5th SEARAME

INTERNATIONAL CONFERENCE

in Conjunction with
WFME Meeting,
2nd JIT Seminars, and
5th IASHE International Conference

PROCEEDING

http://symposium.fk.ugm.ac.id/searame2018/

5 - 8 May 2018

Sheraton Mustika Yogyakarta Resort and Spa
Yogyakarta, Indonesia

DEPARTEMEN OF MEDICAL EDUCATION
FACULTY OF MEDICINE - UNIVERSITAS GADJAH MADA

PROCEEDING

5 SEARAME International Conference
in Conjunction with WFME Meeting, 2nd JIT Seminars, and 5th IASHE International Conference

"Improving the quality of health professions education for the better future of health services"

Yogyakarta, 5th - 8th May 2018

DEPARTEMEN OF MEDICAL EDUCATION
FACULTY OF MEDICINE - UNIVERSITAS GADJAH MADA

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5 SEARAME International Conference
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dr. Gandes Retno Rahayu. M.Med.Ed, Ph.D

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Annisa Nurul Huda, S.Gz
Pawestri Agustini, AMd
Sumartono
Muhamad Farid
Ekwar Mugiyarto, SIP
Putik Hariyanti, Amd
Arif Taufik Wibowo, Amd
Deny Yuliawan
Mara Imbang Satriawan Hasiolan
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Atik Maftuhah
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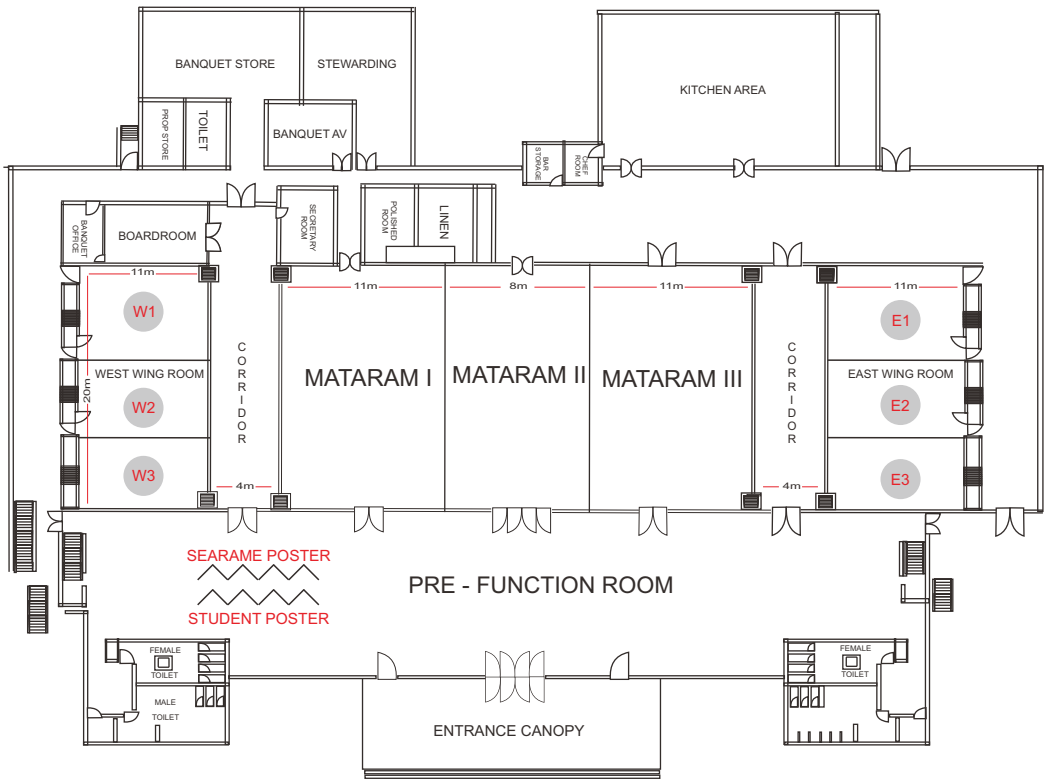

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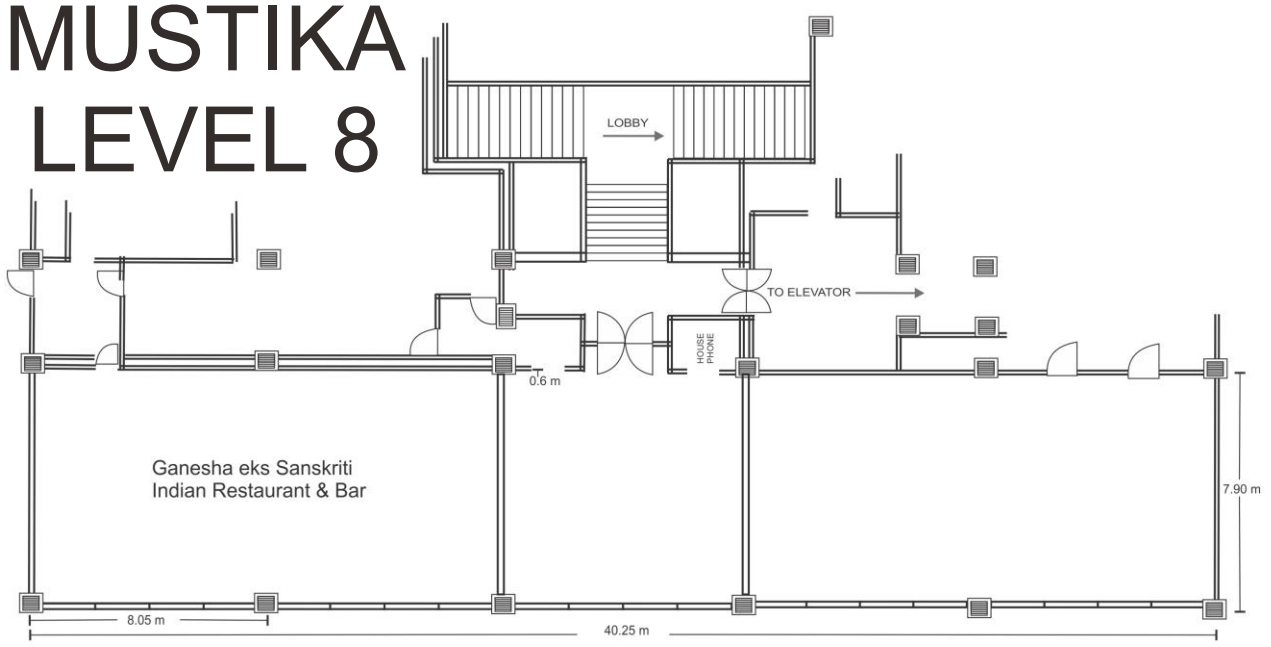

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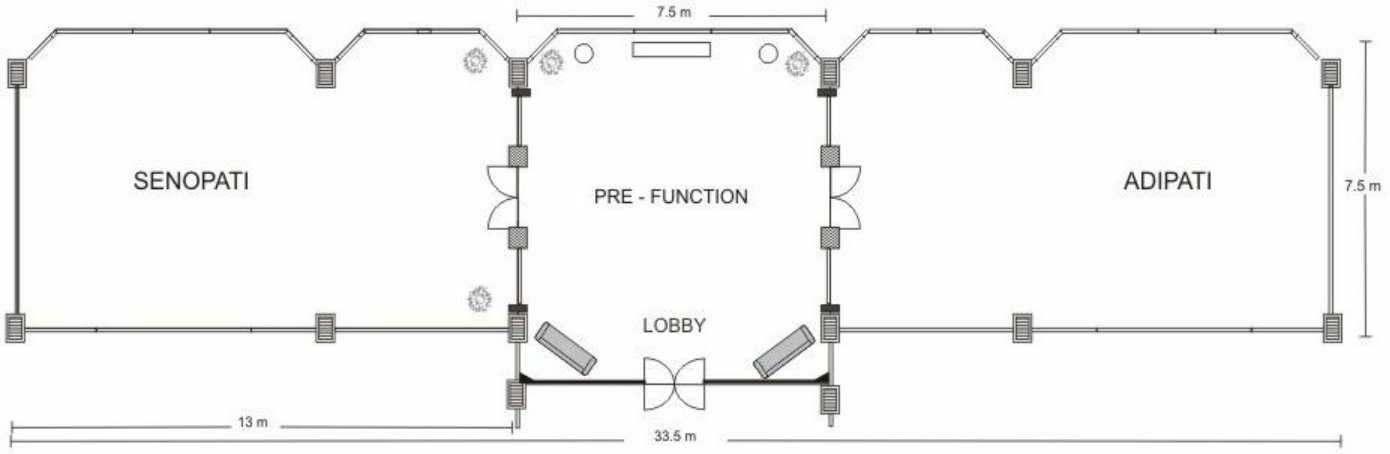

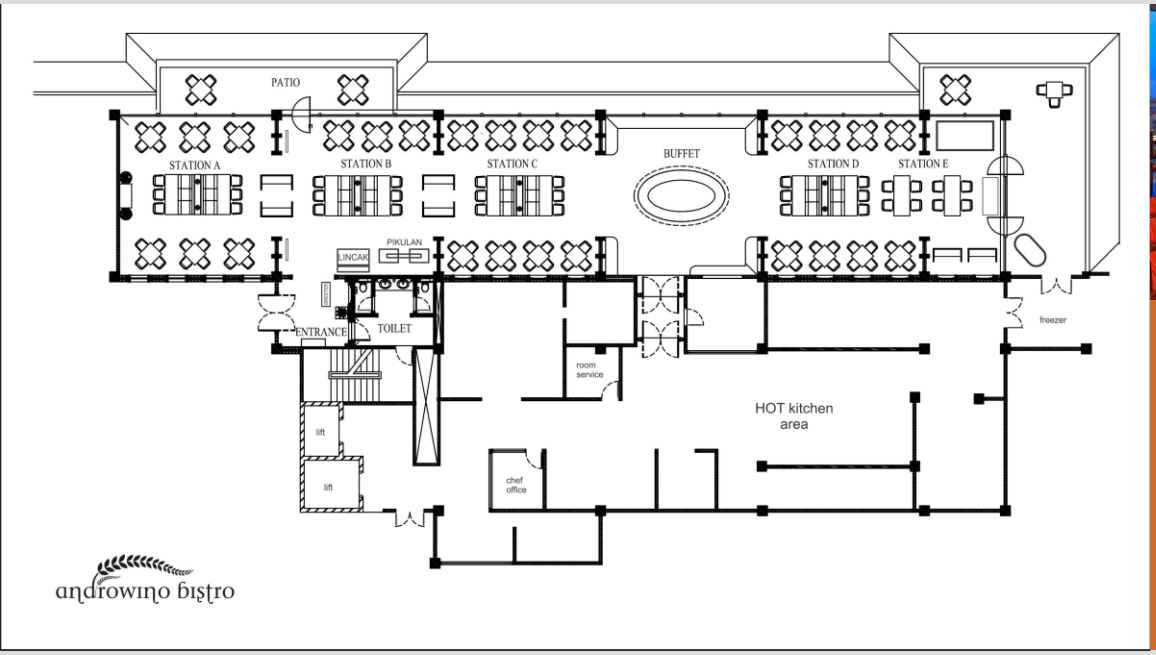

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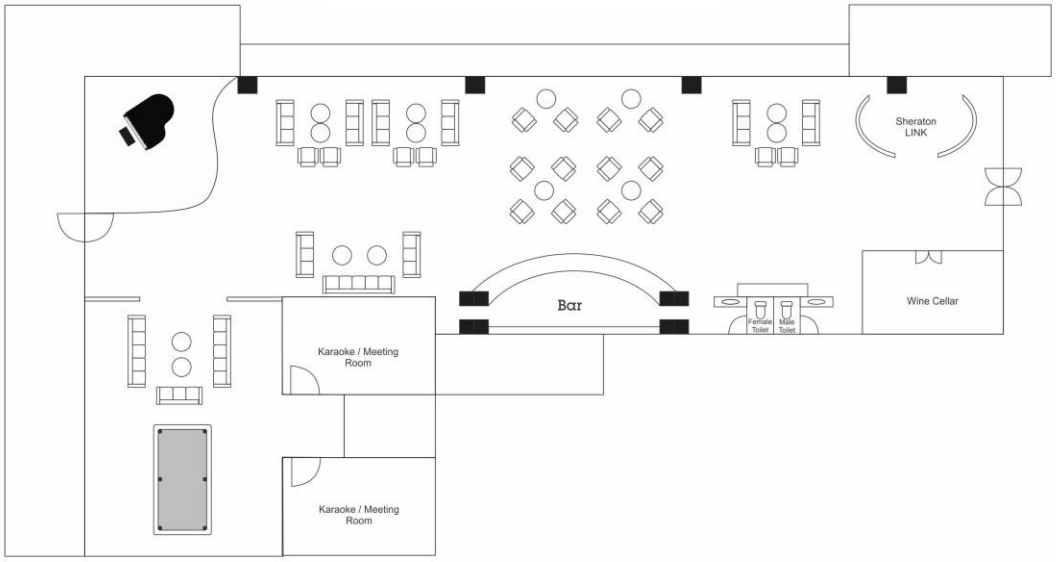

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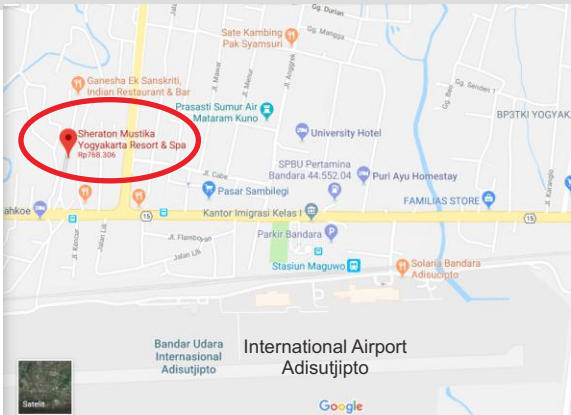

SECTION 1

WELCOME MESSAGE

From chief of SEARAME conference committee

On behalf of the committee of South East Asia Regional Association of Medical Education (SEARAME) conference, I would like to give warmest welcome to all participants, SEARAME members, speakers, and friends all across the world who have travelled far away to our beautiful friendly cultural city, Yogyakarta for this meeting.

It is time for our passionate things, when we are going to discuss, explore, challenge, learn and connect together in a spirit of developing and constructing our knowledge in medical education in order to learn best practices in medical education delineating our path work for creating best health profession in South East Asia. The scientific committee already arranges various program from keynote address, oral and poster session, symposium and workshops. Over next few days, you will hear from our remarkable speaker and presenters from various profession sharing and discussing their thought and works drives from different educational theory and philosophy point of view. Be prepared; enjoy our program, and getting connected with speakers from all around the world.

Thank you very much from meaningful support from Faculty of Medicine, Public Health, and Nursing, Universitas Gadjah Mada, WHO Indonesia, SEARAME Executive Committee, WFME, various health professional organizations in Indonesia: IBI, IDI, PDGI, PPNI, IAI, AIPKI, Persagi, and IAKMI

Over next few days, you will in touch with our warmth and generosity with informal and collegial group who love to learn from colleagues across profession and different setting. I hope that you will have wonderful time in Yogyakarta and I looking forward to meeting you in person during the event.

Warmest regards,

Chief of SEARAME conference committee

dr. Gandes Retno Rahayu, MMedEd, PhD

From president of SEARAME

Dear Participants

Welcome to Yogyakarta – a city of many faces. I feel honored to have the opportunities to welcome you all in this beautiful and unique city to attend the Fifth SEARAME Conference which is organized in conjunction with the 2nd 'Just in Time (JIT)' Seminars and the 5th "Indonesian Association for the Study of Health Profession Education (IASHE)" International Conference. We also have a great priviledge that all these events are organized subsequently after the meeting of Executive Council of World Federation for Medical Education (WFME). We therefore have great fortunes to invite the members of Executive Council of WFME as speakers to share their expertise and experiences in different regions. In these precious events, some members of Executive Committee of SEARAME are also invited to share their expertise and progress of the development of health profession education in their respective countries.

This really is a very rare occasion that a large number of prominent figures in medical and health profession education gather together in Yogyakarta. I hope that all participants can really take the best of every moment of their attendances in these conferences.

Unprecedented events and rapid changes have occured in the area of medical and health profession education over the past decades, especially with the high speed advancements of sciences and technology - including information and nano technology. These new technologies have made possible many things that could not be done in the past – both in the area of education and practices. Whilst at the same time, in South East Asia Region, we still face many challenges in the shortages and maldistribution of health workforces, in the quality of medical and health profession education, in the accreditation and quality assurance system, and so forth.

Hopefully, through these conferences new initiatives and creative ideas to respond to and to cope with those challenges can be discussed and debated in order to find better and sustainable solutions which are in line with the Conferences' theme: Improving the quality of health profession education for the better future of health services.

There are many organizations and inviduals whose contributions have made these conferences possible. In this regards, I would like to deeply express my sincere thanks. The first is the President of WFME and all the members of Executive Council of WFME who have given us support and trust to organize the WFME meeting . Secondly, the members of Executive Committee SEARAME who have actively participated despite the limited resources. Thirdly, the WHO Indonesia who have given continued supports for the SEARAME programmes and activities. Fourthly, the Dean and Vice Deans of Faculty of Medicine Universitas Gadjah Mada – including all the Secretariat SEARAME - who have willingly taken all the hurdles to organize these events. Last but not least, all speakers and the participants who have taken these opportunities to contributes in the endless endeavour to improve the quality of health profession education. May God bless you all.

President SEARAME

dr. Titi Savitri Prihatiningsih, MA, MMedEd, PhD

From rector of Universitas Gadjah Mada

May I take this opportunity to welcome you all to attend the 5th SEARAME Conference that is organized in conjunction with other events, i.e. WFME Executive Council Meeting, IASHE and Just in Time Conferences, hosted by the Faculty of Medicine, Universitas Gadjah Mada? As the best university in Indonesia, Universitas Gadjah Mada has always supported international scientific events, including this Conferences. We believe that providing fora for academicians, policy makers, practitioners, NGOs and other stakeholders are very important as by having continues dialogues and debates, most appropriate solutions in line with local contexts can always be pursued.

Universitas Gadjah Mada is also renowned for its passion to promote innovative education and community-based approaches. We have a policy that prior to graduation, every student must spend three months for community field practice where the students stay in the community and work together in multidisciplinary teams to find solutions for community problems. This program has strengthened our graduates to be ready to work all over Indonesia as they have better adaptability and commitment to serve the community.

Universitas Gadjah Mada has also been a role model for other universities in Indonesia. Therefore, we welcome any future collaboration with other overseas institutions so that Latwe can bring in expertise from other countries and at the same time we can also share our expertise and experiences with our overseas partners.

On behalf of Universitas Gadjah Mada, I would like to thank all organizations and participants who have contributed in these precious events, especially the World Federation for Medical Education and WHO Indonesia. We highly appreciate the Dean and her staff of Faculty of Medicine Universitas Gadjah Mada for their endless effort to advance medical and health profession education in Indonesia and in the world.

Last but not least, I hope you have a chance to visit our campus in addition to enjoying the magnificient city of Yogyakarta and bring memorable events back home.

Rector Universitas Gadjah Mada
Prof. Ir. Panut Mulyono, M.Eng., D.Eng

From Host of SEARAME conference

Welcome to SEARAME conference!

On behalf of Faculty of Medicine, Public Health and Nursing, I welcome SEARAME member, speaker, friends and enthusiastic participants from all over the world to join our firstly hosted SEARAME conference. As an honor for us to facilitate all participants to feel connected, comfy to share and discuss, and enjoy the facilities. The event is held in Sheraton hotel with its' heritage design from Yogyakarta, the beautiful warmest cultural city in Indonesia.

The conference features important keynote addresses from WHO which try to create a better health care profession for future needs. In addition, technology as one of educational tools already being used and developed for the advantages of education. Thus gives huge influences in this conference. We are fortunate having speakers from almost all WHO regional representatives to share their experiences.

We would like to express our gratitude to committee for all their effort and hard work. The conference would not have been held without all the hardwork of committee members and team, volunteers, and we thank them most sincerely.

Dean Faculty of Medicine, Public Health, and Nursing
Universitas Gadjah Mada
Prof. dr. Ova Emilia, MMedEd, SpOG(K), PhD

SEARAME AND SEARAME CONFERENCE

SEARAME

SEARAME is World Federation for Medical Education's Regional Association for South East Asia region.

SEARAME is a regional non government organization interested in enhancing the quality of Medical Education by promoting the highest Standards in Medical Education among the member countries of the South-East Asia Region of the World Health Organization (WHO) with which it is in strategic partnership to achieve the above mentioned purpose.

The parent Organization of SEARAME is the World Federation for Medical Education (WFME) with the mission of quality improvement in Medical Education met through the development of standards in medical education, by the promotion of accreditation of medical schools, with the development of databases on medical education, through projects on the future of medicine and medical education, and through other publications and partnerships.

WFME has six member associations– each corresponding to the WHO's six regions that cover the World namely AMEE for European region, AMEEMR for Eastern Mediterranean region, AMEWPR for West Pacific region, AMSA for African region, PAFAMS for the North and South American region and SEARAME for the South-East Asia Region.

SEARAME CONFERENCE

SEARAME conducts conferences in the member countries of South East Asia region along with its National Association conference so that it provides the host country's educators and Academic Leaders opportunity to meet with their international counterparts from the region and Lear from each other. The earlier Conferences were held in:

1. Jakarta Indonesia (2010) on "Best Practices in Medical & Health Professions Education in S-E Asia.
2. Coimbatore India (2012) on "Social Accountability: Responding to Societal needs through Quality Assurance and Accreditation".
3. Colombo Srilanka (2014) on "Enhancing Clinical Education in the Health Professions".
4. Yangon Myanmar (2016) on Optimising Paradigm shifts in Health Professions Education on 16-18th November

COMMITTEE

Titi Savitri Prihatiningsih
Gandes Retno Rahayu
Mora Claramita
Savitri Shitarukmi
Ratih Nurhayati
Hikmawati Nurokhmanti
Dyah Nuswarini
Muhammad Nur Ludfi
Yulistiarini Kumaraningrum
Siti Rokhmah Projosasmito
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Wika Hartanti
Nurul Wulansari
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Glory Hapsara Suryandari
Widyandana
Rachmadya Nur Hidayah
Yoyo Suhoyo
Prattama Santoso Utomo
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Putik Hariyanti
Arif Taufik Wibowo
Deny Yuliawan
Mara Imbang Satriawan Hasiolan
Muhammad Reza Utama
Rizki Danarty
Supak Silawani
Alif Indiralarasati
Rizki Rinaldi
Roihan Muhamad Iqbal
Lintang Amira Sakti
Kavi Gilang Permana
Penta Akhirul Awal
Gaviota Khalis

Aulia Zuhria Rahma
Ussi Khairani Frestiarizka
Sekar Atmahayu
Bunga Citta Nirmala
Fitria Aninda Ratri
Pradnyamita Puspawikan
Erwin Nur Malikhah
Camilla Amanda
Gilbert Renardi Kusila
Mohamad Reynaldi
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Aditya Nugroho
Aditya Rafdi Eldatama
Chaesi Novita Murti
Inas Nur Hafizhah
Nabilla Ersya Audina
Hana Nurhidayati Utami
Syarifah Zaharatul A
Lutfia Husna Nisa
Arif Abdullah Azzam
Dea Fairuz
Asha Yonika Putri Manalu

Invited Speakers

Diantha Soemantri, MD, MMedEd, PhD

Full Name:
Diantha Soemantri

Institution:
Faculty of Medicine, Universitas Indonesia

Appointment:
Senior lecturer in the Department of Medical Education

Education:
Undergraduate medicine (MD) from Universitas Indonesia
Master of Medical Education (MMedEd) from University of Dundee
PhD in medical education from University of Melbourne

Area of Competence:
Medical Education (selection, assessment, feedback, reflection, interprofessional education)

Professional Experience:
Head of Master in Medical Education Program (2013-now)
Member of Medical Education Unit (2012-now)
Health sciences multi- and interprofessional curriculum coordinator (2013-now)
Member of the Educational Standard Task Force for the Educational Division (2014-now)
Head of the integrated curriculum (interprofessional) working group
Head of the Inter Faculty Committee (2015-now)

Research Interest:
Currently involved in research on interprofessional education and collaborative practice, professionalism dilemma and Situational Judgment Test.

Widyandana, MD, MHPE, Ph.D. SpM

Full Name:
Widyandana

Office:
Department of Medical Education, Faculty of Medicine, Universitas Gadjah Mada

Department of Ophthalmology, Faculty of Medicine, Universitas Gadjah Mada

Formal Education:

Resident of Ophthalmology Department, Faculty of Medicine, Gadjah Mada University	2014-2017
Ph.D in Medical Education, Maastricht University, Netherlands	2008 – 2011
Post Graduate Family Medicine Course, Gadjah Mada University, Yogyakarta, Indonesia	2008 – 2010
Master of Health Professions Education (MHPE), Maastricht University, Netherland	2005 – 2007
Clerkship of Gadjah Mada University Faculty of Medicine	2002 – 2004
Undergraduate Degree at Gadjah Mada University, Faculty of Medicine (GMU FoM)	1997 – 2002

Working Experience:

Coordinator for Community and Family Health Care with Interprofessional Education	Present
Reviewer in Jurnal Pendidikan Kedokteran Indonesia	2012 – present
Staff for Department of Medical Education FM GMU	Jan 2006 – present
Staff and Instructor for Skills Training Laboratory FM GMU	Aug 2004 – present
General Practitioner for Emergency Room In Happy Land Medical Centre, Jogjakarta	Aug 2004 – 2016
General Practitioner for Teenagers Reproductive Health Clinic IPPA (volunteer), Jogjakarta	Aug 2004 – 2016
Speakers for “DIKIPRO”, radio show at RRI Pro2	June 2008 – 2016
Speaker for the “Proseks” radio show at Rakosa FM Female Radio	Feb 2004 – 2016
Speaker for “ORKES” at Jogja TV	Feb 2005 – 2016
Article Coordinator for The IPPA DIY Clinic for “Kedaulatan Rakyat.”	2001 – 2016
A member of Lentera Sahaja (LENSA) IPPA DIY’s Lecturing and Training Team division PKBI DIY	1999 – 2016

Kinik Darsono, MD, M.Pd.Ked

Full Name:
Kinik Darsono

Institution:
RSUD Soehadi Prijonegoro

Appointment:
Head of Information Technology & Medical Record Division

Education:

Year graduate	Education
2008	Master of Medical Education, Universitas Indonesia
1999	Medical Doctor in Faculty of Medicine, Universitas Gadjah Mada,

Area of competence:
Medical & Health Professions Education

Professional Experience:

2016- present	Head of Information Technology & Medical Record Division, Soehadi Prijonegoro Hospital
2011- 2016	Head of Quality Improvement Division, Soehadi Prijonegoro Hospital
2010-present	Director of software development, SMART- IT
2010-2011	General Director, TechnoPark Sragen
2009 – 2010	Director of Communication & Information Technology, TechnoPark Sragen
2004-2008	Secretary Faculty, Medical & Health Science Faculty, Muhammadiyah Surakarta University

Research Interest:

- Web and Mobile Programming
- Learning Media in medical education (esp. technology-based learning resources, simulation & animation)
- Tele Health, Tele Education, Artificial Intelligent, Virtual Reality, Augmented Reality, Internet of Thing and robotics.
- E-Goverment

Noviarina Kurniawati, MD, MSc

Full Name:
Noviariana Kurniawati

Institution:
Department of Medical Education and Bioethics, Faculty of Medicine, Public Health, and Nursing Universitas Gadjah Mada

Appointment:
Education Staff

Education:

Year graduate	Education
present	Doctoral Program in Medical Education, Faculty of Medicine, Public Health & Nursing, Universitas Gadjah Mada
2015	Master of Health Profession Education, School of Health Profession Education, University of Maastricht
2009	Medical Doctor in Faculty of Medicine, Universitas Gadjah Mada,
2007	Bachelor of Medicine in Faculty of Medicine, Universitas Gadjah Mada

Area of competence:
Medical & Health Professions Education

Professional Experience:

2015- present	Block Coordinator for Master in Medical Education, FM UGM
2015- 2017	Undergraduate Educational Coordinator for Dept. of Medical Education, Faculty of Medicine, Universitas Gadjah Mada
2014 – 2017	General Practitioner at KORPAGAMA Gadjah Mada Medical Clinic
2010-2012, 2015-2017	Coordinator for Learning Resources Development in Skills Laboratory
2011- present	Trainer of Standardized Patient for National Competence Examination for Medical Graduates
2012- 2013	Academic Coordinator of Year 3, Skills Laboratory, Faculty of Medicine, Universitas Gadjah Mada
2011- present	Official Trainer of Standardized Patients for National OSCE for Medical Graduates
2010- present	Education Staff of Department of Medical Education, Faculty of Medicine, Universitas Gadjah Mada

Research Interest:
Digital Information Literacy
Learning Resources in medical education (esp. technology-based learning resources, simulation & simulated patient)
E-learning, Skills Training, and other Teaching Learning area in Medical Education

Siti Rokhmah Projosasmito, MD, MEd, (L, P & C)

Full Name:
Rr. Siti Rokhmah Projosasmito

Office:
Department of Medical Education, Faculty of Medicine, Universitas Gadjah Mada

Education:
2007-2008: Master of Education, Leadership, Policy and Change, Faculty of Education, Monash University, Clayton Campus, Victoria, Australia
2002-2004: Medical Doctor, Faculty of Medicine, Universitas Gadjah Mada
1997-2002: Bachelor of Medicine, Faculty of Medicine, Universitas Gadjah Mada

Work Experience:
2000-2002: Laboratory Assistant, Department of Pharmacology, Faculty of Medicine, Universitas Gadjah Mada
2004-2006: Academic Staff on Full PBL System, Faculty of Medicine, Universitas Gadjah Mada
2006-onward: Academic Staff of Department of Medical Education, Faculty of Medicine, Universitas Gadjah Mada
2009-2013: Secretary of Department of Medical Education, Faculty of Medicine, Universitas Gadjah Mada
2009-2014: Member of Technical Assistance of FM UNTAD
2009-2014: Secretary Activity 5 HPEQ Project FM UGM
2013-2016: Block A.1 Coordinator Team of Undergraduate Medical Doctor Study Program, Faculty of Medicine, Universitas Gadjah Mada
2015: Learning Skills Coordinator, Faculty of Medicine, Universitas Gadjah Mada
2015-present: Internal Auditor, Faculty of Medicine, Universitas Gadjah Mada

Dr. Jyotsna Rimal

Full Name:
Jyotsna Rimal

Institution:
BP Koirala Institute of Health Sciences

Education:
BDS
MDS
FAIMER Fellow

Area of Competence:
Oral Medicine and Maxillofacial Radiology
Health Professions Education
Curriculum
Assessment
Problem-based Learning

Research Interest:
Problem-based Learning
Assessment
Curriculum
Faculty Development Programs
Competency-based Medical Education

Professional Experience:

- Conducted a workshop on "Professional Development on Essentials of Students' Assessment" at Khesar Gyalpo University of Medical Sciences (KGUMS) coordinated by Faculty of Postgraduate Medicine, on 18-21 February, 2018, Bhutan
- Conducted a pre-conference workshop entitled "Integrated Teaching in Health Professions Education" at the 1st National Conference of Association of Health Professions Educationists of Nepal, on Dec 2, 2017, Kathmandu, Nepal
- Invited as a key resource person for Induction Program and conducted workshop entitled Teachers' Training Program on Essential of Medical Education on 4-7 October, 2017 at Faculty of Postgraduate Medicine, Keshar Gyalpo University of Medical Sciences of Bhutan, at Paro, Bhutan
- Co-ordinated and Organized 3rd Regional Course in Good Clinical Practice (GCP) under the aegis of WHO Regional Training Center, University of Gajah Madah, Yogyakarta, Indonesia from 31st July-2 August, 2017 at BP Koirala Institute of Health Sciences, Dharan, Nepal
- Invited as a Resource person in 1st faculty development training at National Academy of Medical Sciences, and facilitated sessions on Curriculum analysis, Feedback and Microteaching on June 5-9, 2017 at Kathmandu, Nepal
- Invited as resource person and facilitated Faculty Development Program on "Essentials of Educational Technologies for Faculty Members" at Nobel Medical College on October 2-3, 2016 and Lumbini Medical College on 22-24 March, 2017
- Participated in Educational research workshop on 13-15th December 2016 at University of Gajah Madah, Yogyakarta, Indonesia
- Attended E-learning workshop entitled "Get Started Keep Moving" September 19-23, 2016 at Institute of Tropical Medicine, Antwerp, Belgium
- Attended and conducted sessions on Academic Leadership as a lead at 8th annual workshop of the LINQED educational network, 17-20 May, 2016, Kampala, Uganda
- Have been conducting Basic and Advanced training workshops at BP Koirala Insititute of Health Sciences, Nepal since 2014.

Prof. Dra. RA Yayi Suryo Prabandari, M.Sc., Ph.D

Prof. Prabandari, M.Sc., Ph.D is full professor at the Department of Health Behavior, Environment Health and Social Medicine (HBES), Faculty of Medicine, Universitas Gadjah Mada (FM-UGM). Beside her responsibility for teaching in the under and post graduate, she also holds the position of *chairperson* of Public Health Graduate Program majoring in Health Promotion and Health Behavior. She has involved in Medical Education since the Department of Medical Education in FM UGM was still a unit in 1990. Although Prof. Prabandari finally joined the department of Public Health in 1996, then to the Department HBES in 2016, she remain teaching at graduate program of Medical Education and active as coordinator of communication skills content an Skills lab FM UGM. Prof. Prabandari also the chair of Professional Behavior Committee of FM UGM, as well as member of academic standard committee of Doctorate Program FM UGM.

Prof. Prabandari graduated from Psychology Faculty (1989) and graduate program in clinical psychology (1994) UGM. She achieved her doctorate degree in community medicine at the Faculty of Medicine and Health Sciences, the University of Newcastle Australia in 2006. Prof. Prabandari has presented papers in several medical education workshop and conferences as well as published them. She also used to be a technical consultant in student selection, professionalism, student advisor and counseling, as well as students' assessment in several universities in Indonesia. In 2016, she facilitated a Ph.D supervision workshop with Victoria University, Australia. Prof. Prabandari has supervised more than 50 undergraduate students from various study programs (Public Health, Medical Education, Tropical Medicine, Nursing, Clinical Psychology and Higher Education Management). She also has experience as country supervisor of Ph.D student from University of Adelaide, Australia, University of Mahidol, Thailand, University of Groningen, as well as master program of Imperial College, London, besides supervised 20 doctorate students from FM UGM, Doctorate Program of UNS (Universitas Sebelas Maret, Surakarta) and Doctorate Program of Universitas Diponegoro, Semarang.

Dr. Yoga Pamungkas Susani, MD, MMedEd

Full Name:
Yoga Pamungkas Susani

Institution:
Faculty of Medicine, Universitas Mataram

Education:
2000 – 2004 : Bachelor of Medicine, Universitas Gadjah Mada
2004 – 2006 : Medical Doctor, Universitas Gadjah Mada
2007 – 2010 : Master in Medical Education, Universitas Gadjah Mada
2010 – 2015 : Doctor in Medical Education, Universitas Gadjah Mada

Area of Competence:
Medical Education

Professional Experience:
2005- now Lecturer at Faculty of Medicine, Universitas Mataram
2016- now Medical Education Unit, Faculty of Medicine, Universitas Mataram
2016- now Coordinator of undergraduate medical education, Faculty of Medicine, Universitas Mataram
2016- now Member of Ethics Committee Faculty of Medicine, Universitas Mataram

Research Interest:
Professional identity
Communities of Practice in medical education
Professionalism

Umatul Khoiriyah, MD, M.Med.Ed., Ph.D

Full Name:
Umatul Khoiriyah

Institution:
Faculty of Medicine, Universitas Islam Indonesia

Education:
PhD in Medical Education, Sydney Medical School, University of Sydney

Area of Competence:
Medical Education

Research Interest:
Teaching & learning
Curriculum
Assessment

Prof. Dr. Thomas Chacko

Full Name:
Thomas V. Chacko

Office:
Dean Medical Education, Believers Church Medical College, Thiruvalla, Kerala 689103, India

Institution:
Believers Church Medical College, Thiruvalla, Kerala 689103, India

Appointment:
Dean Medical Education, Thiruvalla
Director, FAIMER Regional Institute, Coimbatore, India
Past Secretary-General, SEARAME

Education:
M.B,B.S.
M.D.
International Fellow of Medical Education
Fellowship of FAIMER Institute

Area of Competence:
Academic Leadership,
WFME Standards (Quality Improvement)
Curriculum & Faculty Development
Education Research
Program Evaluation

Professional Experience:
35 Years in Public Health
15 Years in Medical Education

Research Interest:
Public Health Education & Practice
Program Evaluation
Education Research

Titi Savitri Prihatiningsih, MD, MA, MMedEd, Ph.D

Full Name:
Titi Savitri Prihatiningsih

Institution:
Department of Medical Education, Faculty of Medicine, Universitas Gadjah Mada
Member of the Body of Education National Standard, Ministry of Education and Culture, Indonesia

Education:
1990: Bachelor of Medicine, Faculty of Medicine, Universitas Gadjah Mada
1993: MD, Faculty of Medicine, Universitas Gadjah Mada
1991: Masters in Health Management, Planning and Policy, University of Leeds, UK
2000: Masters in Medical Education, University of Dundee, UK
2003: PhD in Medical Education, University of Dundee, UK
2014: Endeavour Executive Fellowship Programme, Medical Education, Sydney Medical School University of Sydney, Australia
2015: Accreditation assessor training workshop & an assessment of a medical school including site visit, Medical Education, Faculty of Medicine, KhonKaen University in KhonKaen Province
2016: FAIMER Institute Fellowship Programme and FAIMER Keele Distance Learning Programme, Medical Education, FAIMER Institute Philadelphia

Leadership and Management Experience:

Head of the Department of Medical Education, Faculty of Medicine, Universitas Gadjah Mada 2005-2009
Head of Master in Medical Education Program, Faculty of Medicine, Universitas Gadjah Mada 2006-2007
Head of Medical Doctor Program, Faculty of Medicine, Universitas Gadjah Mada 2008-2011
Head Deputy of Quality Assurance Office, Universitas Gadjah Mada 2008-2010
Member of Academic Senate as the faculty representative in Universitas Gadjah Mada 2008-2012
Vice Dean of Academic Affairs, Faculty of Medicine, Universitas Gadjah Mada 2008-2012
Academic Coordinator of Tadulako Assistance team, Faculty of Medicine, Universitas Gadjah Mada 2011
Head of Quality Assurance Office of the Master in Medical Education Program, Faculty of Medicine, Universitas Gadjah Mada 2011
Dean of Faculty of Medicine, Universitas Gadjah Mada 2011-2012
Dean of Faculty of Medicine, Universitas Gadjah Mada 2008-2012
Manager of PHK-PKPD HPEQ Project, Faculty of Medicine, Universitas Gadjah Mada 2011-2013
Head of the Department of Medical Education, Faculty of Medicine, Universitas Gadjah

Mada 2006-2009
Head of Master in Medical Education Prgoram, Faculty of Medicine, Universitas Gadjah Mada 2007-2009
Head of Master in Medical Education Program, Faculty of Medicine, Universitas Gadjah Mada 2013
Head of the Department of Medical Education, Faculty of Medicine, Universitas Gadjah Mada 2014
Member of the Body of National Education Standard 2014-2018

Academic Networking Experience:
Secretary of the Association of Indonesian Medical Education Institutions 2005-2009
Secretary II of the Association of Indonesian Medical Education Institutions 2003-2005
Head of the Task Force for the Preparation of the Standard of Indonesian Medical Council 2005-2007
Executive Committee of Southeast Asia Regional Association in Medical Education (SEARAME) 2007-2015
Head of the Association of Indonesian Health Professions Education 2013-2016
Vice President of Southeast Asia Regional Association in Medical Education (SEARAME) 2015-2017
Member of Asean University Network for Quality Assurance (AUN QA) 2013-2017
Consultant of LAM-PT-Kes 2015-2016
Head of the Task Force for the Preparation of the National Standard of Medical Education 2015
Senior Adviser of World Federation for Medical Education (WFME) 2014-2017

Ardi Findyartini, MD, Ph.D

Full Name:
Ardi Findyartini

Institution:
Department of Medical Education Faculty of Medicine
Universitas Indonesia

Appointment:
Head of Department of Medical Education, Faculty of Medicine Universitas Indonesia
Head of Medical Education Unit Faculty of Medicine Universitas Indonesia

Education:
Medical Doctor, Faculty of Medicine, Universitas Indonesia
PhD in medical education, University of Melbourne, Australia

Area of Competence:
Medical and health professions education in general, including teaching, research and community engagement, curriculum development (undergraduate, postgraduate/residency programs), national and international collaboration, and policy making in medical and health professions education.

Professional Experience:
Teaching in undergraduate medical education
Teaching in postgraduate program on medical education
National and international speakers in conferences
Workshops and faculty development programs
Reviewer of national and international peer-reviewed journals
National and international publication in peer-reviewed journals
Panel member of ASPIRE excellence in faculty development

Research Interest:
Curriculum development, assessment, professionalism, interprofessional education, clinical education, socio-cultural factor in medical and health professions education

Prof. Dr. Tri Nur Kristina, MD, DMM, M.Kes

Full Name:
Tri Nur Kristina

Occupation:
Lecturer of Faculty of Medicine, Universitas Diponegoro

Position:
Dean of Faculty of Medicine, Universitas Diponegoro

Education:

Education	Name & Place of Education	Year of graduation
Medical Doctor	Faculty of Medicine, Universitas Diponegoro, Semarang	1984
Diploma in Medical Microbiology	Institute Medical Research, Kuala Lumpur, Malaysia	1991
Masters Degree	Clinical Epidemiology Faculty of Medicine Gadjah Mada University, Yogyakarta	1997
Doctoral Degree	Doctor in Medical Education. Faculty of Medicine Maastricht University, Maastricht, The Netherlands	2005

International Presentations:

Title	Session	Place	Year
Generic Objective of Community-based Education for undergraduate medical programme	TUFH-WHO Conference	Brazil	2001
Does community-based education (CBE) come close to what it should be; a case study from the developing country	TUFH-WHO Conference	Australia	2002
International comprehensive clerkship for undergraduate medical programme	AMEE Conference	Malaga, Spain	2009
Comparison of Clinical Clerkship in the community: as a part and in the end of clinical rotation	AMEE Conference	Lyon, France	2012
Continuous program of Community-based Education: Facilitating the continuity of health program'	AMEE Conference	Prague, Czech Republic	2013
Contribution of Interprofessional Education to Increase Community Health	International Seminar On Primary Care Medicine Indonesia To Strengthen The Universal Coverage	Yogyakarta	2017

Mora Claramita, MD, MHPE, PhD

Full Name:
Mora Claramita

Office:
Department of Medical Education, Faculty of Medicine, Universitas Gadjah Mada

Department of Family and Community Medicine, Faculty of Medicine, Universitas Gadjah Mada

Academic History:
Maastricht University, The Netherlands, PhD on Medical Education, 2012 (NPT Project, U to U Grantee)
Maastricht University, The Netherlands, Master of Health Profession Education (MHPE) – Cum-Laude, STUNED Grantee, 2002-2005
Universitas Gadjah Mada, Faculty of Medicine, Yogyakarta, 1993-2000. Best Ten Graduates

Professional Works in Medical Education:

- Head of Masters in Medical Education program, Department of Medical Education, Faculty of Medicine, Universitas Gadjah Mada, 2016
- FAIMER Fellows, FAIMER Institute, Philadelphia, USA, 2013-2015
- Team Block Coordinators of Basic Medical Practice, Faculty of Medicine, Universitas Gadjah Mada, 2015
- Curriculum Committee member at Faculty of Medicine, Universitas Gadjah Mada, 2016
- Coordinator of Research and Educational Development of Skills Laboratory, Faculty of Medicine, Universitas Gadjah Mada
- Coordinator of Curriculum Development, Community Family Health Care Program (CFHC-IPE), 2016
- Course director of Community-based Education workshops for 27 Primary Care Centers (Puskesmas) in Yogyakarta city in collaboration with Faculty of Medicine, Universitas Gadjah Mada for a community-based educational purposes, Skills Laboratory, Faculty of Medicine, Universitas Gadjah Mada, 2009-2013
- Course director of Community-based Education workshops for 11 NGOs in Yogyakarta city in collaboration with Faculty of Medicine, Universitas Gadjah Mada for a community-based educational purposes, Skills Laboratory, Faculty of Medicine, Universitas Gadjah Mada, 2009-2013

Lutfan Lazuardi, MD, M.Kes, PhD

Full Name:
M. Lutfan Lazuardi

Current position:
Lecturer at the Faculty of Medicine, Universitas Gadjah Mada

Education:
1999 – Medical Doctor (MD), Faculty of Medicine, Universitas Gadjah Mada, Yogyakarta, Indonesia
2002 – Master in Public Health/Health Service Management, Faculty of Medicine, Universitas Gadjah Mada, Yogyakarta, Indonesia
2007 – Doctor of Philosophy (PhD), Innsbruck Medical University, Innsbruck, Austria

Training/courses:
2016 – mHealth Research Institute-NIH, Bethesda, Maryland, USA
2012 – Cancer epidemiology, IARC-WHO, Lyon, France
2002 – Internship at the Department of Medical Statistics, Informatics and Health Economics, Innsbruck University, Austria

Award:
2016 – Ernst Mach Follow-up Grant (EZA) from Austrian Federal Ministry of Science, Research and Economy (BMWFW)

Research and Consultancies Experiences:

- 2015-2018: Equitable Health – Building capacity to address healthcare challenges in rural areas; Telemedicine Project
  Source of funding: ICLD Sweden
  Position: Co-investigator
- 2015-2017: Mobile survey for Health Demographic Surveillance System (HDSS) in Sleman District with focus on Non-communicable Diseases
  Source of funding: Faculty of Medicine, Universitas Gadjah Mada
  Position: Investigator responsible for developing mobile survey
- 2015-2016: An acceptability trial of SMS to deliver adolescent sexual and reproductive health and anti-smoking messages to young people in Indonesia
  Source of funding: RTI-International
  Position: Researcher responsible for development of SMS Gateway System
- 2016-2017: Scaling up of Vaccine Preventable Diseases Web-based System and development of mobile-based Surveillance System (Prototype). Collaboration between WHO-EPI and Ministry of Health
  Source of funding: WHO (SEINO1408930)
  Position: Principal investigator

- 2014-2015: Development of Vaccine Preventable Diseases Web-based Surveillance System in Indonesia. Collaboration between WHO and Ministry of Health Indonesia
  Source of funding: WHO (SEINO1408504)
  Position: Principal investigator
- 2011: Development of information technology to support dengue surveillance system (automatic platelet counter for primary health care and SMS-based reporting system)
  Source of funding: HPEQ (Health Professional Education Quality) Project, Ministry of Education of Indonesia
  Position: Investigator
- 2010-2012: Development of Hospital information System for UGM Academic Hospital
  Position: Team leader
- 2009: Investigator for Establishing Malaria Elimination Database in Sabang District
  Funded by UNICEF
- 2008: Risk Management of Maternal and Neonatal Child Health (Mapping, Monitoring, Analysis and Recommendation for MNCH Policy): Participatory development and piloting of MNCH risk barometer
  Funded by DHS-1/ADB
  Position: Project leader

Prof. Ova Emilia, MD, MMedEd, Sp.OG(K), PhD

Full Name:
Ova Emilia

Institution:
Faculty of Medicine, Universitas Gadjah Mada

Education:
1982-1989: Medical Doctor, Faculty of Medicine, Universitas Gadjah Mada
1990-1991: Master in Medical Education, University of Dundee, United Kingdom
1996-2000: Specialist in Obstetrics and Gynaecology, Faculty of Medicine, Universitas Gadjah Mada
2000-2004: PhD, Faculty of Medicin, University of New South Wales, Sydney, Australia
2009: Consultant of Obstetrics and Gynaecology, Faculty of Medicine, Universitas Gadjah Mada

Leadership and Managerial Experience:
1993: Coordinator of teacing and learning process, Unit of Medical Education, Faculty of Medicine, Universitas Gadjah Mada
1990-2009: Member of editorial team of "Berita Kedokteran Masyarakat"
1993-present: Member of research team of "Pusat Kesehatan Reproduksi FK UGM"
1993-2003: Secretary of Innovation Team of Medical Education, Faculty of Medicine, Universitas Gadjah Mada
1995-1997: Secertary of Masters Program of Public Health, Faculty of Medicine, Universitas Gadjah Mada
2002: Team member of "Persiapan Program Internasional Pendidikan Dokter FK UGM"
2001-2005: Associate of the Vice Dean of Development and Cooperation, Faculty of Medicine, Universitas Gadjah Mada
2004-2012: Member of the Development of Teaching Process Team, Universitas Gadjah Mada
2004: Consultant of the Development of Health Professional Licensing Instrument, Health Office, Yogyakarta Special Province
2004-present: Member of the Senate of Faculty of Medicine, Universitas Gadjah Mada
2005-present: Manager of D-IV Program of Nurse Teaching, Faculty of Medicine
2005-2008: Head deputy of Clinical Teaching Team in Medical Program, Faculty of Medicine, Universitas Gadjah Mada
2005-2009: Assistant Vice Dean of Academics, Faculty of Medicine, Universitas Gadjah Mada
2007-present: Professional behavior team
2007: Member of material development and clinical skills practice team, Faculty of Medicine, Universitas Gadjah Mada

2007-present: Editor Team of EFKAGAMA
2008: Member of development and planning of hospital human resource, UGM Academic Hospital
2008-2013: Head of Curriculum Team
2009: Head of Assessment Committee Team
2009-2010: Interviewee of Clinical Rotation Development Team
2009-2013: Head of Coordinator Team of Specialist Education
2009-present: Head of the editorial team of "Jurnal Pendidikan Kedokteran Indonesia"
2009: Member of management and coordinator of the development and planning of UGM Education and Research Hospital
2009-2013: Secretary of the Department of Obstetrics and Gynaecology, Faculty of Medicine, Universitas Gadjah Mada
2009: Head of the clinical team of technical planning team of UGM Academic Hospital
2011-2013: Member of "Tim Pelaksana Kegiatan Program Hibah Kompetensi Peningkatan Kualitas Pendidikan Dokter (PHK-PKPD) Proyek Health Professional Education Quality Improvement (HPEQ)", Faculty of Medicine, Universitas Gadjah Mada
2011: Head of Directory Team of Blood Donation
2012: Member of the Task Force Team of the Development of Self-Evaluation Instrument, Specialist Program, Universitas Gadjah Mada
2012: Secretary of Commission I of Education, Academics, and Quality Assurance, Senate of Faculty of Medicine, Universitas Gadjah Mada
2012-2016: Vice Dean of Academics, Students, and Alumni
2014-present: Head of the Editorial Team of "Jurnal Kesehatan Reproduksi"
2014-present: Person in charge of "Part 1 Membership of the Royal College of Obstetrics and Gynaecologists Preparatory Course", Department of Obstetrics and Gynaecelogoy, Faculty of Medicine, Universitas Gadjah Mada

Experience on Academic Networking on National, Regional, and International Level:
2001-2014: Consultant on curriculum development, Faculty of Medicine, Universitas Islam Indonesia
2001-2014: Consultant on curriculum development, Faculty of Medicine and Health Sciences, Universitas Muhammadiyah Yogyakarta
2004: Consultant on the development of Education Hospital Standard, Ministry of Health, Jakarta
2004: Manager of "Pengurus Pusat Pelatihan Klinik Sekunder (P2KS), Yogyakarta Special Province
2005: Consultant on National Competency Based Curriculum in Medical Education, Ministry of National Education
2005: National consultant on the Application of Competency Based Curriculum
2005-2009: SEA-ORCHID team
2012-2015: Vice secretary of AIPKI
2012: Steering Committee of the Development and Coaching of University Hospital
2016-present: Dean of Faculty of Medicine, Universitas Gadjah Mada

Awards:
1984: Scholarship for Southeast Asia Youth Program
1989: HEDERA scholarship
1998: First prize for young gynecologist award, Asian Oceania Congress of Obstetrics and Gynecology, Kuala Lumpur
2005: Poster Prize Winner on The 2nd Indonesian Medical Education Meeting and Expo

2005: Free Paper Prize Winner on The 2nd Indonesian Medical Education Meeting and Expo
2006: The Best Lecture, Faculty of Medicine
2007: SIDA Award
2008: Fellows for Cochrane Systematic Review
2010: The Best Lecture of Universitas Gadjah Mada
2013: The Winner of the First Best Poster of Research in National Congress of Association of Indonesian Family Medicine
2014: The second Winner of Presentation in Annual Scientific Meeting VI Indonesian Society of Social Obstetrics and Gynecology, Makassar

Yoyo Suhoyo, MD, MMedEd

Full Name:
Yoyo Suhoyo

Institution:
Department of Medical Education, Faculty of Medicine, Universitas Gadjah Mada

Education:
2014-2016: FAIMER Fellowship Program, Philadelphia, USA
2006-2008: Master in Medical Education, Faculty of Medicine, Universitas Gadjah Mada
2002-2005: Clinical Rotation, Faculty of Medicine, Universitas Gadjah Mada (Qualification: Medical Doctor)
1997-2002: Undergraduate Program, Faculty of Medicine, Universitas Gadjah Mada (Qualification: Bachelor in Medical Science)

Employment:
2014-current: Member of National Committee for Competency-Based Examination of Indonesian Medical Students, Ministry of Research, Technology, and Higher Education, Indonesia
2017-current: Chairman of Assessment team, Faculty of Medicine, Universitas Gadjah Mada
2010-current: Coordinator of the Educational Development of Clinical Rotation Team, Faculty of Medicine, Universitas Gadjah Mada
2010-2014: Member of Team for Indonesian Medical Doctors Competency-Based Examination – Objective Structured Clinical Examination (OSCE), Association of Indonesian Medical Schools
2000-2005: Staff Assistant, Department of Medical Education, Faculty of Medicine, Universitas Gadjah Mada

Fundhy Sinar Ikrar Prihatanto, MD, MMedEd

Full Name:
Fundhy Sinar Ikrar Prihatanto

Institution:
Faculty of Medicine, Universitas Airlangga

Appointment:
Lecturer

Education:
Masters in Medical Education

Area of Competence:
Medical Education
Anatomy

Professional Experience:
Teaching staff at Universitas Airlangga (2006-now)

Research Interest:
Teaching & Learning Process
Assessment
Media

Rachmadya Nur Hidayah, MD, MSc

Full Name:
Rachmadya Nur Hidayah

Institution:
Department of Medical Education, Faculty of Medicine,
Universitas Gadjah Mada

Education:
2003-2007: Bachelor of Medicine, Faculty of Medicine, Universitas Gadjah Mada
2007-2009: Medical Doctor, Faculty of Medicine, Universitas Gadjah Mada
2010-2012: Master of Science (MSc) in Health Professions Education, Universiteit Maastricht, The Netherlands
2014-current: Candidate for Doctor of Philosophy (PhD) in Medical Education, Leeds Institute of Medical Education, University of Leeds, United Kingdom

Professional History:

April 2009 – current	Teacher/ Lecturer/ Junior Researcher Department of Medical Education, Faculty of Medicine UGM
April 2009 – December 2009	Assistant for Assessment and Evaluation Skills Laboratory, Faculty of Medicine UGM
January 2010 – May 2012	Year II Undergraduate Clinical Skills Training Coordinator Skills Laboratory, Faculty of Medicine UGM
May 2012 – June 2014	Coordinator for Assessment and Evaluation Skills Laboratory, Faculty of Medicine UGM
August 2013 – June 2014	Member of Examination Division Panitia Uji Kompetensi Dokter Indonesia (National Committee for Indonesia Medical Doctor Competence Examination)

Research Projects and Presentations:

2018	The complex issue of failure: How the NLE affects students and medical schools, presented at the Ottawa Conference 2018
2017	Intended and Unintended Consequences of National Licensing Examination in Indonesia, presented at the AMEE Conference 2017
2016	Coping the challenge: how an institution prepares students for the national OSCE,

	presented at the Ottawa Conference 2016
2015	Being a test centre for national OSCE in a developing country: lesson learnt, presented at the AMEE Conference 2015
2014	Final year OSCE as preparation for national examination in Indonesia, presented at the AMEE Conference 2014
2013	Standardized patients training in high-stake examination, presented at the Ottawa Conference 2014
2012	Teaching strategies for integrated communication and physical examination skills training, presented at the APMEC 2013
2012	Developing an affordable vital sign simulator as a learning resource for clinical skills training, presented at the AMEE Conference 2012
2011	Using borderline regression method as a standard setting for undergraduate OSCE in Universitas Gadjah Mada, presented at the International HPEQ Conference, 2011
2011	The effectiveness of Saturday Clinic as early clinical exposure for second year medical students

Research interests:
Assessment
Teaching and learning
Simulation
Professional development
Research in education

Prof. Ali Ghufron Mukti, MD, M.Sc., Ph.D

Full Name:
Ali Ghufron Mukti

Position:
Director General of Resources for Science, Technology and Higher Education, Ministry of Research, Technology and Higher Education

Education:
2000: Doctor of Philosophy (Ph.D), Faculty of Medicine, University of Newcastle, Australia
1991: Master of Science (M.Sc.), Department of Tropical Hygiene, Mahidol University, Thailand
1988: Medical Doctor (MD), Faculty of Medicine, Universitas Gadjah Mada
1986: Bachelor of Medicine, Faculty of Medicine, Universitas Gadjah Mada

Academic and Professional Degree:
- Honorary Degree in Health Sector from Coventry University, United Kingdom
- Health Insurance Expert from Association of Insurance Management and Health Insurance Experts
- Family Medical Expert from Association of Indonesia Doctor

Academic and Professional Positions:
2015-present: Director General of Resources for Science, Technology and Higher Education, Ministry of Research, Technology and Higher Education, Republic of Indonesia
2016-present: Acting Rector of Universitas Trisakti, Indonesia
2012: Chairman of Indonesia Delegation for World Health Assembly-WHO in Geneva
2012-2015: Chairman of Implementation Preparatory Working Group of National Health Insurance Scheme in Indonesia
May-June 2012: Acting Minister of Health, Republic of Indonesia
2011-2014: Vice Minister of Ministry of Health, Republic of Indonesia
2011-2013: Member of Board of Global Health Workforce Alliance (GHWA)-WHO
2011-2013: Chairman of Association of Medical Education Institutions of Indonesia
2009-2012: Head of Indonesia Health Economics Association
2008-2011: Dean of Faculty of Medicine, Universitas Gadjah Mada
2006-2010: Leadership Board Member of Association of Health Insurance Providers
2004-2010: Head of Public Health Sciences and Preventive Medicine Counseling for Faculty of Medicine in Indonesia
2003-2008: Chairman of Public Health Sciences, Faculty of Medicine, Universitas Gadjah Mada
2003-2013: Chairman of Board of Trustee of Provincial Health Insurance, Yogyakarta Special Province, Indonesia

2003-2010: Member of International Health Economics Association (IHEA)
2004-2006: Chairman of International Master Program of Public Health Science, Faculty of Medicine, Universitas Gadjah Mada
2002-2004: Secretary of Doctoral Program of Public Health, Faculty of Medicine, Universitas Gadjah Mada
2002-present: Member of The Examiner Team of The Association of Insurance Management and Health Insurance Experts in Indonesia
2002-present: Chairman of The Association of Insurance Management and Health Insurance Experts in Indonesia
2001-2004: Member of Task Force of Health Insurance Development, Yogyakarta Special Province, Indonesia
2000-2008: Chairman of Health Insurance Financing and Management Policies, Master Program of Public Health Science, Faculty of Medicine, Universitas Gadjah Mada
1999-2008: Director of Gadjah Mada Medical Center, Yogyakarta, Indonesia
1998-2010: Member of International Clinical Epidemiology Network Southeast Asia (INCLEN SEA)
1994-2010: Member of International Clinical Epidemiology Network (INCLEN)

As Guest Lecturer/Examiner in International Universities:

- Coventry University, United Kingdom
- Vrije University, Amsterdam, The Netherlands
- Universiti Kebangsaan Malaya, Malaysia
- Tokai University, Japan
- Asia University, Taiwan
- Health Service Academy, Pakistan
- Dhakka University, Bangladesh

As Consultant in Local Government and International Institutions:

- Health Consultant in Ministry of Health, Republic of Indonesia
- Health Consultant in Indonesia Local Government
  (such as Special Area of The Capital Jakarta, West Java, East Java, Yogyakarta Special Province, Banten, Lampung, East Borneo, North Maluku, etc.)
- Health Consultant in Private Area Industries
  (such as PT. Pertamina, PT. Semen Gresik, PT. Unilever, PT. Perkebunan Nasional X, etc.)
- Health Consultant in International Institutions
  (such as World Bank, World Health Organization, International Labour Organization, Deutsche Gesellschaft fur Internationale Zusammenarbeit (GIZ), Australia Aid Program (AUSAid), etc.)

Expertise and Interests:
Health policy system
Health insurance and financing
Human resources management in health
Quality of health services
Medical family doctor
Epidemiology

Awards:
2017: Honorary Degree from Coventry University, United Kingdom for promoting Universal Health Care in Indonesia
2014: Honorary Awards of Bintang Maha Putra from Indonesian Government
2012: The Best Australian Alumni Award for Outstanding Contribution Public Health Administration
2012: Alumni Award Newcastle University, New South Wales, Australia
2010: Gold Medal from The Government of Balikpapan, East Borneo for the contribution in health development sector in Balikpapan, Indonesia
2002: A Professional Degree as Health Insurance Expert from The Association of Insurance Management and Health Insurance Experts
1994: A Professional Degree as Family Medical Expert from The Association of Indonesian Doctor
1991: Research Fellow Award from Brown University, USA

Prof. David Gordon, FRCP, FMedSci

Professor David Gordon FRCP FMedSci began his term of office as President of the World Federation for Medical Education (WFME) in January 2015. He is a former President of the Association of Medical Schools in Europe, and is emeritus professor of medicine and former dean of the medical faculty at the University of Manchester. He also holds visiting appointments at a number of other universities.

The Medical Faculty in Manchester is one of the largest in Europe, and includes schools of medicine, nursing, dentistry, pharmacy, and psychology. While Dean in Manchester, he was also elected as chair of the Council of Heads of Medical Schools (now the Medical Schools Council), the representative body for all medical schools in the UK, particularly concerned with UK national policy for medical education and for medical schools, and with the interaction of medical schools with their parent universities.

After qualifying from the University of Cambridge, he held research, academic and clinical appointments in Leicester, Cambridge and London, working and publishing on renal and cardiovascular physiology, pathophysiology and epidemiology. He then joined the Wellcome Trust during the period of its expansion to become the world's largest endowed foundation, and the world's largest non-governmental funder of biomedical research.

Anna Maria Iacone, MS

Full Name:
Anna Maria Iacone

Institution:
ECFMG

Appointment:
Assistant Vice President, Global Education in Medicine Services

Education:
MS

Anna M. Iacone holds a senior leadership position as Assistant Vice President for Global Education in Medicine Services at the Educational Commission for Foreign Medical Graduates (ECFMG®). Anna's expertise is in the area of medical and health professions education opportunities worldwide. Her background is in ECFMG certification requirements, US postgraduate residency application, recruitment and match procedures, and visa eligibility requirements for non-US citizen, international medical graduates participating in US postgraduate residency training. Under her leadership, Anna initiated and launched the ECFMG GEMx service program to facilitate student elective exchanges worldwide through global partnerships. Her preliminary work on the GEMx model was published in the *Annals of Global Health* in 2014 and 2015. Anna has presented on GEMx at national and international medical education conferences. Her research interest is student learning experiences from a global health elective.

Anna holds a BBA in International Business Administration from Temple University, Philadelphia, PA, USA and Temple Campus – Rome, Italy. She also received her MS in Organizational Development and Leadership from Saint Joseph's University, Philadelphia, PA, USA. She is also a member of the Omega Chapter of Alpha Epsilon Lambda, in recognition of her graduate academic achievements.

Area of Competence:
Leadership and Management
Program Development
International Relations

Professional Experience:
US Graduate Medical Education Administration
International Student Exchange Services

Research Interest:
Global health electives and its impact on students

Dr. Salma Burton

Dr. Salma Burton has wide ranging experience and expertise in the areas of public health, health policy planning, health management and administration and health programme evaluation. She is a British citizen, born in the Maldives where she did her schooling. Her graduate and postgraduate education have been at the American University of Beirut, Lebanon; University of Leeds, UK; University of Texas, Galveston, US; and South Bank University, London, UK. She has worked in national, international, government and non-government organizational settings including Ministry of Health and Ministry of Women's Affairs in Maldives, National Health Services and Social Services of UK, International Planned Parenthood Federation and Save the Children, United Nations Population Fund in Nigeria, UN World Health Organization in its Southeast Asia Regional Office in New Delhi, WHO Country Office in Myanmar and Indonesia where she currently works. She has travelled extensively with her work and she is widely published. In WHO Indonesia Country Office she is currently Team leader and Coordinator for the Reproductive, Maternal, Newborn, Child and Adolescent Health programmes and Health System Strengthening. As part of the Health System Strengthening work she coordinates the programmes on Universal Health Coverage, rational use of medicines, health information and evaluation and Human Resources for Health.

Dr. Audrey Fontaine

Full Name:
Audrey Chloé Fontaine

Institution:
Lille University Hospital, Psychiatry Department
Junior Doctor Network of the World Medical Association

Appointment:
Resident in Psychiatry, Lille University Hospital
Education director, Junior Doctor Network of the World Medical Association
President of the French psychiatric residents association
Vice president of the French Junior Doctor Union
President of Lille's Junior Doctors Union
Representative of the European Junior Doctors at the psychiatry section of the Union Européenne des Médecins Spécialistes.

Education:
Medical studies
Psychiatry residency training (on going)
Masters in Research (on going)

Area of Competence:
Psychiatry
Mental Health
Medical Residency Training and medical professional organisations

Professional Experience:
Psychiatry resident

Research Interest:
Global mental health, prevention in mental health
E-mental health
Medical education, residency training systems

Prof. P. T. Jayawickramarajah

Name:
Ponnampalam Jayawickramarajah

Education:
Basic medical degree (MBBS) from University of Colombo
Master of Education (med) from University of Illinois
Doctorates (phds) from University of Groningen
Fellow of the College of Preceptors UK
Professor in Medical Education in the Srilankan university

Professional Experience:
Consultant in Medical Education in SEAR countries
Senior Adviser in the World Federation for Medical Education (WFME)
Member of the Board of Study in Medical Education in Post Graduate Institute of Medicine (PGIM) University of Colombo
Academic consultant at the Faculty of Health Care Sciences in the Eastern University
Consultant in Human Resources Development for health(HRH)
Regional Adviser for HRH in SEARO,
Coordinator Health Systems and Director Family Health in New Delhi
WHO Representative and Head of the Mission in Thailand

Contribution:
More than 100 publications many of which appeared in reputed peer reviewed journals in Medical Education
Advocated innovations in medical education
Popularized Problem-Based Learning in medical schools in South East Asia

Prof. Madalena Patrício

Madalena Patrício is Director of the Department of Medical Education (DEM) at the Faculdade de Medicina da Universidade de Lisboa (FMUL)and member of its Scientific Council.She integrates the CEMBE (Center for Evidence Based Medicine) where she leads the BEME Collaboration Group (Best Evidence Medical Education) and coordinates a Systematic Review on the reliability, validity and feasibility of the OSCE (Objective Structured Clinical Examination).She is Professor of Medical Education at the Institute of Introduction to Medicine.

Areas of greatest interest:
Assessment of clinical competences namely based on the OSCE, Humanization of Medicine namely through Community Teaching, BEME (Best Evidence Medical Education) and Social Responsibility of Medical Schools.

Scientific activity:
MP is co-author and co-editor of 5 books: '*The Definitive Guide to the OSCE: The Objective Structured Clinical Examination as a performance assessment'* (Harden RM, Lilley P, Patricio M. 2016),*Handbook of Good Educational Practices in Health Professions'* (Jordão JG, Patricio M.2002), *Medical Skills –A resource book for teachers* (Metz J, Patricio M, Peinado JM, Szekeres P. 1999), *Baby XXI – The Changing patterns for the child and family in the turn of the century* (Gomes-Pedro J, Patricio M. 1999), *Baby XXI – Biopsychology of early parent-infant communication*. (Gomes-Pedro J, Patricio MF. 1989).She has published more than 20 papers (first author in 12) in journals of international circulation with scientific arbitration, has more than 130 presentations in conferences or other scientific events of which more than a 100 by invitation of respective organizations.

At International level MP occupies the following positions:

- President ex-officio of **AMEE,**the international Association for Medical Education is the leading international association for medical education with members in more than 100 countries. It is a not-for-profit organisation. 2013-2018. (www.amee.org)
- Chair of **BEME BOARD,** the Best Evidence Medical Education Collaboration is an international group dedicated to the development of evidence-based education in the medical and health profession. **2015-2018.** Member of BEME Board since 2000.(bemecollaboration.org)

- Founding Member of **ASPIRE,**an AMEE initiative for the International Recognition of Excellence in Education. Member of the panel on ASPIRE Excellence on Student Engagement. Assessor of ASPIRE submissions (aspire-to-excellence.org)
- Member of the **Editorial Board of Medical Teacher,** one of the top ranked Journals in medical Education, 2006 -2018.(amee.org/publications/medical-teacher)
- External consultant of **WHO -World Health Organization** (www.who.org)
- Chair of the **Miriam Friedman Ben David Educator award Committee**, an AMEE distinction to recognize extraordinary efforts and contributions in terms of the design and implementation of innovative methods or approaches to teaching, curriculum and courses. 2016-2018 (amee.org/awards-prizes#miriam-friedman-bendavid-award)
- Member of the **Jury of the Karolinska Institutet Prize on Research on Medical Education**, to distinguish outstanding research in medical education.Stockholm, 2011-2012. (ki.se/en/about/karolinska-institutet-prize-for-research-in-medical-education

MP Participated in volunteer training programs of health professionals in Africa:

- Co-coordinator, teacher and assessor in training programs for Doctors and Nurses developed at Portuguese ancient colonies, namely in Mozambique(3), São Tomé (2) and Angola (1)

MP was awarded the following international distinctions:

- AMEE Life Time Award Achievement, 2013
- Honorary Member of the Royal Academy of Medicine of Catalonia, 2012

Prof. Ibrahim Al Alwan

President of the Association for Medical Education in the Eastern Mediterranean Region (AMEEMR)

Professor Ibrahim Al Alwan obtained his MBBS certification at King Saud University, Riyadh (1988); Residency training in Canada (1993-1996); Certified Pediatrician MRCP, [UK] (1995), American Board of Pediatrics, USA (1996); FRCPC [Canada] (1997); Pediatric Endocrinology and Metabolism, Canada (1999).

Academic appointment: Assistant Professor (2004-2009) and Associate Professor, (2009-date), Paediatrics, COM, KSAU-HS, Riyadh. He held the administrative position of Associate Dean, Academic & Student Affairs, (2006-201) and has until recently been Dean, College of Medicine, KSAU-HS.

Professor Al Alwan is involved in various committees at the COM-R and actively involved in research and publications.

Prof. Ricardo Leon-Borquez

President of the Panamerican Federation of Associations of Medical Schools (PAFAMS)

Ricardo León–Bórquez, MD, MSA is Professor at the Universidad Autónoma de Guadalajara (UAG) in México. He studied medicine at UAG, completed a Masters in Sciences in Physiology at UAG and the University of Oklahoma (1987). He also has a Master in Science Administration from University of Central Michigan (1994). He is a scholar of the Harvard Macy Program (Leaders in International Education – 2000)

He has had a long career at UAG, holding positions as Academic Secretary of the School of Medicine (1985 to 1988), developer of the International Program of the School of Medicine (1988 – 1989), became the first Associate Dean of the International Program (1989 – 2000), Dean of the School of Medicine (2000-2007), Vice-President of Health Sciences (2007 – 2011) and Director of Institutional Relations of UAG (2011 – 2015)

Dr. León has participated as a founder member of the International Association of Medical Sciences Educators (IAMSE). He has held different positions in the Mexican Association of Schools and Faculties of Medicine (AMFEM in Spanish) and in 2015 he became President, his term ending in 2017. He has also served as Vice-President of the Pan-American Federation of Associations of Medical Schools (PAFAMS) from 2013 to 2016 and in June 2016 he was elected President of PAFAMS for the next 3 years.

Prof. Michael Field

President of the Western Pacific Association for Medical Education (WPAME)

Michael Field AM, MD, FRACP is Emeritus Professor of Medicine at the University of Sydney, Australia. He is a nephrologist with a research background in renal physiology, and practises and teaches at the Royal North Shore Hospital of Sydney. He has been President of the Australian Society for Medical Research, and the Australian & New Zealand Society of Nephrology. He was formerly the Associate Dean (Curriculum) at the Sydney Medical School, involved in the reform of medical education in Australia through the introduction of graduate-entry programs based on PBL and IT infrastructure.

Professor Field has had a long interest in quality assurance in medical education, both within Australia and internationally. He was the Chair of the Medical School Accreditation Committee of the Australian Medical Council from 2004-2010, and has been involved as a medical school consultant and reviewer in several European and Asian countries for nearly 20 years. He has been a member of the Advisory Board of WPAME since 2006.

Prof. William W. Pinsky

Full Name:
William W. Pinsky

Appointment:
President and Chief Executive Officer of the Educational Commission for Foreign Medical Graduates (ECFMG)
Chair of the Board of Directors of ECFMG's Foundation for Advancement of International Medical Education and Research (FAIMER)

Education:
Saint Louis University School of Medicine
Pediatrics at Baylor College of Medicine
postdoctoral fellowship in Pediatric Cardiology at Texas Children's Hospital

Professional Experience:
Executive Vice President and Chief Academic Officer of Ochsner Health System (OHS)
Boards of the Accreditation Council for Graduate Medical Education, the Accreditation Council for Continuing Medical Education, and the Alliance of Independent Academic Medical Centers
President and Chief Executive Officer of the Educational Commission for Foreign Medical Graduates (ECFMG)
Chair of the Board of Directors of ECFMG's Foundation for Advancement of International Medical Education and Research (FAIMER)

Nani Cahyani Sudarsono, MD, Sp.KO

Full Name:
Nani Cahyani Sudarsono

Institution:
Faculty of Medicine, Universitas Indonesia

Appointment:
Head of Academic Quality Assurance, Faculty of Medicine, Universitas Indonesia

Education:
Specialist in Sports Medicine
Area of Competence:
Sports Medicine

Professional Experience:

- Physician in Jayapura District Hospital (1988 – 1992)
- Sports Medicine residency training at FMUI (1993 – 1999)
- Lecturer at FMUI (1999 – present)
- Head of Sports Medicine Program FMUI (2006 – 2010)
- Coordinator of Undergraduate Program FMUI (2008 – 2013)
- Chairman of Indonesian College of Sports Medicine Physician (2010 – present)
- Manager of Education and Student affairs FMUI (2014 – 2018)
- Chairman of National Committee for Indonesian Medical Doctor Competency Examination (2015 – 2016)

Research Interest:
muscle physiology and muscle training
physical fitness
exercise in children and diabetics

Clinical Prof. Suwat Benjaponpitak, MD

Full Name:
Suwat Benjaponpitak

Current Position:
Vice President for Academic Affairs, Mahidol University

Dr. Suwat Benjaponpitak, M.D. is a Clinical Professor of Pediatrics and Head of the Pediatric Allergy and Immunology Section at Faculty of Medicine Ramathibodi Hospital, Mahidol University. Currently he also serves as a Vice President for Academic Affairs at Mahidol University, the Council member of Asian Society for Pediatric Research (ASPR), and the Executive Committee of South East Asian Regional Association for Medical Education (SEARAME). In the areas of educationand quality development, he also serves as the Assessor of Thailand Quality Award (TQA) and the Education Criteria for Performance Excellence (EdPEx), Board of Director and Assessor of the Institute of Medical Education Accreditation (IMEAc) in Thailand. He graduated from Prince of Songkla University in 1985. He went on to residency training in Pediatrics at Faculty of Medicine Ramathibodi Hospital, Mahidol University from1988 to 1991. He also went through the fellowship training in Pediatric and Clinical Immunology at Stanford University, USA from 1996 to 1998.

He was a Past President of the Allergy, Asthma, and Immunology Association of Thailand (AAIAT) during 2010-2012, past Board of director of World Allergy Organization (WAO) during 2014-2017. In 2013, he had organized and chaired the Asia Pacific Association of Pediatric Allergy, Respirology and Immunology Conference (APAPARI2013), and in 2016, the Asian Society for Pediatric Research Conference (ASPR 2016) in Bangkok, Thailand. He was the Associate Dean for Education at Faculty of Medicine Ramathibodi Hospital, Mahidol University during 2008-2015. His research of interests includes allergen specific immunotherapy, childhood asthma, drug allergy, food allergy, and medical education. He has published over 60 research articles in peer reviewed journals.

Prof. Dr. Himanshu Pandya

Full Name:
Himanshu V. Pandya

Designation (Academic):
Professor of Medicine and Medical Education,
Pramukhswami Medical College, Karamsad, Gujarat, India

Designation (Administrative):
Associate Dean for Clinical Services, Pramukhswami Medical College, Karamsad, Gujarat, India
Dean, Faculty of Medicine, Sardar Patel University, Vallabh Vidyangar, Gujarat, India
Chairman, Professional Development Group, H. M. Patel Center for Medical Care and Education, Karamsad, Gujarat, India

Role in Medical Education:

Position	Role
Professor, Department of Medical Education	Resource Faculty, Medical Council of India Regional and Nodal Centre for Faculty Development since 2010 Covener, Medical Council of India Regional and Nodal Centre for Faculty Development between 2010 to 2016

Educational Qualifications:

Year	Degree Awarded	Name and Location of Institution (State and Country)	Area of Study
1982 to 1986	M.D.	K M School of PG Medicine & Research, Ahmedabad, Gujarat, India	Medicine & Theurapetics
1977 to 1982	M.B.B.S	NHL Municipal Medical College, Ahmedabad, Gujarat, India	Medicine & Surgery

Professional Experience:

Dates	Position/Title	Name and Location of Institution
January 1997 till date	Professor of Medicine	Pramukhswami Medical College, Karmasad, Gujarat, India
January 1993 to December 1997	Associate Professor of Medicine	Pramukhswami Medical College, Karmasad, Gujarat, India
January 1988 to December 1992	Assistant Professor of Medicine	Pramukhswami Medical College, Karmasad, Gujarat, India
July 1987 to December 1987	Junior Specialist	Shree Krishna Hospital, Karamsad, Gujarat, India
April 1987 to May 1987	Physician	MP Urological Hospital, Nadiad, Gujarat, India

Professor Dr. Md. Humayun Kabir Talukder

Full Name:
Humayun Kabir Talukder

E-mail Address:
hktalukder@yahoo.com

Office Address:
Centre for Medical Education (CME), NHL building 3rdfloor, Mohakhali, Dhaka -1212, Bangladesh

Institution:
Centre for Medical Education (CME)

Appointment :
Professor of Curriculum Development & Evaluation

Education:
MBBS Sher E Bangla Medical College, Barishal, MSc in Health Professions Educations (Thailand), MPH NIPSOM Dhaka, PGDM Bangladesh Open University and FAIMER Fellowship (FAIMER Institute, Philadelphia, USA)

Area of Competence:
Curriculum Development, Interprofessional Education, Quality Assurance, Accreditation, and Problem Based Learning

Professional Experience:
- Professor curriculum development &Evaluation (2015 – current)
- NPO Human Resource for Health, WHO Bangladesh Country Office (2014-2015)
- Associate Professor curriculum development & evaluation (2012-2013)
- Associate Professor teaching methodology (2005-2012)
- Asstt. Prof. Curriculum development, Dhaka (2003-2005)
- Lecturer in Educational Science at CME, Dhaka (1997-2002)

Research Interest:
Curriculum Development, Interprofesional Education(IPE), Quality Assurance, Accreditation & Problem based Learning

Prof. Indika Karunathilake

Full Name:
Indika Mahesh Karunathilake

Institution:
Department of Medical Education
WHO Collaborative Centre in Medical Education

Appointment:
Professor and Head of Department of Medical Education
Head of WHO Collaborative Centre

Education:
MBBS (Col.)
CTHE (Col.)
MMedEd (Dundee)
FCGP (SL)
FHEA (UK)
FCME (SL)
FRCP (Edin.)

Area of Competence:
Medical Education
Primary care
Public Health

Professional Experience:
Professor in Medical Education, University of Colombo
Founder President of College of Medical Educationists, Sri Lanka
Editor in Chief of South Asian Journal of Medical Education
Executive Committee member of SEARAME
Vice President (2014) and Secretary (2008, 2010) of Sri Lanka Medical Association
Vice President of Asia Pacific Consortium of Public Health (2014-2017)
Resource person in medical education at national, regional, international and WHO level.

Research Interest:
Assessment
E-learning
Simulation
Disaster management
Public Health

Prof. Usman Chatib Warsa, MD, PhD

Full Name:
Usman Chatib Warsa

Institution:
Indonesian Accreditory Agency for Higher Education in Health (IAAHEH)

Appointment:
Chairman of IAAHEH

Education:
Medical Doctor, Universitas Indonesia, Jakarta

Area of Competence:
Medical and Clinical Microbiologist

Professional Experience:
Lecturer

Research Interest:
Hospital infections
Drug resistance

Prof. Janet Grant

Full Name:
Janet Grant

Institutions:
Centre for Medical Education in Context (CenMEDIC)
World Federation for Medical Education
FAIMER
University College London Medical School
The Open University, UK
University of Illinois at Chicago College of Medicine.

Appointments:
Academic Director, CenMEDIC
Special Adviser to the President, WFME
Co-Director, FAIMER Centre for Distance Learning
Honorary Professor UCL
Emerita Professor of Education in Medicine, Open University
Senior Scholar, Department of Medical Education, UIC.

Education:
BA, Developmental Psychology
MSc, Psychology of Education, University of London
PhD, Educational Psychology, clinical problem solving, University of London

Areas of Competence:
Janet's interests are in policy research, regulation, educational development, continuing professional development and curriculum. She has written extensively on contextual relevance in these topics. CenMEDIC runs an international distance learning Master's course on accreditation and assessment in health professions education with the US Foundation for the Advancement of International Medical Education and Research [FAIMER] and Keele University Medical School in the UK. Her Centre also developed and manages Sci59, the online psychometric *Specialty Choice Inventory* and the online *Diagnostic Thinking Inventory*. Janet has extensive experience as a regulator in both medical education and legal education. She is author of *The Good CPD Guide* [Taylor and Francis, 2012].

Professional Experience:
Janet has spent her academic life undertaking policy research in medical education for the UK government and professional bodies. She was a founder member of the UK regulatory authority for postgraduate medical education and Chair of it Curriculum Committee. She has been a consultant on curriculum development and regulation to medical schools and professional medical bodies worldwide. She has undertaken external programme evaluations for schools in four continents.

Research Interests:
Clinical problem solving, Continuing professional development, Curriculum, Contextual and cross-cultural educational psychology

Prof. Khunying Kobchitt Limpaphayom

Full Name:
Khunying Kobchitt Limpaphayom

Institution:
Faculty of Medicine, Chulalongkorn Univ.
WFME advisers group

Appointment:
Professor Emeritus

Education:
MD
PhD(honorary)

Area of Competence:
OB & GYN
Gynecologic Oncology

Professional Experience:
Medical education

Research Interest:
GYN teaching

Prof. Tin Tun

Dr Tin Tun, at present, is a Deputy Director General for Academic Affairs at the Department of Human Resources for Health. He graduated from the University of Medicine (1), Yangon in 1995 and served in the Ministry of Health and Sports (MOHS) in various capacities. He got his M.P.H.M from the ASEAN Institute for Health Development, Mahidol University in 2001 and MSc in Medical Education from Cardiff University in 2006. He has involved in managing academic institutions under the MOHS since 2002. Dr Tin Tun has been involved actively in faculty development programmes for all medical and allied health institutions since 2006. He is the course co-ordinator for Diploma in Medical Education programme which is conducted for senior faculty members. He is the Executive Committee Member and Vice-President of South East Asian Regional Association for Medical Education and General Secretary of the Myanmar Society of Medical Educationists. He also takes part in Accreditation Board of the Myanmar Medical Council and Medical Education Sub-committee of the Myanmar Academy of Medical Science as a member. He has been teaching medical education science to the Master of Public Health students since 2007. Ha has also participated in many National and International conferences and workshops as a chair and resource person. He also conducted researches on Medical Education and Human Resources for Health planning. He is a Visiting Professor in Medical Education at the Defence Services Medical Academy and the Military Institute of Nursing and Paramedical Sciences. His areas of interest are Curriculum Development, Educational Leadership and Management, Learners' Assessment and Quality Assurance.

Prof. Dr. Ainun Afroza

MBBS, FCPS (Ban), M Med Ed (UK), CTTP (Can)

Prof. Dr. Ainun Afroza- a Pediatrician and Medical Educator has Teaching, Clinical Care and Research experience for more than three decades. She was the Founder Chair of the Pediatric Gastroenterology and Nutrition Department of Bangabandhu Sheikh Mujib Medical University, Dhaka, Bangladesh. She is also a Co-Founder and Director of the Green Life Medical College & Hospital in Dhaka. Dr. Ainun has worked as an International Professional at South East Asia Regional Office of WHO and contributed in the development of Human Resource for Health in the region.

She is a pioneer Medical Educator of Bangladesh and made significant contribution in the advancement of curriculum development, teaching methods and assessment system. She is a proud member of executive committee of South East Asia regional Association of Medical Education (SEARAME) since 2006, and currently an Advisor of the Association.

Dr. Ainun's noteworthy innovation of **"Integration of Public Health in Clinical Teaching"** and **"Art of Holistic Approach in Clinical Care,"** are well received by health professionals. As a volunteer she is actively engaged with a number of international not for profit organizations focusing on **Global Health, Global Peace**, **Maternal & Child Nutrition**.

Dr. Ainun is honored to be a delegate to attend United Nation's **"Commission on Status of Women"** in UN Head Quarter for four consecutive years. She is a member of the Wilson Centre for Medical Education of University of Toronto and Research Ethics Board of George Brown College. In recent years she has participated in series of Faculty Development Programs and CME programs to enhance her professional endeavor.

To pursue knowledge translation, Dr. Ainun has authored books and published articles in scientific journals and other print media.

Her philosophy of life is: "Do Small Thing with Great Love" – (Mother Teresa)

Previous Training in Health Profession Education:

- The FAIMER-CenMEDIC-Keele University Diploma in Health Profession Education: Accreditation and Assessment

- Fellowship of 'Leading for Change in HPE – An International Program' sponsored by Karolinska Institute, Sweden and BMJ organized in Stockholm, Sweden (2010)
- Distance Learning Course of OUCEM, UK in collaboration with FAIMER-WFME, Theme 1. Self Review and Accreditation. Modules 1 to 8 (2009-11)
- Fellowship of CMCL-FAIMER Regional Institute (2007)

Publications, Conferences, Presentations, Workshops (Medical Education Related):

- Publications in Peer Reviewed National and International journals – 13
- Abstracts in Conference Proceedings of National and International Conference – 07
- Presentations at National and International Conferences and Workshops – 84
- Organized National Symposium – 3
- Organized Workshops under National Faculty Development Program – 98
- MCI Observer to Workshops under National Faculty Development Program – 21
- Professional Development Course, Conference and Workshop – 34

Recognition/Honor (Medical Education Related):

Year	Recognition/Award	Name and Location of Institution	Area of Work
2018	President	Academy of Health Professions Educators, India	Health Professions Education
2014	National Consultant, Advance Course in Medical Education	Medical Council of India, New Delhi, India	MCI National Faculty Develpment Program
2014	Member, Expert Group for Revision of Basic Course Workshop	Medical Council of India, New Delhi, India	MCI National Faculty Develpment Program
2013	Member of Executive Committee	Academy of Health Professions Educators, India	Health Profession Education
2012	Member of MCI National Team and National Faculty	Medical Council of India, New Delhi, India	Curriculum Implementation Support Program
2011	Member, Subcommittee, Academic Cell, MCI	Medical Council of India, New Delhi, India	Curriculum Implementation Support Program
2011	Member, Curriculum Committee, Undergraduate Medical Course	Medical Council of India, New Delhi, India	Medicine
2011	Fellowship of Indian College of Physicians	Association of Physicians of India, Mumbai, India	Teaching, Patient Care, Research

Dr. Joao Martins

Full Name:
João Soares Martins

Current position:
Dean, at Faculty of Medicine and Health Sciences,
Universidade Nacional Timor Lorosa'

Membership of professional bodies:
Timor-Leste Medical Association 2001 to present
Country Coordinating Mechanisms (CCM) of the Global Fund from 2003-2005.

Education:
2006-2010: PhD, University of New South Wales, Sydney, NSW, Australia.
1998-2001: Masters of Public Health (MPH) Distinction, University of Otago, Dunedin, New Zealand
1987-1994: Medical Doctor (Undergraduate) University of Udayana, Bali, Indonesia

On-going Research Projects:

- Understanding human resources for health recruitment and deployment in post-conflict settings: a case study in Timor Leste. Joint Research Collaboration Project between the Liverpool School of Tropical Medicine and Univerisdade Nacional Timor Lorosa'e, funded by the ReBUILD – DFID, UK.
- Perspectives and experience of the policy makers and local authorities towards decentralization and how it affects health financing and budget allocation at municipality level in Timor-Leste. Funded by the Centro Nacional de Investigacao Cientifica, UNTL, Timor-Leste.

Papers presented in international conferences

- Human Resource for Health Challenges for Timor-Leste: Inaugural Forum on Human Resource for Health in the Asia and Pacific Regions organised by the HRH Hub, School of Public Health and Community Medicine, University of New South Wales, Sydney, Australia, in April 2010.
- Malaria Treatment Protocol: implementation issues: Pan-African Malaria Conference, 2-6 November 2009 in Nairobi, Kenya organised by Multilateral International for Malaria (MIM).
- Malaria Treatment Protocol: policy process and implementation: The first Scientific Conference on Health Science in Timor-Leste organised the Institute of Health Science and the Ministry of Health Timor-Leste in December 2008, Dili, Timor-Leste.
- Malaria control during the instability in Timor-Leste in 2006: Transitions: Health & Mobility in Asia-Pacific Populations, Monash University, Melbourne, Australia, in June 2007
- Public health curriculum. Asia Pacific Academic Consortium for Public Health Conference in Brisbane, Australia, December 2004.

Dr. Detty Siti Nurdiati, MPH, PhD, SpOG(K)

Full Name:
Dr. Detty Siti Nurdiati, MPH, PhD, SpOG(K)

Education:

- MD : Faculty of Medicine, Universitas Gadjah Mada, Jogjakarta, Indonesia (1984-1990)
- MPH : Umeå International School of Public Health, Epidemiology and Public Health Sciences, Dept of Public Health and Clinical Medicine, Umeå University, Umeå, Sweden (1996-1997)
- Ph.D : Umeå International School of Public Health, Epidemiology and Public Health Sciences, Dept of Public Health and Clinical Medicine, Umeå University, Umeå, Sweden (1997-2001)
- Obstetrician & Gynecologist : Dept. of Obstetrics & Gynecology, Fac. of Medicine, Universitas Gadjah Mada, Jogjakarta, Indonesia (2002-2006)
- Consultant in Maternal-Fetal Medicine : Dept. of Obstetrics & Gynecology, Fac. of Medicine, Universitas Gadjah Mada, Jogjakarta, Indonesia (2008-2011)

Professional Experience:

- Lecturer, Department of Obstetric & Gynecology, Faculty of Medicine, Universitas Gadjah Mada (1991-now)
- Clinical Educator, SEA-ORCHID Project (2005-2011)
- Contact Person of Indonesian Cochrane Network (2009-now)
- Head of Obstetric and Gynecology Department, Faculty of Medicine, Universitas Gadjah Mada, Dr. Sardjito Hospital (2016-now)

Jarir At Thobari, MD, DPharm, PhD

Full Name:
Jarir At Thobari

PROFESSIONAL ORGANIZATION & WORKPLACE
Name and position in professional organization:
President of International Society of Pharmacovigilance (ISoP) Indonesia Chapter
Member of International Society of Pharmacoepidemiology (ISPE)
Member of International Society of Pharmacoeconomy and Outcome Research (ISPOR)
Member of International Society of Pharmacovigilance (ISoP)
Secretary of Indonesian Clinical Epidemiology and EBM Network (ICE-EBM)
Member of Indonesia Society of Pharmacology (ISP)
Consultant in Pharmacovigilance, National Drug and Food Control, Republic of Indonesia
Consultant of Post Marketing Surveillance for Drug and Vaccine, National Drug and Food Control
Consultant of Directorate Pharmacoeconomy, Ministry of Health, Republic of Indonesia
Member of Health Technology Assessment (HTA) Committee, Ministry of Health, Republic of Indonesia
Member of Health Technology Assessment (HTA) Committee, Indonesian Hospitals Society
Member of Drug Evaluation Committee, National Drug and Food Control, Republic of Indonesia

Name and position in workplace (hospital, university, regional training center WHO etc):
Director of Clinical Epidemiology and Biostatistics, Faculty of Medicine, Universitas Gadjah Mada & Sardjito General Hospital, Yogyakarta, Indonesia
Trainer of Good Clinical Practice (GCP) and Coordinator Training of GCP, Regional Training Center, World Health Organization – Tropical Disease Research (RTC-WHO-TDR)
Board of Director, Cochrane Indonesia, Universitas Gadjah Mada, Yogyakarta, Indonesia
Academic staff, Department of Pharmacology and Therapy, Faculty of Medicine, Universitas Gadjah Mada, Yogyakarta, Indonesia
Board of Director, Pediatric Research Office, Faculty of Medicine, Universitas Gadjah Mada, Yogyakarta, Indonesia
Researcher at Centre for Health Insurance Management, Faculty of Medicine, Universitas Gadjah Mada, Yogyakarta, Indonesia

EDUCATION: List of Colleges/Universities attended and degrees obtained:
2015 – Certificate Training in Ethics in Implementation Research, WHO-TDR, Yogyakarta, Indonesia
2014 – Certificate Training in Advanced Good Clinical Practice (GCP), WHO-TDR, Cali, Colombia
2012 – Diploma in Advanced Vaccinology (ADVAC), Merieux Foundation, Annecy, France
2011 – Diploma in Vaccinology, Institute Pasteur and Marie Curie University, Paris
2010 – Diploma in Basic Vaccinology, International Vaccine Institute, IVI, Seoul, Korea
2010 – Certificate Training in Good Clinical Practice (GCP), WHO-TDR
2010 – Certificate Training Effective Planning and Program Evaluation (EPPE) from WHO-TDR
2010 – Diploma in Clinical Research and Evidence-Based Medicine, Institute Tropical Medicine (ITM), Antwerp, Belgium
2009 – Diploma in Molecular Epidemiology, Leeds University, Leeds, United Kingdom
2006 – Doctor Degree (PhD) at Department of Pharmaco-epidemiology, Pharmacoeconomy, and Pharmacotherapy, Groningen University, the Netherlands
2002 – Master Degree in Pharmacology & Therapy at the Department of Biochemical Pharmacology, Faculty of Medicine, Innsbruck University, Innsbruck, Austria
1999 – Master Degree in Hospital Management in University of New South Wales (UNSW), Sydney, Australia
1998 – Medical Doctor (MD) – Faculty of Medicine, Universitas Gadjah Mada, Yogyakarta, Indonesia

RESEARCH EXPERIENCE:
List of current research
Rotavirus Vaccine Clinical Trial, Phase I, in Indonesia (as PI)

List of previous researches
Rotavirus Vaccine Clinical Trial, Phase IIB, in Indonesia (as PI)
Public health impact and economic evaluation of dengue vaccine in Indonesia (as PI)
Vaccine safety in Indonesia (as co-PI)
Acceptability of vaccination in Indonesia: religious leader, health professional and parents (as PI)
New finance scheme strategies for national immunisation program in Indonesia
Pharmacovigilance of TB, HIV and malaria drugs (as PI)
Pharmacovigilance of Pethidine and Levosol Injection in Indonesia (as PI)
Pharmacoeconomic Study of Ticagrelor in Indonesia (as PI)
Pharmacoeconomy of Breast Cancer Chemotherapy in Indonesia (as co-PI)
Pharmacoeconomy of Acute Leukemia Chemotherapy in Indonesia (as co-PI)

Dr. Emi Nurjasmi, MSc, PH

Full Name:
Dr. Emi Nurjasmi, MSc,PH

Current Positions:
President of Indonesian Midwives Association
Vice Director of Women Health Education Foundation
Lecturer on Midwifery Program Study – Jakarta Health Polytechnic III, MOH, Republic of Indonesia
Team Expert for Social, Health and welfare, Women Council of Indonesia
Assessor on National Board For Higher Education Accreditation, Ministry of Education, RI
ICM Board Member – Representative of Asia Pacific Region

Education:
Doctorate on Educational Management Jakarta State University
Master Degree Program on Public Health, University of Indonesia
Bachelor Degree of Public Administration, Banda Aceh
Diploma in Midwifery, Jakarta

Working Experience:
Lecturer of Midwifery Program Study, Health Polytechnic, MOH (2011- Now)
Head of Sub Directorate of Midwifery Services, MOH Indonesia (2006 – 2011)
Center for Health Menpower Education, Ministry of Health :
Head of Nursing and Midwifery Education, MOH (2002 – 2006)
Head of Specific Program on Continuing Education, MOH (2000 – 2001)
Head of Facilities Development for Health Education Institution (1998 –1999)
Staff Midwife on MCH Divition Provincial Health Office, Central Java (1988 – 1993)
Staff Midwife on MCH Divition, Provincial Health Office, DI Aceh (1982 – 1988)
Cinical Midwife in Manokwari Public Hospital, Papua (1981 – 1982)
Clinical Midwife in Public Health Center, Oransbari, Manokwari, Papua (1979 – 1981)
Cinical Midwife in Bukittinggi Public Hospital, West Sumatera (1976– 1979)

drg. Iwan Dewanto, MMR

Full Name:
Iwan Dewanto

Occupation:
Director of Muhammadiyah Yogyakarta Dental Hospital
Lecturer of School of Dentistry, Faculty of Medicine and Health Sciences, Universitas Muhammadiyah Yogyakarta

Past and Present Employment:
2004-Now: Lecturer in Public Health at Faculty of Medicine and Health Sciences, Universitas Muhammadiyah Yogyakarta
2009-Now: Director of Dental Hospital, Universitas Muhammadiyah Yogyakarta
2010-Now: General secretary of Indonesia Family Dentist Association
2011-2016: Vice chairman of Indonesia National Dentist Competence Examination
2013-2017: Chairman of Indonesian College of Dentist (Kolegium Dokter Gigi Indonesia)
2017-Now: Chairman of Quality Assurance of Indonesia National Dentist Competence Examination
2017-Now: Vice secretary general of Indonesian Dental Association (IDA)

Educational Background:
1991-1997: Faculty of Dentistry, Universitas Gadjah Mada
1999-2011: Master of Hospital Management, Universitas Muhammadiyah Yogyakarta
2013-Now: PhD candidate, Faculty of Dentistry, Thammasat University, Thailand

Courses:
2007: HWS DIKTI short course of Ethic, Law, and Human Rights, Faculty of Medicine, Universitas Indonesia
2012: The 4th UW/KKU/TU Workshop on Clinical Research Methods in Oral Health, Chiang Mai

Major Interest:
Dental public health
Management of Dental Health Services
Ethicomedicolegal
Indonesian Dental Association
Indonesian Public Health Dentistry Association
Indonesian Family Dentist Association
Indonesian College of Dentist (KDGI)

Research and Publication:
1. Iwan Dewanto, 2007. Gambaran Rekam Medik Gigi sebagai Posisi Sentral bagi Dokter Gigi di Yogyakarta (Description of Dental Record as the Central Position

among Dentists in Yogyakarta). Jurnal Mutiara Medika, Volume 7 Nomor 2, Page 83-87.
2. Iwan Dewanto, 2010. Infection Control Implementation at Private Dental Practice in Yogyakarta City, paper presented during 6th FDI-IDA Joint Meeting Conference, November 12-14, Balikpapan, 2010.
3. Iwan Dewanto, 2011. Pemasaran Praktek Dokter Gigi secara Etikolegal, dalam: Ilmu Kesehatan Oral, editor: Niken Sriyono and Sudibyo, Fakultas Kedokteran dan Ilmu Kesehatan, Universitas Muhammadiyah Yogyakarta, pp 23-25.
4. Iwan Dewanto, 2014. Lower Middle Income Class Preferences for Dental Services, paper presented during Kongres PDGI XXV, Pontianak, 28-31 Mei 2014.
5. Iwan Dewanto and Nanik Isnaini, 2014. Pelayanan Kedokteran Gigi dalam Sistem Jaminan Kesehatan Nasional; Buku Pedoman, PB PDGI.

Drs. Nurul Falah Eddy Pariang, Apt.

Full Name:
Nurul Falah Eddy Pariang

Working Experience:

- President Commisioner of PT. KIMIA FARMA APOTEK, 2013 – on going
- Senior Consultant in the field of *Leadership & Human Capital* at PT. Prakarsa Daya Motekar, 2016 – on going
- Member of Indonesia National Pharmacy Council (KFN), 2015 – on going
- Commisioner of PT. KIMIA FARMA Trading & Distribution, 2011 – 2013
- Member of Indonesia House of Representatives (DPR-RI), 2004 – 2009
- Human Resources Senior Manager of PT. Kimia Farma (Persero) Tbk, Jakarta, 2002 – 2004
- Optical Manager of PT. Kimia Farma (persero) Tbk, Jakarta, 2000 – 2002
- Branch Manager of Apotek Kimia Farma Denpasar, PT. Kimia Farma, 1999 – 2000
- Branch Manager of Pharmacy Wholesalers Palangkaraya, PT. Kimia Farma 1990 – 1999.

Organizational Experience:

- South East Asia Region Pharmaceutical Forum (SEAR Pharm Forum) , Position : Vice President, 2016 – 2018
- Indonesian Pharmacist Association (IAI)Position, President, 2014 – 2018
- Central Board of Indonesian Pharmacist Association, Position : Secretary General, 2009 – 2013
- Steering Committee of Health Professional Education Quality (HPEQ), Position : Chairman, 2009 – 2014
- Indonesia House of Representatives Working Group related to Pharmacy State Owned Enterprises, Position : Member, 2004 – 2009
- Central Board of Kimia Farma Labor Union, Position : Secretary General, 2000 – 2003
- Association of Indonesia's Local Pharmaceutical Manufacturer Companies in Jakarta, Position : General Secretary, 2001 – 2004
- Chamber of Commerce and Industry in Central Kalimantan, Position : Vice President, 1994 – 1999
- Association of Indonesia's Local Pharmaceutical Manufacturer Companies in Central Kalimantan, Position : President, 1996 – 1999
- Batang Garing Audit Services Corporation, Central Kalimantan, Position : General Secretary, 1986 – 1999

- Association of Entrepreneurs in Medical Devices and Laboratory equipment ,Central Kalimantan, Position : General Secretary, 1995 – 1998
- Association of Indonesia's Fashion Designers and Mode , Central Kalimantan, Position : Vice President, 1996 – 1997
- Indonesian Pharmacist Association , Central Kalimantan, Position : President, 1994 – 1997
- National Youth Committee of Indonesia (KNPI), Central Kalimantan , Position : President of the Bureau of Cooperatives and Entrepreneurs, 1994 – 1997
- Student Cooperative of Universitas Gajah Mada (KOPMA UGM), Position : President, 1986 – 1988

Life Philosophy:
Work hard in silence, let your success be your noise

Assoc. Prof. DR. Toto Sudargo, MKes

Full Name :
Toto Sudargo

Adress (office):
Departmentof Health and Nutrition, Faculty of Medicine, Gadjah Mada
University, Farmako Street, Sekip Utara Yogyakarta 55281 Indonesia

Position:
Head of Health Nutrition Department

Formal Education :
• Bachelor (1991) : Universitas Diponegoro
• Master (1997) : Universitas Gadjah Mada
• Doctoral (2011) : Universitas Gadjah Mada

Informal Education :
• 2013 : Service excellent by Houseof Quality (HOQI) Surabaya
• 2013 : Training of Internal Quality Assurance Audit (ISO 9001:2008) by House of Quality (HOQI) Surabaya
• 2013 : Training of External Quality Assurance Audit (ISO 9001:2008) by House of Quality (HOQI) Surabaya Working Experience
• 1992 – 2003 : Lecturer at Akademi Gizi Yogyakarta
• 2003 – Now : Lecturer at School of Public Health, Faculty of Medicine, Universitas Gadjah Mada
•2012 – Now : Nutrition consultant of CITO laboratorium

STUDENT'S CONFERENCE

Day 1—Saturday, 5th May 2018

12.00-17.00 Open registration

Venue : East lobby of hotel

Day 2—Sunday, 6th May 2018

08.00-09.00 Registration

Venue : East lobby of hotel

09.00-15.00 Pre-conference workshop

Morning (09.00-12.00)

Topics	Room
PCWM-01 : Community-based education innovation to improve social accountability	Mustika Level 8
PCWM-02 : The use of technology for improving student-assessment's quality	Nakula 2 Level 4
PCWM-03 : Improving faculty training system as a measure in upgrading the quality of education	Kusuma ex batik Level 7
PCWM-04 : Designing programs for improving students' professionalism	Senopati Level 5
PCWM-05 : Academic leadership for improving the quality of health professional education for ensuring better health care	Suko wine lounge Level 7

Afternoon (13.00-16.00)

Topics	Room
PCWA-01 : Curricula innovation in medical and health professional education to accomodate the disruptive era	Mustika Level 8
PCWA-02 : Designing and evaluating continuing professional development programs for the better future health services	Nakula 2 Level 4
PCWA-03 : Improving continuing professional development using technology for the better future health services	Kusuma ex batik Level 7
PCWA-04 : Clinical teaching management	Senopati Level 5
PCWA-05 : The role of national examination's feedback in improving teaching-learning process	Suko wine lounge Level 7

09.00-13.00 Social activity (optional)

"Desa binaan KMFKKMK Mojosari, Dusun Srimartani"

Day 3—Monday, 7th May 2018

08.00-09.00	**Registration** **Venue :** Mataram ballroom
09.00-10.00	**Opening Ceremony** **Venue :** Mataram ballroom
10.00-11.00	**Keynote Speech** **Venue :** Mataram ballroom **President of WFME** "Improving the quality of health profession education for the better future health services: global perspectives" **WHO Representatives** Improving the quality of health profession education for the better future health services: WHO perspectives"
11.00-12.00	**Plenary Session:** **Venue :** Mataram ballroom **Dr Salma Burton - WHO** "Current and emerging international health problems to be solved through education for better future health services" **Dr Audrey Fontaine - World Medical Association** "Improving international health organization collaboration for the better future health services" **Prof Dr Thomas V Chacko, MBBS, MD - SEARAME Representatives** "Efforts to improve health services in south east asian countries: challenges **Prof PT Jayawickramarajah** Improving health care through learning, inquiring, and reasoning **Moderator : Prof dr Ova Emilia, MMedEd, SpOG(K), PhD**
12.00-13.00	**Lunch Break and Pray**
13.00-15.00	**Plenary Sessions** **Venue :** Mataram ballroom "Improving the quality of health professions education for better future health services: challenges and solutions from each region"
13.00-14.45	**Oral Presentation of Scientific Paper** **Venue :** Mataram east room 1 & 2
14.45-15.30	**Break**
15.15-17.00	**Poster Presentation of Scientific Paper** **Venue :** Mataram ballroom foyer
19.00-21.00	**Welcome Dinner and Cultural Night** **Venue:** Mataram ballroom

Day 4—Tuesday, 8th May 2018

08.00-10.00	**Plenary Session: International Licensing Examination** **Venue :** Mataram ballroom
10.00-10.30	**Break**
10.30-12.00	**Student's Symposia 1** **Venue :** Mataram ballroom 3 "Doctor without Border" **dr. Hendro Wartatmo, Sp.B-KBD**
12.00-13.00	**Lunch Break and Prayer**
13.00-15.30	**Student's Symposia 2** **Venue :** Mataram ballroom 3 "Interprofessional Education as a Collaborative Approach to Develop Healthcare Students as Future Interprofessional Team Members" **dr. Widyandana, MHPE, PhD, SpM**
15.30-16.30	**Closing Ceremony**
16.30	**Finish**

PRE-CONFERENCE WORKSHOP

SUNDAY, 6 May 2018

08.00 – 09.00	Registration
Venue:	East lobby of hotel sheraton
09.00 – 12.00	**PCWM -01 :** **Community-based education innovation to improve social accountability**
Venue:	Mustika room – level 8 hotel sheraton
Speakers:	Diantha Soemantri, MD, MMedEd, Ph.D Hikmawati Nurokhmanti, MD, MSc
09.00 – 12.00	**PCWM-02 :** **The use of technology for improving student-assessment's quality**
Venue:	Nakula 2 room – level 4 hotel sheraton
Speakers:	Kinik Darsono, MD, M.Pd.Ked Noviarina Kurniawati, MD, MSc
09.00 – 12.00	**PCWM-03 :** **Improving faculty training system to upgrade the quality of education**
Venue:	Kusuma ex batik room – level 7 hotel sheraton
Speakers:	Jyotsna Rimal Dr Siti Rokhmah Projosasmito, MD, MEd, (L, P & C)
09.00 – 12.00	**PCWM-04 :** **Designing programs for improving students' professionalism**
Venue:	Senopati room – level 5 hotel sheraton
Speakers:	Yayi Suryo Prabandari, Prof. Dra., M.Si., Ph.D. Yoga Pamungkas Susani, Dr., MD, MMedEd
09.00 – 12.00	**PCWM-05 :** **Academic Leadership for improving the quality of Health Professional Education for ensuring better health care**
Venue:	Suko wine lounge – level 7 hotel sheraton
Speakers:	Thomas V Chacko, Prof
09.30 – 13.00	WFME Meeting
Venue:	Adipati room – level 5 hotel sheraton
13.00 – 16.00	**PCWA-01:** **Curricula innovation in medical and health professional education to accommodate the disruptive era**
Venue:	Mustika room – level 8 hotel sheraton
Speakers:	Titi Savitri Prihatiningsih, MA. MD, MMMeEd, Ph.D Ardi Findyartini, MD, Ph.D
13.00 – 16.00	**PCWA-02:** **Designing and Evaluating Continuing Professional Development programs for the better future health services**
Venue:	Nakula 2 room – level 4 hotel sheraton
Speakers:	Tri Nur Kristina, Prof, Dr, MD, DMM, M.Kes Mora Claramita, MD, MHPE, PhD

13.00 – 16.00	**PCWA-03:** **Improving Continuing Professional Development using Technology for the better future health services**
Venue:	Kusuma ex batik room – level 7 hotel sheraton
Speakers:	Lutfan Lazuardi, MD, M.Kes., Ph.D Noviarina Kurniawati, MD, MSc Desi Rima Melany
13.00 – 16.00	**PCWA-04:** **Clinical Teaching Management**
Venue:	Senopati room – level 5 hotel sheraton
Speakers:	Ova Emilia, Prof., MD, M.Med.Ed., Sp.OG(K)., Ph.D Yoyo Suhoyo, MD, MMedEd
13.00 – 16.00	**PCWA-05:** **The Role of National examination's feedback in improving teaching-learning process**
Venue:	Suko wine lounge – level 7 hotel sheraton
Speakers:	Fundhy Sinar Ikrar Prihatanto, MD, MmedEd Rachmadya Nur Hidayah, MD, MSc

CONFERENCE PROGRAM

Monday, 7 May 2018

08.00 – 09.00	Registration and Coffee Break
Venue:	Mataram Ballroom

09.00 - 10.00	Opening Ceremony
Venue:	Mataram Ballroom
	dr Titi Savitri Prihatiningsih, MA, MMedEd, PhD President of SEARAME **Prof dr Ova Emilia, MMedEd, SpOG(K), PhD** Dean of Faculty of Medicine, Health Public, and Nursing Universitas Gadjah Mada **Prof Ir Panut Mulyono, MEng, Deng** Rector of Universitas Gadjah Mada

10.00 - 11.00	Keynote Speech
Venue:	Mataram Ballroom
10.00 - 10.30	Maintaining standards and improving quality in medical education worldwide, at a time of rapid growth and change **Prof. David Gordon** - President of WFME
10.30 - 11.00	Improving the quality of health professions education for the better future health services: WHO perspective **Dr. N Paranietharan** - WHO Representatives

11.00 12.00	Plenary Session
Venue:	Mataram Ballroom
Moderator:	Prof dr Ova Emilia, MMedEd, SpOG(K), PhD
	Current and emerging international health problems to be solved through quality education for better future health services : global perspectives **Dr Salma Burton** – WHO
	Improving international health organization collaboration for the better future health services : roles of professional organizations **Dr Audrey Fontaine** – World Medical Association
	Efforts to improve health services in south east asian countries: challenges & solutions for the region **Prof Dr Thomas V Chacko, MBBS, MD(PSM)** - SEARAME Representative
	Improving Health Care through Learning, Inquiring and Reasoning **Prof P T Jayawickramarajah** – Exco SEARAME

12.00 - 13.00	Lunch Break and Pray
Venue:	Mataram Ballroom

13.00 - 14.45	Plenary Sessions Improving the quality of health professions education for better future health services : challenges and solutions from each region
Venue:	Mataram Ballroom
Moderator:	dr Gandes Retno Rahayu, MMedEd, PhD
	Prof Madelena Patricio - Past President of AMEE European Region
	Prof Ibrahim Al Alwan - President of AMEEMR Eastern Mediterranean Region
	Prof Ricardo Leon-Borquez - President of PAFAMS Pan American Region
	Prof Michael Field - President of WPAME Western Pacific Region
	dr Titi Savitri Prihatiningsih, MA, MMedEd, PhD - President of SEARAME South East Asian Region

13.00 - 15.00	Student Oral Presentation
Venue:	Mataram East Room 1
13.00 - 13.15	Medical students' perceptions on public health course in undergraduate program faculty of medicine universitas padjadjaran **Steven Saputro**
13.15 - 13.30	A study on the importance of adopting evidence-based medicine into all medical schools undergraduate curriculum **Annisa Fajriani**
13.30 - 13.45	Attitude toward integrative medicine among undergraduate medical students of udayana university, bali **I Putu Hendri Aryadi**
13.45 - 14.00	Correlation between extracurricular activities and academic performances among preclinical medical students in udayana university, bali **Ida Ayu Dewi Dhyani**
14.00 - 14.15	Perceptions of clinical medical students about the benefits of public health rotation: a preliminary study of medical students' evaluation on public health clinical curriculum. **Tiara Syafitri Putri**
14.15 - 14.30	The relation between grade of national examination with grade point in the first semester at medical students faculty of medicine yarsi university academic year 2015/2016 **Humaerah**
14.30 - 14.45	The relation between mentoring with grade point in the first semester at medical students faculty of medicine yarsi university on academic year 2016/2017 **Hana Nabila Ulfia**

13.00 - 15.00	Student Oral Presentation
Venue:	Mataram East Room 2
13.00 - 13.15	Cinemeducation as a learning method for bioethic and humaniora program in faculty of medicine universitas padjadjaran **Dwi Putri Nurulliza**
13.15 - 13.30	The relation between self directed learning readiness (sdlr) with grade point (gp) in the first semester at medical students faculty of medicine yarsi university academic year 2016/2017 **Gemia Clarisa Fathi**
13.30 - 13.45	Bridging high school student to medical student **Jimmy Taruna Taufiq Fajar**
13.45 - 14.00	The reflector and theorist but not the activist learning style preference related to better cognitive academic performance among first year medical students in udayana university **I Gusti Agung Ayu Andra Yusari**
14.00 - 14.15	Virtual patients technology for quality improvement of medical personnel **Komandaniel Simanullang**
14.15 - 14.30	On-the-spot project collaboration in medical article writing using clinical search engine and online word processor **Muhammad Auzan Ferdiansyah**
14.30 - 14.45	The relation between parent's support with grade point in the first semester at medical students faculty of medicine yarsi university academic year 2016/2017 **Annisa Fitri Bumantari**

14.15 - 15.15	Coffee Break
Venue:	Mataram Ballroom

15.15 - 17.00	SEARAME Oral Presentation
Venue:	Mataram West Room 1
15.15 - 15.30	Augmented reality scenario innovation implementation in problem based discussion **Dian Nugroho**
15.30 - 15.45	Indonesian islamic educational tradition meet emerging technologies: implementation of the e-sorogan learning technological model in medical education **Herdiantri Sufriyana**
15.45 - 16.00	Developing e-bandongan as a learning system for flipped-classroom in medical education and massive open online courses in medical long-life learning **Herdiantri Sufriyana**
16.00 - 16.15	The educational media intervention on smartphone addiction and its effect on the interpersonal relationship and self-esteem **Robert Shen**
16.15 - 16.30	Dramatics in medical education: an experience of online listserv discussion through mentoring and learning web sessions of gsmc faimer fellowship programme **Priyadarshini Mishra**
16.30 - 16.45	Flipped Anatomy Classroom Using Social Media: Views of the Undergraduate Medical Students onLearning Impact **Shahnaj Pervin**

15.15 - 17.00	SEARAME Oral Presentation
Venue:	Mataram West Room 2
15.15-15.30	Acceptance and attitude towards team based learning in clinical medicine course **Mohd Rahman bin Omar**
15.30-15.45	How does feedback in clinical teaching motivate student's learning? **Sylvia Mustika Sari**
15.45-16.00	Students interaction with doctors during transition to clinical clerkship **Dian Puspita Sari**
16.00-16.15	Come to the kampong : The community integrated learning in preclinical students **Elda Nazriati**
16.15-16.30	Field Site Training (FST) program in community medicine and student's feedback **Md. Mahfuzar Rahman**
16.30-16.45	The community service program activity as a learning method at YARSI university faculty of medicine **Miranti Pusparini**

15.15 - 17.00	SEARAME Oral Presentation
Venue:	Mataram West Room 3
15.15-15.30	An educational needs assessment: What are medical students views and experiences of reflective practice in the University of Padjadjaran (Indonesia) context? **Andini Nurkusuma Wardhani**

15.30-15.45	The influence of visual and audiovisual learning style to memory retention of medical students **N Juni Triastuti**
15.45-16.00	A delphi consensus study to identify clinically most valuable anatomy material of the digestive system for teaching medical students **Siti Munawaroh**
16.00-16.15	What students learn from experiences through writing narratives? (field observation of first year medical students) **Shulhana Mokhtar**
16.15-16.30	Improving medical student biostatistical competencies through hands on approach **Gita Sekar Prihanti**
16.30-16.45	CReAMS – a module on systems based practice for medical students **Mahalaksmi VN**

15.15 - 17.00	**SEARAME Oral Presentation**
Venue:	Mataram East Room 1
15.15-15.30	Teaching professionalism using medical teacher roles' as role model: is it a burden for us? **Ita Armyanti**
15.30-15.45	Ethical dilemma or ethical misconduct? A reflection on medical ethics teaching in Indonesia **Amalia Muhaimin**
15.45-16.00	Indigenous health and behavioral medicine": a module to enhance cultural competence of medical students **Miko Ferine**
16.00-16.15	Guided reflection: a structured method in teaching and learning professional behavior in clinical education **Yohanes Sudarmanto**
16.15-16.30	Effect of experiential learning on student nurses' attitudes to differently abled: a mixed method study **Wilma Valsalan**
16.30-16.45	Evaluation of videobased communication skills teaching learning based on kirkpatrick (KP) model for improving the quality of health professionals for better health services in future **Varsha Murthy**

15.15 - 17.00	**SEARAME Oral Presentation**
Venue:	Mataram East Room 2
15.15-15.30	Using gelatine as moulage base in patient simulation : a pilot study **Natalia Puspadewi**
15.30-15.45	Training members of 'Self Help Groups' from the local community as 'Standardized Patients' for medical education **Mahalakshmi VN**
15.45-16.00	Cadaver based procedure skills training for medical undergraduates in pre clinical phase **Rishi Pokhrel**
16.00-16.15	Development of low cost ultrasound phantom for simulation training in follicle growth monitoring during control ovarian stimulation **Agung Dewanto**
16.15-16.30	Arranging the "A" student with structural task consultation as academic conselour **Dian Nugroho**
16.30-16.45	IFMSA students' toolkit on social accountability: when medical students work together **Aikaterini Dima**
16.45-17.00	Via DREEM, dream of medical students comes true: a mixed method study. **Laila Isrona**

15.15 - 17.00	**SEARAME Oral Presentation**
Venue:	Mataram East Room 3
15.15-15.30	Item analysis of in use multiple choice question and in neurology course in Medical Faculty Baiturrahmah University **Resti Rahmadika Akbar**
15.30-15.45	Enhancing students motivatiion: the effect of standardized oral assessment in basic clinical skills training **Ratih Yulistika Utami**
15.45-16.00	Developing blueprint for block assessment: a faculty of medicine andalas university experience **Yulistini**
16.00-16.15	Measuring graduate outcome for quality enhancement in medical education **Mahalakshmi VN**
16.15-16.30	Developing tools and measuring integration characteristics of Basic Science curriculum **Babu Raja Maharjan**
16.30-16.45	Toward a humanist health and medicine education in indonesia by reintegration of religion and science **Fatma Sylvana Dewi Harahap**
16.45-17.00	The CHASE educational strategies: Positioning of Indonesian Islamic educational philosophy on medical education SPICES continuum **Herdiantri Sufriyana**

15.15 - 17.00	SEARAME Oral Presentation
Venue:	Mataram Ballroom 1 & 2
15.15-15.30	Barriers and facilitators concerning dying and death in undergraduate nursing education: a view of nurse educators of a public university in Indonesia **Hana Rizmadewi Agustina**
15.30+15.45	Evaluation overview of clinical lecturer competence in medical doctor profession education Universitas Halu Oleo Kendari 2017 **Satrio Wicaksono**
15.45-16.00	Students' constructive and collaborative knowledge construction within interprofessional problem-based learning **Endang Lestari**
16.00-16.15	The correlation between the readiness in inter-professional collaboration with clinical decision making ability of midwifery students **Bulan Kakanita Hermasari**
16.15-16.30	Udayana one health student club: a pilot project to increase students' self-efficacy and cultural competence **I Made Subagiarta**
16.30-16.45	Measuring graduate outcome for quality enhancement in medical education **Mahalakshmi VN**

15.15 - 17.00	SEARAME Poster Presentation 1
Venue:	Mataram Ballroom Foyer
	The description of medical students' interest and achievement on anatomy at faculty of medicine universitas kristen indonesia **Bernadetha Nadeak**
	Teaching pathological of human disease: lesson from undergraduate medical curriculum **Diani Puspa Wijaya**
	E-learning from first-year medical students' perspective: beginners' view **Noviarina Kurniawati**
	Factors affecting low academic achievement in medical education **Rika Lisiswanti**
	Generalizability theory analysis in OSCE using EduG: an introduction **Winny Setyonugroho**
	Assesssing reliability of the objective structured clinical examination and correlation with standardized patient satisfaction **Marindra Firmansyah**
	OSCE of pediatric ward as a clinical competency assessment of medical students: how about the retention of knowledge? **Yeny Dyah Cahyaningrum**
	Two weeks direct supervision is enough time to make resident's skills of delivering the baby in cesarean section same with the expert **Ide Pustaka Setiawan**
	Challanges on implementing longitudinal interprofessional education in community setting : students view from 5 years experiences **Widyandana**

15.15 - 17.00	SEARAME Poster Presentation 2
Venue:	Mataram Ballroom Foyer
	Knowledge, attitude and practice about human papilloma virus/hpv vaccine in the prevention of cervical cancer among the medical students **Umme Jamila Akther Manni**
	Hospital of clinical rotation affects quality teaching of clinical reasoning **Dian Apriliana Rahmawatie**
	The evaluation of clerkship program in non-major divisions of sanglah central general hospital **Putu Gede Sudira**
	Career preferences among preclinical and pregraduate of yarsi medical students **Zwasta Pribadi Mahardhika**
	Impact of reflective writing on medical student attitude **Siti Khotimah**
	Nurturing professionalism in pre-clinical years: medical teachers' perception in faculty of medicine universitas indonesia **Estivana Felaza**
	Students' perception on the use of role play with standardized patients for clinical ethics education: an initial report **Wika Hartanti**
	Perceptions of health students on learning interprofessional education **Dina Zakiyyatul Fuadah**

15.15 - 17.00	SEARAME Poster Presentation 3
Venue:	Mataram Ballroom Foyer
	Development of an artificial model for ovum pick up simulation **Hindun Wildani Wahab**
	Review of research results of patient satisfaction level of BPJS participant who come in outpatient room with SERVQUAL method, encourage Medical Education Institution simulate Empathy attitude in learning process **Rospita A. Siregar**
	1st year student workload perception correlated during OKK programmes with overall student achievement **Yuni Susanti Pratiwi**
	Anxiety overview of medical student undergraduate **Ashaeryanto**
	Professional identity formation: historical study on GPs' identity **Hikmawati Nurokhmanti**

Relationship between the incidence rate of urinary tract infection and school toilet hygiene in school-age children at sd negeri cempaka putih barat 17 pagi jakarta and SD negeri cikentang taktakan serang
Sri Hastuti Andayani

Relationship between the risk factors of urinary tract infections with the incidence rate of urinary tract infections in school-age children in sd negeri cempaka putih barat 17 pagi cempaka putih district central jakarta (urban area) and sd negeri cikentang taktakan district serang city (rural area)
Sri Hastuti Andayani

Tackling patient anxiety in dental extraction using yoga technique to Improve patient care for the better health professionals and health services in future.
V.Yuvaraj

15.15 - 17.00	**Student Poster Presentation 1**
Venue:	Mataram Ballroom Foyer

Relation between parent's education with the nutritional status of children under five years in west cakung east jakarta in 2017
M Fikri Satria Kamal

Relation between family expenditure to buy cigarettes with nutritional status of children under five years old in west cakung east jakarta in 2017
Muhammad Faisal Indrasyah

Relation between the number of children under five visits posyandu with the nutritional status of these children in west cakung east jakarta in 2017
Nevy Ulfah Hanawati

Relation between drinking water treatment and nutritional status of children under five in west cakung east jakarta in 2017
Nabila Azzahra

Correlation between birth interval and nutritional status of children under five in west cakung, east jakarta in 2017
Wardhani Putri Pratiwi

Associasion of hormonal contraception use with hba1c level in women at pisangan baru jakarta as the risk factors diabetes mellitus review based medical and islam
Nisa Nabiilah

15.15 - 17.00	**Student Poster Presentation 2**
Venue:	Mataram Ballroom Foyer

Correlation between ABO blood type with random blood glucose in women in pisangan baru jakarta as a risk factor of diabetes melitus
Nadya Aulia

Correlation of random blood glucose with lipid profile in women with prediabetes mellitus type 2
Siti Khodizah Senaria

Correlation of HBA1C and random blood glucose with lipid profile in women with diabetes mellitus
Nimas Ayu Azizah

Relationship between age, length of work and working period to the incidence of carpal tunnel syndrome on construction workers in yarsi university
Sry Irma Arischa

Prevalence of carpal tunnel syndrome symptoms on online gamers
Rizma Mudzalifah

Relationship between duration of computer using with carpal tunnel syndrome symptoms on employees in yarsi university
Mildayanti

15.30 - 17.00	**ECFMG Gmex**
Venue:	Mataram Ballroom 3
Speaker:	Anna Maria Iacone

17.00 - 18.00	**I AM HPE Organizational Meeting**
Venue:	Mataram Ballroom 3

19.00 - 21.00	**Welcome Dinner**
Venue:	Mataram Ballroom

Tuesday, 8 May 2018

07.30 - 08.00	**Registration**
Venue:	Mataram Ballroom

08.00 - 10.00	**Plenary Session**
Venue:	Mataram Ballroom
Moderator:	dr Rachmadya Nur Hidayah, MSc

International licensing examination
Prof William W Pinsky - President of ECFMG

Experience of national licensing examination
dr Nani Cahyani, SpKO - Indonesia
Clinical Prof Suwat Benjapponpitak - Thailand
Exco SEARAME
Prof Dr Himanshu Pandya - India
Exco SEARAME
Prof Dr MD Humayun Kabir Talukder-Bangladesh
Exco SEARAME
Prof Indika Karunathilake - Sri Lanka
Exco SEARAME

10.00 - 10.15	**Coffee Break**
Venue:	Mataram Ballroom

10.15 - 12.00	**Symposium SEARAME:** **Improving the quality of health professions education for the better future health services**
Venue:	Mataram Ballroom
Moderator:	dr Widyandana, MHPE, PhD, SpM
	Experience from Thailand **Prof Khunying Kobchitt Limpaphayom**
	Experience from Myanmar **Prof Tin Tun**
	Experience from Indonesia **dr Titi Savitri Prihatiningsih, MA, MMedEd, PhD**
	Experience from Bangladesh **Prof Ainun Afroza**
	Experience from Timor Leste **Dr Joao Martins**
	Experience from Sri Lanka **Prof PT Jayawickramarajah**
	Experience from Nepal **Dr Jyotsna Rimal**

12.00 - 13.00	**Lunch Break and Pray**
Venue:	Mataram Ballroom

13.00 - 14.00	**Symposiums of Medical Education**
Venue:	Mataram Ballroom 1 & 2
	Teaching evidence-based medicine **dr Detty Nurdiati, MPH, PhD, SpOG(K)** Head of Cochrane Indonesia **dr Jarir At Thobari, PhD**

13.00 - 14.00	**Symposiums of Midwifery Education**
Venue:	Mataram West Room 1
	Improving the quality of midwifery education for the better future health services **Dr. Emi Nurjasmi, MKes** - IBI

13.00 - 14.00	**Symposiums of Nurse Education**
Venue:	Mataram West Room 2
	Nursing education and the future of interprofessional collaboration in indonesia **Prof Dr Nursalam, M.Nurs (Hons)** - PPNI

13.00 - 14.00	**Symposiums of Public Health Education**
Venue:	Mataram West Room 3
	Dr Ridwan Mochtar Thaha, Msc - IAKMI

13.00 - 14.00	**Symposiums of Dental Education**
Venue:	Mataram East Room 1
	Improving the quality of health professions education for the better future health services: Challenges and solutions for indonesian dentist profession **drg Iwan Dewanto, MMR, PhD** - PDGI

13.00 - 14.00	**Symposiums of Pharmaceutical Education**
Venue:	Mataram East Room 2
	Drs Nurul Falah Eddy Pariang, Apt - IAI

13.00 - 14.00	**Symposiums of Nutrition Education**
Venue:	Mataram East Room 3
	Improving the health quality of health profession education for better future health services: Challenges and solutions for Nutrition Profession **Dr Minarto, MPS** - PERSAGI

14.00 - 14.15	**Coffee Break**
Venue:	Mataram Ballroom

14.15 - 16.00	**Plenary Sessions**
Venue:	Mataram Ballroom 1 & 2
Moderator:	dr Titi Savitri Prihatiningsih, MA, MMedEd, PhD
	International accreditation and international recognition : WFME perspective **Prof David Gordon** - President of WFME
	Improving the quality of health professions education through a new accreditation system in indonesia **Prof dr Usman Chatib Warsa, SpMK, PhD** - IAAHEH / LAM-PTKes
	Improving accreditation and international recognition : from concepts to practice **Prof Janet Grant** - Special Adviser to WFME and Director of CenMEDIC

16.00 - 16.30	**Keynote Speech**
Venue:	Mataram Ballroom 1 & 2
16.00 - 16.30	Improving the quality of health professions education for the better future health services: Indonesia's perspectives **Prof. Drs. H.Muhammad Nasir, M.Si, Akt, Ph.D** Minister of Research, Technology and Higher Education Republic of Indonesia

16.30	**Closing Ceremony**
Venue:	Mataram Ballroom 1 & 2

17.00 - 20.00	**SEARAME Organization Meeting**
Venue:	Mataram Ballroom 3

ORAL PRESENTATION INDEX

No	Nama	Title	Session Description	Session Date	Session Time	Session Room
1	Agung Dewanto	Development ofLow Cost Ultrasound Phantom For Simulation Training in Follicle Growth Monitoring During Control Ovarian Stimulation	SEARAME Oral Presentation	Mon 7 May	16.00	East Room 2
2	Amalia Muhaimin	Ethical Dilemma or Ethical Misconduct? A Reflection on Medical Ethics Teaching in Indonesia	SEARAME Oral Presentation	Mon 7 May	15.30	East Room 1
3	Andini Nurkusuma Wardhani	An Educational Needs Assessment: What Are Medical Students Views and Experiences of Reflective Practice In The University ofPadjadjaran (Indonesia) Context?	SEARAME Oral Presentation	Mon 7 May	15.15	West Room 3
4	Annisa Fajriani	A Study on The Importance of Adopting Evidence-Based Medicine into All Medical Schools Undergraduate Curriculum	Student Oral Presentation	Mon 7 May	13.15	East Room 1
5	Bulan Kakanita Hermasari	The Correlation Between The Readiness in Inter-Professional Collaboration with Clinical Decision Making Ability of Midwifery Students	SEARAME Oral Presentation	Mon 7 May	16.00	Mataram 1&2
6	Dian Nugroho	Augmented Reality Scenario Innovation Implementation in Problem based Discussion	SEARAME Oral Presentation	Mon 7 May	15.15	West room 1
7	Dian Puspita Sari	Students Interaction with Doctors During Transition to Clinical Clerkship	SEARAME Oral Presentation	Mon 7 May	15.45	West Room 2
8	Elda Nazriati	Come to The Kampong : The Community Integrated Learning in Preclinical Students	SEARAME Oral Presentation	Mon 7 May	16.00	West Room 2
9	Gita Sekar Prihanti	Improving Medical Student Biostatistical Competencies Through Hands on Approach	SEARAME Oral Presentation	Mon 7 May	16.15	West Room 3
10	Herdiantri Sufriyana	The CHASE Educational Strategies: Positioning ofIndonesian Islamic Educational Philosophy on Medical Education SPICES Continuum	SEARAME Oral Presentation	Mon 7 May	16.45	East Room 3
11	Herdiantri Sufriyana	Indonesian Islamic Educational Tradition Meet Emerging Technologies: Implementation of The E-Sorogan Learning Technological Model in Medical Education	SEARAME Oral Presentation	Mon 7 May	15.30	West room 1
12	Herdiantri Sufriyana	Developing E-Bandongan as A Learning System For Flipped-Classroom In Medical Education and Massive Open Online Courses in Medical Long-Life Learning	SEARAME Oral Presentation	Mon 7 May	15.45	West room 1
13	Ida Ayu Dewi Dhyani	Correlation between Extracurricular Activities and Academic Performances among Preclinical Medical Students in Udayana University, Bali	Student Oral Presentation	Mon 7 May	13.45	East Room 1
14	Ita Armyanti	Teaching Professionalism Using Medical Teacher Roles' as Role Model: Is it a Burden for Us?	SEARAME Oral Presentation	Mon 7 May	15.15	East Room 1
15	I Gusti Agung Ayu Andra Yusari	The Reflector and Theorist but Not The Activist Learning Style Preference Related to Better Cognitive Academic Performance among First Year Medical Students in Udayana University	Student Oral Presentation	Mon 7 May	13.45	East Room 2
16	I Putu Hendri Aryadi	Attitude toward Integrative Medicine among Undergraduate Medical Students of Udayana University, Bali	Student Oral Presentation	Mon 7 May	13.30	East Room 1
17	Jimmy Taruna Taufiq Fajar	Bridging High School Student to Medical Student	Student Oral Presentation	Mon 7 May	13.30	East Room 2
18	Komandaniel Simanullang	Virtual Patients Technology for Quality Improvement of Medical Personnel	Student Oral Presentation	Mon 7 May	14.00	East Room 2

20	Mahalakshmi VN	CReAMS – a module on Systems Based Practice for medical students	SEARAME Oral Presentation	Mon 7 May	16.30	West Room 3
21	Mahalakshmi VN	Measuring Graduate Outcome for Quality Enhancement in Medical Education	SEARAME Oral Presentation	Mon 7 May	16.00	East Room 3
22	Mahalakshmi VN	Training members of 'Self Help Groups' from the local community as 'Standardized Patients' for medical education	SEARAME Oral Presentation	Mon 7 May	15.30	East Room 2
23	Miko Ferine	Indigenous Health And Behavioral Medicine": A Module to Enhance Cultural Competence of Medical Students	SEARAME Oral Presentation	Mon 7 May	15.45	East Room 1
24	Miranti Pusparini	The Community Service Program Activity as a Learning Method at YARSI University Faculty of Medicine	SEARAME Oral Presentation	Mon 7 May	16.30	West Room 2
25	Mohd Rahman Bin Omar	Acceptance And Attitude Towards Team Based Learning In Clinical Medicine Course	SEARAME Oral Presentation	Mon 7 May	15.15	West Room 2
26	Muhammad Auzan Ferdiansyah	On-the-spot project collaboration in medical article writing using clinical search engine and online word processor	Student Oral Presentation	Mon 7 May	14.15	East Room 2
27	N Juni Triastuti	The Influence of Visual and Audiovisual Learning Style to Memory Retention of Medical Students	SEARAME Oral Presentation	Mon 7 May	15.30	West Room 3
28	Priyadarshini Mishra	Dramatics in Medical Education: An Experience of Online Listserv Discussion through Mentoring and Learning Web Sessions of GSMC FAIMER Fellowship Programme	SEARAME Oral Presentation	Mon 7 May	16.15	West room 1
29	Ratih Yulistika Utami	Enhancing Students Motivatiion: The Effect of Standardized Oral Assessment in Basic Clinical Skills Training	SEARAME Oral Presentation	Mon 7 May	15.30	East Room 3
30	Resti Rahmadika Akbar	Item Analysis of in Use Multiple Choice Question And In Neurology Course in Medical Faculty Baiturrahmah University	SEARAME Oral Presentation	Mon 7 May	15.15	East Room 3
31	Rishi Pokhrel	Cadaver Based Procedure Skills Training for Medical undergraduates in Pre Clinical Phase	SEARAME Oral Presentation	Mon 7 May	15.45	East Room 2
32	Satrio Wicaksono	Evaluation Overview of Clinical Lecturer Competence in Medical Doctor Profession Education Universitas Halu Oleo Kendari 2017	SEARAME Oral Presentation	Mon 7 May	15.30	Mataram 1&2
33	Shahnaj Pervin	Flipped Anatomy Classroom Using Social Media: Views of the Undergraduate Medical Students onLearning Impact	SEARAME Oral Presentation	Mon 7 May	16.30	West Room 1
34	Siti Munawaroh	A Delphi Consensus Study To Identify Clinically Most Valuable Anatomy Material of The Digestive System For Teaching Medical Students	SEARAME Oral Presentation	Mon 7 May	15.45	West Room 3
35	Steven Saputro	Medical Students' Perceptions on Public Health Course in Undergraduate Program Faculty of Medicine Universitas Padjadjaran	Student Oral Presentation	Mon 7 May	13.00	East Room 1
36	Sylvia Mustika Sari	How Does Feedback in Clinical Teaching Motivate Student's Learning?	SEARAME Oral Presentation	Mon 7 May	15.30	West Room 2
	Tiara Syafitri Putri	Perceptions of Clinical Medical Students about the Benefits of Public Health Rotation : A Preliminary Study of Medical Students' Evaluation on Public Health Clinical Curriculum.	Student Oral Presentation	Mon 7 May	14.00	East Room 1
37	Varsha Murthy	Evaluation of Videobased Communication Skills Teaching Learning based on Kirkpatrick (KP) Model for Improving The Quality of Health Professionals for Better Health Services in Future	SEARAME Oral Presentation	Mon 7 May	16.30	East Room 1

38	Wilma Valsalan	Effect of Experiential Learning on Student Nurses' Attitudes to Differently Abled: A Mixed Method Study	SEARAME Oral Presentation	Mon 7 May	16.15	East Room 1
39	Yohanes Sudarmanto	Guided Reflection: A Structured Method in Teaching and Learning Professional Behavior in Clinical Education	SEARAME Oral Presentation	Mon 7 May	16.00	East Room 1
40	Yulistini	Developing Blueprint for Block Assessment: A Faculty of Medicine Andalas University Experience	SEARAME Oral Presentation	Mon 7 May	15.45	East Room 3

POSTER PRESENTATION INDEX

No	Nama	Title	Session Description	Session Date	Session Time	Session Room
1	Ashaeryanto	Anxiety Overview of Medical Student Undergraduate	SEARAME Poster Presentation	Mon 7 May	15.15	Mataram Ballroom foyer
2	Bernadetha Nadeak	The Description of Medical Students' Interest and Achievement on Anatomy at Faculty of Medicine Universitas Kristen Indonesia	SEARAME Poster Presentation	Mon 7 May	15.15	Mataram Ballroom foyer
3	Dian Apriliana Rahmawatie	Hospital of Clinical Rotation Affects Quality Teaching of Clinical Reasoning	SEARAME Poster Presentation	Mon 7 May	15.15	Mataram Ballroom foyer
4	Diani Puspa Wijaya	Teaching Pathological of Human Disease : Lesson from Undergraduate Medical Curriculum	SEARAME Poster Presentation	Mon 7 May	15.15	Mataram Ballroom foyer
5	Dina Zakiyyatul Fuadah	Perceptions of health students on learning interprofessional education	SEARAME Poster Presentation	Mon 7 May	15.15	Mataram Ballroom foyer
6	Estivana Felaza	Nurturing Professionalism in Pre-clinical Years: Medical Teachersâ€™ Perception in Faculty of Medicine Universitas Indonesia	SEARAME Poster Presentation	Mon 7 May	15.15	Mataram Ballroom foyer
7	Hikmawati Nurokhmanti	Professional Identity Formation: Historical study on GPs' identity	SEARAME Poster Presentation	Mon 7 May	15.15	Mataram Ballroom foyer
8	Hindun Wildani Wahab	Development of an Artificial Model for Ovum Pick Up Simulation	SEARAME Poster Presentation	Mon 7 May	15.15	Mataram Ballroom foyer
9	Noviarina Kurniawati	E-learning from First-Year Medical Students' Perspective: Beginners' View	SEARAME Poster Presentation	Mon 7 May	15.15	Mataram Ballroom foyer
10	Putu Gede Sudira	The Evaluation of Clerkship Program in Non-Major Divisions of Sanglah Central General Hospital	SEARAME Poster Presentation	Mon 7 May	15.15	Mataram Ballroom foyer
11	Rika Lisiswanti	Factors Affecting Low Academic Achievement in Medical Education	SEARAME Poster Presentation	Mon 7 May	15.15	Mataram Ballroom foyer
12	Rospita A. Siregar	Review of Research Results of Patient Satisfaction Level of BPJS Participant Who Come in Outpatient Room With SERVQUAL Method, Encourage Medical Education Institution Simulate Empathy Attitude in Learning Process	SEARAME Poster Presentation	Mon 7 May	15.15	Mataram Ballroom foyer
13	Siti Khotimah	Impact of Reflective Writing on Medical Student Attitude	SEARAME Poster Presentation	Mon 7 May	15.15	Mataram Ballroom foyer
14	Umme Jamila Akther Manni	Knowledge, Attitude and Practice About Human Papilloma Virus/HPV Vaccine in The Prevention of Cervical Cancer Among The Medical Students	SEARAME Poster Presentation	Mon 7 May	15.15	Mataram Ballroom foyer
15	Widyandana	Challanges on implementing longitudinal interprofessional education in community setting : students view from 5 years experiences	SEARAME Poster Presentation	Mon 7 May	15.15	Mataram Ballroom foyer
16	Wika Hartanti	Students' Perception on The Use of Role Play with Standardized Patients For Clinical Ethics Education: An Initial Report	SEARAME Poster Presentation	Mon 7 May	15.15	Mataram Ballroom foyer
17	V Yuvaraj	Tackling patient anxiety in dental extraction using yoga technique to Improve patient care for the better health professionals and health services in future	SEARAME Poster Presentation	Mon 7 May	15.15	Mataram Ballroom foyer

18	Yeny Dyah Cahyaningrum	OSCE of Pediatric Ward as a Clinical Competency Assessment of Medical Students: How about the retention of knowledge?	SEARAME Poster Presentation	Mon 7 May	15.15	Mataram Ballroom foyer
19	Zwasta Pribadi Mahardhika	Career Preferences Among Preclinical and Pregraduate of Yarsi Medical Students	SEARAME Poster Presentation	Mon 7 May	15.15	Mataram Ballroom foyer

THE WINNERS

ORAL PRESENTATION

Professional

1. Best oral presentation: Rishi Pokhrel
"Cadaver Based Procedure Skills Training for Medical undergraduates in Pre Clinical Phase"
2. Runner up: Mahalakshmi VN
"Measuring Graduate Outcome for Quality Enhancement in Medical Education"
3. 2nd Runner up: Ratih Yulistika Utami
"Enhancing Students Motivation: The Effect of Standardized Oral Assessment in Basic Clinical Skills Training"

Student

1. Best oral presentation: Annisa Fajriani
"A Study on The Importance of Adopting Evidence-Based Medicine into All Medical Schools Undergraduate Curriculum"
2. Runner up: Ida Ayu Dewi Dhyani
"Correlation between Extracurricular Activities and Academic Performances among Preclinical Medical Students in Udayana University, Bali"
3. 2nd Runner up: Tiara Syafitri Putri
"Perceptions of Clinical Medical Students about the benefits of Public Health Rotation: a preliminary study of medical students' evaluation on Public Health clinical curriculum."

POSTER PRESENTATION

1. Best poster presentation: Hindun Wildani Wahab
"Development of an Artificial Model for Ovum Pick Up Simulation"
2. Runner up: Yeny Dyah Cahyaningrum
"OSCE of Pediatric Ward as a Clinical Competency Assessment of Medical Students: How about the retention of knowledge?"
3. 2nd Runner up : Widyandana
"Challanges on implementing longitudinal interprofessional education in community setting : students view from 5 years experiences"

SECTION 2

PRE-CONFERENCE WORKSHOP

6 MAY 2018

Innovations in community-based medical education to improve social accountability

Diantha Soemantri, MD, MMedEd, PhD*, Widyandana, MD, MHPE, PhD, SpM**
*Faculty of Medicine, Universitas Indonesia
**Medical Education Department, Faculty of Medicine, Public Health, and Nursing, Universitas Gadjah Mada-Indonesia

Abstract

Background : Kelly et al (2014) defines community-based medical education (CBME) as education that put students training in a community setting, in which they are exposed to patients who are suffering and dealing with their illnesses within the context of family, social and community. Activities in the CBME may or may not be relevant to the needs of community. Therefore, one of the important features of CBME is how to make the learning experiences productive for students and responsive to the community's health needs (Magzoub & Schmidt, 2000).

Magzoub and Schmidt (2000) developed the taxonomy of CBME and differentiate between three categories of CBME program; service-oriented, research-oriented and training focused. The experiences provided through each CBME program should enable students to acquire the intended competencies, and increase students, staff and university contribution related to the healthcare services in the community.

Similar to other educational activities, a rigorous instructional design from learning objective to evaluation needs to be developed. This workshop will discuss the principles and approaches of CBME and how to optimize its roles in, not only helping students achieve the competencies, but also improving the medical and health professions schools' social accountability. The participants will be asked to actively participate in the workshop by developing the design of CBME program according to the category/taxonomy selected.

Creating interactive online forms and quizzes for teaching & learning

Kinik Darsono*, Noviarina Kurniawati**
* Head of Information Technology & Medical Record Division, Soehadi Prijonegoro Hospital, Sragen-Indonesia
**Medical Education Department, Faculty of Medicine, Public Health, and Nursing, Universitas Gadjah Mada-Indonesia

Abstract

Background : Students' overexposure to multimedia technology and information sources changed students learning and attention pattern. With flourishing e-learning and mobile learning, the demand for web-compatible learning resources also increases. Providing interactive tools for students' learning can increase students' engagement in the learning activity. Providing such learning material can be challenging in terms of technical complications. Technology rise, on the other hand, also brings opportunity to simplify these processes. This workshop aims to encourage participants in using internet features to support their teaching and learning activities, i.e. developing simple interactive learning resources (forms and quizzes) using selected applications.

Improving faculty training system to upgrade the quality of education

Siti Rokhmah Projosasmito, MD, MEd(L,P&C)*, Dr. Jyotsna Rimal, MDS, FAIMER Fellow**
*Medical Education Department, Faculty of Medicine, Public Health, and Nursing, Universitas Gadjah Mada-Indonesia
**Additional Professor and Head, Oral Medicine and Radiology, Coordinator, Health Professions Education Core Group, Department of Health Professions Education, BP Koirala Institute of Health Sciences, Dharan, Nepal

Abstract

Background : The roles of a Health Professions Educator have changed in the present context. Earlier, anybody who graduated from a Medical School was thought to be capable of teaching the students. Teaching is a complex skill and an art. It requires enthusiasm to teach, self-discipline, hard work, practice and feedback. Apart from content, teaching involves process which has to be mastered by the teachers.

Presently, the competencies required for our graduates has been upgraded from a mere scholar to information manager, health advocate, communicator and a leader. Are we, the educators, equipped with the skills to impart these competencies? The solution to this is training the faculty on a regular basis. Even those endowed with inherent talent of teaching need to undergo trainings to improve their performance as educators.

The training programs may range from few days' workshops to online training modules for busy clinical teachers, advanced training modules, diploma, masters and PhD in Health Professions Education. The workshop will highlighton the strategies to improve the training system of the teachers involved in health professions education.

Designing programs for developing students' professionalism

Yayi Suryo Prabandari*, Yoga Pamungkas Susani, Umatul Khoriyah*****
*Chair of Professional Behavior Committee, Faculty of Medicine, Public Health & Nursing, Universitas Gadjah Mada-Indonesia
**Medical Education Unit, Faculty of Medicine Universitas Mataram
***Faculty of Medicine, Indonesian Islamic University

Abstract

Background : Professionalism is one of health professionals' competency and should be taught during the education. Designing professionalism education is challenging, particularly on how teach and integrate into the curriculum.

Objectives : This workshop will give opportunity for the participants to be able to 1) learn a brief example on developing professionalism education, focussed on professional identity; 2) describe the steps to develop professionalism curriculum; 3) discuss on how to integrate professionalism education into existing curriculum, and 4) debate teaching learning methods to deliver professionalism education and its evaluation.

Methods : We will start the workshop with explaining about one example of professional identity development. Participants then will learn based on the example and follow curriculum development steps. Workshop session consists of short introduction and case based lecture, small group discussion, presentation and debate.

Expected outcome : Participants will leave this session with an understanding of an example of professionalism identity education development. They will also be able to explain steps to develop professionalism education and integrate into the existing curriculum. Delegates will be able to use the result of discussion and debate to design teaching learning and evaluation of professionalism education in their institution.

Keywords : *profesionalism, professional identity, education, professional identity, participation, communities of medical practice*

Academic leadership for improving the quality of health professionals education for ensuring better health care.

Dr Thomas V Chacko
Past Secretary-General SEARAME, Director PSG-FAIMER Regional Institute, Coimbatore, India, Dean Medical Education, Believers Church Medical College, Thiruvalla, India

Abstract

One of the critical inputs needed to ensure better health care is to improve the quality of education so that they become competent health care team members. To improve the quality of education, Health Professions Educational Institutions need to provide academic leadership and mentoring of faculty to enhance the capability of the faculty and staff.

Literature on academic leadership suggests that all levels of faculty play leadership roles and so would benefit from building up their capacity to fulfil this role. Besides, Academic Leaders within Institutions throughout the world are striving hard to make their institutions get recognized as a center of academic excellence. For this purpose, apart from the Dean or the Principal, there are other positions – both formal as well as informal where we are often entrusted to play leadership roles within our own department or at institutional level to help junior faculty and colleagues to grow academically as well as help our students excel in various ways.

This workshop is meant for you to sharpen your A**cademic** Leadership skills for **fostering Academic growth** of faculty under you so that the collective synergy of efforts by larger body of empowered and enlightened faculty translates to better learning by students.

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Curriculum innovations in medical and health profession education to accommodate the disruptive era

Titi Savitri Prihatiningsih, MD, MA, MMedEd, PhD*, Ardi Findyartini, MD, PhD**
*Medical Education Department, Faculty of Medicine, Public Health, and Nursing, Universitas Gadjah Mada- Indonesia
** Department of Medical Education Faculty of Medicine Universitas Indonesia

Abstract

Background : Medical and health professions' education has been facing great challenges in producing high quality graduates at all levels who will determine the quality of healthcare in the 21st century. Future healthcare as well as medical and health professions education will be very dynamic, disruptive, and the landscape might be determined by explosion of information and technology, big data, robotic and artificial intelligence. In addition to this, health professionals will need to overcome more complex clinical problems, patients and families, societies, and other uncertain aspects of healthcare. Curricula in medical and health professions education therefore need to be very adaptive to local as well as regional and global needs within a system based approach. At the same time, medical and health professions education institutions have to assure the quality of the student, academic, teaching-learning process, assessment, infrastructure and other support system. The realizations of current challenges should be translated into an adaptive-competency-based curriculum as well as encouraging innovative curriculum in medical and health professions education. Such curriculum is regarded as systematic approach to developing, implementing and evaluating curriculum by first defining the expected learning outcomes which are derived from the articulation of stakeholders' needs including patients, community, society, professional bodies, health services, government and other stakeholders.

Improving continuing professional development using technology for better future health services

dr. Lutfan Lazuardi, PhD*, dr. Noviarina Kurniawati, MSc**
* Health Management Information System, Faculty of Medicine, Public Health, and Nursing, Universitas Gadjah Mada-Indonesia
**Medical Education Department, Faculty of Medicine, Public Health, and Nursing, Universitas Gadjah Mada-Indonesia

Abstract

Health professional should constantly improve their skills, knowledge and competencies with aim to provide the ultimate healthcare services. Continuing Professional Development (CPD) ensures that heath professional maintain and enhance the knowledge and skills needed to deliver a professional service to patients and community. Information and communication technologies (ICT) with its versatile features may potentially useful in facilitating dynamic environment of continuing professional development. ICT allow us to facilitate the learning environment for health professional, which are usually need high degree of flexibility, adaptive, reflective and interactive.

The purpose of the workshop is to provide participants with:

- Strategies that will help them to facilitate continuing professional development using ICT
- The skills to develop capacity to use ICT for continuing professional development
- The tools and platform for continuing professional development

Clinical teaching management

Prof. dr. Ova Emilia, MMedEd, Sp.OG(K), PhD, dr. Yoyo Suhoyo, MMedEd, PhD
Faculty of Medicine, Public Health, and Nursing, Universitas Gadjah Mada-Indonesia

Abstract

Background : Clinical teaching is critical aspect in medical education. In clinical setting, students learn various clinical competence trough various patient-based teaching-learning activities. Many aspects of clinical learning environment should be taken into account in establishing good clinical teaching. Therefore, managing clinical teaching is such challenging work for all medical and health profession education institutions. This workshop offers opportunity to learn principles and to share experiences in managing clinical teaching.

Utilising national examinations' feedback to improve teaching and learning activities

dr. Fundhy Sinar Ikrar Prihatanto, MMedEd*, dr. Rachmadya Nur Hidayah, MSc**
*Faculty Medicine, Airlangga University-Indonesia
**Medical Education Department, Faculty of Medicine, Public Health, and Nursing, Universitas Gadjah Mada-Indonesia

Abstract

Background : The results of national examination in Indonesia contain information on examinees' performance, which may reflect their experience in learning competencies and how institution prepares their students for the examination. The results could serve assessment's purpose in not only determining pass or fail, but also improving teaching and learning process. On the other hand, report/ feedback of these results is commonly overlooked and loses its potential in providing the ground for programme evaluation. By utilising national examinations' feedback, several information could be taken as basis for improve teaching and learning activities as well as assessment practice in the institution.

CONFERENCE DAY

7-8 MAY 2018

Maintaining standards and improving quality in medical education worldwide, at a time of rapid growth and change

David Gordon
President WFME

Abstract

The World Federation for Medical Education (WFME) works to enhance the quality of medical education world-wide in order to improve healthcare for all. WFME promotes the highest standards in the management, organisation, support and delivery of medical education, but it is not primarily concerned with the detail of what is taught in medical education, or what educational methods and approaches are used. We are thinking more about how the medical school is run and how well the teachers teach, but less about the exact content of what is taught and what teaching techniques are used.

WFME projects include:

- Development of standards in medical education
- Management of the *World Directory of Medical Schools*, jointly with FAIMER, the Foundation for Advancement of International Medical Education and Research
- Promotion of accreditation of medical schools

The first edition of the WFME standards for medical education was published in 2003, and was adopted widely, world-wide. The third edition is in preparation. Elements to be considered in the new edition will be discussed.

The *World Directory of Medical Schools* is the successor to the WHO World Directory of Medical Schools, first published in 1953. Maintaining an up-to-date list of medical schools is problematic at a time when new medical schools are proliferating, often in an uncontrolled fashion. There are more than 400 medical schools that are reliably thought to exist, but for which we have no proof, and many of these are likely to be of poor quality. Nevertheless, many new medical schools are very good. It is particularly encouraging that some less-developed countries have opened schools of high quality, and relevant to the needs of local society. The World Federation for Medical Education (WFME) has an advisory paper on "Criteria for establishment of a new medical school".

WFME activity in accreditation is best known through the high-profile programme for the recognition of accrediting agencies, which is important in the goal of the promotion of accreditation. The SEARAME conference will be presented with the most up-to-date information on this programme.

Improving the quality of health professions education through a new accreditation system in Indonesia

Prof. Usman Chatib Warsa, MD, PhD
IAAHEH / LAM-PTKes

Abstract

The Indonesian Accreditation Agency for Higher Education in Health (IAAHEH) as an independent entity has made a turning point in accreditation system in Indonesia. The uniqueness of IAAHEH focus on the integration of seven health organization profession and seven association of higher education institution namely medicine, dentistry, nursing, midwifery, pharmacy, public health, and nutrition. These fourteen representatives have established the agency become a self-funded organization and during its initiation was supported by the government.

IAAHEH has carried out accreditation activities for Higher Education in Health related Study Programs since March 2015 under the following regulation: (1) The Minister of Law and Human Rights of the Republic of Indonesia Decree No. AHU-30.AH.01.07. dated February 3, 2014 on the Legal Recognition of IAAHEH; (2) The Minister of Education and Culture of the Republic of Indonesia Decree No. 291/P/2014 dated October 17, 2014 on the Recognition of the Establishment of IAAHEH; (3) The Minister of Research, Technology, and Higher Education of the Republic of Indonesia Decree No. 46/E.E3/KL/2015 dated February 2, 2015 on the Operationalization of IAAHEH. Based on the existing regulation, accreditation is mandatory for all study program in Indonesia including health study program.

The integration of fourteen representatives creates a powerful energy to change the differences among health profession and higher education association to become a beautiful harmony in order to cultivate the culture of quality among higher institution in health, which finally lead to the quality of its graduates. In addition, another uniqueness of IAAHEH is by facilitating a new innovative accreditation system which become an important part of advance information technology. The accreditation system is conducted mostly through an online system and provided with a facilitating approach prior to enter the process. It is followed with a monitoring system (called "surveillance") where each study program will be monitored for the efforts to improve its quality of academic achievement. The system design allows every people who is involved become more aware of the situation in the study program entering the accreditation process and their perception on quality in the study program afterwards. During three years operation, the IAAHEH has accredited 1738 study program in health fields includes study program in medicine. Among 83 faculty of medicine in the country, 73 has accredited and 10 others new medical school in accreditation process. The evaluators for study program in medicine are 303 persons. All accredited study program have been following up their process to create quality academic culture. The full presentation will describe all in details.

SEARAME Student and Faculty Exchanges: What does it look like?

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Abstract

Background : Student and faculty exchanges is one way forward towards globalizing and enhancing medical and health professions education while strengthening health professions' networks through intra-institutional partnerships.Linking SEARAME's intra-institutional membersfor the exchange ofstudent and faculty can be achieved. The question is, how?

Aims : The aims of the ECFMG GEMx symposium are to:

- IntroduceGEMx and how it can serveas "facilitator" of global student and facultyexchanges amongst SEARAME's intra-institutional partners
- Identify what student and faculty exchanges look like amongst SEARAME's intra-institutional partners
- Identify the role of SEARAME in the context of intra-institutional exchanges

Improving the quality of health professions education for better future health services: challenges and solutions from european region

Professor Janet Grant
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Abstract

Europe is not one place. The European Union has 28 countries, with 48 countries in Europe overall. GDP per capita ranges from US$ 5,697 (Moldova) to US$ 107,737 (Luxembourg). There are differences in healthcare spending, disease patterns, health status, healthcare service frameworks, access, effectiveness and quality of care, and number of doctors and nurses per capita.

Policy documents for health and health professions education are written by WHO-Euro, and various EU bodies. Two features are clear:

- Education and service development tend to be addressed separately
- Both are seen as the responsibility of national governments (the principle of subsidiarity whereby decisions are taken as closely as possible to the citizen).

Despite this, in practice, there is a close relationship between health professions education and the healthcare service, the principles of which apply differently in different countries.

The general structures of medical and nursing education are also different within and between countries. In this presentation, we will address medical education as our case in point.

Although there is a universal interdependency between medical education and the health care service, and medical education has, as its first purpose, to develop the physicians and surgeons of the future who will staff that service, there has rarely been a concerted analysis of the complex relationship between medical education and the health care service. This presentation will tease out some emerging trends in this complex relationship at the levels of undergraduate and postgraduate medical education, and continuing professional development. We will consider workforce planning, contextual curriculum design and the medical school's own responsibility for the healthcare service on which it depends.

Improving the quality of health professional education for better future health service

Professor Emeritus Khunying Kobchitt Limpaphayom
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Abstract

Healthcare has become increasingly complex and face enormous challenges in providing quality care to diverse population. An important need has developed for a cohesive and collective vision for the physician of the future requires skills that will further adaptations and reforms to the medical education system. Medical education is about transmitting large amounts of technical and increasing complicated knowledge to young minds. But mastering the reality of today does not prepare students for the challenges of tomorrow.Medical education should teach how to manage change. The challenges content of many curricula were designed to developing countries to deal with disease like management of some carcinoma using advance treatment and technique but very little attention was given to prevention or the skill required to provide leadership in health teams.

All health professionals should be educated to deliver patient-centered care as members of an interdisciplinary team, emphasizing evidence-based practice, quality improvement approaches, and informative. A competency-based approach to education could result in better quality because educators would begin to have information on outcomes, which could ultimately lead to better patient care, reducing cost and resulting in better communication and coordination across.Transformative education is mandated because the health need of society can no longer be met by physicians alone, but required the concerted attention of growing hand of related health professionals.

Thailand started to improve health insurance coverage for people with low-incomes, the formally employed, children and the elderly. As of the year 2002, Thailand achieved in 100% full-coverage on health care for the whole population of the country. (Bulletin of WHO, 2017). The country statistical report showed the proportion of 21 hospital-beds per 10,000 population and the health worker density was 4 physicians per 1,000 population (WHO, 2017). With the Universal Coverage Scheme, we can expect to see if the system proves to be effective for the country.

Every seven years we have a national medical education conference. Major curriculum reviews take place every seven years. Thailand has a strong mechanism for quality assurance and standardization of education and accreditation. It is recommended that medical institutions be community-oriented, relevant to flexibility of the

teaching methods, student centered and integrated as much as possible. It was expected that medical graduates for the 21st century health care system should be skilled clinicians capable to work more or less alone in rural hospitals; be good teachers capable to train community health workers and volunteers; be good managers capable to manage district hospitals; as well as be good supporters of primary health care.

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Experience of National Licensing Examination from Thailand

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Abstract

To qualify for medical practice in Thailand, the foreign graduate physicians must pass the medical licensing examination of Thai Medical Council (TMC). In the past Thai medical students who graduated from Thai medical schools, they received the medical license approval form TMC without taking the national licensing examination. However, since 2006, The Center for Medical Competency Assessment and Accreditation(CMA) of the TMC has established the regulation that every Thai medical graduates has to pass the National Medical Licensing Examination (NL) the same as foreign graduates. Thereare 3 steps in this NL. Third-year medical studentssit for the Step 1 test which is a paper-based 300-MCQexamination covering basic science subjects. Step 2 istaken by the fifth-year students regardless of the Step 1result. It is also a paper-based 300-MCQ examinationcovering clinical science topics. Students must pass theSteps 1 and 2 in order to be eligible for the Step 3 test whichincludes the 20 stations of objective structured clinical examination (OSCE). There is no limit in attempts for taking theseexaminations. Finally, applicants are required to pass all 3 partsof Thailand NL. The NL Step 1 and Step 2 are separately scheduled for 1-day,twice yearly, and offered at several testing locationsin Bangkok and other provinces. Since 2015, almostall questions in NL Step 1 and Step 2 will be in English,except for the questions associated with Thai law orforensic medicine, which appear in Thai. The NL Step 3 (OSCE) is a half-dayexamination given 3 times a year, and is conductedonly in Thai. In addition, every applicant isalso required to take 2 more examinations, which areconsidered part of the NL Step 3. They consist ofmodified essay questions (MEQ) and Long caseexaminations. Completion of all examinations, includingNL Step 1 (MCQ), NL Step 2 (MCQ), NL Step 3(OSCE), MEQ, and the Long case, are the samerequirement for both Thai national graduates and foreign graduates.

Once all these 3 principle requirements are fulfilled, He/she will be granted a life-long, permanent Thaimedical license, which is valid for practice throughoutthe country. From the first NL until present the pass rates of Thai medical graduateswho take the NL show ranging from 90.6% to 99.4%. More results will be discussed in the presentation. In conclusion, the benefit of implementation the NL is the excellent evidence to support and to improve the quality of medical education and medical practitioners in Thailand.

Experience of National Licensing Examination from Indonesia

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Abstract

National Licensing Examination for Medical Doctor in Indonesia has already implemented since 2007. It was started with paper-based of 200-item multiple choice questions (MCQ) for 2000 participants from 37 medical schools. After more than 10 years, the four-time-a-year examination has developed to a two modes of exam consist of 200-item computer-based MCQ and 12-station OSCE, with more than 4000 participants from 72 medical schools per period. The current committee is called PNUKMPPD, consist mainly of medical teachers from all over the country along with the representatives from Ministry of Research, Technology and Higher Education, Ministry of Health, Indonesian Medical School Association (AIPKI), and College of Physician (KDI). To date, the experience of the committee covers many aspects; such as developing the system to make sure that the presence of all 72 medical schools is well covered, getting the medical schools to buy in to the whole process from writing items as well as execution of the exams, and creating feed-back to support the development of medical school in the national exam system to meet the national standard of medical education. Trying to maintain regular national exam is quite challenging since not all medical schools can deal with maintaining the standardized technical aspects of the exam, as well as achieving the expected performance. Yet the national examination as exit exam as well as for licensing medical doctors is a mandatory in Indonesia.

After a very long and rich experience in developing MCQ for national medical licensing exam, we applied a tiered system to gather quality MCQ items from medical school. The key system used is the regionalization of medical school with regards to the organization basis developed by AIPKI. A strong support from AIPKI enabled the writing, reviewing, and try-outs conducted from school, regional, to national level. Such system became essential in developing national MCQ item bank. Through the system, it is also realized that some school need to increase its ability to write good MCQ items, since the number of items produced by each school did not always linearly correlated with the number of items successfully reached the national-level item bank. From other study, we found out that school performance was correlated with its level of accreditation. Knowing that there is at least one outstanding medical school in each of the six AIPKI regionals, the process of regular meeting for item reviewing is hopefully become the groundwork of strong collaboration between medical schools.

OSCE officially became the part of national licensing examination in 2013, after a long period of development and one-year prior implementation as formative exam. Many technical aspects need to be developed and standardized for OSCE, including rooms, equipment, patients, as well as clinical techniques or procedures. The other important part needed to be standardized is the OSCE examiner. The examiner, as they are also medical teachers, are expected to transform their experience as national OSCE examiner to the development of skill teaching in their own medical

school. Furthermore, in terms of OSCE items, the similar system with MCQ item development was formed. Yet the process was less rigorous, since the item required was not as many and try-out is not considered needed. On the other hand, to support the quality of medical school level skill teaching, the Ministry of Research, Technology and Higher Education along with AIPKI, support the development of ISLAND (Indonesian Skill Lab Network Development). The impact of ISLAND is expectantly becoming the backbone of successful national OSCE.

Later on, studies conducted in 2016–2017 showed that the national exam system before licensure of physician give assurance to many; the governing bodies such as the Ministry of Health and Indonesian Medical Council, and also the patients and other healthcare profession. The next challenge of PNUKMPPD will be to provide evidence showing that the items are valid and reliable to represent the competence of the participant, showing that it correlates with the achievement of previous study. Moreover, the items should also be able to predict the performance in the internship program, the next phase of medical doctor graduates. Finally, another important lesson from Indonesia experience in national medical licensing examination is the need of strong administration basis in many aspects related to examination for enabling the advancement of technology in managing the three-monthly national exam. The strong basis can only happen when good relation ties government, medical school, medical council and medical college, in which all parties are equally at stake.

Challenges and solutions for improving the quality of medical education: perspective of the Western Pacific Region

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Abstract

The Western Pacific Association for Medical Education is the division of the World Federation for Medical Education responsible for enhancing medical education standards in the largest world region, on criteria ofboth population and geographical area. This gives rise to enormous challenges but also to great opportunities for improvement.

The region includes countries at very different stages of socioeconomic development and with very different tertiary education and professional regulation systems. Australia and New Zealand have a well-established authority for the quality assurance and quality improvement of medical education, the Australian Medical Council, and a direct linkage exists between school accreditation status and the eligibility of graduates for registration to practice. In the past few decades, other countries in the region have established accreditation agencies along broadly similar lines, though with local differences in structure and governance. In the period before about 2000, these countries included Malaysia, South Korea, Taiwan andthe Philippines. More recently, other countries with even larger medical education systems have set up their own national authorities, taking into account the requirements for recognition of such bodiesissued by the WFME. In this category are China (Working Committee for the Accreditation of Medical Education) and Japan (Japan Accreditation Council for Medical Education). A number of other countries have the development of such an agency under active consideration, eg. Singapore and Vietnam.

Challenges exist in countries with smaller numbers of medical schools, and/or less experience and resources available for developing accreditation systems. In these countries, the WPAME has provided consultations and advice, and in some cases a service of external evaluation of a medical school program against the WFME standards for basic medical education. In this category, visits by WPAME teams have been made to schools in Mongolia, Fiji and Samoa. In these and some other countries in the region, setting up a national medical school accreditation agency may not be appropriate, and alternative methods for ensuring the quality of medical programs are required.

Licensing of Medical Doctors to Practice Medicine in Sri Lanka

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Abstract

Medical doctors must register with the Sri Lanka Medical Council (SLMC) in order to practice Medicine in Sri Lanka. The SLMC is the statutory body established for the purpose of protecting health care seekers by ensuring the maintenance of academic and professional standards, discipline and ethical practice by health professionals who are registered with it.

Currently the number of active registrations with SLMC is 25600. These doctors may work primarily in one of four different employment sectors i.e. (1) Ministry of Health, (2) university sector, (3) private sector, (4) overseas. Majority (70 %) of active registrants are employed with the Health Ministry.

The doctors registered with SLMC can either be graduates from Sri Lankan state medical schools or overseas medical schools. Gaining admission to a Medical school in Sri Lanka in highly competitive. Some of the students who fail to gain admission to a Sri Lankan state medical school may enter an overseas medical school. Approximately 1500 new doctors are registered with SLMC.

Successful completion of internship is a mandatory requirement for SLMC registration. Overseas medical graduates must pass a licensing examination (Examination for Registration to Practise Medicine (ERPM), conducted by SLMC. The candidates should possess a MBBS or equivalent degree from a medical school recognized by the SLMC, to be eligible to sit this examination. Passing this examination enables them to apply for Provisional or Full Registration with the SLMC.

The objective of this Licensing Examination is to determine whether the graduate is fit to do internship and fit to practice medicine in Sri Lanka. Although the principles of medical practice remain the same, clinical teaching and the relative emphasis on various aspects of training differ from country to country due to variations in the pattern of disease prevalence, the facilities and resources available for the provision of health services.

Improving Health Care through Learning, Inquiring and Reasoning

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Abstract

In today's digital world professional knowledge has emerged not only as an individual asset for practice in health but as a "capital" for advancing health systems. It is learning that provides the only sustainable competitive advantagein research, innovations, pooled clinical expertise and health system performance. This presentation will briefly address current thinking on approaches to learning, facilitation of scientific inquiry and clinical reasoning.

Since 1980's several studies have been carried out to understand how students learn in higher education in different fields of study. There is increasing evidence that students adopt a deep approach to learning withtransformative changes in their curricula, compared to predominantly surface learning in traditional programs. If students are given motivation, the means and the knowledge necessary to critically think, assess, challenge and change their assumptions they will have a chance to become lifelong learners capable of adapting to the changing world.

Scientific inquiry refers to the different ways scientists study the natural world and propose explanations based on evidence. There is an abundance of literature on theways to promote inquiry from kindergarten to higher education. Inquiry based teaching can be undertaken at different levels of student learning. In lower levels teachers can help students to carry out guided simple experiments and at higher levels they plan experiments, control variables, state expectations of what will happen and compare them with actual results.

Inquiry in medical research frequently confronted with two types of observations, Data Set Observations (DSO) amenable to statistical interpretations and Casual Process Observations (CPO) that give crucial insights for the process of innovation. An impressive number of discoveries resulted from combining qualitative reasoning and quantitative analysis. Edward Jenner in Small pox, Semmelweis in Puerperal sepsis, John Snow in Cholera, Christian Eijkman in Beriberi, Alexander Fleming in Penicillin – demonstrated the kind of inquiry and casual process reasoning in their endeavors. Such inquires and observations continue to deliver results when we reflect on the latest 2017 Nobel Prize in Medicine and Physiology. Hall, Robash and Young worked on fruit fly, identified Period gene and PER protein to demonstrate Circadian rhythm.

Training of students and doctors in Evidence Based Medicine (EBM), Continuing Professional Development (CPD), and recertification of physicians are some efforts undertaken after the Institute of Medicine (IOM) Report- *to Err isHuman,* highlighting the enormity of medical errors. Current research on Clinical Reasoning process is an educational effort aimed atimproving Patient Safety which is a global concern.

Clinical reasoning is an ability to integrate and apply different types of knowledge, to weigh evidence, critically think about arguments and to reflect upon the process used to arrive at a diagnosis. Research on this area dates

back to 1970's aimed at exploring the thinking process of individual clinician in medical problem – solving (clinical reasoning).

A dual process model of thinking proposed by the Nobel Laureate Daniel Kahneman, involving two system thinking is considered useful in understanding the reasoning process. The faster system, Type 1, is automatic, unconscious and effortless. The slower system, Type 2 is controlled, conscious and effortful.

Clinical reasoning thus becomes meaningful to learners with a deep approach with sound skills in observation and reasoning in a controlled and effortful manner. The repertoire of knowledge available in the working memory relevant to the data generated from the patient and self-recognition of dual process can help reduce diagnostic errors.

Experience of National Exit Examination and National licensing Examination: Bangladesh

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EC Member, SEARAME
Secretary General, AME Bangladesh

Abstract

An exit examination is a test that students must pass to receive a degree/diplomafrom an institute. In Bangladesh exit examination for graduate medical, dental, nursing and medical technology courses are being conducted by Faculty of Medicine of different universities. After that medical & dental graduates get time bound registration from BM&DC to do practice. Exit examination of undergraduate diploma of different medical technology & allied health professionals courses are being conducted by State Medical Faculty of Bangladesh. Exit examination of diploma in pharmacy course is conducted by Bangladesh Pharmacy Council. Exit examination of diploma nursing & midwifery courses are being conducted by Bangladesh Nursing & Midwifery Council (BN&MC).

Licensure is the process by which a federal, state or local governmental agency grants an individual permission to practice in a particular occupation or profession that is subject to regulation under the government's authority and to refer to oneself as "licensed" or authorized to practice.Obtaining a license in order to practice a profession is mandatory*(FSMTB).*At presenting Bangladesh is practicing national licensing examination only for the medical/dental graduates who acquire degree from outside the country. It is known as registration qualifying examination (RQE). This RQE is conducted by Bangladesh Medical & Dental Council (BM&DC). This RQE is conducted twice in a year such as at the last week of April and November. Only written examination of 100 marksin which pass mark is 60. Question paper for written examination is consist of total 100 multiple true false type of MCQ. Out of 100 MCQ10 from preclinical, 20 from para clinical and 70 MCQ from clinical disciplines. Each MCQ consists of four option/branches with the provision of negative marking. Duration of examination is one hour forty minutes. Moderators selected by BM&DC prepare the questions set at BM&DC premisesbefore examination and results are published on the same day. Bangladesh has been practicing this RQE sinceNovember 2011with the hope to have it(RQE) in future for the graduates who are acquiring MBBS/BDS degree from the institutes within the country.Apart from medical and Dental graduates Bangladesh has been conducting licensing examination in nursing sectorsince June 2011. Diploma and graduate nurses are to appear for licensing examination. Bangladesh Nursing &Midwifery Council (BNMC) conducts national lichening examination twice in a year. Diploma & graduate nurses are to appear lichening examination with separate question set in the same day. The licensing examination is consist of 100 MCQ out of which 60% is multiple true false and 40% is single best response type of MCQ. Pass mark is 60%. Total duration of the national licensing examination is one hour.

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Medical Education in the American Continent

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Abstract

The American Continent is divided in three regions North, Central and South and medical education has different levels of development from the ones with very high technology and innovations to those that are very limited and that work with traditional curricula. This presentation pretends to provide updated information of how medical education is in the different regions, what are we doing to raise the level of all schools and what the impact of international accreditation is of the National Associations members of the Pan-American Federation of Associations of Medical Schools (PAFAMS)

Efforts to improve health services in South East Asian Countries: Challenges & solutions for the region

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Abstract

The countries in South-East Asia region are newly emerging countries that are in demographic and epidemiological transition. This imposes a double burden of communicable and non-communicable diseases on the people who are overcoming the diseases of poverty and unsafe environment coupled with increased life expectancy (due to improvements in health care) and life-style diseases in a technology driven globalized world.

The challenges faced include those that hinder provision of Universal Health Coverage particularly in the rural and remote hilly areas, increasing cost of health care to people who due to low subscription to health insurance, spend large amounts of money out of pocket for catastrophic illnesses that puts families under financial strain and in debt.

Challenges in providing Universal Health Coverage besides low allocation of country's budget (< 3-5%) to health care include lack of adequately trained Human Resources for Health who are not job-ready due to faults in the educational system like discipline-based compartmentalized information overload system ; faulty assessment and certification systems that test only knowledge domain; there is craze among doctors to go in for higher but narrow field specialization that earns them more money and respect compounded by patients and their relatives preferring to consult them directly rather than going to a GP or a family Physician; similar gaps in training of the para medical professionals who are posted to the remote areas without supportive supervision, transport facilities and availability of IT enabled consults for telemedicine for diagnosis and identification of cases at risk that need referral. Lack of infrastructure and educational facilities for the children of the health care providers also makes the graduates prefer urban rather than rural areas.

Solutions to these problems and challenges are already available in the region but are practiced in isolation. These include training the doctors in primary and secondary care settings as well as with the GPs, more opportunities for specializing as General Practitioners and Family Physicians, provision of tele-medicine; changes in the educational system with move towards ensuring job-ready graduates and health care team through Competency Based Medical Education and Inter Professional Education, Critical Reflection for transformative leadership of teams and Continuing Professional Development; In-service training of para professionals directed at competencies required for primary care and management of life-style diseases; Use of algorithms and Task shifting etc for more effective care at primary care level with good system of referral. Success stories and working models reported from literature and by SEARAME country members will be shared.

What needs to be done is to scale up these success stories by using appreciative inquiry and other strategies to discover within each country what is already working in their own country despite all the challenges and obstacles and then the Ministries of Health can then engage in developing policies that will facilitate adoption of these good practices within the health systems and the health professions educational systems of the countries in the region.

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Experience of National Licencing Examination from India

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Abstract

India is a country characterized by vastness and diversity and therefore varying contexts for health care and medical education. It also has the highest number of medical colleges in the world. This growth has occurred in the past three decades in response to increasing health needs of the country. It has resulted in challenge for the regulatory body of medical education, the Medical Council of India (MCI), to balance the need for more medical colleges with the maintenance and improvement of standards of medical education. It is also necessary that an Indian Medical Graduate (IMG) is locally competent but globally relevant in the light of effects of globalization on medical education and health care.

MCI Vision 2015 has addressed the areas of undergraduate and postgraduate medical education including examination patterns for reforms. The proposed changes in this document were recommended to improve access to medical education and uniform standards of basic doctors and specialists. This presentation will describe the proposed plan and initiatives taken so for implementation of National Eligibility Entrance Examination (NEET) and the National Licentiate Examination (NLE). It will also describe the benefits and disadvantages of NEET and NLE.

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Improving the Quality of Health Professional Education For The Better Future Health Services: Challenge and Solution for Each Health Profession

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Abstract

The Quality of Professional health education is certainly starting from the ability of higher health education to formulate clearly and measurable about the competence, vision and mission, whose contents must emphasize the ability knowledge will be obtained, the formed professional attitude, the possessed learner skills, and character development to be able to face future services.

The Higher Education system faces three generations of educational reform. The first generation, launched in the early 20th century, teaches science-based curriculum. Around the middle of the century, the second generation introduced a problem-based learning innovation that is currently being intensified by the health education curriculum in Indonesia. But in order to embrace a strategic, adaptive future, first- and second-generation approaches should change to the third generation, based on the national health system, to improve the performance of the national health system, by adapting core professional competencies to the context of solution needs, while utilizing available global knowledge.

A key challenge is whether we are willing to change from science-based curriculum and curriculum based on problem based learning to the National Health System-based learning curriculum as a solution.

Nursing Education and the Future of Interprofessional Collaboration in Indonesia

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Abstract

Introduction : In recent decades, nursing education in Indonesia has been improved significantly. Since the first bachelor of nursing programme has been opened in 1982, the nursing education centers (universities, colleges, health institutes, academy, and polytechnics) are growing up like mushrooms in rainy season. The growth is in line with the demand from people. There are a lot of young generations who are interested to be nurses and have passion on it. This phenomenon brings nursing profession into an honorable position in the society.

Even though minor cases is still exist, in general, nurses is no longer stigmatized as "doctor's servant" or "second class health profession". The position of doctors and nurses are equal. Even, both professions have been considered as partners which complement each other alongside other health professionals such as dentist, pharmacists, midwives, public health experts, and so on. However, there is still a question: when will such interprofessional collaboration be accommodated in our education?

Nursing Education in Indonesia : The question above is actually dilemma for the nursing side. Because professional nursing education in Indonesia is relatively new if compared to the medical education which has been established since colonial era. In 1970s, the diploma programme in nursing was "just" set up in several urban provinces. Meanwhile, the professional nursing era began in 1982 when Universitas Indonesia (UI) opened a four years nursing programme as a pilot project under the faculty of medicine. From that point forward, several faculty of medicines from all over Indonesia followed the path to open bachelor of nursing programme in their campus, one of which was the bachelor of nursing programme in Universitas Airlangga (UNAIR) which just celebrated its 19th anniversary on April, last month.

Beside the direct recruitment from senior high school, bachelor of nursing programme also receives students who are graduated from three years diploma programme, called *"program khusus"* or *"alih jenis"*. This special programme provides opportunities for clinical nurses to pursue higher education in their spare time as clinicians. This programme aims to improve their professional knowledge and skills to make the health care services better and enhance their ability to compete with nurses from other countries.

Furthermore, as the demand of nursing programme increased slightly, a lot of qualified nurse educators were required. Responding this circumstances, the Ministry of Health sent a number of nurses to study abroad to obtain master and doctoral degree. This step was followed by the establishment of master and doctoral degree in nursing in several campus in Indonesia. For the masters, there are several campus, both public and private,

which have provided the programme and the number will be growing in the next few years. For the doctoral programme, we still have one at Universitas Indonesia. The second will be opened soon at Universitas Airlangga, this year. We hope to get supports from many parties regarding this plan, so the nursing education in Indonesia will be more developed.

Considering those situations, we can say that nursing education in Indonesia is still in the development phase. Some of the programmes have obtained "A" score in accreditation, while the others still have to struggle to get recognition. Even in "A" rank institutions, some improvements are still required to make the education getting better, especially in curriculum development, teaching methods, human resources, and educational fascilities. How about the nursing programmes which have lower rank? Of course, the situation is more challenging. This is one of considerations why the Association of Indonesian Nursing Education Centers (AINEC) was established in 2001. AINEC has a role to ensure the quality standards of the nursing graduates through the development of nursing education curriculum and the improvement of nursing institutions.

In addition, in 2014, *Undang-Undang No. 38 tahun 2014 tentang Keperawatan* (Nursing Act) was passed in DPR RI (House of Representatives), 25 years after it was initiated. That was one of the happiest moments for Indonesian nurses as the act provides legal certainty and clarity for nursing practice in Indonesia. This act also makes us confident that nursing education will be more structured, standardized and can guarantee the quality of nursing graduates, so the nurse will be recognized as equal alongside the other health professionals.

Interprofessional Collaboration : Regarding the interprofessional collaboration, we have to start from two changes in nursing profession. First, the development of nursing science has changed nursing education from a biological paradigm into a holistic paradigm. Dorothy Johnson, one of nursing theorists, gave an example that besides treating homeostatic process (dominantly biological and becomes doctor's domain), nurse must be aware on the *homeorhetic* process in which the nurse has a role as external regulator in changing patient's behavior. This example shows that between doctor and nurse have their own roles on treating patient, and emphasizes that nurse is not dependent to doctor. Second, in Nursing Act 2014, the terminology "patient" is no longer dominant and replaced by the term of "client". It means that in workplace, nurse does not only focus on patient him/herself, but also must consider patient's family, community, and system in society when giving intervention. The changes show that the nurse's role and working scope has been developing from the small scope into the larger one. Accordingly, the nurse requires skills to work independently and to engage people on shared jobs.

Those two skills are fundamental on interprofessional collaboration. The role and domain of each profession must be clear as well as on how they work together. This concept actually has been recognized in nursing profession 35 years ago when Charlotte Searle describe the three functions of nurse in an article titled *The Dependent, Independent and Interdependent Functions of the Nurse Practitioner – A Legal and Ethical Perspective*, which was published in *Curationis* journal (Vol. 5 No. 4, December 1982). Searle divided the nurse's functions into three categories: dependent, independent, and interdependent. Dependent function means that the nurse practice is based on authorization from the law, not solely based on doctor's instruction.

Independent function means that the nurse has their own diagnosis, treatment, authority, and professional manner as a registered nurse. Meanwhile, the interdependent function describes the relationship between nurse with clients and other health professional. When discussing about interprofessional collaboration, we cannot separate it from the discussion about these three functions.

The emphasis of the interprofessional collaboration must be initiated since the education phase. It means that education system for health professions ought to fascilitate the interaction among students from diverse professional backgrounds. Even though in the current clinical education might be informal interactions among them, the structured interprofessional education curriculum will make the collaboration even better. Reeves et.al. (2009) revealed that interprofessional education has positive outcomes. The positive outcomes are found in the culture of workplace and patient satisfaction; the behavior of collaborative team and the reduction of clinical error rates; management of domestic violance victims; and the competencies of the health practicioner.

Blue et.al. (2010) explained that to achieve successful interprofessional education, there must be support and leadership from institution, involvement of faculty members, the structure enrollment on organization, and shared space among health professions. It means that the first step is the willingness of the decision maker to make collaboration among health professions. Then, all parties have to discuss together the "shared space" among their education system. After that, the socialization must be conducted to ensure that faculty members, students, and supporting staffs understand about the mission of interprofessional education. This success cannot rely only on one side. Ferlie and Shorthell (2001) were giving an example on the success story of the quality improvement of health care in the United Kindom and the United States that the reformation must be conducted in multi levels, start from individual, group/team, organization, until the larger system/environment (government and regulation).

Conclusions : Back to the question, when will such interprofessional collaboration be accommodated in our education? The answer is depend on our readiness to start the collaboration and open our mindset that working together is better than alone. Considering the trend and progress of nursing education, I believe that the interprofessional collaboration through interprofessional education system will be soon established nationally in Indonesia.

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Improving the Quality of Pharmacy Education for the Better Future of Health Services: Challenges and Solutions

Nurul Falah Eddy Pariang
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Abstract

Indonesia is a big country with huge number of population. Professional workforce shortage in health care become big issue to be overcome by any health care professions in Indonesia. Indonesia has 38 schools of pharmacy which producing about 4,000 new pharmacists every year. The number of school producers will still increase every year. Total number of registered pharmacists are about 70,000 across the country. In term of number and its distribution, pharmacy workforce still gathers at big cities. The other challenge is quality assurance from every school who produce the pharmacists.

In 2013, World Bank supported Indonesia's Government through HPEQ program (Health Professionals Education Quality) to improve the quality of pharmacy education in Indonesia. The outcomes from the program are Independent Accreditation Body for Health Education (LAM-PTKES), Exit exam for new pharmacists through Computer-Based Test (CBT) and Objective-Structured Clinical Examination (OSCE) which has been implemented officially in the early 2018.

Professional organization (IAI) is also improving its contribution to improve their member competencies through SMART program, which will train practicing pharmacists at all level of services to be trained to make health impacts to their patients. The outcome from this program will be measured quantitatively in regular basis to find out how big is the impact produced from pharmacist's intervention.

Practicing pharmacists which are also the member of Indonesian Pharmacists' Association are also encouraged to follow continuing professional development (CPD) according to their individual needs. Various CPD providers are also involved in providing education for IAI members, including online education (e-learning).

Indonesian Pharmacists' Association (IAI) is preparing advance pharmacy practice program to accommodate members who want to advance their practice, so that could produce more impacts in health to the society.

Keywords : *Indonesian Pharmacists' Association, quality assurance of education, health impacts, continuing professional development, online learning, SMART program, advance pharmacy practice.*

Improving the quality of health professions education for the better future health services: challenges and solutions for indonesian dentist profession

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Abstract

Based on data from Indonesia Dental Council, there are 25,869 dentists and 3,339 dentist specialists registered in Indonesia and uneven distribution remains a major problem. Due to Indonesia has more than 13 thousand islands, IDA has established a management information system to improve the quality of dental resources. This system also regulates continuing professional education (CPD) which is connected to the re-registration system for the dentist to obtain a competency certificate. IDA has established the board name P3KGB that will be responsible for CPD implementation for dentists in Indonesia. Indonesian dentists should undertake some CPD activities to update their knowledge based on accredited events in e-P3KGB system. if within 5 years, the dentist does not have a sufficient number of CPD activities which is a prerequisite for re-registration then they should take an Indonesian dentist competency examination. Indonesian dentist competency examination (Uji kompetensi dokter gigi-UKDGI) was developed to ensure the individual's competence and be a basis for certification on their qualification. This examination was determined from Indonesia Medical Practice regulation number 29/2004 about "Indonesian Dentist Standard of Competence".

In dental education, Indonesia has 31 Faculties of Dentistry (1 in process), which are located in Java, Sumatra, Kalimantan, Sulawesi and Bali. Between 2007 until July 2014, all graduation dentist from all faculties should take Indonesian dentist competency examination (Uji kompetensi dokter gigi-UKDGI). Key performance indicator (KPI) of UKDGI was considered under performance due to the accumulation of unpassed participants. However, the dental school has constraint to deliver a formal enforcement education since they were already be a dentist. Due to solve these problems, the Ministry of Higher Education established Act Number 30/2014 in order to schedule the national test before graduation (exit examination). The Act put the faculty of dentistry at strong responsibility to ensure the qualification of their students. The improvement of the national licensure test for Indonesian dentist will be carried out continuously. The data of licensed dentists is recorded in a management information system which is integrated with data network of Indonesia Dental Association, Indonesia Medical Council, Indonesia college of dentist and Ministry of Higher Education.

By understanding the ASEAN movement of natural persons agreement (ASEAN MNP agreement) and mutual recognition arrangement (MRA), Indonesia dentists should have knowledgement about the regulations of other countries, opportunity to work abroad, networks as part of the health profession and develop the mastery of various languages of other countries. Based of this situation, Indonesia Dental Association has strengthened the collaboration with Indonesia Dental council to develop interoperability system by this years

SECTION 3

Item analysis of multiple choice questions (MCQS) used in neurology module of medical faculty of baiturrahmah university

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ABSTRACT

Background: Multiple choice questions (MCQs) are the most common method of assessing the knowledge capabilities of undergraduate, graduate and postgraduate. The MCQs used must be good quality and therefore they need to be tested for the standard of quality. Item analysis is an effective method in the evaluation of MCQs. The quality of MCQs is determined by five parameters such as reliability, validity, difficulty index, discrimination index, and distractor efficiency. The objective of this study was to assess the quality of MCQs currently used in neurology module and determine items which meet good quality standard.

Methods: the test was conducted to 3rd year students in medical faculty of Baiturrahmah University and consisted of 100 MCQs/items. Each item was analysed for five parameters.

Results: the reliability of the test was 0,800 and validity was 55%. Difficulty index of 65 items was in the acceptable range (p=25-75%), 7 items were too easy (>75%) and 28 items were too difficult (<25%). A total of 100 item had 400 distractors. Among these, discrimination index of 27 items were excellent (≥0,35), 29 items were good (d=0,20-0,34), and 44 items were poor. Nonfunctional distractors were 20% and 80 % were functional distractors. Items with one nonfunctional distractor were 34, with two nonfunctional distractor 34, and with 3 nonfunctional distractor 12.

Conclusion: Item analysis is a valuable tool as it helps us to retain the valuable MCQs and discard the items which do not fulfill good item quality standards. Conducting item analysis can improve the proficiency of the lecturers' skills in the test construction.

Keywords: Quality of test, neurology module learning, MCQs, item analysis, difficulty index, discrimination index.

ABSTRAK

Latar Belakang: *Multiple choice question (MCQs) merupakan bentuk test yang banyak digunakan untuk menilai kemampuan mahasiswa. Butir soal yang digunakan merupakan soal yang berkualitas dan diuji kualitasnya. Analisis butir soal merupakan metode evaluasi yang efektif. Kualitas butir soal MCQ ditentukan oleh lima parameter seperti reliabilitas, validitas, tingkat kesukaran, daya beda soal dan efisiensi distraktor. Tujuan penelitian ini untuk menilai kualitas butir soal MCQ modul neurologi dan membuang soal yang tidak bisa digunakan.*

Metode: *Populasi penelitian ini adalah mahasiswa tahun ke-3 dengan total sampel berjumlah 80 orang. Jumlah soal yang diujikan berjumlah 100 soal. Data diperoleh dari hasil dokumentasi kertas jawaban ujian mahasiswa. Setiap butir soal dinilai lima parameter penentu kualitas butir soal MCQ.*

Hasil*: Reliabilitas soal ini 0,800 dan validitasnya 55%. Tingkat kesukaran soal bervariasi, kesukaran sedang (p=25-75%) 65 butir soal, mudah (>75%) mudah dan sulit (<25%). Daya beda soal, soal yang dapat diterima (≥0,35) 28 butir soal, soal yang direvisi (0,20-0,34) 31 butir dan 41 butir soal tidak dapat*

digunakan. Dari 100 soal terdapat 400 distraktor. Butir soal yang memiliki satu distraktor nonfungsional 12 soal, 2 distraktor nonfungsional 34 soal, dan 3 distraktor nonfungsional 12 soal.

Kesimpulan: *analisis butir soal merupakan metode yang digunakan untuk meilai kualitas butir soal MCQ dan mengganti soal yang tidak dapat digunakan, menilai analisis butir soal dapat meningkatkan kemampuan dosen dalam membuat soal.*

Kata kunci: *kualitas soal, analisis soal, modul neurologi, sasaran pembelajaran, MCQ, tingkat kesukaran, daya beda.*

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INTRODUCTION

Assessment is an important part of the educational process. Assessment provides an overview of student learning outcomes and shows student competence in a module. The learning method is synchronized to the method of evaluation. Various evaluation methods can be used to assess student competence.[1]

The method of evaluations used vary from a written examination, usually in essays, structured essays, MCQs, and others. Type of examination that is widely used is the Multiple choice question (MCQ) type A, by choosing one best right answer. MCQs was chosen because of its higher reliability than the essay, the scoring and the way of assessing was also faster and easier.[2–8]

Module examination was aimed to measure the achievement of student learning outcomes after learning the competencies taught. The use of examination is to test learning competency with the purpose of summative assessment and it is very important to maintain the quality of examination questions . One of the efforts is by doing item analysis.[9,10]

Item analysis aims to determine each item in order to obtain good quality questions and also aims to help improve the quality of the test through revision or dispose of ineffective, and to find out diagnostic information. The item analysis can asses the good quality of questions tested and the items as a whole. Good quality item analysis can assess cognitive, affective and psychomotor domains. Analyzing items is an activity that the lecturer should do to improve and maintain the quality of the questions that have been written. [5,7,9,10, 11, 12,13]

Benefits of the item analysis are; (1) to determine the function of the items as expected (2) to give feedback to the students about the competency and as the basis for discussion material (3) to give feedback to the lecturer about the students difficulties (4) to give feedback on certain aspects for curriculum development (5) revise the assessed or measured items(6) improve skills in writing questions.[3,4,13]

Reliability of the test aims to determine the level of precision and the consistency of the test. The reliability index ranges from 0-1. The higher the reliability coefficient of a test approaching to index one means the higher of the accuracy also.[9,10,14,15]

Factor that affects the reliability of the items: [9,10,14,15]

- The more number of the items, the more accurate of the test
- The longer duration of the test, the more accurate of the test
- The narrower the range of difficulty of the item, the more accurate of the test
- The more objective the score is, the greater the reliability is
- The existence of interruption during the test
- Cheating
- Misinterpretation in the item
- The more homogeneous of the items, the more reliable

The level of difficulty of the items is that it states how easy or difficult an item is for the participants being tested. Good item means it is not too difficult and not too easy. If the items are too difficult and the examinees can not answer or vice versa if the items are too easy and all examinees correctly answer the question, it means the items can not describe learning achievement. It also means that the items can not distinguish between higher achiever and lower receiver. [2,9,10]

The level of difficulty (TK) is expressed in the form of a proportion of magnitude ranging from 0.00-1.00. An item of having level difficulty = 0.00 means that no student can answer correctly and if the level difficulty = 1, it means that all students answer correctly. The difficulty level calculation is performed for each question number. The level of difficulty is the result of comparison of the number of students who correctly answer the item with the number of students who took the test..[2,9,10]

The category of items difficulty level is classified into:[2,9,10]

- 0,00-0,24 : difficult items
- 0,25-0,75 : moderate items
- 0,76-1,00 : easy items

Discrimination index is a statement about how much power a item can differentiate between higher achiever and lower achiever. By measuring the varying power of an item, it will provide benefits to improve the quality of each item and to find out how far each item can detect students' ability.[2,9,10]

Discrimination index ranges from -1.00 to 1.00. The higher the discrimination index, the stronger or better the items are. If the discrimination index is negative, it means more lower achiever who answer correctly. Classification of discrimination index:[2,9,10]

- <0,20 : unused items
- 0,20-0,34 : items can be revised
- >0,34 : items are accepted

An effective distractor is a choice of answers that serves as a fraud selected by at least 5% of students. This distractor or deceiver is usually chosen by students who do not understand the material being tested. If all examinees answer correctly, it means the items are poor. [9,10]

METHODS

This study was conducted at the Medical Faculty of Baiturrahmah university. Data are obtained from the documentation after fifth grade students took the examination of neurology module period of the 2017/2018 .The data is obtained through the head of the neurology module. Subjects in this study are examination questions and answer sheets of neurology modules made by lecturers of neurology specialists at Medical faculty. The number of students who took the neurology examination is 80 students.

Data is collected by using the documentation technique which is the result of the student's response to the test module made by the lecturer. This technique may collect data from each result of student answers. Furthermore the results of student answers are analyzed to determine the quality of tests used. The quality of tests taken were the validity, reliability, the level of difficulty, discriminative index, and effective distractors of the items.

After the data required from this research is obtained, the data will be processed with SPSS 20.0 program to obtain the validity, reliability, difficulty level, the level of difficulty, discriminative index, and effective distractors of the items of neurology module.

The reliability of the question was analyzed using cronbach alpha and the validity of the questions was assessed with Pearson, then compared with r Product Moment Table. In this test, due to the number of examinees were 80 people, then r Product Moment Table for a significant level of 5% is 0.220. If the result is greater than the value of r table product moment, then the items were considered valid.

The level of difficulty index was analyzed by SPSS which is by obtaining the mean value. Discriminative index is assessed by R arithmetic of pearson correlation values. Meanwhile, effective distractors were observed from the results of student answers.

RESULTS

To determine the result of learning outcome of neurology module, quantitative data analysis was done. Student test results can be reviewed from individual completeness. Analysis of the completeness of student learning outcomes as listed in table 1 below.

From the results of data processing below, it can be concluded that students' categorized as achiever students classically in neurology module learning is 8.75% and non-achiever was 91,25%. It may be concluded that the mastery of classical learning is still low and learning achievement is still not completed.

From the analysis results (table 2) obtained reliability of the question of MCQ module Neurology was 0.800. The value of the

coefficient of validity has a varying level of validity. Of the 100 questions, which are <0.05 which is valid, there were 55 valid items and 45 invalid items.

The difficulty level varied from easy, moderate and difficult (table 3). Of these categories, there were 7 easy category questions, 65 moderate category and 28 difficult category questions.

From the table 4, we may conlude that there were 27 accepted items, 29 revised items, and 44 discarded items

Table 1. Student's achievements

Students	**Achiever students**		**Non achiever students**	
	N	%	n	%
80	7	8,75%	73	91,25%

Table 2. Item analysis-validity

Number of items	**Validity**	**Items amount**
4,5,6,7,9,12,13,17,18,19,20,21,22,23,24,25,26,29,30,31, 32,33,35,39,41,42,43,45,46,47,49,52,56,58,62,63,64,67, 70,72,74,75,77,78,79,82,83,85,86,87,88,89,91,93,100	<0,05	55

Table 3. Difficulty level of neurology module items

Classification	**Item numbers**	**Items amount**
Easy (0,76-100)	12,18, 22, 42, 63, 70, 72,	7
Moderate(0,25-0,75)	1, 2, 3, 4, 7, 8, 9, 15, 17, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 33, 34, 35, 36, 38, 40, 41, 43, 44, 45, 46, 47, 48, 49, 52, 55, 58, 61, 62, 64, 66, 67, 68, 71, 74, 75, 77, 78, 79, 81, 82, 85, 87, 88, 89,90,91, 92, 93, 94, 95, 97, 99, 100	65
Difficult(0-0,24)	5, 6, 10, 11, 13, 14, 16, 32, 37, 39, 50, 51, 53, 54, 56,57, 59, 60, 65, 69, 73, 76, 80, 83,84, 86, 96, 98	28

Table 4. Discriminative index of neurology module items

Classification	**Item numbers**	**Interpretation**	**Items amount**
<0,20	2,3, 6, 8, 9, 10, 11, 14,15, 16, 27, 28, 33, 34, 36, 37, 38, 40, 44, 50, 51, 54, 55, 57, 59, 60, 61, 65, 66, 68, 69, 73, 76, 80, 81, 84, 90, 92, 94, 95, 96, 97, 98, 99	Discarded	44
0,20-0,34	1,12, 13, 18, 23, 24, 26, 30, 31, 39, 47, 48, 53, 56, 58, 63, 67, 70, 71, 72, 74, 75, 78, 79, 82,83, 85, 86, 91,	Revised	29
≥0,35	4,5, 7, 17, 19, 20, 21, 22, 25, 29, 32, 35, 41, 42, 43, 45, 46, 49, 52, 62, 64, 77, 87, 88,89, 93, 100	Accepted	27

Table 5. Effective Distractors

Distractor	Effective Distractors
4	0
3	4%
2	17%
1	34%
0	45%

The spread of choice of answers is assessed to find out whether the distractor is functioning or not. Of the 100 questions tested, there were 400 distractors. As many as 4% questions, 3 distractors are not selected, meaning only one effective distractor. There were 17% items in which 2 distractors not selected, meaning from 5 choices of answers consisting of 1 correct answer, only 2 effective distractors. There were as many as 45% items in which all distractors selected.

DISCUSSION

The item analysis is a statistical calculation that is relative and depends on several factors, such as student samples, instruction quality, illustrations, readings, and answer options in items and error questions. By discussing the various parameters determining the quality of the items, it is expected that the results can complement one with the other.[12,13,16]

The validity and realibility of neurology module examination were in high category. There were 55% of valid questions. Overall, neurology module examination were considered good. However, by assessing other parameters such as the difficulty level, differentiation and effective distractors, the assessment of the items cant just be done as an item package but also must be analyzed per item.

The level difficulty of neurology module of 100 items, 65 items were in moderate category. It is expected that this result can be used as a feedback for lecturers in order to provide information to the students about their learning achievement and suspect biased items. Other uses of this difficulty level is to provide ideas that students need to learn more in some topics or indicate the weakness of the curriculum. [10]

Seven items were in the easy category level in which the distractor is not working. 28 items were in difficult category level in which the analysis of questions or sentences about too complex and long. Surely this result was also influenced by the level of ability of students who took the examination.

The analysis of dicriminative index of 27 items were obtained acceptable and 29 questions need to be revised. The results of this calculation can describe the ability of the items in distinguishing between students who understood the material tested with students who did not understand. There were 44 discarded items. The item consists of questions and answer choices. The lecturer has made items based on good standard of MCQs A type in which containing vignette, lead in, and choices options. Classically, the assessment of the item analysis actually depends on the ability of the tested participants. In addition, students were not familiar the MCQ type A. [5–7,17,18]

The effective distractors selected by the students are at least 5%. If less, then the distractor is considered ineffective. The maximum distractors that do not work in one item are 3 distractors. Creating a distractor is not easy, the item writer must consider certain aspects in creating option choices. Thus, the students who achieve good mark is really deserving the good marks. [5–7,17,18]

CONCLUSION

Item analysis is a quality assessment procedure about examination that can provide information not only of reliability and validity, but also the difficulty level, discriminative index and function of the distractor. Ideally a test has a moderate level of difficulty in which in this test was 65%, this result was still acceptable. This examination need to be replaced with 44 items so the result of the validity of all questions for the next examination is better. As the purpose of item analysis, lecturers can improve the quality of the items so these results are expected to

improve examination quality. In addition, the writing skill ability of lecturers can also improve.

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The community service program activity as a learning method at YARSI university faculty of medicine

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ABSTRACT

Background: Lerning form according to SNPT no 44 2015, consists of lectures, responses and tutorials, seminars, and practicum, studio practice, workshop practice, or field practice. For diploma education, undergraduate, professional, and specialist programs must be added community service, a student activity under the guidance of lecturers in order to utilize science and technology to advance the welfare of society and educate the nation. To apply the form of community service learning, YARSI University in collaboration with Dinas Perlindungan Anak dan Pemberdayaan Perempuan (DPPAPP) conducted Community Service Program from Program Kependudukan dan Keluarga Berencana serta Pembangunan Keluarga (KKBPK).

Summary of Work: The Community Service Program activity is carried out in the learning process in the 7th semester at the Faculty of Medicine YARSI University academic year of 2017 - 2018, in Elective Block with Domestic Violence interest. This activity conducted by 1 group consisting of 5 (five) students as counselor, whom give counseling and discussion.

Summary of Results: Pretes and postes are given as benchmarks of the delivery of the material. The results of pretest showed 7 participants or 29.17% got 80-90 points, 10 participants or 41.67% got 60-70 points, and 7 participants got ≤ 50 points. Postes results showed 12 participants or 48% got 80-100 points, 9 participants or 36% got 60-70 points, and only 4 participants or 16% got ≤ 50 points. Questionnaires for the assessment of the implementation showed that 58,14% presentation was considered very good, and for the presentation material 48,84% was considered good.

Discussion & Conclusions: The result showed the increase of average score 12.38 points from 60.42 on pretest to 72.80 at postes. This shows that the material can be well delivered by all students. The results of questionnaires showed that the participants rate that the students can delivered the material very well, and the material provided by the students was considered good.

Take-home Messages: The Community Service Program activities are expected to continue, to increase knowledge in the community, as well as to increase the ability of students, as well as provide opportunities for students to have early direct learning experience in the community.

Keyword: *SNPT, Community Service Program Activity, students*

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INTRODUCTION

Learning form according to Standar Nasional Pendidikan Tinggi/SNPT (National Standards of Higher Education) number 44 of 2015, consists of lectures, responses and tutorials, seminars, and practicum, studio practice, workshop practice, or field practice. For diploma education, undergraduate, professional, and specialist programs must be added community service, a student activity under the guidance of lecturers in order to utilize science and technology to advance the welfare of society and educate the nation. Community service activities undertaken by students as one of the forms of learning should be directed to meet the achievements of learning outcome and regulatory requirements in universities. The minimum criteria for assessment of the results of community service include: a. level of community satisfaction; b. changes in attitudes, knowledge, and skills to the community in accordance with program objectives; c. sustainable use of science and technology in society; d. the creation of enrichment of learning resources and / or learning as well as the maturation of the academic community as a result of the development of science and technology; or e. the limitation of social issues and policy recommendations that stakeholders can take advantage of.

Community Service Program Activity is an intracurricular activity that combines Tridharma of the Higher Education. Tri Dharma of the Higher Education according to Undang-*Undang Republik Indonesia Nomor 12 Tahun 2012 Tentang Pendidikan Tinggi* (Law of the Republic of Indonesia number 12 of 2012 on Higher Education) is the obligation of Higher Education to organize education, research, and community service. Community Service is the activity of academic community that utilize science and technology to advance people's prosperity and educate the life of the nation. Community Service Program Activity is one form of the implementation of community service in Tridharma of the Higher Education. The implementation of community service is done in accordance with the academic culture, expertise, and / or academic autonomy of the academic community as well as the socio-cultural conditions of the community.

Community Service Program Activity implementation is to provide stock to students in the form of learning experiences and community empowerment. Community service activities become a good choice as a tools for socialization of development programs, including Family Planning and Family Development. Increasing the role of Community Service Program Activity students in disseminating Family Planning and Family Development, will provide double benefit, that is for the students themselves to be more understanding about Population issues, Family Planning, and Family Development, as well as for communities in Community Service Program Activity locations that get explanation from Community Service Program Activity students. The students can be a medium of socialization to the community, community mobilizer, and become a community-based example.

One of the theme of Community Service Program Activity conducted by DPPAPP is Child Care, Domestic Violence, Gender Equality and Justice. Domestic Violence according to the Law of the Republic of Indonesia number 23 of 2004 on the Abolition of Domestic Violence is any act against a person, especially women, resulting in misery or suffering physically, sexually, psychologically, or destruction of household expenses including threat to commit acts, coercion, or deprivation of liberty unlawfully within the scope of the household. According to the annual report of the National Commission of Women during 2016 there were 259,150 cases of reported and handled violence against women, consisting of 245,548 cases sourced from cases / cases data handled by 359 Religious Courts, and 13,602 cases handled by 233 service provider partners, spread over 34 Provinces. While in 2017 there were 348,446 cases of reported and handled violence against women, consisting of 335,062 cases sourced from case / case data handled by Religious Courts, and 13,384 cases handled by 237 partner service agencies spread over 34 Provinces. In general there is an increase in cases of domestic violence, or an increase in reporting the incidence of domestic violence. National Commission on Women states that Jakarta occupies the first position of the area that often happened cases of violence against

women during 2016. Jakarta occupies the first position with 2,552 cases, followed by East Java 1635 cases, West Java 1.377 cases, and Central Java 1.123 cases. National Commission on Women received reports of violent complaints from various parties, ranging from economy, age, religion, ethnicity, education, and profession. From all the 13,602 cases of violence, 75% or 10,205 cases of violence occurred in the personal realm, namely domestic violence. The rest is done in the community sphere with 23% or 3,092 cases, and the state sphere with 305 cases. While in the community, the highest rape, and occurred in employment, in education, also experienced by migrant workers. Sexual violence was first ranked to 2,290 cases, followed by physical violence 490 cases and other violence, 83 cases of psychological violence, migrant workers 90 cases and trafficking 139 cases.

Community Service Program Activity in YARSI University's Medical Faculty has never been implemented before. To apply the form of community service learning, YARSI University in collaboration with *Dinas Perlindungan Anak dan Pemberdayaan Perempuan/DPPAPP* (The Office of Child Protection and Women's Empowerment) conducted Community Service Program Activity from *Program Kependudukan dan Keluarga Berencana serta Pembangunan Keluarga/KKBPK* (Population and Family Planning and Family Development Program). With the collaboration with DPPAPP, Community Service Program Activity is attempted to be implemented in Elective Block for 7th semester students. The Elective Block has been running since 2007 curriculum, consists of several interests such as emergency, drugs, palliative care, and domestic violence. Elective block is implemented in 3 weeks, students are formed in small groups according to their intrest. Furthermore, each student will take one case according to the location of intrest such as Pasar Rebo Hospital for emergency, National Narcotics Agency for drug abuse, Dharmais Cancer Hospital for palliative care, and Legal Aid Institute for the domestic violence intrest. Students then develop case reports with a review of social, legal, psychological, management, and Islamic views.

Domestic violence in this case is one of the special concerns of DPPAPP. Student activities through this Community Service Program Activity aims to provide an overview of current and future population conditions of Indonesia and the importance of population data. In addition, it also helps families and communities to develop their potentials optimally for their own interests and the wider environment. Students through this area of interest can learn and analyze issues related to violence against women, violence against children, as well as about various forms of personality in the family, as well as on gender equality. At the end of the activity, it is expected to increase understanding of domestic violence and gender equality, so as to improve the quality of family welfare.

RESEARCH METHODOLOGY

The Community Service Program activity is carried out in the learning process in the 7th semester at the Faculty of Medicine YARSI University academic year of 2017 - 2018, in Elective Block with Domestic Violence interest which runs from October to November 2017. This activity conducted by 1 group consisting of 5 (five) students as counselor, whom give counseling and discussion, accompanied by a Lecturer. The activities carried out in *Kampung Keluarga Berencana* (Family Planning Village) in the area of DPPAPP of DKI Jakarta Province. This activity was held in *Ruang Publik Terbuka Terpadu Ramah Anak/RPTRA* (Child Friendly Open Space Public Room) Pulo Gundul on Friday, October 27, 2017. The target of this activity is 50 people of productive age group (15 - 64 years), especially for women.

The activities were conducted with counseling and discussion for productive age group, as well as assistance for the victims. Counseling and discussions were conducted by students, beginning and ending with pretest and postes, and distributing questionnaires for student counseling assessments. Students present the material using the power point that has been prepared and approved by the supervisor.

Table 1. Students Material

No.	Name	NPM	Material
1.	Martiana Fahriah	1102014151	The Impact of Domestic Violence on Children
2.	Olvie Astanaini Annisa	1102014205	Jealousy as a Cause of Domestic Violence
3.	Putri Justicarici	1102014213	Domestic Violence from the Legal Viewpoint
4.	Nora Saputri	1102014197	Domestic Violence in Islamic Views
5.	Optaviana	1102014201	Prevention and Handling of Domestic Violence

The given pretest and postes consist of 10 questions referring to the given material. The question given on the pretest is the same as the question given at postes. Of the total 50 participants, only 25 participants were collected.

RESULT

Table 2. Participants Pretest and Postes Results

No	Pretest	Postes	Enhancement
1.	90	90	0
2.	70	70	0
3.	70	80	10
4.	70	80	10
5.	60	80	20
6.	60	60	0
7.	60	90	30
8.	50	60	10
9.	20	40	20
10.	40	60	20
11.	80	80	0
12.	80	70	-10
13.	90	90	0
14.	80	100	20
15.	60	100	40
16.	10	50	40
17.	0	70	70
18.	70	70	0
19.	50	60	10
20.	20	40	20
21.	60	70	10
22.	80	90	10
23.	40	50	10
24.	80	90	10
25.	60	80	20
	60.42	**72.80**	**12.38**

The student counseling assessment questionnaire is filled out by the participants, consisting of material ratings and an assessment of the delivery of materials. Assessment is made on a scale of 1 - 4, which has the meaning of poor, fair, good, and excellent. Of the total 50 participants, only 25 participants were collected

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Tabel 3. Questionnaires for Student Counseling Assessments Result

No	Questionaire	Percentage	Conclusion
1.	**Assessment of the counselor**		
a.	Martiana Fahriah		
	1 Poor	0.00%	Good
	2 Fair	20.93%	
	3 Good	**41.86%**	
	4 Very Good	34.88%	
b.	Olvie Astanaini Annisa		
	1 Poor	0.00%	Very Good
	2 Fair	16.28%	
	3 Good	41.86%	
	4 Very Good	**41.86%**	
c.	Putri Justicarici		
	1 Poor	0.00%	Very Good
	2 Fair	16.28%	
	3 Good	25.58%	
	4 Very Good	**58.14%**	
d.	Nora Saputri		
	1 Poor	0.00%	Very Good
	2 Fair	18.60%	
	3 Good	39.53%	
	4 Very Good	**41.86%**	
e.	Optaviana		
	1 Poor	0.00%	Good
	2 Fair	13.95%	
	3 Good	**46.51%**	
	4 Very Good	39.53%	
2.	**Assessment of materials**		
a.	The Impact of Domestic Violence on Children		
	1 Poor	0.00%	Good
	2 Fair	13.95%	
	3 Good	**48.84%**	
	4 Very Good	37.21%	
b.	Jealousy as a Cause of Domestic Violence		
	1 Poor	0.00%	Good
	2 Fair	6.98%	
	3 Good	**48.84%**	
	4 Very Good	44.19%	
c.	Domestic Violence from the Legal Viewpoint		
	1 Poor	0.00%	Good
	2 Fair	6.98%	
	3 Good	**46.51%**	
	4 Very Good	39.53%	
d.	Domestic Violence in Islamic Views		
	1 Poor	0.00%	Good
	2 Fair	6.98%	
	3 Good	**48.84%**	
	4 Very Good	44.19%	
e.	Prevention and Handling of Domestic Violence		
	1 Poor	0.00%	Good
	2 Fair	9.30%	
	3 Good	**46.51%**	
	4 Very Good	41.86%	

DISCUSSION

Pretes and postes are given as benchmarks of the delivery of the material. The given pretest and postes consist of 10 questions referring to the given material. The question given on the pretest is the same as the question given at postes. Of the total 50 participants, only 25 participants were collected. The results of pretest showed 7 participants or 29.17% got 80-90 points, 10 participants or 41.67% got 60-70 points, and 7 participants got ≤ 50 points. Postes results showed 12 participants or 48% got 80-100 points, 9 participants or 36% got 60-70 points, and only 4 participants or 16% got ≤ 50 points. After the counseling, postes results showed an average increase in the average score of 12.38 points from 60.42 when pretest to 72.80 at postes. This indicates that the materials can be well communicated by all the speakers, and there is an increasing knowledge about domestic violence held by participants.

The student counseling assessment questionnaire is filled out by the participants, consisting of material ratings and an assessment of the delivery of materials. Assessment is made on a scale of 1 - 4, which has the meaning of poor, fair, good, and excellent. Of the total 50 participants, only 25 participants were collected. Questionnaires for the assessment of the implementation showed that 58,14% presentation was considered very good, and for the presentation material 48,84% was considered good. This shows that the material given and the way of delivering the material is adequate and required by the participants.

CONCLUSION

The test result showed the increase of average score 12.38 points from 60.42 on pretest to 72.80 at postes. This shows that the material can be well delivered by all students and there is an increasing knowledge about domestic violence held by participants and at the end of the activity, it is expected to increase understanding of domestic violence and gender equality, so as to improve the quality of family welfare.

The results of questionnaires showed that all the participants rate that the students can delivered the material very well, and the material provided by the students was considered good. This activity gives students the opportunity to apply the knowledge they have so far, also apply the ability to make presentations and educate the community directly. The results of the questionnaire showed that the students were able to interact with the community and be able to apply their knowledge and skills. Students directly perform community service as the realization of the tridarma of the higher education.

Community service activities that have been done by the students is one of the forms of learning that is geared to meet the learning outcomes. The Community Service Program Activity also showed that students can be a medium of socialization to the community, community mobilizer, and become a community-based example. This activity also results in community satisfaction; changes in attitudes, knowledge, and skills to the community in accordance with program objectives; sustainable use of science and technology in society; the creation of enrichment of learning resources and / or learning as well as the maturation of the academic community as a result of the development of science and technology; as well as the limitation of social issues and policy recommendations that stakeholders can take advantage of. The results of this activity in accordance with the expected results in the standard implementation of community service according to the National Higher Education Standard number 44 of 2015.

TAKE HOME MESSAGE

The Community Service Program activities are expected to continue, to increase knowledge in the community, as well as to increase the ability of students, as well as provide opportunities for students to have early direct learning experience in the community. Community service activities that can be implemented can include: community services; application of science and technology in accordance with their area of expertise; community capacity building; or community empowerment. Furthermore, community service activities undertaken by students as one of the forms of learning should be directed to meet the achievement of learning outcome.

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ATTACHMENT

PRETEST and POSTES questions

1. Seorang ibu memukul anaknya ketika sedang marah, tindakan yang dilakukan oleh Ibu tersebut adalah..
   a. Kekerasan psikis
   b. Kekerasan fisik
   c. Kekerasan ekonomi
   d. Kekerasan seksual

2. Terdapat dampak dari kekerasan yang dilakukan oleh pelaku kepada korban dibawah ini, kecuali...
   a. Trauma
   b. Merasa sakit
   c. Paranoid
   d. Merasa disayangi

3. *Emotional Jelously*, Kecemburuan yang melibatkan....
   a. Perasaan dan rasa amarah
   b. Rasa curiga yang berlebihan terhadap pasangan
   c. Rasa protektif dan dekektif yang berlebihan
   d. Tidak peduli pada pasangan

4. Berikut adalah tips untuk mengurangi rasa cemburu, kecuali.....
   a. Mendekatkan diri dari Tuhan
   b. Saling percaya
   c. Pengertian terhadap pasangan
   d. Berdandan secara berlebihan agar terlihat lebih cantik

5. Di atur dalam Undang-undang nomor Berapa perlindungan hukum terhadap korban kekerasan dalam rumah tangga...
   a. UU nomor 23 tahun 2004
   b. UU nomor 33 tahun 2006
   c. UU nomor 23 tahun 2006
   d. UU nomor 33 tahun 2004

6. Apakah sanksi yang diberikan kepada pelaku kekerasan fisik dalam rumah tangga...
   a. Penjara paling lama 5 tahun dengan denda 15juta rupiah
   b. Penjara paling lama 2 tahun dengan denda 10juta rupiah
   c. Penjara paling lama 8 tahun dengan denda 15juta rupiah
   d. Penjara paling lama 5 tahun dengan denda 10juta rupiah

7. Yang termasuk batasan diperbolehkannya melakukan pemukulan adalah...
   a. Pukulan yang menyakitkan
   b. **Pukulan yang ringan**
   c. Pukulan dalam keadaan emosi
   d. Pukulan untuk anak yang dibawah umur 10 tahun

8. Firman Allah yang menyebutkan bahwa seorang istri mempunyai hak untuk diberi nafkah, mendapatkan kasih sayang, terdapat dalam surat..
   a. Al baqarah ayat 128
   b. Al baqarah ayat 28
   c. An nisa ayat 128

d. **Al baqarah ayat 228**

9. Dibawah ini yang termasuk pencegahan KDRT adalah....
   a. Menjauhkan diri pada Tuhan
   b. Boleh berkata kasar pada anak
   c. Komunikasi yang baik
   d. Menyelesaikan masalah secara sepihak

10. Apabila kita melihat KDRT di lingkungan kita, yang lakukan sebagai orang terdekat adalah...
    a. Diam saja
    b. Melapor pada RT
    c. Melerai
    d. Melapor pada pihak yang berwajib

QUESTIONAIRE FORM

No	Questionaire	1	2	3	4
1.	**Assessment of the counselor**				
a.	Martiana Fahriah				
b.	Olvie Astanaini Annisa				
c.	Putri Justicarici				
d.	Nora Saputri				
e.	Optaviana				
2.	**Assessment of materials**				
a.	The Impact of Domestic Violence on Children				
b.	Jealousy as a Cause of Domestic Violence				
c.	Domestic Violence from the Legal Viewpoint				
d.	Domestic Violence in Islamic Views				
e.	Prevention and Handling of Domestic Violence				

Community Service Program Activity
RPTRA Pulo Gundul
Friday, October 27th, 2017









Evaluation of clinical lecturers competence in medical doctor profession education universitas halu oleo

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ABSTRACT

Background: Evaluation of clinical lecturers competence in medical doctor profession education is required as a control mechanism to maintain the quality of graduates.

Objective: Knowing the percentage of pedagogical, professional, personal and social competence of clinical lecturers in medical doctor profession education of Universitas Halu Oleo Kendari 2017

Method: The present study is typically quantitative descriptive using 150 student samples who have completed clinical departement cycles during 2017. The sampling technique is using purposive sampling by assessing 66 clinical lecturers.

Result: Evaluation of 66 clinical lecturers have pedagogical competence with very high criteria (90.90%) and high criteria (9.09%), professional competence with very high criteria (92.42%), and high criteria (7.57%), personal competence with very high criteria (92.42%) and high criteria (7.57%), social competence with very high criteria (92.42%) and high criteria (7.57%).

Conclusion: Pedagogical competence, professional competence, personality competence, and social competence of clinical lecturers in Medical Doctor Profession Education Faculty of Medicine Universitas Halu Oleo are dominated by very high criteria.

Keywords: Lecturer competence, Pedagogical competence, Professional competence, Personal competence, Social competence

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INTRODUCTION

According to Law no. 14 of 2005 on Teachers and Lecturers, then a lecturers must have a certain standardization and competence. Lecturers are required to have academic qualifications, competencies, mentorship certificates, physical and mental health, and other qualifications required by the place of duty, and have the ability to realize national education objectives. Competence is a set of knowledge, skills, and behavior that must be owned, experienced, and mastered by teachers or lecturers in performing professional duties. This competency is then distinguished into pedagogical competence, professional competence, personality competence and social competence.

Pedagogic competence is the ability to manage the learning environment. Pedagogic competence consists of several aspects of ability such as recognize the characteristics of students, master the theory of learning and principles of learning, able to develop curriculum, communication with students, assessment and evaluation of learning.[1,2]

Professional competence is the ability to keep up with the latest science. This competency must be continuously developed by learning and through reflective action. Professional competence is the ability to master the learning materials widely and deeply, covering the concept, structure, scientific / technological / coherent method with teaching materials, teaching materials, the

relationship between the concept of related subjects, and the application of scientific concepts in daily life.

Personality competence is the competence associated with exemplary. Some aspects of this competence such as maturity, emotional stability, wise and prudent, noble character, and be an example for students.

Social competence includes the way of oral and written communications, using communication and information technology functionally, socializing effectively with students, counselors, parent / guardians of students, have a good relationship with the surrounding community, and acting in accordance with religious norms, social, and national culture of Indonesia. [1,2]

Setiawati (2009) said that competence has a positive correlation with performance. the performance of a lecturer is significantly influenced by the competence of the lecturer. Pramudyo (2010) also said that lecturer who have high motivation and competence and supported by good leadership, it will be able to improve its performance.

Mediawati (2010) said that external factors that are influent on student achievement is a factor that comes from lecturer, especially about the competence.[5] A lecturer bears a very heavy burden to create the quality of graduates who are critical, intelligent, productive and noble. Thus, the competence of lecturers to be things that can not be negotiable. Lecturers who do not master the teaching materials, do not control the class and can not grow enthusiasm, it is no longer reliable in obtaining an optimal learning outcomes.

The learning process at the hospital is an important part of the medical doctor profession education program. In this phase a student will be accustomed to face the case in the real field of medicine. In the implementation, students of medical doctor profession education program will receive knowledge from an experienced clinical lecturers. This clinical lecturers, composed of professionals according to their expertise.[6]

Some clinical lecturers accept the role of a clinical lecturer just because of the obligation to teach and guide without knowing the purpose of learning to students. The clinical lecturers has the main duty and responsibility as a professional according to their knowledge and also as a lecturer. In their daily activities, their duty is to provide health services in hospitals, but also to provide guidance to students of medical doctor profession education program. Things that should be owned by a clinical lecturers is the knowledge and skills. A clinical lecturers sometimes does not know all the knowledge and skills that are in accordance with their knowledge and this needs to be realized by the lecturers. [6]

The Medical Doctor Profession Education Program, Faculty of Medicine, Universitas Halu Oleo currently has 66 clinical lecturers and 254 active students. From the 66 lecturers, most are clinical lecturers from Bahteramas Hospital, Southest Sulawesi. Daily activities in carrying out health services in the hospital and also conducting clinical guidance, the clinical lecturers are required to maintain the level of competence, so that the quality of graduates are maintained. Considering the importance of clinical lecturers competence in medical doctor profession education program and the lack of data on clinical lecturers competence is the basis of this research. The purpose of this study was to determine the pedagogic competence, professional competence, personality competence and social competence of Clinical Lecturers on Medical Doctor Profession Education Program, Faculty of Medicine, Universitas Halu Oleo.

RESEARCH METHODOLOGY

This research is a quantitative descriptive research that aims to describe matters related to the objectives of the research such as the evaluation of pedagogic competence, professional competence, personality competence and social competence quantitatively in the Medical Doctor Profession Education Program Faculty of Medicine, Universitas Halu Oleo.

The population of this research is the students of Medical Doctor Profession Education Program Faculty of Medicine, Universitas Halu Oleo which is active during 2017. The present study is typically quantitative descriptive using 150 student samples who have completed clinical

departement cycles during 2017. The variables in this study is a single variable that is the evaluation of the competence of clinical lecturers by students of the Medial Doctor Profession Education Program, Faculty of Medicine, Universitas Halu Oleo.

Data were collected using questionnaires consisting of questions related to pedagogical competence of 24 questions with a maximum scores of 120, questions related to professional competence of 9 questions with a maximum scores of 45, questions related to personality competence of 10 questions with a maximum scores of 50, and questions related to social competence of 6 questions with a maximum scores of 30. Assessment is done by providing a scale assessment of scores 1 to 5. A score of 1 is given to very bad, and a score of 5 is given to very well. The results of this questionnaire interpret each of the competencies of clinical lecturers. Results are interpreted as follows: 0-20 (very low), 21-40 (low), 41-60 (medium), 61-80 (high), and 81-100 (very high).

RESULTS AND DISCUSSION

The average scored results of questionnaires obtained for pedagogical competence of medical doctor profession education programs 92.17%, professional competence of medical doctor profession education programs 94.85%, personality competence of medical doctor profession education program 94.67%, and social competence of medical doctor profession education program 93.81%.

Evaluation of 66 clinical lecturers have pedagogical competence with very high criteria (90.90%) and high criteria (9.09%), professional competence with very high criteria (92.42%), and high criteria (7.57%), personal competence with very high criteria (92.42%) and high criteria (7.57%), social competence with very high criteria (92.42%) and high criteria (7.57%).

Table 1. Competency Criteria of Pedagogic, Professional, Personality, and Social Competence

Competence Criteria	Competence			
	Pedagogic	Professional	Personality	Social
Very High	60 (90.90%)	61 (92.42%)	61 (92.42%)	61 (92.42%)
High	6 (9.09%)	5 (7.57%)	5 (7.57%)	5 (7.57%)

The result of the pedagogic competence with very high criteria of 90.90% and high criteria of 9.09% shows that evaluation of pedagogic competence of clinical lecturers by students has been very good. The lecturers are highly prepared to give lectures, to provide timetable, motivation, able to enliven the classroom, facilitate the improvement of softskill, systematic, able to direct the discussion, and have diversity of learning methode.

The result of the professional, personality, and social competence with very high criteria of 92.42% and high criteria of 7.57% shows that evaluation of professional, personality, and social competence of clinical lecturers by students has been very good. Lecturers are able to master the learning materials, provide relevant examples, have a good personality, have good confidence in teaching, sociable, tolerant of diversity, and well acquainted with their students.

Some efforts have been made by the Faculty to improve the level of competence, among others through regular training. The ability to manage the learning process is obtained from the training of Basic Instructional Skills Improvement Program. With this training, the clinical lecturers will be trained how to manage a good class. Another training that was held was the training on Objective Structure Clinical Examination (OSCE). This training makes the clinical lecturers become a creative lecturer in developing the science in accordance with his profession, especially for educational purposes. Training of OSCE examiners is also carried out by the faculty with the involvement of clinical lecturers. This training is useful in addition to increas the number of examiners and to carry out OSCE-like exams while at the hospital.

Youssef et al. (2003) said that the learning environment gives influence to the development of student learning, so it is necessary to make certain efforts to improve the quality of learning.[7] Ramani and Leinster (2008) also said that the teaching process at health facilities is complicated and not easy.[8] Some clinical lecturers cannot handle the class due to lack of good preparation. A good clinical lecturer should be able to act as an informer, role model, facilitator, assessor, curriculum planner, and be a source of learning materials. This role causes a clinical lecturer to be more than just an expert in medicine. Therefore, educational institutions should be able to facilitate by providing more training to clinical lecturers.

Kilminster, et al (2007) said there needs to be some kind of training for clinical instructors, especially in terms of understanding how to guide, conduct assessment, and counseling skills.[9] A good clinical lecturer should be able to bridge between theory and practice, can provide solutions to problems, able to provide feedback and become someone who is competent in medicine. Conversely, an ineffective clinical lecturer is guided through a rigid guidance and lack of empathy.

CONCLUSIONS AND SUGGESTIONS

Pedagogical competence, professional competence, personality competence, and social competence of clinical lecturers in Medical Doctor Profession Education Faculty of Medicine Universitas Halu Oleo are dominated by very high criteria.

More research needs to be done to determine the factors that influence the evaluation of the competence of clinical lecturers in the Medical Doctor Profession Education Program, Faculty of Medicine, Universitas Halu Oleo.

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How does feedback in clinical teaching motivate student's learning?

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ABSTRACT

Background : Feedback is the essential element during clinical education as a dialog about student's performance that observed by preceptor. An ideal feedback should facilitate self-reflection, specific and encourage motivation in learning. Meanwhile, the cultural problem still has been an emerging issue in feedback experience. The purpose of this study was to explore the student's perception on feedback clinical education and its influence on their learning motivation.

Summary of work : This research used qualitative research method with phenomenology approach. We conducted this study to the clinical years' students which was taken by purposive sampling. The data collection was performed in three groups of FGD (N=26) and semi-structure interview (N=3) that collected by purposive sampling and analyzed by content-analysis method.

Summary of results : We found that students assumed feedback as subjective and sensitive comments from their preceptors. Some feedbacks represented their performance and form as an interactive dialog, but most of feedbacks were delivered by judgmental tone, negative words without any explanation about their achievement. The students agreed that feedback experience influenced their motivation in learning.

Discussion & Conclusions : As an essential aspect, the quality of feedback should be prioritized in clinical learning development. The students experience on feedback described a variety of preceptor's skills in delivering feedback, some feedback potentially formed as negative experience in students. This results were more pronounced in qualitative data. The influence of feedback experience and learning motivation described the experiential learning theory which emphasized the role of feedback in facilitate self-reflection and motivate learning that leads to a better competence achievement.

Take-home Messages : It is important to have a specific view of hidden curriculum in clinical teaching, especially feedback experience in order to decide what and by whom actions need to be taken. Further research can deeply study a model of an ideal form in delivering and receiving feedback in clinical teaching, concerning the cultural issue.

Keywords: *Feedback, clinical learning, qualitative*

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INTRODUCTION

Clinical education is a phase which focuses on the medical students' experience to integrate their knowledge, skills and professional behaviors in real clinical situation. In this setting, students will learn from their experience and need to be facilitated by clinical teacher or preceptor to reflect on their performance by providing good quality in feedback. [1,2] During the clinical education, students can receive feedback in their learning activities such as Bedside teaching or case report, and most frequently they receive feedback during the formative or summative clinical assessment such as Mini-CeX, DOPS or OSLER. [3]

Feedback define as an information which can also form as dialogue between preceptor and students to describe: (1) *How well the performances' done*. It means that preceptor should clearly define the gap between students' performance and the expected competencies; (2) *What to do next.* Preceptor should provide a constructive advice to improve student performance.[2–5] Besides that, Branch suggests that feedback in clinical education is define as the major feedback category, so student should know the timing of the feedback to prepare and will reflect on his or her performance based on the feedback given.[6] In accordance with the theory of experiential learning, through effective feedback, students are able to run a cycle of self-reflection and conceptualize the reflected-experience constructively and finally, feedback will *drives* students to improve their performance in the next clinical experience. [2,3,7]

To reach the effectiveness of feedback, preceptors' role is not the only factor that matters, we need to consider about how this feedback received by students because the given feedback may not be the same as the feedback received. [2,8] The students' ability to accept feedback will influence their internalization of the feedback experience that leads to students' motivation to change and improve their performance.[2] Suhoyo (2014) found that Indonesian students' with power distance and low individualism culture perceived feedback as more instructive form that influence by the status of supervisor. [9] This means in receiving feedback, an internal factor of student, such as their emotion or cultural view that should be considered. Having a positive perception in their feedback experience lead to confidence, self-esteem and motivation in learning that affect positively in their improvement. Visa versa, receiving negative feedback is just like a nightmare for student, and potentially lead to the lack of competence improvement. [2,10,11] Subramaniam (2015) also noticed that different styles of supervisor such as coaching, mentoring or abusive in clinical learning are influence learning development. [12] Grifftin revealed that language, power and emotion are the important roles in producing the effective feedback.

As mention earlier, during clinical education, learning improvement will derived from the students' ability in receiving feedback. Several studies refer this students' ability to improve their learning quality much more about internal factor that related to psychological approach such as social cognitive theory (SCT) or the motivation regulation in self-determination theory (SDT). [2,13] Kusurkar (2011) noticed that the achievement of intrinsic motivation will be influenced by 'autonomy', 'competence' and 'relatedness'.[13] In the context of receiving feedback, those three factors come from students' feeling about their achievement which related to their perceived about feedback experience. Many literatures have conveyed the problems that exist today, students rarely get observed well and have a good quality feedback in clinical education that influenced by preceptors' quality in providing feedback and also students perceived in feedback experience. [1,2,14]

Medical Faculty of Jenderal Ahmad Yani University (Unjani) in Indonesia has been developing clinical education curriculum. The curriculum development is focused on learning and assessment method accordance to work-place based assessment concept. In the implementation of this the learning and assessment methods, one of the emphasized aspects is the ability of the preceptor to provide feedback. Hence, we conduct a study about our students perceived in feedback and how it relates to their motivation in competence achievement during clinical years. Based on these thoughts, we define the research problems include: (1) How the students perceived about feedback in clinical education (its definition, how it delivered and how it perceived as positive and negative feedback)? (2) In what way the feedback relates to their motivation in learning during clinical years?

RESEARCH METHODOLOGY

This research used qualitative research method with phenomenology approach. Phenomenology is used to describe the deep meaning of the experience of respondents who have direct experience appropriate with the research question to wit feedback in clinical

education. [15] So, we conducted this study to the clinical years' students that have direct experience in receiving feedback from the preceptor.

The sample in this research was taken by purposive sampling as mention in table 1. The data collection method was FGD (Focus Group Discussion) and semi-structured interviews. The FGD which also known as 'a semi-structured group session' by Tavakol and Sanders (2014) was selected because the feedback perceived that we want describe might be a socially constructed opinion. In order to fulfilling the validity aspect of this research, we also collect the data by individual semi-structured interviews according to interview guide about feedback and its relation to learning motivation. The interview guide was made based on our research question, such as (1) What is the definition of feedback? (2) How does feedback delivered? (3) What kind of feedback experience that perceived as positive and negative feedback? (4) How does the feedback experience can influence the learning motivation?

Table 1. Data collection process

Group 1	Group 2	Group 3
Students completed 3-7 clinical rotations	Students completed 8-14 clinical rotations	Students completed all clinical rotations and pass the exit exam
FGD (N=9)	FGD(N=8)	FGD (N=9)
One individual interview	One individual interview	One individual interview

FGD and individual interview results are audio-taped, then the content analysis approach is done with the following details: (1) verbatim data transcripts (2) Categorize (3) Formulate the theme as the findings in this stud

RESULT

Characteristics of Respondents

This study was conducted to the students of the clinical stage with information in table 2. All respondents meet the inclusion criteria as active-students' and have been through at least three clinical rotations.

Table 2. Respondent Characteristics

Method	Academic Year	Characteristics	Gender	Respondent Code
FGD 1	2013	3-7 clinical rotations	N (9) Female 6 Male 3	F1.13_1 – F1.13_9
FGD 2	2012	8-14 clinical rotations	N (8) Female 5 Male 3	F2.12_1 – F2.12_8
FGD 3	2011	Complete all rotations and pass the exit exams.	N (9) Female 7 Male 2	F3.11_1 – F3.11_9
Semi-structured Interview	2013, 2012, 2011	One sample each FGD group	N (3) Female 2 Male 1	Int_13.1 Int_12.1 Int_11.1

Student perceptions of feedback

In this research, the students' perceptions will be described in relation to their experiences in receiving feedback from the preceptor including their thought and feelings about preceptors' feedback.

a. Feedback definition

Based on FGD results, most students define feedback as **one-way information and tend to be subjective** from the preceptor about the student's ability. However, some students also define feedback as **instructive form** from the preceptor according to their performance.

"Feedback is the opinion of clinical lecturer who are subjective, because their treatment is not the same to all co assistant .." (F3_11_5)

"I think feedback is not a dialogue .. but it is more like in one directive information, for example I have been working on skills, then the preceptor usually convey what I'm doing is correct or not .." (F1_13_4)

In addition, students also define feedback not only limited to verbal communication but can also be a **non-verbal response from preceptors**, such as facial expression, eye contacts, body gestures and their assumption about preceptor's mood. Although not explicitly delivered verbally, it was tended to perceived as feedback.

"A feedback is when I know I was wrong, because my preceptor spoke with a high note and looked at me irritatedly .." (F1_13_7)

"Sometimes, when we having case presentation, the preceptor like suddenly frowned at us and shake his head, then we thought there must be something wrong with us.." (F2_12_2)

As mention earlier, in clinical education feedback, students will notice whenever they have to received feedback, which actually right after they performed some clinical skills or knowledge. [(11)] In the time that the student should have feedback, students tended to get confused when the suddenly found a **silent behavior** from the preceptor. During that sharped time, most of students tended to thought that he has made a mistake, but some have doubts whether his/her skills were good or in the contrary, had not yet reached the standard.

"Sometimes it is confusing when he was silent, was I wrong or right?" (F1_13_5)

"If he went silent ... after I answered .. means I was wrong .." (F1_13_1)

"That if he went silent, I simply consider as a feedback .. means I was wrong. That simple .." (F3_11_2)

Students' Perceived of positive feedback

The "good enough" feedback that form as positive feedback by students was a feedback that has a specific consideration of **what went wrong** and **how to do it in the right way**. The good preceptor perceived by students would ask them underlying reason of their choice, found whether it was right or wrong and finally the preceptor demonstrate or explained in the right context.

"I've ever got feedback, for example he asked "is it the right way? ".. then I said "as far as I know, doc.." and he asked whether I got the percussion in right way. Then I said I cannot hear the dullness .. and he said "yeah, I know exactly that you cannot hear it, as the technique you've done was wrong .." Then he showed me how.." (F2_12_5)

"The content of the feedback is indeed refers to my ability, the good preceptor will say that I have to think about my wrong procedure, so I will not do that again later .." (F3_13_4)

In the interview results, students also perceived the positive feedback when it formed based on their performance objectively and having directive planning to improve their ability.

"I think the positive feedback is when it's really describe on our ability. So it depends on the quality of the students. " (Int_11.1)

"In my opinion, I found the feedback was positive whenever I can received it happily, the preceptor seems to has willingness to help us so we will not make the same mistakes." (Int_13.1)

Students' Perceived of negative feedback

Most of students tended to perceived the feedback was negative when it formed as a judgment that they were totally wrong or they never will become a good doctor. This could happen because of unconducive relationship between the preceptor and students and the power-distance culture in Indonesia.

*"My preceptor once said **it seems I can not be a doctor** ... because I was considered fail in making case review and diagnosis" (F2_12_4)*

"Well, this was a co-assistant be like. Definitely full of mistakes, right?? So in my opinion, with the feedback, I hope at

least I knew which went wrong and not just be so called ***unable or not worthy of becoming a doctor*** *.." (F3_11_5)*

Besides, students also felt that a non-verbal communication form in feedback mostly perceived as negative feedback that lead to guilty feelings. Students thought that they were making mistakes if they found non-verbal responses such as an annoyed facial impression or frowned face, leaning closer to them, high tone of speech and laughed at them when they performed some clinical skills.

"... then he frowned and leaned closer to me .. Well, in that time, I know I must be wrong .. especially if he repeated my answer while laughing so ... I mean.. that's feedback from my preceptor.. and I knew that procedure or my answer is wrong .." (F2_13_4)

" I have a negative feeling, whenever she speaks with high tone after I answered her question, I mean.. she just scream at us like "What?? " and in that time, we knew, we have nothing to answered anymore.." (Int_13.1)

Instead of judgmental word and non-verbal response, students also noticed that there is the lack of follow-up plan that was delivered as part of the feedback function in improving students' ability.

"After my preceptor got mad.. usually we did not have any instruction to do the right way. By that time, somehow we didn't know what to do" (Int_11.1)

"Usually we don't know whether it is right or wrong.. or what should we do if the preceptor only get mad and tell us that she was fail to teach us.." (F3_11_8)

Besides that, students also highlighted the different ways of delivering feedback from various preceptors. Apparently, the difference was affected by the age, type of rotation or department.

"Over all, I think the negative of positive feedback is depend on who is the preceptor, we knew that the preceptors have a different characters and styles when deliver a feedback. I prefer the junior teachers..." (Int_13.1)

The influence of feedback on student motivation

The students perceived or how they feel about feedback theoretically found as predictor in students' motivation.[13] Students will learn from their feedback experience so they get motivated to improved their learning. This is reflected in some students' opinion related to the influence of feedback in student motivation.

Influence of positive feedback

This study found that when feedback perceived as a positive form by students, they will get motivated as soon as they received feedback. This opinion will drive students to learn more and improve their ability. Besides, this positive perception also build their confidence and self esteem.

"Actually I think is very influential, because with proper delivered, comfortable and objective feedback .. we become motivated .. well, somehow we feel that we can be better.. and better.." (F1_13_6)

Influence of negative feedback

This study found that negative perception of feedback was not the only factor that influence their motivation. Students that have a negative perception of feedback experience can also be motivated after they realized that the feedback experience was a 'normal' form in their cultural view.

"I've got a feedback .. but I think it's a feedback that .. well, like melt down my spirit. Then I think again, I still have many chances anyway, maybe this is just a piece of cake among others .... " (Int_13.1)

"Well, I think it depends on the students, it's possible that we felt unmotivated even after got the feedback. let alone if we felt pissed off during the exam .. Feels like we will not be able to be a doctor .." (F2_12_7)

"It still boosting up my spirits .. although the feedback sometimes hurt my feeling ..." (F3_11_8)

Based on some quotes above, it can be described the role of internal motivation to co-opt the feedback received. Students tend to assume that it was normal. Even negative feedback will still infuse their motivation to move forward.

Table 3. The overview of Data Analysis

Research question	Primary categories	Main categories	Themes
Perception of feedback			
Feedback Definition	Subjective preceptors' opinion	One-way communication forms, subjective and tend to be instructional	Feedback define as a subjective and instructive communication, both verbal and non-verbal form between preceptor and student.
	Intended Instruction of action		
	Not a "dialogue"		
	Non Verbal Communication	Non-verbal communication is perceived as feedback	
	Silent behavior		
Positive feedback	specific and objective consideration	Specific and objective information	Positive feedback form as specific and objective information that describe observed students' ability and planning to improve their performance.
	what went wrong	Describe the students' performance	
	how to do it in the right way	Describe the directive learning plan based on student's performance	
	Directive planning to improve students' ability		
Negative feedback	Judgmental sentences	Judgmental and non-verbal response	Negative feedback perceived in a judgmental sentence and non-verbal response that lead to a guilty feeling and the lack of directive instruction.
	Most of non-verbal feedback form negatively		
	The dominance of students' *'guilty feelings'*	Resulting a guilty feeling	
	Lack of improvement plans for subsequent performances	No directive plan	
The influence of feedback on student motivation			
The feedback role in motivation	Positive feedback has a direct influence on motivation	The influence of positive feedback that can increase motivation	Feedback affects the motivation of students, positive and negative feedback lead to motivation in their clinical performance.
	The feeling of 'being rewarded' with positive feedback		
	Feedback that gives negative impression on motivation and the feeling of 'always doing something wrong'	The influence of negative feedback depends on the individual aspect	
	Impressive negative feedback can still have a positive effect		

DISCUSSION

The definition of feedback in several studies reveals that feedback is one form of interpersonal communication or form as dialogue between preceptor and students. [(2)(8)] This study found that students define feedback as a form of one-way communication with

subjective and instructive approach. Suhoyo revealed that the process of receiving feedback in clinical education is influenced by cultural factors, which Indonesia is categorized as power-distance and low individualism.[9] This allows the rationale of our finding in students' perceptions of feedback as instructional and subjective information from the preceptor. Students' also perceive that feedback is not only verbally spoken but also non-verbal response and a silence behavior of preceptors. Silverman (2013) noted that the verbal and non-verbal communication are never separately in delivering, but it can be different to received. A non-verbal communication formed continuously even when in silence. Comfortable or uncomfortable silence actually mediated with non-verbal communication.

As a trigger in self-reflection on student achievement, feedback in clinical education should has these conditions: (1) a good relationship between student and preceptor, can be in a form of information submitted by a preceptor or an interactive dialogue between the student and the preceptor, given on time and the appropriate place by considering the readiness of the students in receiving feedback (2) contains the things that can describe the objective and specific criteria of the observation of the students' current ability; (3) to give sufficient information about the gap between current capability with the expected capability and (4) able to motivate students in improving their ability in the future. [2,10,11,14,16,17]

Students perceived that the positive feedback form as specific and objective information that describe observed students' ability and planning to improve their performance. This finding can describe that students have notice about the purpose and roles of feedback in clinical learning that leads to positive feedback impact to enhance the quality of learning. [14–16]

However, in more in-depth findings, we found the negative feedback perceived by students such as in a judgmental sentence and non-verbal response that lead to a guilty feeling and the lack of directive instruction. Students also assume there is still variation in the delivery of feedback between the preceptor. Several literatures reveal that the end result of feedback may differ from acceptance.[2,6,8,11] The acceptance of feedback can affect a person's self-esteem. Perceptions of negative feedback produce dilemma in student self-control that can cause negative-esteem feeling such as shyness, failure or disappointment. [2,11] This study also found that there was a tendency of students in feeling 'always do wrong' during his clinical skills performance that has possibility to decrease students' self-esteem and confidence.

In addition, students tend to have a negative perception of themselves that they have made mistakes because they lack the courage to express their opinions and assume that the teacher is always in the right position. This might be resulting from our cultural approach (power dictance).[9] Another finding in relation to the students' perception of the contents of feedback is that students tend not to have sufficiently clear information about the gap between current performance and learning objectives. Many studies revealed that most clinical teachers do not understand the role of feedback in student learning, especially in relation to feedback purpose in helping students to achieve their competence. [1][6,11] Grifftin revealed that feedback will be effective if there is synergy of feedback source factors, in this case the preceptor, the factor of language and power as well as the feedback receiving factor.[2]

The learners' ability to interpret feedback will be influenced by experiences that will either increase or decrease their motivation to make changes. This is consistent with the theory of experiential learning, in which the student will reflect on his experience to make conceptualization as a basis for improving the ability to further experience. In the process of conceptualization which is the process of cognitive thinking, learners will involve emotion, mood and self control over the interpretation of their experiences. This will affect the self-esteem that gives impact to the motivation to change.[2,5,7] Kusurkar (2011) notice that motivation will influence the learning behavior and academic achievement. Medical student tends to be highly motivated because of many considerable factors to enter the medical schools and also the highly complicated learning environment.

In Johari Windows (cited by Griffin)[2] describe a connection between preceptor and student is

required to achieve effective feedback objectives. The illustration illustrates that the phenomena occurring in this study can be expressed in the following illustrations: (1) OPEN area, meaning positive perception of feedback generated from constructive relationship between preceptor and student will facilitate student in self reflection, self esteem and trust self that can improve learning motivation (2) BLIND area, occurs when the student does not know things that must be repaired from them. This area can be influenced by students' perceptions of feedback (3) HIDDEN area, occurs when students hide their feelings of curiosity or actual ability. This area can also be influenced by students' perceptions of feedback. (4) UNKNOWN area, that is when students feel confused with the feedback given e.g. on the silent behavior or non verbal response from the preceptor without clear instruction.

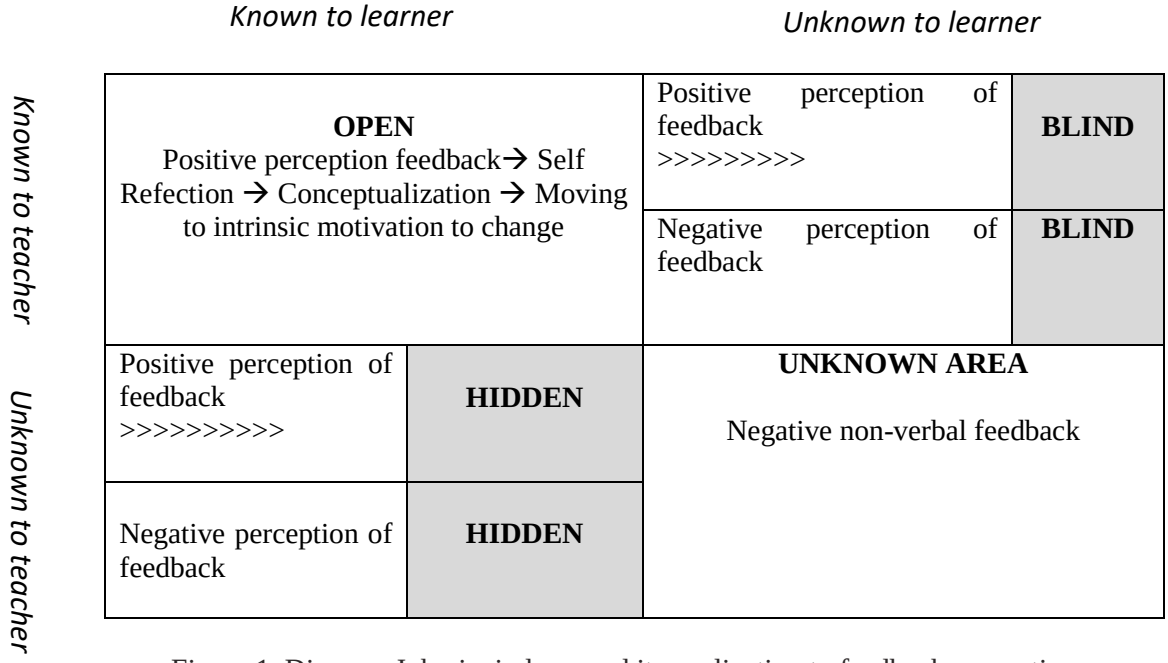

Figure 1. Diagram Johari windows and its application to feedback perception

Based on the application of the this theory, the role of feedback in generating student motivation became clear. However, this study found that there was still individual factor which adequate in maintaining student motivation. Among the few phrases reflect that students still have a strong motivation despite the negative perception of feedback. The variability in the impact of feedback extends beyond the individual factor.[11]

According to SDT, motivation is a continuous process from amotivation, extrinsic motivation to finally achieved the intrinsic motivation (1,13,18–20) In this context, clinical learning environment such as feedback can play role in receiving extrinsic motivation that also has a different level of self-determination, such as external regulation, introjected regulation, identified regulation and integrated regulation. (13,18) The students perceived of feedback can be an external regulation that continued by realized the important of feedback (introject regulation), and then it begin to value in identified regulation, and finally get internalized in integrated regulation. This study found that the perception of most of the students towards themselves, as an interpretation of the feedback preceptor, is always to make mistakes, but then this found to be the potential to affect their motivation to be better. Subramaniam (2015) also found that the abusive supervision that comes from negative behavior of supervisor has no significant relationship with talent development among trainee doctor. This finding noted that during internalization of external regulation of feedback, students has a reinforcing factor that can affect the perception of feedback.

CONCLUSION

Feedback on clinical education is defined as verbal and non-verbal communication related to student performance. Some feedbacks are still perceived as subjective, delivery of judgmental sentences and silent behavior and some negative nonverbal responses. The contents of the feedback is considered to represent the appearance of students but have not been able to describe the gap with the standards that must be achieved. Furthermore, feedback on student's perception related to feedback influences student's motivation, but with the influence of cultural aspect and internal factors that reinforce motivation, student's perception toward negative feedback keeps students motivated. However, positive feedback will certainly lead to better motivation to improve competence.

TAKE-HOME MESSAGES

It is important to have a specific view of hidden curriculum in clinical teaching, especially feedback experience in order to decide what and by whom actions need to be taken. Further research can deeply study a model of an ideal form in delivering and receiving feedback in clinical teaching, concerning the cultural issue.

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Professional identity formation: initial historical study on GPs' identity

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ABSTRACT

Background : Study on students development becoming certain profession already recommended on how they reach 'ends' achievement i.e. recognized as new member of certain profession like by doing reflections in certain experiences, role modeling though shared values-reasoning-relationship-place/context, and discussion around faced dilemmas towards certain situation. Professional Identity Formation (PIF) sketched they work for over decades, but the "identity" part of physician related to its context and culture is still missing. Thus should be defined by each community of practice. GP is one community of practice who has its own typical work and values regarding to their jobs-environment-challenges. This study is aimed to explore the history of GPs' based on documents.

Summary of work : GP or physician is the first acknowledged profession and followed by other specialties along with the medical technology developments. Hippocratic Oath is the first declared value from a physician and WHO also formulated five star doctors as the golden standard of a GP in 1978. A literature review was used to understand GP history from time to time. This study applied advanced search at PubMed and Google by using keywords "history" and "physician or general practitioner".

Summary of result : There were343 articles founded in PubMed and which tell the story of GP. From 343 articles, 5 articles had relevant abstract to historical of GP but in the end only one article could be retrieved from PubMed because of language barrier and no full text available. Nevertheless, also only one related articles was founded by using Google and Google scholar engine. Fortunately, we found one source page which tells about Australian GP history.

Discussion and conclusion : Two articles tell about GP history in UK and one source page tell about GP history in Australia. Both have similarities of historical flows such GP has time up and down, there was time that GPs' number depleted since most of physician wants to be a specialist but Alma Atta statement in 1978 pushed "health right for everyone" has influence to GP where previously they could be as standalone GP with abundance of work to become a GP team with coordinated works based on community needs. Thus policy bring consequences for GP to add more competencies which followed by establishment of FRACGP in Australia (1973) and College of General Practitioner in UK (1952). The name of physician with such competencies has different historical flows, as it was started with the declaration of GP specialist as recognized firstly by AMA in 1976 and declared as Family Physician in Australia at 1971. While financial system history in both countries has little bit difference, GP in UK received salary based on per capita since 1997 and GP in Australia receive community based incentives since 1975. And how about Indonesia, will Indonesia GP history end up with the same story with UK and Australia?

Take home message :

- Health system will influence on how human inside the system works.
- Indonesia already implemented new health financial system since 1st January 2016 which will bring consequences for GP. Along with that, GP will have different roles which should be defined by the new GP community of services.
- Those new defined roles from new GP community of services will be the source of information for "identity" which should be facilitated though health educational system.

Key words : *GP, primary care, history*

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INTRODUCTION

According to Kagan's professional development, students' development from novice to become a certain profession is through several phase i.e. imperial, interpersonal, and institutional (Cruess et.al., 2015). The imperial phase is signed by an individual who only obey any rules within profession without asking since they has low self-reflection. The interpersonal phase is signed by his/her ability to see multiple perspectives simultaneously and beat their own self-interest. The institutional phase is when an individual able to jumps into relationship with awareness of difference in term of values and expectations. Each phase would be experienced differently by any individuals. Therefore, institution is obliged to facilitate students reaching the highest phase of professional development.

There are several strategies which able to facilitate students achieving the highest phase of professional development such like reflection, role modeling through shared values-reasoning-relationship-place context, and discussion around faced dilemmas towards certain situation (Olivia and Abercrombie, 2017; Wald, et.al., 2015). By reflection, students will able to see their own perspective, values, and ideas regarding to their experiences within medical education. Thus will conflicted with prevail professional values regarding to its context and culture. The internal conflict will develop in line with their professional development. With role model, students will see a figure within profession which could guide them to step inside the community of practice. Positive and negative role model would give impact to students tough how students will apply what their perceived from their role model depends on the students itself regarding to their working context/setting. A discussion strategy also has been used to deliver difficult conflicted cases within practical setting. By discussion, students are able to understand the situation, its decision regarding to the situation and reason behind the decision.

All of those strategies need confirmed values as reference standard which embedded to the profession within specific community of practice. With those values will influence teachers in facilitating the students in term of professionalism i.e. in reacting, responding, and deciding any patients' problems either to the students. Thus become an "identity" which could influence the students since it gives students reason to act or react as part of a certain professional. The "identity" itself defined as "self-image which permits feeling of adequacy and satisfaction in the performance of the expected role" (Trede, Macklin, and Bridges, 2012) while Professional Identity Formation (PIF) could defined as "a representation of self, achieved in stages over time during which the characteristics, values and norm of medical profession are internalized, resulting in an individual thinking, acting, and feeling like a physician" (Wald, et.al, 2015).

Before able to facilitating PIF, a teacher should have a specific characteristic or identity which could inspire the students becoming like her/him. Thus characteristic comes from their body of knowledge and following community of service. GP is the first health profession in the world as signed with Hippocratic Oath. However, it has its own story which could influence their characteristics. This study is aimed to reveal the history of GP in order to gain deeper insight on GP characteristics.

METHODS

This study used literature review strategy in order to reveal GP's history. Started with searching in PubMed database and Google with term "general physician or physician" and "history", skimmed titles and abstract, and ended with extracted articles.

RESULT

There were343 articles founded in PubMed and Google which tell the story of GP. From 343 articles, 5 articles had relevant abstract to historical of GP but in the end only one article could be retrieved from PubMed because of language barrier and no full text available. Nevertheless, only one related articles was founded by using Google searching engine. Fortunately, we found one website which tells about Australian GP history (http://www.gp.org.au/history.html).

An article by Zocia (2011), as well founded in the document entitled "The evolving role and nature of GP in England", explain how the GP change over 100 years ago in UK. In UK, the story started with the National Insurance Act in 1911 which then followed by NHS statement 1948 giving free services for people who access Primary Care. Thus bring consequences for GP for overwhelming job and creating under-standard services as reported in 1950s. Based on Dr. Joseph Silver Collings report, some GP discussed and end with the establishment of legal constitution of the College of General Practitioners in 1952 that pushed the development of postgraduate training for doctors who wish to enter general practice. GP received capitation fee for each of their registered patients in 1948 and changed into Family doctors charter in 1966 which allowed paying their own secretary and nurses. Then, the document entitled "The evolving role and nature of GP in England" continues tell the history of GP in 1970s – 2000s. GP has its official professional body since 1972 with the establishment of Royal College of General Practice (RCGP) and has prevention and promotion as their center of service since Alma Ata declaration in 1978. Since then, GP has its own characteristic and success to maintain their standard of service quality.

Website http://www.gp.org.au/history.html uncovers the history of GP in Australia. The article tells Australian physician comprehensively, starts with the first physician in Australia1629, physician in first-second shipment in 1787 – 1811, colonial era, and federation era. In 1940s, hospitals flourished after war and followed by the increasing number of specialties in 1950s. The article from Dr Joseph Silver Collings also gives influences to Australian GP having Australian council and association of general practice (ACGP) in 1953. In addition, effectuation of national insurance for all Australian people started also in 1953.

Following that, the college of general practice established in 1958 which consist of three committees i.e. undergraduate, post-graduate, and research. The ACGP already hold entrance exam in 1968 and changed its name RACGP in 1969. In 1970 is defining time for GP since RACGP started introduce term family physician. However, most of GP did not use the term for themselves although they saw themselves as family physician. Annals of general practice were replaced by Australian Family Physician (AFP) in 1971. Following that, Family Medicine Program (FMP) was started in 1973.

DISCUSSION AND CONCLUSION

Both GP history in UK and Australia have almost same story. Australia's GP had little bit difference story since Australia has different starting points which make Australia physician could learn from UK history and able to make different story. Also from the history, it was known that GP has up and down history. Once a time, they work overwhelmingly and in the end they work hard to gain fit and comfortable work. Thus lead to resilience character of GP.

As founded in the article, the heart of GPs' service lays on preventive and promotion area that make their work mostly on the community. GP also has its own values as "generalism" which has two key concepts i.e. patients centeredness and holism. Patients' centeredness is where GP minds stands on priorities of patients' needs in making appropriate clinical decision for their patients. As consequences of family centeredness, GP is expected to give culturally responsive, flexible, and relevant care to each individual in the context of their family. While holism is bio-psychosocial approach in handing patients' case which enable GP to see patients' problem from many perspectives. As consequences, GP will have a comprehensive patients management based on their analysis form multiple perspectives.

Technology, public expectation, and funding are factors which influence GP's work for over decades. The combination of those three factors will determine on how GP's work characteristic i.e. competencies within community of health services. Technologies and funding are factors depends on higher level i.e. policy related to health service area. In the contrary, public sector is more determining the GP roles and it dynamics from time to time. Therefore research should be done in public area to help GP defining GPs' competencies.

All of those facts raise questions for Indonesian GP history. Meanwhile there is big change in health system in Indonesia since 2016. A universal coverage was implemented in 2016 which then forcing the health system adapt to tiered system i.e. primary care, secondary care, and tertiary care. GP already exist before Indonesia independence but the history remains unclear. Just before the implementation of universal coverage, GP could practice single hand but some already grouped into one clinic. Some of them have specific ability or competency such like in dermatology i.e. wound care could open specific clinic. Family physician already sounded but the acceptance of the health service community still unclear.

Form the history, it is known that resilience, patients' centeredness, holism are the dominant characteristic of GP. Community of practice will influence GP characteristic including its prevailing health system and culture. As consequences, there should be another research to explore more on GP characteristic related to its context and culture.

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Nurturing professionalism in pre-clinical years: medical teachers' perception in faculty of medicine universitas indonesia

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ABSTRACT

Background*:* Developing professionalism in medical education remains challenging; starting from the process of defining professionalism and identifying methods for teaching and assessing it. Studies showed that professionalism needs to be taught from pre-clinical years. This study was aimed to capture medical teachers' perception of professionalism and the process of teaching and assessing it in pre-clinical years.

Summary of Work: This qualitative study was conducted in FMUI in October 2017. Data was collected through focus group discussions involving 30 medical teachers as participants. All of the participants are teachers who interact with students in pre-clinical years. Findings regarding the definition of professionalism and suitable methods for teaching and assessing it were further processed using thematic analysis.

Summary of Results: Definition of professionalism varies from list of characteristics of competent physicians (such as honest, disciplined, and collaborative) to a more conceptual definition.

Professionalism was taught from the 1st year by introducing good characters needed in students. Later these characters were further explored and build during small group discussion as students go through subsequent modules. Medical teachers identified the importance of being role models and providing students with constructive feedback. Process of developing professionalism should involved lecturers, mentors, and senior students.

Attitude assessment was conducted through observations in small group sessions. Teachers emphasizedthe need of suitable scoring sheets that can properly assess students' attitude. Students can discuss their assessment results with the mentors to reflect on their performance.

Discussion and Conclusion: Developing professionalism in the pre-clinical years was conducted by introducing and nurturing attitudes that are expected from the medical profession. Social learning occurred as students observe their role models and imitate them, which then emphasize the importance of medical teachers in setting good examples. Assessment focused on observation of attitude and providing students with constructive feedbacks.

Take-home messages: To nurture students' professionalism, institution needs to foster their teachers to be good role models; and provide suitable assessment tools and opportunities for students to discuss their attitudes.

Key words : *professionalism, nurturing professionalism*

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INTRODUCTION

Despite vast development on the studies of professionalism, its definition remains as subject of many discussions. Some defines professionalism as certain attributes considered as professional behavior, such as being altruistic, committed to high ethical and moral standards, and showing accountability to the profession. Others attempt to provide more comprehensive definition of professionalism. Cruess defined professionalism as a social contract between profession and society. This contract would grant professionals a right to practice based on their knowledge and skills, and in turn would make them accountable to their patients and the community.[1]

Professionalism is a contextual and dynamic concept. As a contract between medical profession and the society, professionalism evolves as the scope of the profession and the need of the society change through time. The changing role of physicians, societal culture and values, as well as rapid development of technology nowadays might affectthe concept of professionalism.[1]

Professionalism is considered as an 'acquired state' rather than a trait that someone was born with.[2] This entailed that professionalism can be learnt, and medical schools has include teaching professionalism in their curriculum. The learning takes place in both pre-clinical and clinical years, with varying methods from lecture in pre-clinical to more experiential and reflective methods mostly conducted during clerkship.

As difficult as it was to define professionalism as a concept, it seemed somewhat easier to identify certain act as unprofessional behavior. Study showed that unprofessional behaviors are detected in up to 20% of medical students. [3] This result was deemed important because these types of behaviors are related to similar behaviors later in their practice as physicians. Severe irresponsibility (such as unreliable attendance and failure to perform proper patient care) and diminished capacity for self improvement (such as failure to except constructive feedback and display of poor attitudes) in medical students were found to be strongly linked with unprofessional behavior later as these students become working physicians.[4]Therefore, unprofessional behavior in medical students if left untreated could leads to decreasing quality of healthcare which might even jeopardize patients' safety and well-being.

This article was meant to address the problem by first identifying the pre-clinical teachers' perception of the concept of professionalism. Being an acquired state rather than a trait, it is now understood that professionalism should be taught in medical school starts from the pre-clinical years. Medical teachers' perceptions of professionalism and the way of teaching and assessing it are important to further develop suitable methods for nurturing students' in the process of transforming them to become competent and professional physicians.

METHOD

This study was conducted in FMUI in October 2017. Data were collected through focus group discussion involving 30 medical teachers who taught students in pre-clinical modules. Teachers were then divided into 3 groups of 10-12 for focus group discussion. Each group was facilitated by a moderator and a scriber to write down important points and themes that emerged during discussions. The responses regarding concept of professionalism and suitable methods for teaching it were then recorded, analyzed, and further categorized into themes.

RESULTS

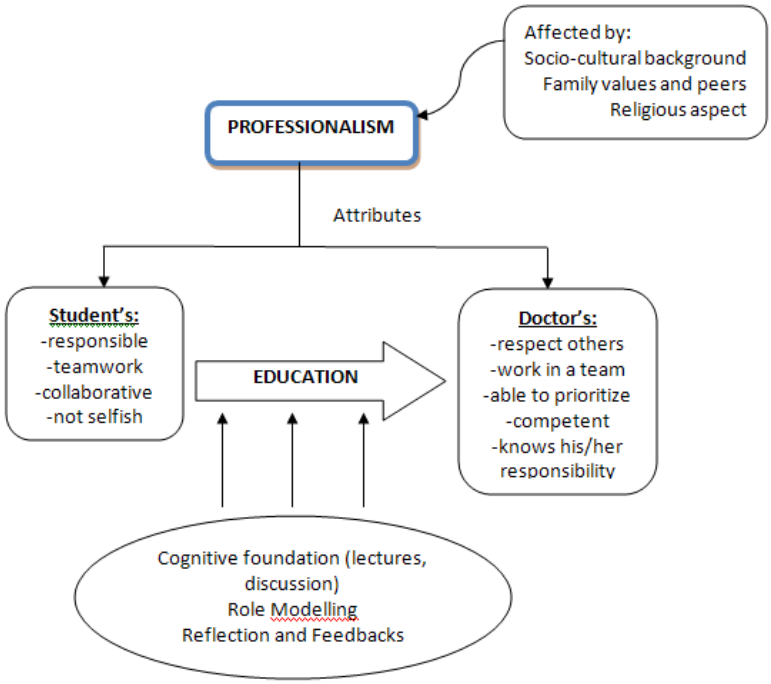

Fig.1 Concept and ways of teaching professionalism

Concept of Professionalism

Professionalism was defined as attributes that someone needs to have in order to be considered professionals.

" ..I think professionalism is a group of attitudes that doctors need to have so they can practice medicine properly" (T.01.1)

"doctors need to be able to work in a team, able to collaborate..respect others, able to prioritize, discipline, and know for sure his/her responsibility" (T.06.1)

" professionals have to be competent in their field of work..and performing his job with full aware of his responsibility" (T.02.2)

Similar to those in medical doctors, professionalism in medical students was based on their understanding of their obligations as students.

" students should know his responsibilities, he should not be reminded all the time about his assignments or duties.." (T.02.2)

"..students should not be selfish, they should collaborate with each other.." (T.03.2)

Teachers related students' professionalism with other factors, such as family values, peer pressures, and religious aspect.

"medical students these days mostly come from fortunate family with well-established financial background..they don't really know what it's like to be in need of something, they have never experienced it" (T.10.1)

"parents nowadays don't really teach their children manner, for example the way they are supposed to treat their neighbors..these children were only told by their parents that they should be friendly to their neighbors, but when the parents have never shown this kind of friendliness to the neighbor, children have no role model to look up to" (T.08.1)

"students are very much affected by their peers. For example, in our campus in Depok, our medical students are mingling with their peers from other schools..and they don't usually have classes in the morning, so this somehow affect our students..and make them late for their morning classes." (T.01.1)

"..if we act according to the attitudes and behaviors that are valued by our religion, then we would not be so confused with this. All of these attitudes were there, such as discipline, humble, and honest" (T.04.3)

As to humanism, the term was used interchangeably at times, and quite difficult to differentiate with one another.

"humanism means how a person can interact with another person and treat them as human beings" (T.07.3)

"..when we try to describe humanism and professionalism in forms of attitudes, both of those terms are pretty much the same and can be used interchangeably" (T.02.1)

Teaching of professionalism

Education in FMUI comprises of pre-clinical years (the first two semester are considered as general education phase, and the rest of the pre-clinical years are called basic biomedical science phase) and clinical years. Teachers identified teaching opportunities available for developing students' professionalism within these phases.

" inthe first phase, we have module in UI that teaches characters for students. Students are introduced to 9 characters that UI students must have. After that, we have empathy module which runs longitudinally across the basic biomedical phase." (T02.1)

"Role models are very important in the process of teaching professionalism, so we should not rely on lectures alone. Medical teachers, whether they are doctors or not, should be role models. Students need to be able to see their role model and interact with them" (T03.2)

"besides being role models, teachers are needed to provide feedback to students regarding their attitude..academic advisors can also be utilized to facilitate discussion on certain topics related to professionalism" (T02.3)

DISCUSSIONS

Medical professionalism as one of the competency of Indonesia's medical doctor needs to be acknowledged in order to be learnt by medical students. Professionalism can be identified through its attributes which mostly are observable in everyday behaviors. Studies have found that conceptualization of professionalism is dependent on context.[1]Being contextual, professionalism can be assigned to the context of medical profession's, as well as students'. Professionalism defined as understanding one's responsibilities and being accountable. For students, this means obeying the rules, completing assignments on time, and respecting their peers. For medical doctor as a profession, professionalism means being competent in their field of work and able to perform their duty responsibly.

According to Hilton & Slotnick, there are 6 domains of professionalism, comprises of those called as intrinsic domains (consists of ethical practice, reflection and responsibility) and extrinsic domains (consists of respect for patients, teamwork, and social responsibility). In this study, some of the domains have been mentioned as attributes, such as responsibility, respect for others, and teamwork.[1] Comparison between students' and doctors' attributes showed that attributes expected in medical doctor are similar to those in students. Teamwork for medical student means being able to work collaboratively with their peers during group project, while later as doctor he should be able to collaborate with their team in treating patients. This indicates that process of education was aimed to transform students' professionalism into the contexts of medical professions.

Professionalism is perceived to be affected by several factors, such as family background, social norms valued by family and peers, and religious aspect. Students from family with high socioeconomic status usually are not accustomed to financial difficulties, and therefore makes it harder for them to show empathy towards others in need. Empathy can be described as a process that engages doctors with patients by understanding the situation from patients' point of view. Ability to empathize with patients would form compassion, which very much needed in patient care.[5] Value from society (including family and peers) also plays important roles in students' professionalism. Behaviors that seem to be acceptable in their surroundings can be adopted by students. As a social contract with the society, professionalism is very much affected by what the society perceived as acceptable.[1] Role models are needed, and in the context of students' professionalism, role models can be picked up from family and peers, as well as teachers. Religious teaching contains rules that individuals need to obey, including the importance of values, such as honesty, responsible, and empathy. By holding on to this, students may find it easier to show professionalism.

Institutions should identify methods that are proven to be effective in teaching professionalism. One of the important features of teaching professionalism, as it was found in this study, was for it to be taught longitudinally across the curriculum. Process of building the basic concept of professionalism in the early phase, followed by continuous enrichment and scaffolding as students progressed seems to be the suitable approach for teaching professionalism. The concept itself would slowly shift from professionalism as a student to the one of medical professions. During clinical phase students would face situations that are relevant as context for medical professionalism, and the concept would be

revisited.[2] The challenge for medical teachers was to identify those clinical situations and utilize it as learning opportunities to nurture professionalism.

Role models, both in pre-clinical and clinical years, are very much needed to teach professionalism. Medical teachers' behaviors have great influence on students, especially those they encounter during clinical clerkship. Clinical teachers become models of what students want to be later on as they gradually form their identity as doctors. A systematic review studies has concluded that teaching professionalism requires both cognitive foundation which being taught explicitly throughout the curriculum and the process of role modeling.[2] Teaching process should involve discussion about behaviors in certain clinical situations. Negative role model can also be addressed and discussed accordingly, so students can decide which behaviors they should adopt. Academic advisors as teaching faculty that observes students for a long period of time can encourage students to reflect on their experiences and provide feedbacks to them.

CONCLUSION

Professionalism can be defined as a set of attributes of certain profession that deemed acceptable by the society. As students progressed throughout their education, their professionalism developed as they gained their identity as doctors. Education process in medical school needs to ensure that teaching professionalism has been conducted explicitly in a form of cognitive foundation through pre-clinical years, and strengthening it through role modeling and feedbacks during clinical rotation.

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Toward a humanist health and medicine education in indonesia by reintegration of religion and science

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ABSTRACT

Medical and health education in Indonesia has not been brave to put religion as a concept and principle in actualizing its scholarship. While the profession of social science background (health and medicine) will generate a scientists who come directly contact with human, the creatures of Allah Almighty who is the highest degree in the appeal of His other creatures. After finish their education, both professions will be a leaders in the table of counseling and action. Where they will inspect, palpate and auscult varied complaints.

How to integrate religion with applying health and medical education? How does the history of Islam integrate religion with health and medicine education? Is religion as a metaphysical can be integrated health and medical education as a physic?

The reintegration of religion and science in health and medicine is one of the methods to restore universal health and medical education. The application of religious and logic in medical and medical theories is the answer to the birth of a generation of health and medicine professions with logical, theological and humanist expertise.

Azyumardi (Azra: 1999) states the difference of teaching and education lies in the emphasis of education in shaping the awareness and personality of students in addition to transmitting knowledge and expertise. Azra mentions the process of putting forward this form will produce nations and countries that inherit their generation of cultural values, thought and expertise so that they are ready to welcome life. (Hafhuddin: 2004) states the educational paradigm should row on two corals: namely spirituality and modernity because of the cruel social crisis lately. In the Qur'an An-Nisa Surah 65 is affirmed about education with Islamic principles of bringing people who have the skills and attitudes to be a person capable of realizing Divine skill.

This paper describes the urgency of integrating religion with health and medicine education which is a balanced science between physical and metaphysical. The analysis will use Hegel's dialectics of the process to arrive at a truth. Religious science is represented by tawheed, tasawwuf and Islamic philosophy integrated with the science of health and medicine.

The approach of religious integration with health and medicine education is one of the methods to balance people and nature. The separation of religion and science in education of health and medicine will only leave a generation who is materialism, anthropomorphism, secularism, exclusivism and other radicalism traits. Islam generate scientists to be the protector and sustainer of human beings, nature and His creatures.

Keywords: *Education, Islam, Health and Medicine, Religion.*

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INTRODUCTION

Azyumardi Azra's thinking about the location of the differences in teaching and education lies in the emphasis of education in shaping the awareness and personality of the students in addition to transmitting knowledge and skills. Koenig in his literary summary states that his "religious beliefs" and practices derived from religious traditions are found to consistently associate with better health and predictable health will be better. Religion as an epistemological basis in education of health and medicine as a container that will produce scientific and religious knowledge is important to be realized to answer it. Because the phenomenon that occurs education empirically oriented science alone contrary to religious education, he lost the spirituality in his scholarship. On the contrary religious science loses its empirical in scholarship. Albert Einstein's ideas on the importance of science and religion as follows: Science without religion is lame, religion without science is blind. So with the harmonious thinking of Einstein, Azra, Kartanegara, Bakar will be born a morally responsible and competent medicine and health profession who provides care to troubled women, especially cases of unintended pregnancy in Indonesia. Also Nurcholish Majid reveals that the teachings of religion (Islam) should be the "grounds for meaning" or the principles of meaning of life "that is foundament and (point of view in looking at issues)".

METHODS

One of the applicative methods to realize the balance of spirituality and modernity in education of health and medicine is to integrate religion with health and medicine education. The method is integrate tawheed, Sufism and philosophy of Islam with health and medicine by use dialectics of Hegel. They can be reach by the history of implementation of integration of health and medicine as a social sciences in past and present (980 AD-contemporer)

DISCUSSION AND RESULT

The phenomenon of living in empirical science without spirituality became a momentum for researchers to reintegration health, medicine and religion. This hope will be a big question included in the methodology as it will incorporate something that is physically and metaphysically unacceptable by a pro-dichotomous and reductionist view by one of the only thinkers who recognizes religion as well as science alone. This thought would certainly not be in line with the Comte with his Positivism that rejected the belief in religion (God) before his wife Mme Clotilde de Vaux passed away. According to Comte he rejects psychological and metaphysical elements such as religion in science. For him the view of empiricism only recognizes the observable facts as a source of knowledge. This view is very contrary to Durkheim, physical facts are facts that are outside of the mind. Positivism accepts only positive factual factual facts that are independent of individual consciousness.

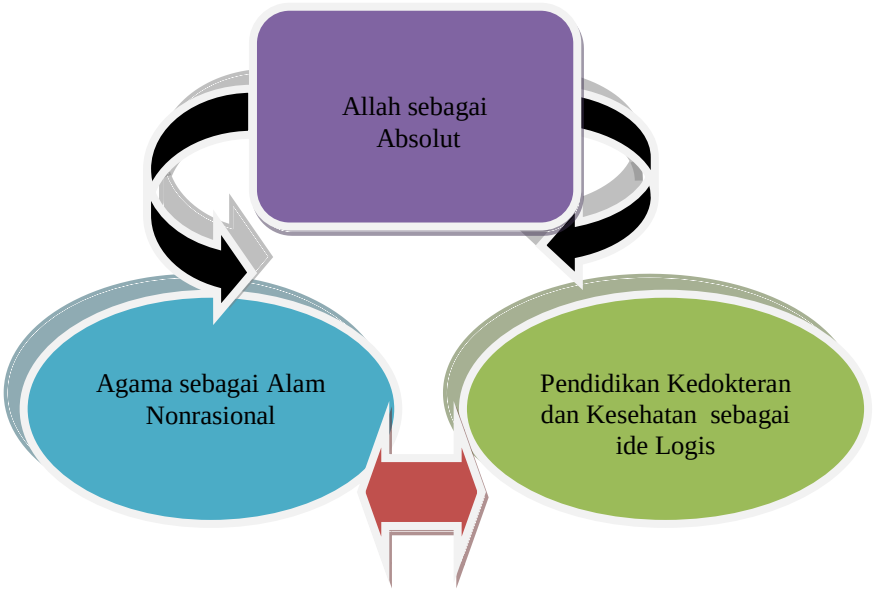
Health and medicine as a source of knowledge of materialism and religion as a source of knowledge of idealism are two different ontological views. Akhyar Yusuf Lubis calls materialism a philosophical view which assumes that reality consists only of matter or atoms whose truths can be verified or verifiable. The empiricists think that something can be verified by observation. Empiricism is a flow in epistemology that considers reality limited to objects that can be observed through the senses or ontological realism. Hence the supporters of empiricism (ontology) receive experience (empirical) as the only source of knowledge.

Hegel's dialectical thought is one of the processes to arrive at a single truth. For example, the dialectical sequence of midwifery education as a form of 'exist' raises religion as something metaphysical or its 'non-existent' (antithesis) form. From these two contradictions comes the 'becoming' or synthesis of the unity between existence and absence. The solution of contradiction that moves in contradiction with development is inherently inherent in historical reality in the mind and it will move in a higher direction until the last synthesis of the 'absolute idea' is reached.

As Osman Bakr in his work Tawheed and science explains that however widely logical in Islam he is different from the rationalism and logicism found in the modern West because the use of the ratio is never independent of faith in divine revelation. Similarly Mulyadi Kartanegara in his book Reactualisation Islamic Scientific Tradition, mentions various theoretical sciences aims to know the objects or various entities that are physical and non-physical on the earth as it is.

While the objects of practical science are human free actions (voluntary) aimed at guiding humans in action and ultimately they become good and noble human beings (karim) in their capacity as individuals, family members and society. The integration between religion and science is also reinforced by Syamsuddin through the application of Golshani and Al-Attas (2012). Mehmet C. Oz (2011) states religion not only as a spiritual guide but also as a healing power. Abstract interactions such as prayer and MIT therapy (Melodic Intonation Therapy) are regarded as "the effect of invisible healing without the use of drugs, medical devices and surgical procedures

It also reinforces the practice of religion integrated with the medical science of the patient, that those who receive prayers need a little respirator, antibiotics and pills. The reconstruction and urgency of the integration of religion and reproductive health in answering the number of unfortunate pregnancy rates ending in abortion has been widely proposed philosophically by various academics. Lubis's view holds that the epistemology and philosophy of science that separates religion and science is more prevalent in the West. Revelation (the word of God) is not included as a source of knowledge. Islam in its epistemology can not separate science and religion as Islamic thinkers. In Islamic epistemology the world view of Tawheed becomes the basis of how one perceives reality (ontology), aesthetics (axiology), truth, world, space and time and moral values. Based on the analysis and argumentation of the thinkers and practitioners above can be put forward the role of religion to health; That Islam lays revelation and science represent the role of reason go hand in hand. The harmony of this science has been called by Allah SWT in the Qur'an: "Say if the sea becomes ink to (write) the words of my Lord, it is finished the sea before it is finished (written) the words of my Lord, though We bring the addition of that much" (Surat al-Kahf: 109) . In the hadith of the Prophet Muhammad SAW also states that the study of knowledge is a duty to every Muslim: "Demanding compulsory science for every Muslim. And surrender a science not to the experts such as following pigs, gems, pearls and gold, "(Narrated by Ibn Majah).



Picture 1. The Applicastion of Hegel's Dialectic in Integration of Medicine and Health Education

Harold G. Koenig is Professor of Religion and Health, Geriatric Specialist and Psychiatrist in a reflection by Jamie D. Aten and Jane E. Schenck. Koenig mentioned that faith communities with an understanding of faith can help members of the community to stay healthy. The result of his thinking is to understand how religion can affect health through community participation will be of paramount importance. Also, as he mentioned before it takes a lot of research to be done on the clinical applications of research findings as clinical care later. Several studies have been done but he wants to do more research on the application of religious influence on health. Koenig is linking religion and health aspects of psychiatry and medicine in which religion has an influence therapist to recovery. It can be concluded through this study the integration of religion and health are in the clinical application and curative.

A. The History of Islam on the Integration of

Religion and Science.

The discipline of Islam was known at the beginning of the Abbasid dynasty (133-766 AH) / 750-1258, after the Muslims were able to produce security and ability throughout the Islamic lands. On the other hand, who have better levels of life, concentrate on expanding their territorial expansion, to build a civilization through the development of science, divided into three forms called (1) the preparation of books (2) Islamic science formulations, and (3)) translated the manuscripts of the books into Arabic. The development of science is not only the discipline of Islam but also the search for inseparable science associated with religious science, so at this time emerging experts in Islamic science, experts in Arabic science, experts in natural science, philosophers and the like. The integration of natural Islamic science and social science has taken place since the beginning in the development of science in the era of Abbasia. But in subsequent developments, as the Islamic world declines, especially in terms of science and technology, the dichotomy between religious and natural science and social science is aimed at becoming a world science. Although in the modern era, marked by the rapid increase of science and technology, the dichotomy is clearly increasing. The religious discipline is based largely by revelation, although the experience grows but is slowly due to something in religious science that is eternal or permanent. While "general science" and technology, based on rationalism and empiricism are growing very rapidly.

Although Islam allows and even continuously encourages Muslims to learn all kinds of science and its philosophies and theories, but Islam only emphasizes consistent application of science or no conflict in its teaching. For example, in the area of economics and political science, Islam teaches its followers to study economic and political theories, but in practice, only economies and political systems are compatible or not in conflict with Islamic teachings. That is why when there are many or most Muslims want applications in economic and political systems.

This study aims to find the concept of integration of science and its implementation in research and learning. What is meant by the integration of science here is unification, merging or connecting among variations of disciplines. In order to accept the integration of various disciplines, there should be a discussion of the philosophy of science involving three aspects of natural science called ontology, epistemology and axiology. In the Islamic perspective, the ontology of the whole of science is the revelation of God. Religious discipline is God's written revelation, when natural and social sciences are characterized in the form of natural phenomena and the social life of mankind. Of this Allah Almighty says:"We will show them Our signs in all regions of the earth and in themselves, until it is clear to them that the Qur'an is true. Is not it enough that your Lord be witness to all things? "(Q. Fuṣilat: 53)

B. The Scientist of Islam and His Work in the Transcendent and Ratio Integration in Medical Science and Health.

Institution that organizes health and medicine as a social sciences curriculum in the curriculum has the authority of prevention, promotion, education until therapy within the limits of its authority need to know the treatment of Islamic medicine. This is done to further strengthen the education and service education that is given to the community so as to give birth to competent and transcendent midwives in serving the community. Medical Practice and Medieval Medicine.

1.Ibn Sina/ Avicenna (980-1036).

He is a philosopher who is also a physician with his famous book, Al-Qānūn fi al-Ṭibb, the greatest Doctor of the Islamic era is Avicenna or Ibn Sina with his full name Abu Ali al-Husayn ibn Abdallah ibn Sina. Some medical histories claim he is the greatest doctor ever. That is why Ibn Sina is not only an excellence or special physician but his knowledge and wisdom towards other branches of science and culture including philosophy, metaphysics, logic and religion. As a result of his wisdom he has been awarded names: Shaykh al-Rais (the chief Master) and al-Muallim al-Thani (second philosofer after Aristotle). Ibn Sina was a privileged person. At the age of 10 years he can memorize the entire contents of the Qur'an. At the age of 16 years has mastered all the science that interests him including mathematics, geometry, Islamic law, logic, philosophy and metaphysics. At the age of 18 he has taught medicine.

Born in the present city of Bukhara as the center of Asia in 370 AH / 980 AD. He quickly gained office and became vizier (vizir / prime minister) and as a doctor in Samanid who was controlled by Prince Bukhara Nuh ibn Mansur. The royal

library is open to him and develops the greatness of Avicenna's science in a new dimension. His famous book Canon of Medicine in the West with the title originally Al-Qānūn fi al-Ṭibb. Here are some of Ibn Sina's Statements on Health, Reproductive Health and Medicine that integrate with Tawheed. Ibn Sina associates the temperature associated with sex. Women have lower body temperatures than men. In his book, he attributes a colder temperament to his behavior. Ibn Sina states that better lower body temperature is better to stay at home to work on a lighter physical. This statement is in line with the nature of women in Islam to stay indoors to educate and care for their families. Ibn Sina's statement is in accordance with the word of Allah swt. In the letter of An-Nisa: 34, "Men are leaders for women, because God has overpowered some of them (men) over others (women), and because they (men) have spent part oftheir property. So a righteous woman, who is obedient to God again takes care of her when her husband does not exist, because God has preserved (them). The women whom ye fear for their nushyuz, So counsel them and separate them in their beds, and beat them. then if they obey you, then seek not a way to trouble him. (Surat al-Nisā: 34) The message about the relation of body temperature to physical activity is also mentioned in the Hadith narrated by Muslims "Do not you forbid women to go to mosques, but the best is to remain silent at home." (Muslim) Based The Qur'an, Hadith as well as Ibn Sina's statement as a whole calls for the protection of women to do the work in the room (the best at home) to protect their reproductive health.

Ibn Sina's method of integrating science with religion is as follows: 1. Although the word of God is not included in his work but Ibn Sina in every statement about the ratio of health in line with the Qur'an. Islam is the point of view, the spirit and belief of thought-pemi rannya in the science of health and medicine. 2. In other words religion in this case Tawheed and Al-Qur'an is the source of metaphysics behind the thoughts of both the theory and practice of health and medicine. In another statement Ibn Sina mentions one asmaul husna to explain about temperamental in health. Thus his statement, "The All-Merciful God forms every mammal and other creature with an overall temperature that is best suited and best adapted to its form and function and passive statement." In the case of humans, He has given his creatures the greatest possible temperature match across the world like correspondence. This proof is addressed through philosophy not by treatment. In Ibn Sina's statements in the book of Canon of Medicine through health and medicine he always associates religion in this case Tawheed with science.3. Ibn Sina also explains medicine in poetry (Orjozah). His famous poems including other branches of medical science were presented in an interesting and easier way. Ibn Sina divides his poetry in two parts. The first is a second temporary theory is the actual practice he did in al-Qanun's book. Ibn Sina in his poetry began with a long orjozah, followed by an explanation of health preparations for four seasons. Ibn Sina also mentions 56 versions in the introduction of prenatal care (postpartum) and postnatal, delivery, newborn care and how to choose a good nurse, then the management of children in the age of care. Kaadan mentions "I will present the words of truth written by the European physician De Poure who declared: Medicine will not exist until Hippocrates finds it, dies after Galen revives, dispersed after Rhazes reassemble, deficient until Avicenna perfects it. Also, in the West mentioned for anyone who wants to be a good doctor he should be an Avicennist.

2. Abu Bakr Mohammad Ibn Zakariya al-Razi (864-930 C.E) / Rhazes.

Rhazes, is undoubtedly the greatest doctor in the Islamic world. He is known as a great clinical expert in the golden age of Islamic civilization and one of the great doctors of all time. He was born in Raiy near Tehran in 864 A.D., and died there in 925 A.D. Rhazes (this is the Latin name of Abu Bakr Muhammad ibn Zakariya al-Razi). He declared to arrive at medical science he had gone through his life with chemistry, mathematics, philosophy and literature first. A biography tells that in his youth he played traditional vocal instruments, but in his quest for identity he announced this work, it was stated that music was a way of connecting whiskers and beards that were unsuitable for recommendation. In another article mentioned Rhazes is actually interested in music but in the end he studied medicine, mathematics, asrtonomi, chemistry, pharmacy and philosophy. When Rhazes returns to a more serious life a responsible authority places this incident in the thirties of Rhazes life or 30 Rhazes lives. Of course Baghdad was the city where he studied medicine. At this time the Abbasid dynasty. When in Baghdad Rhazes found full equipment in the hospital, a library with a lot of stocks and traditions of education and research.Razazes returned to their place of birth to provide services in a local way. He

received a reputation as a physician by providing health and medical sciences in new ways for hospitals there. Then after returning to Baghdad and leading a hospital in the capital. He also created great works in the field of medical science. The most famous work is Kitab al-Mansuri, dedicated to Abu Salih al-Mansur ibn Ishaq ibn Ahmad ibn Nuh, the prince of Kirman and Khurasan. Then Kitab al-Muluki, written as gratitude to 'Ali bin Weh Sudhan Tabaristan and al-Hawi a gigantic encyclopedia that was not resolved until Rhazes's death and edited by his students.

Regarding reproductive health is also explained by Rhazes such as addiction or addiction in sexual intercourse. In this section Rhazes connects the role of shaitan and the real impact on health when having unlawful sexual intercourse. Here's his statement about addiction in sexual intercourse:

Addiction in sexual intercourse is one of the stimulation of satanic disposition and is induced by desire and preceded by happiness, involving man's pleasures of all kinds from the disasters and temptations of shaitan. Weakness of eye sight, weak mind and release of body, make premature old, senile and weakening of energy, injure brain and nerves and reduce and weaken strength, also a largely ill effects. This is marked by an "extreme greed" like any other fun job-its influence includes exerting excessive strength rather than rest, since the soul remembers how excessively pleasure is compared to the others. Additionally, the repeated use of the sexual organs by enlarging the testes and the atractions will multiply blood and sperm, resulting in more generated results because of the use of these organs. So, the desire to learn to spoil its level and will grow and grow again. Conversely, when one is reduced or recurring in sexual intercourse, the body retains its original freshness with the rest of the body. Through the period of growth and development is increasingly widespread and occurs the process of aging, drying, a thin body and senile. Furthermore, retardation, testicular contractions and decreased body supply, reduced sperm generation, distention becomes thin, kelelakian organ that subsides and loss of appetite. That is why the greatness of lust will not be long.

The Rhazes argument about sexual addiction is very reasonable and in accordance with the verse, in the Qur'an described the balance of the body"And God has leveled the earth for His creatures.

" (Qur’an, Arrahman, 10) Rhazes describes an event of disruption of health through human imbalance characterized by the role of shaitan. It can explain a prohibition in health to avoid illness through a process that uses reason with involving organs in the explanation. Any description of health exposed by Rhazes does not use God's revelation explicitly-for example by writing the verses of the Qur'an in his work. But using the role of shaitan who seduces humanity and Islamic teachings about the halal and haramnya a habitual by humans. Not until there Rhazes also convey the consequences if humans do not heed the halal-haram God delivered through His kalam and explained by Rhazes using the ratio. Some of the above arguments can be deduced that Rhazes tend to relate his work with Islamic Philosophy. After following the medieval practice of medicine and medical Islam, the following will explain the practice of medicine and health of contemporary Islam.

Medical Practice and Contemporer Health.

Medical Practice and Licensed Religion in India

The continuity of Islamic medicine has been practiced in Islamic countries lately. However, modern Western traditional medicine has replaced the core of the health system to Islamic countries. Some countries with consistent levels of wearing Islamic medical treatment status are the subcontinent of India. The three countries that are the parent of the Indian subcontinent are India, Pakistan and Bangladesh. Therefore India has published a medical school where the treatment of 'Tibb or Unani' (translated as natural treatment or Greek medicine) is continuously taught. This school gives its students a formal diploma degree in 'Tibb or Unani' medicine, they allow their students to become doctors licensed from 'Tibb or Unani' treatment. These students will be given instructions on the concept of 'Unani' treatment. Then they will use science and therapeutics in the practice of medicine. Certificates, licenses and supervision are supervised by the Indian Medical Council. In India both urban and rural communities find doctors with a model of 'Tibb or Unani' treatment. In Pakistan in the 16th century the government under the leadership of President Muhammad Ayub Khan requested official registration and licensed the traditional Judge.

Tibb also feels the enjoyment of public popularity in their countries including Afghanistan, Malaysia and the Middle East Countries. The greatest challenge in Islamic medicine is not in practice,

its therapeutic or its application but in its adaptation to the needs of the modern era lately. The most fundamental challenge is not in the way in which Islamic Medicine is practiced but the way in which it is defined. In the late 16th and 17th centuries a dichotomy developed between Islamic Medicine and Modern or Western Medicine. This dichotomy is primarily linked to the development of one civilization and the decline with each, the circle that occurs in historical facts. This increase from one and the slide of another civilization is undoubtedly a phenomenon that occurs that great influence on culture and mankind. To state that one system of medicine is superior to another is the likeness to commit entirely or lebelling a superior antibiotic against another. Although one of them may be found earlier and the other one late in the antibiotik game in healing. Then the challenge is learned and defined against the relationship between the two and is properly defined when one is particularly useful to the other. In fact, equations are used against 2 different systems of medicine. The ways in which they are both will be defined, each requiring a deep study and a light of development against both and each needing a supplement so that humanity can benefit from the good of each treatment.

CONCLUSIONS

In the Qur'an it is asserted that education with the principles of Islam leads men who have the skills and behaviors to become persons capable of realizing divine justice, creating human beings as khalifatu fi al-'arḍ and rahmatan li al-'ālamīn. Word of God about the importance of educating and producing scientists who have expertise and expertise useful to mankind summarized in the letter An- Nisa verse 65: "So by your Lord, they do not believe before they make you (judge) as a judge in their disputed case, (so) then there is no objection in their hearts to the verdict you give, and they fully accept. In this verse is contained a very deep meaning to bear a leader in this case science that has a balanced scientific concept between the phenomena that occur as a physical while the concepts and principles are guided as metaphysical.

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The correlation between the readiness in interprofessional collaboration with clinical decision making ability of midwifery students

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ABSTRACT

Background: Maternal mortality remains a major challenge to health system worldwide. This problem requires the attention of health practitioners and health professional educators including midwives. Effective clinical decision making is among the most important skills required by healthcare practitioners not only in the intra-profession but also in the interprofessional context. All students in health care professions should be engaged in IPE as a component of their curriculum in order to be well prepared for professional work. This study aims to explore the midwifery student's clinical decision-making ability and attitude toward interprofessional learning.

Summary of Work: This study used quantitative design with cross-sectional survey approach. The research population was the students of the 4th-semester students. The sampling technique used total sampling. Subjects of research as many as 50 student respondents. The instruments were The Readiness for Interprofessional Learning Scale (RIPLS) questionnaire; and a rubric that assesses the student's essay containing the problem-solving plan of the obstetric case study**.** The scenario for case study was developed by Indonesian Young Health Professionals' Society (IYHPS)

Summary of Results: Most of the students (68%) are not ready to collaborate with other health professions. Most students (98%) have low and moderate clinical decision-making abilities with approximately the same amount. There is a significant positive correlation ($p < 0.05$) between student readiness for inter-professional collaboration with clinical decision-making ability

Disscussion and Conclusions: The findings of this study in line with previous study which stated that midwifery students have relatively low readiness. One of factors that affect collaborative readiness are the involvement of professional educators and students in interprofessional learning from the beginning of educational time, the availability of role model. The clinical decision-making ability are influenced by several factors: student's knowledge and skills, the previous collaborative actual experience, and student's knowledge about role and responsibilty of other health professionals. The clinical decision-making of midwives was influenced by the nature and content of the collaboration within maternity care professionals.

Take-home Messages: It is necessary to implement interprofessional and collaborative learning in FM UNS from the beginning of study period. This learning uses a wide range of instructional designs including case studies with collaborative clinical context to develop clinical shared decision-making capabilities.

Keywords: *clinical decision-making, collaborative, interprofessional, midwifery*

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INTRODUCTION

Maternal mortality remains a major challenge to health system worldwide. Since the Millennium Declaration in 2000 and the establishment of the Millennium Development Goals, the focus on improving maternal and newborn health has intensified. This is evidenced by the target of decreasing maternal and child mortality rates as a high priority for the international community, especially in view of the increased attention on the Millennium Development Goals 4 and 5 (Bhandari, 2012). This problem requires the attention of health practitioners and health professional educators including midwives. This has been attributed to the swift and skilled multidisciplinary response to a mother's health problem once it has been recognised. This means that midwives and other health professionals need to be vigilant and highly skilled in identifying and managing the problem (Scholes et al., 2012). During managing the problem, midwives are constantly weighing the appropriate care for each individual woman, including when the assistance of specialised caregivers is needed. This assessment demands well-developed competencies for clinical decision-making.

Effective clinical decision making is among the most important skills required by healthcare practitioners (Parker-Thomlin, 2017). One of the major challenges in teaching midwifery and advanced practice nursing is helping students develop the critical thinking and clinical decision-making skills needed for various situations encountered in practice that frequently change over time (Carr, 2015). Decision-making within midwifery practice is complex and challenging and is directly linked to the standard of care provided. Students need not only to master the core knowledge and skills required, but also need to assess, analyze, judge, decide on action, act, and evaluate their actions as the patient's condition or situation changes (Smith, 2016). This clinical decision-making ability is needed not only in the intra-profession but also in the interprofessional context.

Interprofessional collaboration is intended to increase the affordability and coordination of health services, the appropriate use of specific clinical resources, chronic health outcomes, and patient care and safety in emergency cases (WHO, 2010). Health professionals in Indonesia still tend to work individually and therefore need the initiative to develop an Interprofessional Education (IPE) curriculum as the foundation for pioneering collaborative practice in Indonesia (Indonesian Young Health Professionals' Society, 2014). It is emphasized in the literature that all students in health care professions should be engaged in IPE as a component of their curriculum in order to be well prepared for professional work (WHO, 2010). Nevertheless, one of the main barriers to the development of IPE is students' readiness toward the learning (Al Qahtani, 2016).

One of the learning methods used to improve clinical decision-making capabilities and facilitate collaborative learning is a case study (Carr, 2015). Students are often given the patient's case and a set of questions to answer, drawing on their readings, lectures, and/or clinical experiences. Case studies usually present all of the scenario data at once, and students base their response on the given information, which requires them to analyze a problem and offer a solution or plan.
This study aims to explore the midwifery student's clinical decision-making ability and attitude toward interprofessional learning.

SUBJECT AND METHOD

This study used quantitative design with cross-sectional survey approach. This study was conducted in Midwifery Diploma Program of Faculty of Medicine Universitas Sebelas Maret (FM UNS) in December 2016-June 2017. The research population was the students of the 4th-semester students. The sampling technique used total sampling. Subjects of research as many as 50 student respondents
The instrument for measuring students attitude toward IPE was The Readiness for Interprofessional Learning Scale (RIPLS) questionnaire (McFadyen, 2005). Validity and the reliability of the questionnaire was done by McFayden (2005) and has been re-done by Fauziah (2010) which resulted that all items consisting of 19 statements are declared valid and test reliability obtained results Alpha Cronbach value of 0.72, so the instrument is said to be reliable.

While the instrument to determine the clinical decision-making was a rubric that assesses the student's essay containing the problem-solving plan of the obstetric case study. Researchers used a scenario

case from the Indonesian Young Health Professionals' Society (IYHPS) (2014). From that case, the students were asked to analyze and solve the problem from the most critical (urgent) that needs to be done immediately in the form of plan of action. The case have been tested in the implementation of the NHC (Nusantara Health Collaborative) in 2014, a program enrolled by the Indonesian Government to encourage the implementation of collaborative and educational practices interprofessional in Indonesia. The plan of action assessment rubric was developed by researchers based on the theory of developing a plan of action by Husna (2011). Rubric consists of eight stages plan of action: the agreeness on a problem and propose a solution, sign up action for each goal, compile the timeline (plan time of action), sharing of human resources that exists, identifying problems that may arise, strategy monitor progress after action, delegate tasks in teams according to competence, and implement the plan.

Data processing has been done using Statistical Product and Service Solution (SPSS) 20.0 for Windows. At last, we determine the correlation using Spearman Test.

RESULT

The sample of research is all students of the 4th semester, consists of one class with a total of 50 students. Researchers distributed the RIPLS questionnaires as well as emergency midwifery scenario to students. All students have filled in RIPLS questionnaires and write plan of action from the scenario case.
This study result as follows:

Tabel 1. Student's attitude toward interprofessional learning

Student's readiness	n	%
Not ready	34	68
Ready	16	32
Total	50	100

Most of the students (68%) are not ready to collaborate with other health professions.

Table 2. Student's Clinical Decision-Making Ability

Student's Clinical Decision-Making Ability	n	%
Low	23	46
Moderate	26	52
High	1	2
Total	50	100

Most students (98%) have low and moderate clinical decision-making abilities with approximately the same amount.

Table 3. The Relationship between Student's Readiness for Interprofessional Learning and Clinical Decision-Making Ability

Variable	Clinical decision-making	
	Spearman's correlation coefficient	p
Student's readiness	0.561	0,000

There is a significant positive correlation ($p < 0.05$) between student readiness for inter-professional collaboration with clinical decision-making ability.

DISCUSSION

Most of the students are not ready to collaborate with other health professions. This is in line with Lestari et al. (2016) which stated that midwifery students have relatively low readiness. Alexa M et al (2016), Parsell G and Bligh J (2013) stated that factors affecting collaboration readiness are the involvement of professional educators and students in interprofessional learning from the beginning of educational time.

Learning environment in interprofessional education (IPE) can be used as student learning media. IPE is a process whereby a group of learners or health workers with different backgrounds learn together over a period of time during the educational period, with interaction as the primary goal, for collaboration in providing preventive, promotive, rehabilitative and other health services (WHO, 2010) . This learning has the effect to prepare students for clinical practice, to help improve professional relationships so as to enhance collaborative readiness between professions (Fraser et al., 2000). Student's experiences in interprofessional learning nurture the development of communication skills, leadership skills and collaborative skills (Lestari et al., 2016). This experiences can develop positive attitude towards teamwork and collaboration, as well as towards interprofessional education in general. Hence, involvement in multi-professional student activities will increase students' readiness for collaborative learning.

According to Laila (2016) the lecturer as a role model is defined as a lecturer to be an example, motivating and inspiring students, so that lecturers applying inter-profession collaboration will be imitated by students in collaboration between professions. Students will also be motivated and inspired to collaborate between professions. The existence of faculty factors exposed to collaborative education between professions and become role models should be supported by a learning system that supports collaboration between professions in FK UNS.

In this study, the respondents have not yet got the implementation of interprofessional learning. IPE in FM UNS is newly implemented for incoming students by year of 2017.

Most students (98%) have low and moderate clinical decision-making abilities. It is influenced by several factors, including knowledge and skills of students (D'amour and Oandasan, 2005). Midwives provide evidence-based care, using the best available clinical evidence, their own clinical expertise and experiences, and the situation and values of the pregnant women (Scholes et al.,2012). Therefore, the previous actual experience with regard to the case context greatly affects the student's analytical and problem solving skills. Case study include more complex competencies, such as differential diagnosis, diagnosis, management/appropriate interventions, specific psychomotor skills, and/or recognition of the need for consultation (Carr, 2015). The students must know and be able to analyze what knowledge and/or skill is needed to manage the case. In this study, with the context of collaborative clinical cases, students have no experience of interacting with other professional students so that they have not been able to identify the knowledge, skills, roles and responsibilities of other health professions in solving cases. The next influencing factor is the students' perception of other unsuitable health professionals, which makes the students unable to reflect on the knowledge, skills, and ability of themselves and other health workers who are invited to collaborate (Stone, 2010).

The clinical decision-making of midwives was influenced by the nature and content of the collaboration within maternity care professionals (Daemers et al. 2017). In interprofessional learning, there is a process of shared communication and informed decision-making under the influence of grouped knowledge and skills (Hegde et al., 2017). Case study in the context of collaborative clinical problem is able to transform students' mindsets and skills to manage patient's case so that the student's readiness increase (Nasution, 2011).

CONCLUSION AND TAKE HOME MESSAGES

There is a positive relationship between the readiness of D III students Midwifery FK UNS in inter-professional collaboration with the ability of preparation of plan of action in case of emergency obstetric emergency. It is necessary to implement interprofessional and collaborative learning in FM UNS from the beginning of study period. This learning uses a wide range of instructional designs including case studies with collaborative clinical context to develop clinical shared decision-making capabilities.

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A delphi consensus study to identify clinically most valuable anatomy material of the digestive system for teaching medical students

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ABSTRACT

Background: The anatomy curriculum is slowly being narrowed down from the medical curriculum. The large number of anatomy materials leads to the uncertainty of choosing which ones to structure or add and which ones should be removed from the anatomy curriculum for medical students. Furthermore, there is increasingly a call for clinical relevance in the teaching of the biomedical sciences within all health care programs. The purpose of this study is to identify clinically most valuable anatomy materials of the digestive system that are relevant to current clinical practice in order to reinforce anatomy teaching.

Methods: Two rounds of Delphi technique involving twenty general practitioners were conducted. The anatomy material list was based on three anatomy textbooks along with a list of anatomy material composed by Munawaroh. In the first Delphi round, the panels that selected the essential materials at least 25% of the overall panels went to the second round of Delphi questionnaire. In the second round, the panels were asked to write down the importance level for each point by checking in column 1-4. Percentage agreement was utilised as outcome measure for components rated as important (point 3 or 4) with consensus of more than 60%.

Results: Response rates were 75% for the first round and 95% for the next round. In first round, there were 65 materials added to 207 materials in the initial questionnaire. After the second round, there were 87 core materials.

Disscussion and Conclusions: The findings of this study provide clinicians' opinions regarding the current required essential anatomical knowledge for ~~a~~ graduating medical students to apply during their clinical encounters. The information obtained can be utilised to encourage further development of clinical anatomy curriculum reflecting the evolving nature of health care.

Take-home Messages: not all materials contained in the textbook is directly related to medical practice, so it is possible for lecturers to select essential teaching materials to reduce the students' learning burden.

Keywords: *anatomy curriculum, digestive system, medical education*

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INTRODUCTION

Medical disciplines generally recognize that anatomy is one of the basic medical sciences that forms the essential foundation for training physicians and other medical personnel including nurses, dentists, physiotherapists, and radiographs.[1,2]. It has been the cornerstone of medical education for hundreds of years. It is therefore believed that anatomy courses are important for students to visualize the structure of the human body and to develop reasoning skills in solving clinical problems.[3] Anatomical knowledge supports the patient's physical examination, diagnosis establishment, radiological imaging interpretations, surgical invasive procedures, and various other medical measures.[2,4] Therefore it fits as a knowledge base for all careers of medical personnel. However, in recent years, the science of human anatomy has gradually been narrowed down from the medical curriculum.[4]

Various assumptions have led to increased emphasis on the genetics and molecular biology disciplines into the medical curriculum, suggesting the idea of making a revised redesign of the current medical curriculum. The idea to

learn a new discipline but not accompanied by an extension of undergraduate degree in medicine results in a compensation reduction in the number of teaching hours of the basic sciences of medicine, one of which anatomy, due to assumptions that it is mere rote, too detailed, and not being able to provide the fact that it is necessary for safe and effective capital practice.[2]

A large number of anatomical materials cause much doubt to choose which to be maintained or added, and which should be removed from the anatomy curriculum for medical student learning.[5] According to Haase (2000) in Prakosa's journal (2006), there is a challenge to determine which is clinically important to be mastered by graduates of general practitioners in this modern era.[6]

In Indonesia there has been a consensus of experts in anatomy on the core materials of the digestive system by Munawaroh et al (2018).[7] However, the content of the material contained in this consensus is still only an outline, not yet mentioned in detail. The purpose of this study therefore is to obtain an important consensus of anatomical core material for medical students to continue the research.

METHODS

This qualitative research used a Delphi method. We selected 20 general practitioners throughout Indonesia as the research subjects.

The purposive sampling employed in this research determined the inclusion criteria, i.e., general practitioners that had been practicing for at least 3 years and had graduated from medical school for no more than 10 years.

We compiled a list of questionnaires taken from three anatomy textbooks referring to a consensus list of a digestive system anatomy material composed by Munawaroh (2018)[7]: *Gray's anatomy for student* written by Standring et al. (2008)[8], *Sobotta, Atlas of Human Anatomy* by Paulsen, Friedrich and Waschke (2010)[9] and *Clinically Oriented Anatomy* by Moore et al., (2008)[10]. Considering that, according to Grković et al.'s study (2009), *Gray's Anatomy for student* and *Clinical Oriented Anatomy* had the highest score in the assessment of correlation between anatomical literature and medical undergraduate curriculum.[11] In addition, the books also available in the form of e-books are widely used by medical education students in various medical institutions in Indonesia.

The results of questionnaire that had been compiled were consulted to an anatomy expert, i.e., an anatomy lecturer in the field of digestive system anatomy.

In the round I of Delphi, 25% of panels considered a particular material point as important and therefore it was set into an important list and redistributed at the time of the round II of Delphi.

In the round II of Delphi, the panels were required to write down the importance level for each point by checking on numbered column 1-4. The score 1, 2, 3, and 4 meant that the material was respectively 'not required', 'acceptable', 'important', and 'essential'. Sixty percent of the panels rated 3 (important) and 4 (essential), meaning that the material was then set as important and feasible to fit into the core material curriculum of anatomy.

RESULTS

The 28 general practitioners as the research subjects came from various universities chosen according to the inclusion criteria. In the first round of Delphi, out of 28 panels, there were 21 (75%) returning the questionnaire. While in the second round of Delphi, of 21 distributed questionnaires, there were 20 questionnaires being returned (95.23%).

Table 1. Characteristics of Research Subjects

No	Characteristic	Number (N)	Percentage (%)
1	Gender		
	Male	14	70
	Female	6	30
2	Age(years)		
	25 – 30	5	25
	31 – 35	13	65
	36 – 40	1	5
3	Duration of practice as general practitioner (years)		
	3 – 5	7	35
	6 – 8	12	60
	9 – 10	1	5
4	Delphi Panel Practice Area (Province)	1	5
	Sumatera Barat	1	5
	Bangka Belitung	2	10
	DKI Jakarta	1	5
	Jawa Barat	5	20
	Jawa Tengah	1	5
	Jawa Timur	1	5
	Bali	1	5
	Kalimantan Timur	1	5
	Sulawesi Utara	1	5
	Sulawesi Selatan	1	5
	Maluku Utara	1	5
	Papua	1	5
	Papua Barat		

Round I of Delphi

The initial questionnaire of the digestive system was divided into 9 main topics with a total of 207 materials. In the first round, the materials were added by the panels totaling 65 points so the total amounted to 272 items. The new materials from each topic are shown in the table below.

Table 2. Number of New Materials Added to the Round I of Delphi

No	Topic Name	Preliminary questionnaire	Number of Added Materials	Results of the Delphi round I
1	Cavum Oris	46	52	98
2	Oesophagus	5	1	6
3	Gaster	9	3	12
4	Intestinum	19	-	19
5	tenue			
	Intestinum	26	6	32
6	crassum	17	1	18
7	Peritoneum			
	Digestiva	43	-	43
8	accesoria			
	Hepatic portal	17	2	19
9	circulation	25	-	25
	Abdominal wall	207	65	272
	Total			

Round II of Delphi

Anatomical topics were considered to be core material when there were Delphi panels who rated 3 (important) or 4 (Essential) as more than 60%. The total number of incoming materials from the round I of Delphi was 272 materials, and then through the round II of Delphi the core materials produced were 87.

Table 3. Number of Core Materials Obtained from the Round II of Delphi

No.	Digestiva System Topics	Number of materials of Delphi Round I	Number of Core Materials
1	Cavum Oris	46	26
2	Oesophagus	5	2
3	Gaster	9	4
4	Intestinum Tenue	19	6
5	Intestinum	26	13
6	Crassum	17	5
7	Peritoneum	43	20
8	Digestiva Accesoria	17	2
9	Hepatic portal circulation	25	9
	Abdominal wall	272	87
	Total		

The details of each topic are in table 4 below.

Table 4. List of core materials of Digestiva system anatomy

No.	Materials	Σ panels who selected 3 and 4 (%) (n = 20 people)
A.	**CAVUM ORIS**	
1	Function of cavum oris	19 (95)
2	Topography of cavum oris	15 (75)
3	Morphology of cavum oris	15 (75)
4	Labia superius	16 (80)
5	Labia inferius	15 (75)
6	Lingua function	18 (90)
7	Lingua structure / components	17 (85)
8	Papilla lingua foliatae	12 (60)
9	Papilla lingua filiformes	12 (60)
10	Tonsilla lingualis	16 (80)
11	Tonsilla palatine	19 (95)
12	Submandibular gland	17 (85)
13	Sublingualis gland	14 (70)
14	Salivary glands	18 (90)
15	Glandula parotidea	19 (95)
16	Glandula parotidea accesoria	19 (95)
17	Palatum durum	18(90)
18	Uvula palatine	16 (80)
19	Palatum molle	18 (90)
20	Dentes decidua	18 (90)
21	Dentes incisive	18 (90)
22	Dentes canini	18 (90)
23	Dentes premolar	19 (95)
24	Molar Dentes	19 (95)
25	Gingivae	19 (95)
26	Nervus hypoglossus	12 (60)
B	**OESOPHAGUS**	
1	Esophageal function	18 (90)
2	Skeleptopis esophagus	12 (60)
C.	**GASTER**	
1.	Gaster function	19 (95)
2.	Morphology of gaster	18 (90)
3.	Plica gastricae	15 (75)
4.	Pylorus	15 (75)
D.	**INTESTINUM TENUE**	
1.	Function of Intestinum tenue	18 (90)
2.	Morphology of intestinum tenue	18 (90)
3.	Structure / component of intestinum tenue	18 (90)
5.	Duodenal function	20 (100)
6.	Morphology of Jejunum	18 (90)
7.	Morphology of ileum	18 (90)
E.	**INTESTINUM CRASSUM**	
1.	Function of intestinum crissum	19 (95)
2.	Morphologi intestinum crissum	18 (90)
3.	Structure / component of intestinum crissum	18 (90)

4.	Colon function	19 (95)
5	Colon ascendens	18 (90)
6	Colon descendens	19 (95)
7	Colon transversum	19 (95)
8	Colon sigmoideus	19 (95)
9	Appendices epiploicae	12 (60)
10	Caecum	15 (75)
11	Appendix vermiformis	17 (85)
12	Rectum	20 (100)
13	Canalis analyst	14 (70)
F.	**PERITONEUM**	
1.	Peritoneum function	19 (95)
2.	Morphology of peritoneum	16 (80)
3.	Peritoneum parietale	16 (80)
4.	Peritoneum viscerale	16 (80)
5.	Cavitas peritoneale	12 (60)
G.	**DIGESTIVA ACCESORIA**	
1.	Embryology of digestiva accesoria	12 (60)
2.	Hepatic function	20 (100)
3.	Morphology of liver	19 (95)
4.	Topographiy of liver	19 (95)
5.	Dextra hepaticus lobes	13 (65)
6.	Lobus hepaticus sinistra	14 (70)
7.	Lobus hepaticus caudatus	13 (65)
8.	Lobus hepaticus quadratus	13 (65)
9.	Ductus hepaticus	13 (65)
10.	Vena portae hepatis	15 (75)
11.	Topography of vesica fellea	15 (75)
12.	Ductus cysticus	15 (75)
13.	function of vesica fellea	20 (100)
14.	Morphology of vesica fellea	17 (85)
15.	Pancreas function	20 (100)
16.	Morphology of the pancreas	18 (90)
17.	Topography of the pancreas	17 (85)
18.	Lien function	20 (100)
19.	Morphology of lien	20 (100)
20.	Topography of lien	19 (95)
H	**HEPATIC PORTAL CIRCULATION**	
1.	Vena portae hepatis	16 (80)
2.	Ductus choledochus	16 (80)
I	**ABDOMINAL WALL**	
1.	Abdominal wall function	18 (90)
2.	Structure / component of abdominal wall	17 (85)
3.	9 abdominal region	18 (90)
4.	4 abdominal region	16 (80)
5.	Cutis abdomen	19 (85)
6.	Fascia superficialis abdominis	12 (60)
7.	Musculus rectus abdominis	14 (70)
8.	Musculus obliquus externus	13 (65)

	abdominis	
9.	Ligamentum inguinale	13 (65)

DISCUSSIONS

The panels are spread in various residences and universities located in different provinces in Indonesia. It is thus expected to provide a diverse experience from each panel according to the clinical case that they often encounter representing every region in Indonesia. It is expected that the different backgrounds will result in different anatomical learning experiences from each panel, so that it will result in a consensus representing the opinion of various graduates of the Faculty of Medicine in Indonesia

In the round I of Delphi, many new materials are added to the topic cavum oris, i.e., kinds of musculus masticatoria. However, based on a summary of the Delphi II questionnaire, the number of votes obtained on the materials is less than 12 people (60%) who consider important so that the materials are not included in the core material. We also consider that the material will be included in another system, the musculoskeletal system.

The round II of Delphi produces 87 core materials and the other 185 materials are considered by the panels as less important materials for medical students. Some of these are small arteries that vascularize an organ and connective tissue such as ligament. In addition, anatomical materials that express a bulge or edge on an organ are seldom selected by Delphi panels, for example, philtrum and linguae terminal sulcus. Most of these materials are not selected by the panels as an important point because of the lack of clinical significance.

Embryology of the organ included in the core curriculum is embryology of the digestiva accesoria. A total of 12 Delphi panels (60%) state that the material is quite important. Carlson (2002) states that it is very important for medical students to understand the origin of birth, or so-called medical embryology. This is because congenital abnormalities are a fairly high case in the medical world. Embryology will help medical personnel understand normal and abnormal development. Examples of many cases that appear on the digestive system are cleft lip, atresia ani, and so forth.[12] This is in contrast to the consensus of Munawaroh (2017) in which no embryological materials passes and enters the core materials of anatomy. [13]

On the topic of cavity oris, there are some materials that are considered important by most panels. Among them are the function of cavum oris, topography of cavum oris, and morphology of cavum oris, labia superius, and inferius labia. One Delphi panel mentions the clinical correlation of the materials, i.e., stomatitis and labioschisis.

Tonsilla palate has a clinical correlation of tonsillitis, ulcers, and abscesses. Tonsilla palatina can be used as a basis in the diagnosis of acute tonsillitis, chronic tonsillitis, and chronic tonsillitis of acute exacerbations. The submandibular gland, the sublingual gland, and the salivary gland must be mastered as the most basic knowledge by a general practitioner. When this is associated with a clinical state, this may indicate an infection and malignancy. The material of the durum palate is included in the core material associated with palatoschizis.

Uvula palatina is very important to be studied as a diagnostic physical examination. In addition, there are clinical signs such as hypertrophy, inflammation, and median edges of tonsil enlargement.

Dentes decidua, dentes incisive, dentes canini, premolar dentes, and molar dentes are basic anatomical knowledge that must be known by general practitioners, for diagnosis, and when it is correlated with clinical circumstances, i.e., caries dentis, and to assess oral hygiene. Gingivae must be known by a general practitioner for diagnosis establishment, and when it is correlated with clinical circumstances of caries dentis and to assess oral hygiene. The nervus hypoglossal is associated with a clinical state of the tongue motor lesion found in stroke patients.

Esophagus topics include 2 materials as the core material, i.e., the function and skeleptopis of esophagus. The material is important to know that medical students can differentiate things physiologically and pathologically. Besides, the material is the basic material that must be known by a general practitioner.

Four materials on gastric topics are considered important by the majority of the panels. Among them are gastric function, gastric morphology, plica gastricae, and pylorus. Gastric function is important to differentiate normal and abnormal functions and there are clinical manifestations, such as gastritis and gastroenteritis, the diagnosis of acute gastritis, chronic gastritis, gastroesophageal reflux disease, peptic ulcer, and gastroenteritis.

The topics of intestinum tenue are 5 materials that fall into the core material of anatomy, i.e., the function and the morphology of intestinum tenue as the basic material and that must be known by the general practitioner. The structure/component of the intestinum tenue is used to distinguish the duodenum, jejunum and ileum boundaries.

The materials included in the core material of instestinum crassum topics are quite a lot. According to the Delphi panels, the material is important as the basic material for knowing the physiological and pathological forms of an organ. They can also serve as a basis for diagnosis: colitis, amoebic dysentery, irritable bowel syndrome, ulcerative colitis, ca colon, acute and chronic appendicitis, hemorrhoid interna grade 1-4, and ca rectum. One Delphi panel mentions that canalist analyst can be used as a rectal toucher examination that has many clinical manifestations such as prostate, hemorrhoids, mass, and others.
The topics of hepatic portal circulation produce 2 core materials, i.e., portae hepatis vein and ductus choledochus. Hepatic portae vein is considered important because it acts as a transport of the gastrointestinal tract and is associated with the pressure disorder of portae venous. Ductus choledochus is considered important because at the section blockage often occurs.

Abdominal wall produces many core materials, including function of abdominal wall, structures/components of abdominal wall, 9 abdominal regions, 4 abdominal regions, abdominal cervix, superabial abdominis fascia, muscular rectus abdominis, obliquus externus abdominis muscle, and inguinale ligament. The core materials of abdominal wall are used to assess abnormal and abnormal abdominal walls, distended walls, and muscular defense. The inguinal ligament may be associated with an inguinal hernia.

In Indonesia, guidance as a reference in learning anatomy curriculum has not been found. The Anatomy expert Association of Indonesia has not yet formulated the core materials of anatomy that should be mastered by a general practitioner in order to practice safely and effectively.[13]

This study is expected to be a first step for the association to formulate anatomy curriculum standard that can be applied to all Faculties of Medicine in Indonesia. In addition to shortening the teaching time of anatomical science, the remaining time can be used to teach applied anatomy, such as the diagnostic imaging anatomy that is still poorly taught in the pre-clinical year[14].

CONCLUSION

Based on the consensus result of the general practitioners, the anatomical core materials concerning the digestive system are selected to 87 out of 272 preceding materials, comprising cavum oris, oesophagus, gaster, intestinum tenue, intestinum crassum, peritoneum, digestiva accesoria, hepatic portal circulation, and abdominal wall.

TAKE-HOME MESSAGES

Not all materials contained in the textbook is directly related to medical practice, so it is possible for lecturers to select essential teaching materials to reduce the students' learning burden.

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Knowledge, attitude and practice about human papilloma virus/HPV vaccine in the prevention of cervical cancer among the medical students

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ABSTRACT

Vaccination against HPV (Human Papilloma Virus) has an immense public health importance in the developing countries like ours. It is because every year many women die from cervical cancer. Researchers have shown that this brutal disease can easily be prevented by taking vaccination against HPV. So to find out the extent of knowledge, attitude & practice about HPV vaccine in the prevention of cervical cancer among the medical students, we carried out a descriptive cross-sectional study among 194 students of 3rd & 4th year of Dhaka Medical College. Data was collected by face to face interview with semi structured questionnaire. Among the respondents, 50.52% were male & 49.48% were female. Majority(84.54%)were Muslims. mean age of the respondents was 22 years. Majority 53.1% of the respondents were of 3rd and the rest were from 4th year. Majority(61.66%) of the fathers were service holders and majority (76.17%) of the mothers were housewives. Majority (92.23%) of respondents had idea of causative agent of cervical cancer. . Majority 91.71%) of the respondents agreed that the vaccine can prevent cervical cancer. When we looked into their attitude regarding HPV vaccination, majority (83.94%) of the respondents believed that the vaccine could effective after HPV infection. majority (93.27%) of the respondents had not yet been vaccinated. Most of the respondents (61.58%) thought the possible source to learn about the vaccination was Government awareness campaign, followed by health professionals (17.37%), electronic media (15.79%) & parents (5.26%). Among the respondents. most of the students (50.26%) have no idea about the need of vaccinating men. 62.69% of the respondents are willing to take the vaccine if it is provided to them. 82.90% believe that the vaccine should be added into the national immunization program.

At last, we can say that we have tried to show the picture of knowledge, attitude & practice about HPV vaccine in the prevention of cervical cancer among the medical students, though there were shortage of time, lack of experience & other resources. From this study, we can conclude that there is still a gap persisting between knowledge, attitude & practice of HPV vaccination which can be alleviated by long term and extensive initiatives.

Keywords: *HPV, knowledge, attitude, vaccination, practice, HPV vaccine*

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INTRODUCTION

Cervical cancer is the second most common cancer in women, with an estimated 500,000 new cases and 231,000 deaths occurring worldwide every year. Systemic screening can reduce the death rate from cervical cancer by at least 70%. Since the mid-1990's, clinical evidence has established that the human papilloma virus (HPV) causes cervical cancer.[1]

Human papilloma virus (HPV) is one of the most frequent sexually transmitted diseases in both men and women throughout the world. HPV carries on being an important factor for cervical cancer and the frequency of infection carries on to increase rapidly. It is the most common cancer in the developing countries and forms 25% of the women's cancers.[2]

Despite the fact that most sexually active individuals will become exposed to HPV in their lives, knowledge about HPV and the diseases that HPV causes is generally very limited. Numerous studies have demonstrated that most parents are unaware of HPV and its association with genital warts and cervical cancer. Approximately 33% of women and half of men surveyed worldwide have never heard of HPV.[3] For this reason, questionnaire studies concerning HPV vaccine were carried out in communities of various countries.[2]

Educational initiatives targeting health care professionals have a definite role in fostering vaccine acceptance. Results obtained from present study may also be useful at the policy level to implement awareness program among the health care professionals about this important public health issue.[4]

According to the Centers for Disease Control and Prevention (2008), about three out of four people have HPV infection at some point in their lives. By age 50, at least 80% of women will have infection.[6] Fortunately, more than 80% of HPV infections are removed over a period of 3-4 years without any intervention. On the other hand, primary prevention through vaccination and screening for cervical cancer seems to be effective (Wong, 2009). HPV vaccine is safe and reduces development of cervical cancer up to70 %.[7]

In a study conducted at a medical university of Ukraine, 16% of the respondents indicated that they knew a lot about cervical cancer, while 55% indicated that they knew not-so-much about the cancer. 58% of the respondents had heard about cervical cancer screening.[8]

Health college students and university community need such information not only to improve their own knowledge and health level but also to instruct and educate other society groups.[9]

Therefore, it is essential to assess the current knowledge, attitude and practice about HPV in a population of medical college students to identify the current level and sources of HPV information to allow the Government authorities to set proper health education policies and program.

It is generally accepted that HPV is etiologically associated with cervical cancer. HPV infection types 16 and 18 account for approximately 70% of cervical cancers all over the world. HPV is one of the leading carcinogenic infections. [11]

Two prophylactic HPV vaccines have been developed and are available internationally. These are quadrivalent vaccine and bivalent vaccine. In June 2006, these vaccines have been recommended for girls between ages of 9-26 years in many countries.[11]

The recent approval of Gardasil vaccination in males is an important step toward reducing the incidence and prevalence of HPV infection in men. The FDA approval of Gardasil for use in males also has the potential of greatly reducing HPV associated diseases in women. Herd immunity occurs when there is a reduction in vaccine preventable illness through directly protecting those vaccinated as well as the indirect protection of others in the community. Vaccinating men against HPV may not only reduce male HPV associated disease burden but also be effective in reducing female HPV associated disease.[12]Research has shown that parents and patients are more likely to accept a vaccine if it is effective, safe, reasonably priced and recommended by a physician. Gynecologists often serve as the sole health care provider for many women. They are in an excellent position to disseminate information about

risks and consequences of HPV infection as well as provide information about HPV vaccines .[13]]

Hence, medical college students need such information not only to improve their own knowledge and health level but also to instruct and educate other society groups. Therefore, it is essential to assess the current knowledge, attitude and practice about HPV in a population of medical college students to identify the current level and sources of HPV information to allow government authorities to set proper health education policies and program.

METHODS AND METERIALS

This was a descriptive, cross sectional study conducted among 194 medical student of Dhaka medical college. Study population were 3rd and 4th year students of Dhaka medical college. Only criteria for exclusion was unwillingness of a students to participate.

After obtaining institutional Ethics committee approved, medical students who consent to participate in study took written consent signed by the participant to avoid identification problem. Thus confidentiality of the participants was guaranteed.

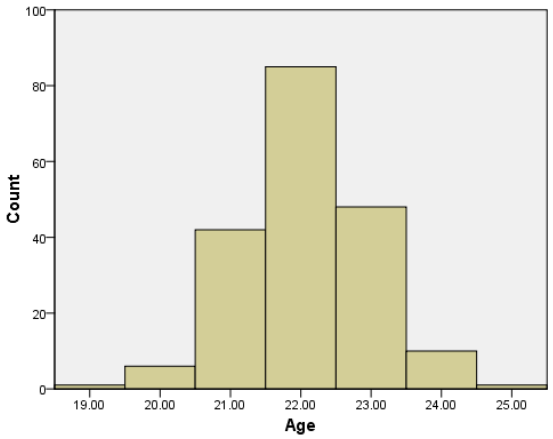
Convenient sampling technique was adopted for collection of sample.194 participants constituted the sample size. Research instrument was semi-structured questionnaire. A total 23 questions were asked. To asses knowledge 7 questions, to asses attitude 7 questions and to asses practice 3 question and to determine socio-demographic characteristics 6 questions were asked to the participants.
Data was collected by face to face interview of the respondents with semi structured questionnaires. All the data was checked and verified after collection. Collected data was entered and analyzed by SPSS of windows XP program version 21.0

RESULT

A total of 194 students participated in the study of which 50.52% were male and 49.48% were female. majority of the respondents were 22 years old. Among them majority (84..54%) of the participant were Muslim, and 15.46% were Hindu. Majority (53.1%) of the respondents were 3 rd year students and the rest were from 4th year students. Majority of the respondents fathers (61.66) were service holders, followed by businessmen (27.46%). There were also farmers (4.15%), NGO workers (1.04%) and other professionals(5.70%). In respect to mothers occupation most of the respondents mothers (76.17%) were housewives, followed by service holders (21.76%), there were also business women (1.55%) and other professionals (0.52%). Majority (92.23%) of respondents had idea HPV is the causative agents of cervical cancer ,4.66% think it is the Cox sachie virus. 1.55% voted for Epstein Bar virus and 1.56% of the respondents answered that they don't know. Regarding the risk factor respondents answered multiple among them. Regarding vaccines ability to prevent cancer, 91.71% of the participants agreed that the vaccine can prevent cervical cancer, 3.63% believe the vaccine can not effectively prevent the cancer. 4.66% were neutral. Regarding availability of the vaccine in Bangladesh most of the participants (86.01%) believe that vaccine is available in Bangladesh whereas 0.52% think it is not still available here. 13.47% said they don't know exactly. Idea about recommended age of receiving the vaccine, most of the participants (52.86%) believe that the age group 15-20 years is the most appropriate for the vaccination.27.46% voted for 20-25 years age group, 17.62% voted for 10-15 years and rest(2.06%) voted for 5-10 years. Idea about the age of catch up vaccine program 38.86% of the respondents think 20-25 years is the correct time for catch up vaccination program, 30.05% thin 15-20 years, 16.06% believe 10-25 years and 15.03% believe 10-15 years is the right for catch up vaccination program. Idea about the effective age of this vaccination most of the respondents (44.04%) said vaccine is most effective at puberty being closely followed by before onset of sexual activity (37.31%), at any age of life (16.58%), 2.07% believe that at the end of college life it is most effective. Idea about the need of vaccinating men 50.26% of the participants think that the vaccination is not needed for men. 26.42% thinks it is needed 23.32% said they don't have any clear idea. When we looked into their attitude regarding HPV vaccination the effectiveness of the vaccine after HPV infection, majority of the participants (83.94%) do believe that the vaccine can effectively prevent HPV infection.7.25% said it can't, 8.81% have no clear idea about this. According to the receipt of the vaccine 93.27% of the participants have not yet been vaccinated, 5.18% have been vaccinated, 1.55% don't know about their vaccination status. Idea about the possible sources to learn about the vaccination, majority of the

participants (61.58%) think the possible source to learn about the vaccination is Govt. awareness campaign, followed by health professionals (17.37%), electronic media(15.79%) and parents(5.26%). Regarding the main obstacle in implementing the vaccination program, 68.40% of the respondents believe lack of awareness is the main obstacle for implementing the vaccination program, followed by its cost(24.35%) fear of side effects(5.70%), the mentality that it is not required(1.55%) need for addition of HPV vaccine in national vaccination program 82.90% believe that the vaccine should be added into the natural immunization program, 6.22% don't think there is any need of it, 10.88% have remained neutral in this regard. Regarding practice whether the respondents asked their friends or family members about the vaccination, 58.55% of the respondents have not been asked and 41.45% were asked question regarding HPV vaccination. Regarding ever searched the internet for information about HPV vaccination 72.02% of the participants have not searched the internet for information and 27.98% have searched the net regarding this topic. Regarding whether the participants advised anyone to take such vaccine,59.07% of the participants have never suggested anyone to take the vaccine but 40,93% have done it. Majority of the respondents(62.69%) are willing to take the vaccine if it is provided to them.24.35% would not take the vaccine even it is provided to them.12.95% are unsure about what they will do. Regarding willingness to recommended it to family,84.97% will recommend the vaccine to their families, 7.25% won't recommended it and 7.77% aren't sure what they would do.

1) Diagram showing age of the respondents:



The histogram shows that the majority of the respondents were 22 years old. The overall range was 19 to 25 years.

2) Table showing distribution of the respondents according to sex

Sex	Frequency	Percentage
Male	98	50.52
Female	96	49.48

The table shows that 50.52% respondents were male and the rest (49.48%) were female.

Table showing religion of the respondents

Religion	Frequency	Percentage
Islam	164	84.54
Hinduism	30	15.46

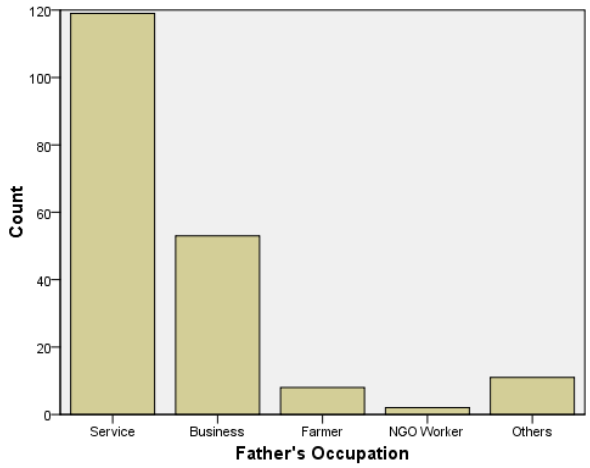
The table shows that the majority of the respondents were Muslims (84.54%), and the rest were Hindus.

3) Respondents according to their academic year

Year	Frequency	Percentage
3rd	103	53.1
4th	91	46.9

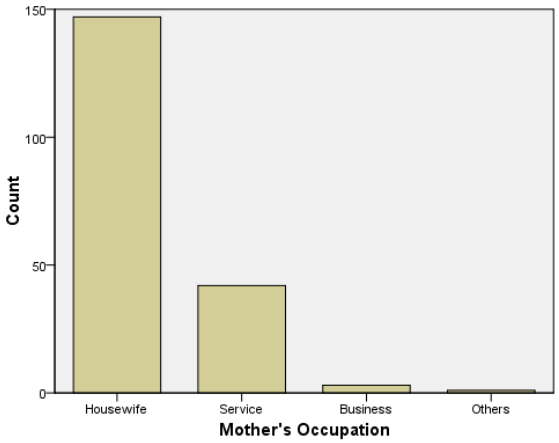
The table shows that the majority of the participants were of 3rd year (53.1%) and the rest were from 4th year.

4) Diagram showing father's occupation



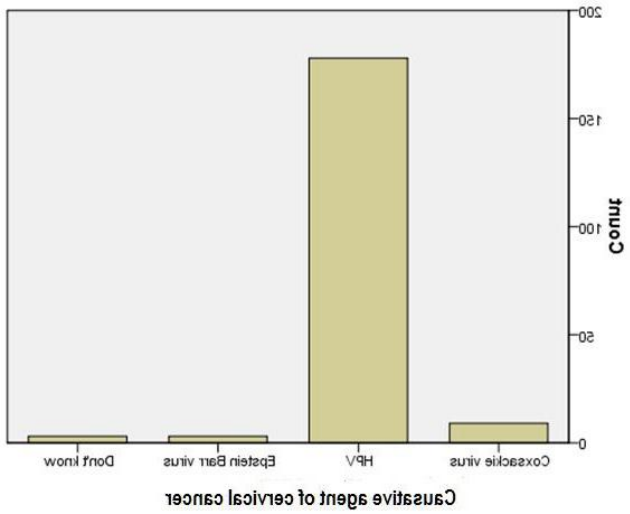
The bar diagram shows that the majority of the respondents' fathers (61.66%) were service holders, followed by businessmen (27.46%). There were also farmers (4.15%), NGO workers (1.03%) and other professionals (5.70%)

5) Diagram showing mother's occupation



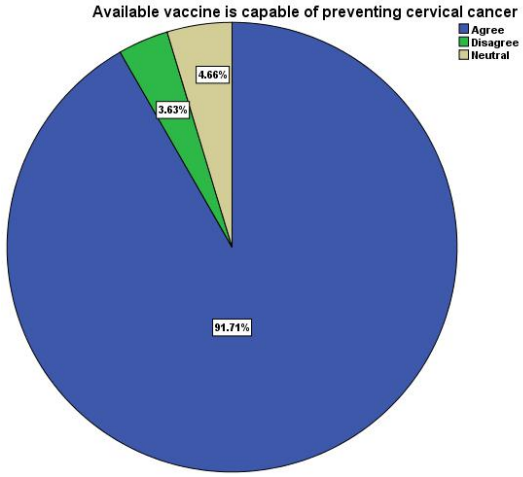
The bar diagram shows that most of the respondents' mothers (76,17%) were housewives, followed by service holders (21.76%). There were also businesswomen (1.55%) and other professionals (0.52%).

6) Respondents knowledge of causative agents of cervical cancer



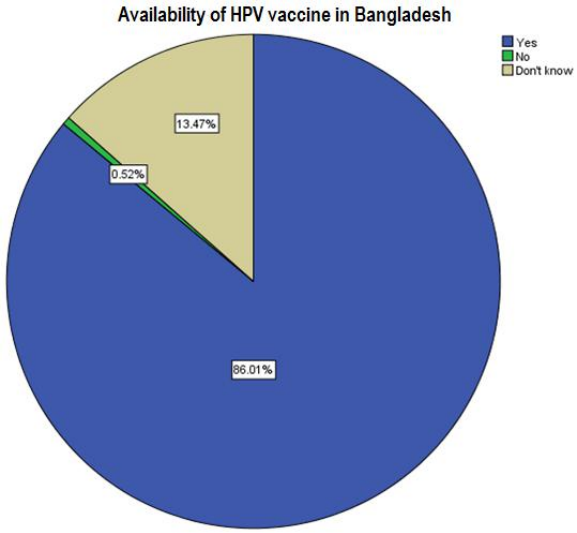
Majority of the respondents (92.23%) believe that HPV is the causative agent of cervical cancer. 4.66% think it is the Coxsackie virus. 1.55% each voted for Epstein Barr virus and 1.56% dont know

7) Respondents' idea about the vaccine's ability to prevent cancer



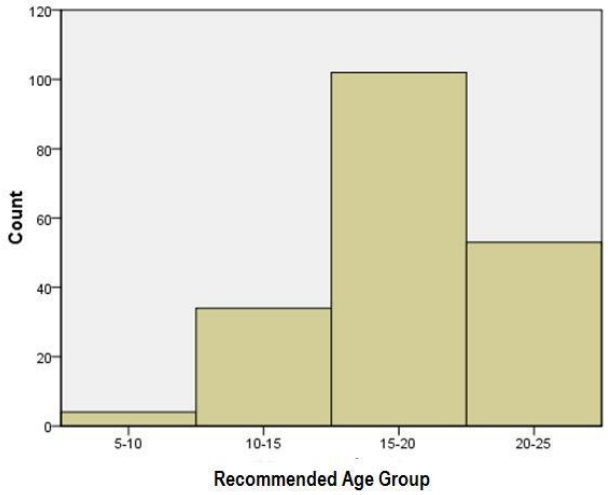
91.71% of the participants agreed that the vaccine can prevent cervical cancer. 3.63% believe the vaccine can't effectively prevent the cancer. 4.66% has remained neutral.

8) Distribution of the participants according to their idea about the availability of the vaccine in Bangladesh



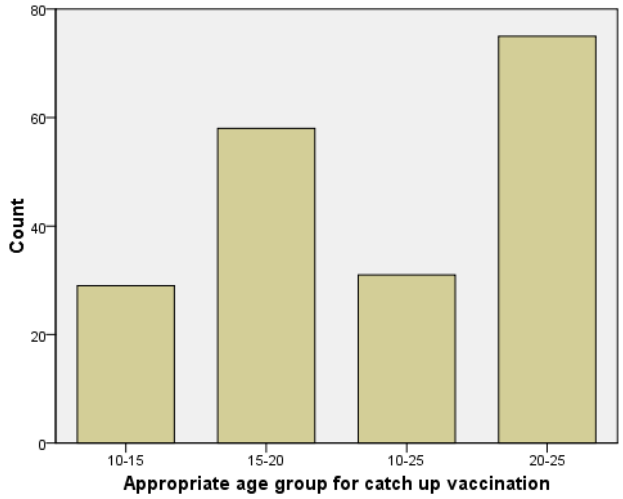
Most of the participants(86.01%) believe that vaccine is available in Bangladesh whereas 0.52% think it isn't still available here. 13.47% said they don't know exactly.

9) Respondents' idea about the recommended age of receiving this vaccine



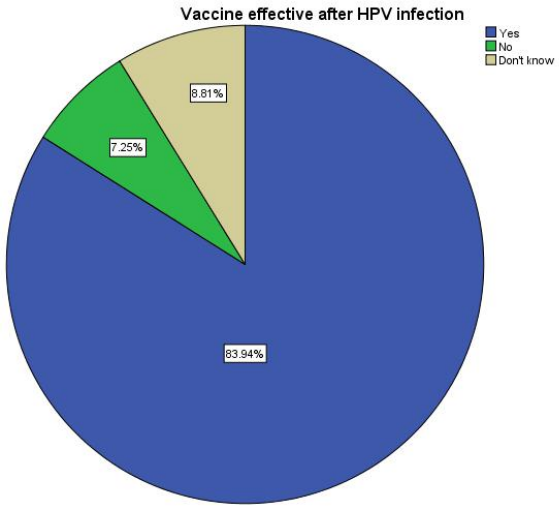
Most of the participants (52.86%) believe that the age group 15-20 is the most appropriate for the vaccination. 27.46% voted for 20-25 age group, 17.62% voted for 10-15 and the rest(2.07%) voted for 5-10 years.

10) Participants' idea about the age of the catch up vaccine program



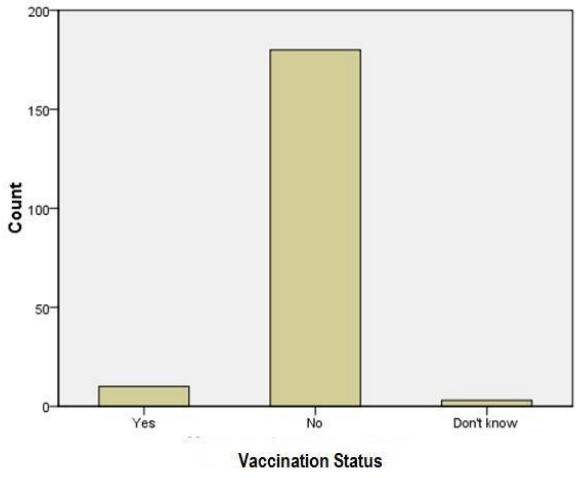
38.86% of the respondents think 20-25 years is the correct time for catch up vaccination program. 30.05% think 15-20 years is the correct time whereas 16.06% believe 10-25 years is the appropriate age. 15.03% believe 10-15 years is the most suitable age group.

11) Idea about the effectiveness of the vaccine after HPV infection



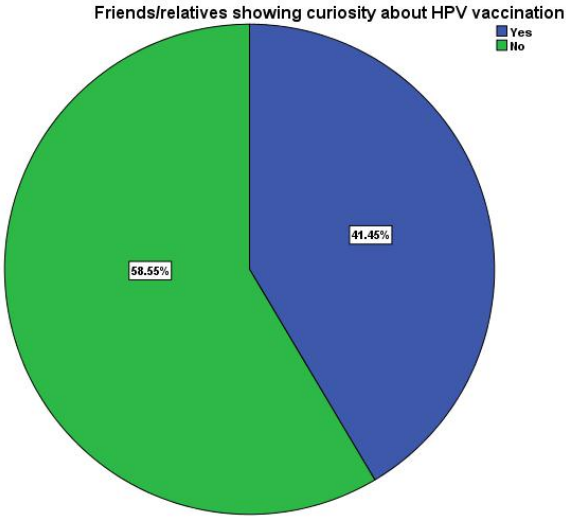
Majority of the participants (83.94%) do believe that the vaccine can effectively prevent HPV infection. 7.25% said it can't. 8.81% have no clear idea about this.

12) Respondents according to the receipt of the vaccine



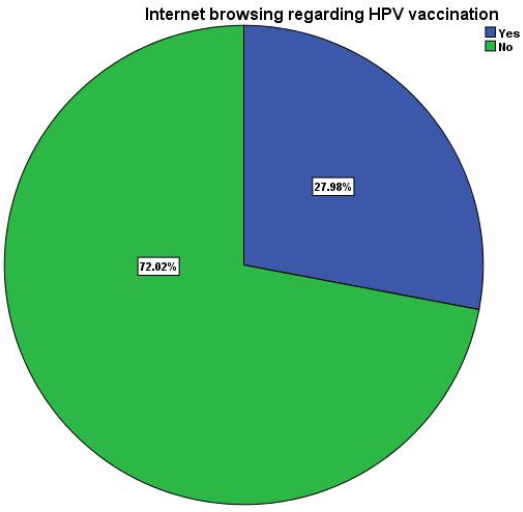
93.26% of the participants have not yet been vaccinated. 5.18% have been vaccinated. 1.55% don't know about their vaccination status.

13) Whether questions were asked by the friends or family members about the vaccination



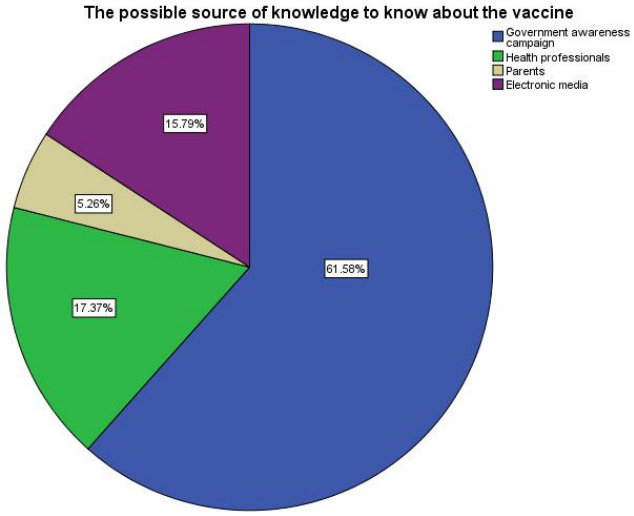
58.55% of the respondents have not been asked questions regarding HPV vaccination by their friends or family. 41.45% were asked questions.

14) If the respondents ever searched the internet for information about HPV vaccination



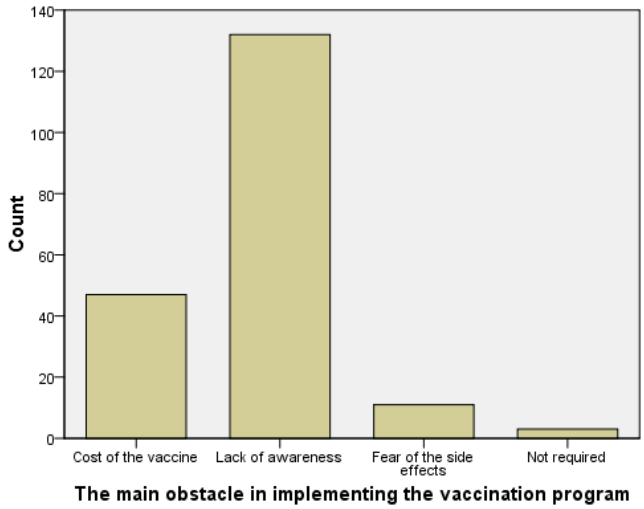
72.02% of the participants have not searched the internet for information regarding HPV vaccination. 27.98% have searched the net regarding this topic.

15) Respondents' distribution according to their idea of the possible sources to learn about the vaccination



Majority of the participants (61.58%) think the possible source to learn about the vaccination is Govt. awareness campaign, followed by health professionals (17.37%), electronic media (15.79%) and parents (5.26%).

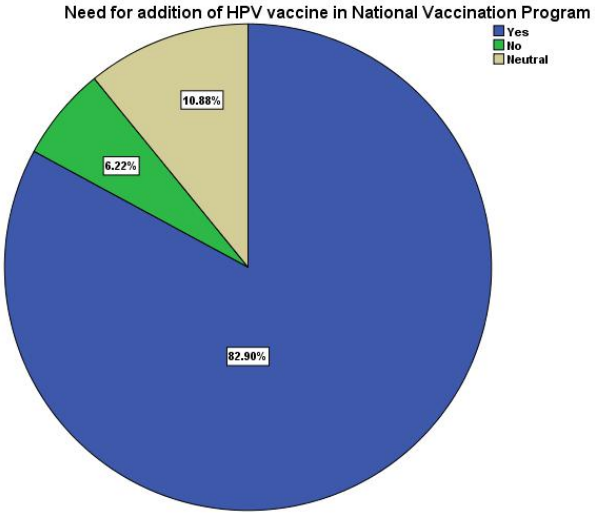
16) Distribution of the participants according to their idea of the main obstacle in implementing the vaccination program



68.39% of the respondents believe lack of awareness is the main obstacle for implementing the vaccination program, followed by its cost (24.35%), fear of side

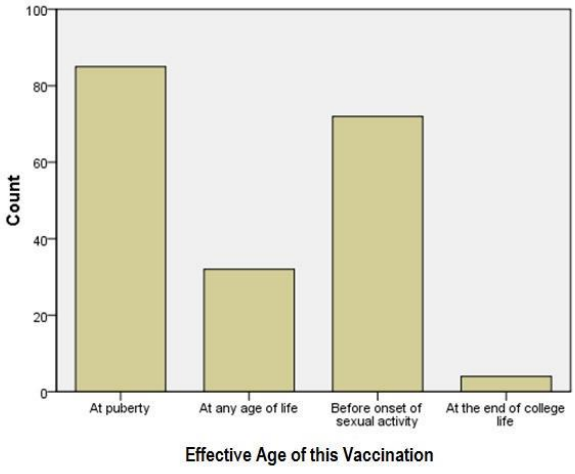
effects(5.70%), and the mentality that it is not required (1.55%).

17) Should the vaccine be added in the national vaccination program



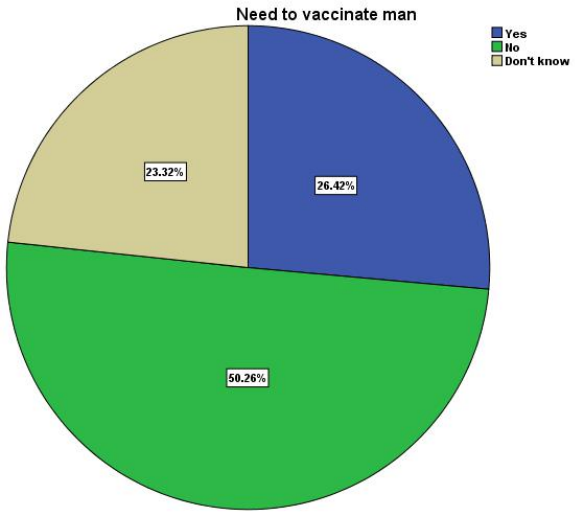
82.90% believe that the vaccine should be added into the national immunization program. 6.22% don't think there is any need of it. 10.88% have remained neutral in this regard.

18) Participants' idea about the effective age of this vaccination



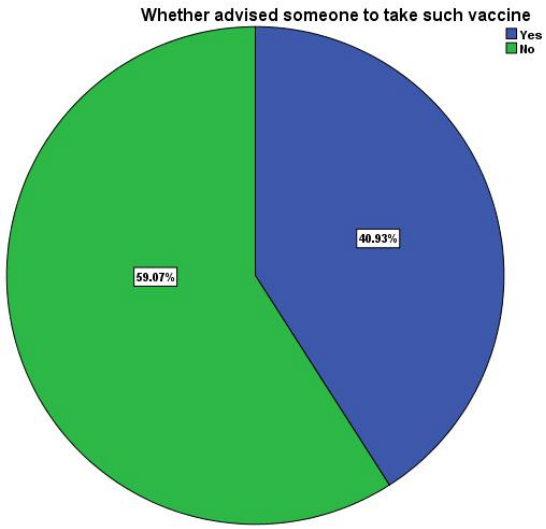
Most of the respondents (44.04%) believe that the vaccine is most effective "at puberty", being closely followed by "before onset of sexual activity"(37.31%), "at any age of life"(16.58%). 2.07% believe that at the end of college life it is most effective.

19) Distribution of the participants according to their idea about the need of vaccinating men



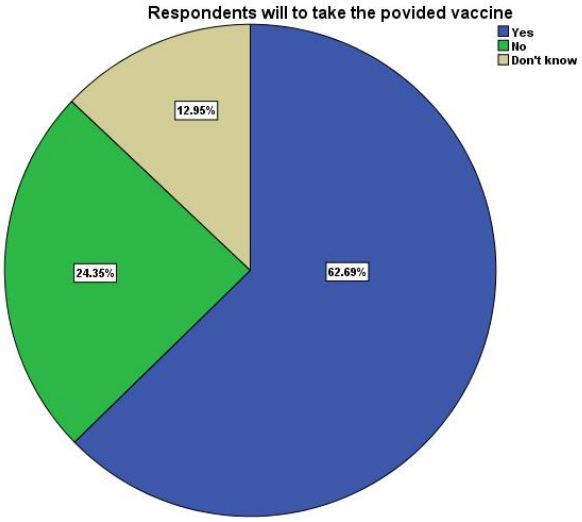
50,26% of the participants think that the vaccination is not needed for men. 26.42% thinks it is needed. 23.32% said they don't have any clear idea.

20) Whether the participants have ever suggested anyone to take the vaccine



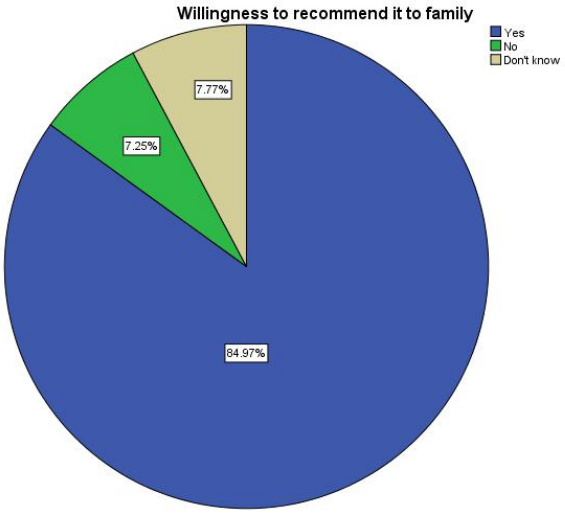
59.07% of the participants have never suggested anyone to take the vaccine but 40.93% have done that.

21) Distribution of the respondents according to their willingness to take the vaccination, if provided



The pie chart shows 62.69% of the respondents are willing to take the vaccine if it is provided to them. 24.35% would not take the vaccine even if it is provided to them. 12.95% are unsure about what they will do.

22) Respondents' willingness to recommend the vaccine to their family



According to the pie chart, a huge majority (84.97%) will recommend the vaccine to their families. 7.25% won't recommend it and 7.77% aren't sure what they would do.

DISCUSSIONS

The study was restricted to undergraduate students of medical college. Cervical cancer will remain one of the commonest female genital cancers for decades to come if concerted and sustained efforts are not geared towards preventive measures. In this study, we sought to establish the level of knowledge, attitude and practice about cervical cancer and government intervention. We studied the knowledge, attitude and practice about HPV vaccination on 194 students. Assessment of students' knowledge of HPV and HPV vaccination revealed a number of clinically relevant results.

The study shows that the majority of the respondents were 22 years old. The overall range was 19 to 25 years. Among the 194 students studied, 90 students were 22 years old. 52 students were 23.According to the distribution of the respondents according to sex, we see that 50.52% respondents were male and the rest were female, which was 49.48%. We tried to review both male and female, as they will contribute equally in the medical profession. If religion was considered, majority of the respondents were Muslims (84.54%) and the rest were Hindus. (15.46%).According to academic year, the majority of the participants were of 3rd year (53.1%) and the rest were from 4th year, which is precisely 46.9%.We also represented a Bar diagram which shows father's occupation of the participants. It shows that the majority of the respondents'(61.66%) fathers were service holders, followed by businessmen. There were also farmers, NGO workers and other professionals. Also, most of the respondents' mothers were housewives, followed by service holders. There were also businesswomen and other professionals.

Majority of the respondents believe that HPV is the causative agent of cervical cancer. Around (92.23%) students answered the causative agent correct. which is similar to an international study.[18] Respondents' idea about the risk factor of cervical cancer was evaluated.

Majority (91.71%)of the participants also agreed that the vaccine can prevent cervical cancer. this is similar to international study [8]When studied about distribution of the participants according to their idea about the availability of the vaccine in Bangladesh, most of the participants86.01% believe that vaccine is available in Bangladesh which was better than a study conducted among medical students india.[18] Moreover, most of the participants(52.86%) believe that the age group 15-20 is the most appropriate for the vaccination. 27..46% were given answer to 20-25 years age group. Most of the respondents (38.86%) think 20-25 years is the correct time for catch up vaccination program. Also, the effectiveness of the vaccine after HPV infection was studied. Majority of the participants do believe that the vaccine can effectively prevent HPV infection. But still, 93.26% students among 194 students are yet not vaccinated.

Majority of the respondents have not been asked questions regarding HPV vaccination by their friends or family, which might be the reason behind lack of interest in taking this vaccine. Most of the participants 27.98% have not searched the internet for information regarding HPV vaccination. which is similar to the study done in India [18] Whereas, they think the possible source to learn about the vaccination is Govt. awareness campaign, followed by health professionals, electronic media and parents. Awareness regarding the availability of vaccine against cervical cancer in Kolkata was 69.4%, which was better than a study conducted among women of Belgium, which was 50%.[18]

When we studied the distribution of the participants according to their idea of the main obstacle in implementing the vaccination program, most of the respondents (68.39%) believe lack of awareness is the main obstacle for implementing the vaccination program, followed by its cost and fear of side effects. . But, a study conducted by medical school in India showed high cost of the vaccine as the major concern for mass vaccination program in India.[8] The overwhelming majority believes that the vaccine should be added into the national immunization program. Adding the vaccine in the national immunization program, will bring to light the HPV virus and its disease

Participants' idea about the effective age of this vaccination was discussed. Most of the respondents believe that the vaccine is most effective "at puberty", being closely followed by "before onset of sexual activity".

We also studied the distribution of the participants according to their idea about the need of vaccinating men. Most of the participants(50.26%) think that the vaccination is not needed for men .similar to study findings found in india.[8] Majority of the participants have never suggested anyone to take the vaccine. But when asked if the respondents are willing to take the vaccine if it is provided to them, they agreed (62.69%) whole heartedly. which is similar to the study done in medical school in india[8] A huge majority will recommend the vaccine to their families.

In conclusion, moderate knowledge of medical college students about HPV makes it necessary to set effective national public health efforts for HPV education and prevention considering excess of young population here is vulnerable to cervical cancer. Increased education of health care providers may increase the general knowledge of HPV in the population. These all will strengthen cervical cancer prevention strategies in the country.

CONCLUSION

From above mentioned study it can be concluded that there was male predominance over female among the total respondents interviewed. Majority of the respondents were 22 years old. Majority of the fathers were service holders while majority of the mothers were housewives. .majority of the respondents agreed that the vaccine can prevent cervical cancer. It was found that majority of the respondents thought that the possible source to learn about the vaccination was Government awareness campaign. Majority of the respondents were not vaccinated against HPV. Most of them were not asked about HPV vaccine by their relatives and friends. Majority of them did not recommend it to their families and relatives. But it should have been more positive as the study was conducted among medical students.

So, in this study it has been found that long term and extensive initiatives should be taken to increase the level of knowledge, attitude and practice of Human Papilloma Virus vaccine to prevent cervical cancer.

RECOMMENDATIONS

Depending upon the study, following recommendations were made :

1. The Government should take initiative to provide information and health education to increase the knowledge about HPV vaccination.
2. Teachers should encourage and influence their students to be vaccinated against HPV to prevent cervical cancer.
3. Awareness should be raised about vaccination against HPV through television programs and textbooks.
4. HPV vaccine should be included in the National Immunization Program
5. Parents should be made aware of the importance of vaccinating their children.

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Developing e-Bandongan as a learning system for flipped-classroom in medical education and massive open online courses in medical long-life learning

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ABSTRACT

Background : Information gathering have been subtituted with problem-based learning in many medical school worldwide regarding the need of clinical problem solving skill and the limitation of time to master rapidly-growing of medical sciences. The students may not have the opportunity to gain an understanding of the concepts in logical progression. Medical learning material in social media have a potential benefit to facilitate the student needs. This work aims to describe our development on e-Bandongan as a learning system for flipped-classroom in medical education and massive online courses in medical long-life learning.

Summary of Work: We offered audio, video, and written material resumers in Indonesian language for every topic in existing discipline-based textbook. We also explained about its utilization as part of flipped-classroom in their education and massive open online courses in their future long-life learning. The online anonymous questionnaire was given to identify the students perception on their behavior to the material resumers. Thirty-seven students responses were taken. The respondents answer for the opened question were assessed qualitatively.

Summary of Results : All respondents admitted that they will always (16.2%), very frequently (29.7%) and quite frequently (48.6%) utilize the material resumers. However, the addition of exercises feature and/or non-curricular rewards did not change the utilization frequency, indeed, it made the 'never' and 'quite rarely' utilization were admitted. The qualitative assessment demonstrated their reasons that the material resumers were more concise, repeatable, synhronized with the exam question from the teachers, visually-explained and in Indonesian as their native language.

Discussion & Conclusions : Respondents admitted that they will utilize the offered material resumers. Video material resumers from their own teachers is preferred. Future investigations will compare their behavior to the online material resumers between the on-page website statistics and these self-assessed perceptions.

Take-Home Messages : The e-Bandongan as a learning system for flipped-classroom and massive open online courses was acceptable for the medical students with or without both exercises feature and non-curricular rewards.

Keywords : *ebandongan, medical long life learning, learning system, medical education*

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INTRODUCTION

In recent years, problem-based learning has been considered as better curriculum compared to information-gathering (lecture-based) which at the opposite side in the SPICES continuum (1). Nonetheless, there is a possibility to integrate information-gathering without disrupting problem-based learning. The Falk Library Program had facilitate its integration for the medical students in University of Pittsburgh by providing the packages of informational materials in small-group rooms based on the librarians' case-related resource lists and by hiring key informants in central location during specific time to be students partner for informal discussion (2). Although this offline program was succesful for the integration, the online implementation have not been elucidated yet.

It is important to innovate in medical education with problem-based learning, however, it does not means to sacrifice the information-gathering, particularly using the students-centred approach. Medical doctors who graduated from lecture-based medical schools after 9.91 years perceived that they have better possession of profession-relevant knowledge, writing reports or articles, productivity and ability to work under pressure, in comparison with graduates from problem-based medical schools after 8.49 years who perceived that they have better interpersonal competencies (3). McGill University's medical school that integrated problem-based and lecture-based learning in hybrid curriculum for eleven years demonstrated that their students had more text-generated rather than inferences-generated explanation, while the students with problem-based curriculum had a great deal of inferences, particularly in basic sciences (4). Although evidence-based medicine is considerably important to enhance patient care (5), and the evidences is exploding in fundamental process of human biology, basic sciences has been shrinking in most medical schools curricula (6), along with shrinking of information-gathering as time-compensation for the expanding clinical problem-based curriculum. Therefore, we need teacher-directed, students individual learning beyond face-to-face class and time to enhance competencies of the medical graduates, at least on four competencies above.

More time for application of knowledge in problem-based learning can be given by removing transmission of factual knowledge in information-gathering from face-to-face meeting to pre-meeting teacher-directed learning, that is, well-known as flipped-classroom model (7). This model demonstrated significant improvement on oral case presentation skills (8), and exam results of physiology as the basic science (9,10), however, no improvement on examination of obstetrics and gynaecology as the clinical practice (11). Flipped-classroom utilizes video lectures and computer-graded tests that makes it potentially expanded as massive open online courses (MOOCs) by adding discussion forums (12). Both of them require self-directed learning readiness, while it is lower by students in some health profession educational institutes from different countries (13–15), including from Indonesia. However, no study has found either for flipped-classroom or MOOCs in Indonesian medical education.

We will develop the learning system for MOOCs as well as for flipped-classroom because of its benefit for medical long-life learning (16). In addition, since our institution need to adopt *bandongan*, the mass approach learning in Islamic secondary education (17), we named the learning system as e-Bandongan (electronic *bandongan*). Anyone can attend *bandongan* without formal requirement which is similar to MOOCs' principle. Therefore, this work aims to describe our development on e-Bandongan as a learning system for flipped-classroom in medical education and massive online courses in medical long-life learning.

RESEARCH METHODOLOGY

This is a pilot study based on quantitative and qualitative responses from thirty-seven medical students in University of Nahdlatul Ulama Surabaya. The respondents consist of first-year (32,4%), second-year (21,6%), third-year (27%) and fourth-year (18,9%) students. We need to get insight about future behavior of the students on offering audio, video, and written material resumers to support flipped-classroom and MOOCs.

The material resumers were offered in Indonesian language for every topic in existing discipline-based textbook. It was explained to them that way since it is intended to negotiate with limited credits in relative to huge medical topics over clinically-oriented medical school curriculum rather than to provide specific learning system based on the curriculum. Medical learning materials were also largely provided in English rather than their native language (Indonesian). In addition, we also explained about its utilization as part of flipped-

classroom in their education and MOOCs in their future long-life learning.

The online, anonymous and concise questionnaire was given to identify the students perception on their behavior to the material resumers. The respondents answered both for the closed and opened question. Four closed questions were multiple-choices with 5-points Likert scale that asked about utilization frequency of the material resumers with or without exercises feature and/or non-curricular rewards. Each closed question consists of 'never', 'quite rarely', 'quite frequently', 'very frequently' and 'always'. One opened question asked about their reasons choosing the answer of each closed question and were assessed qualitatively.

RESULT

Utilization frequency for the material resumers without both exercises feature and non-curricular rewards demonstrated highest proportion on option 'quite frequently' (48.6%), then followed by 'very frequently' (29.7%), 'always' (16.2%) and 'quite rarely' (5.4%), but no one chose 'never' (Figure 1). Addition of exercises feature made them mostly choosing 'quite frequently' (40.5%), then followed by 'very frequently' (35.1%), 'always' (13.5%), 'quite rarely' (8,1%) and 'never' (2.7%), while addition of non-curricular rewards made them mostly choosing 'quite frequently' (54.1%), then followed by 'very frequently' (24.3%), 'quite rarely' (16,2%) and 'always' (5.4%), but no one chose 'never'. Both exercises feature and non curricular rewards made them mostly choosing 'quite frequently' (55.6%), then followed by 'very frequently' (27.8%), 'always' (11.1%) and 'quite rarely' (5.6%), but no one chose 'never'.

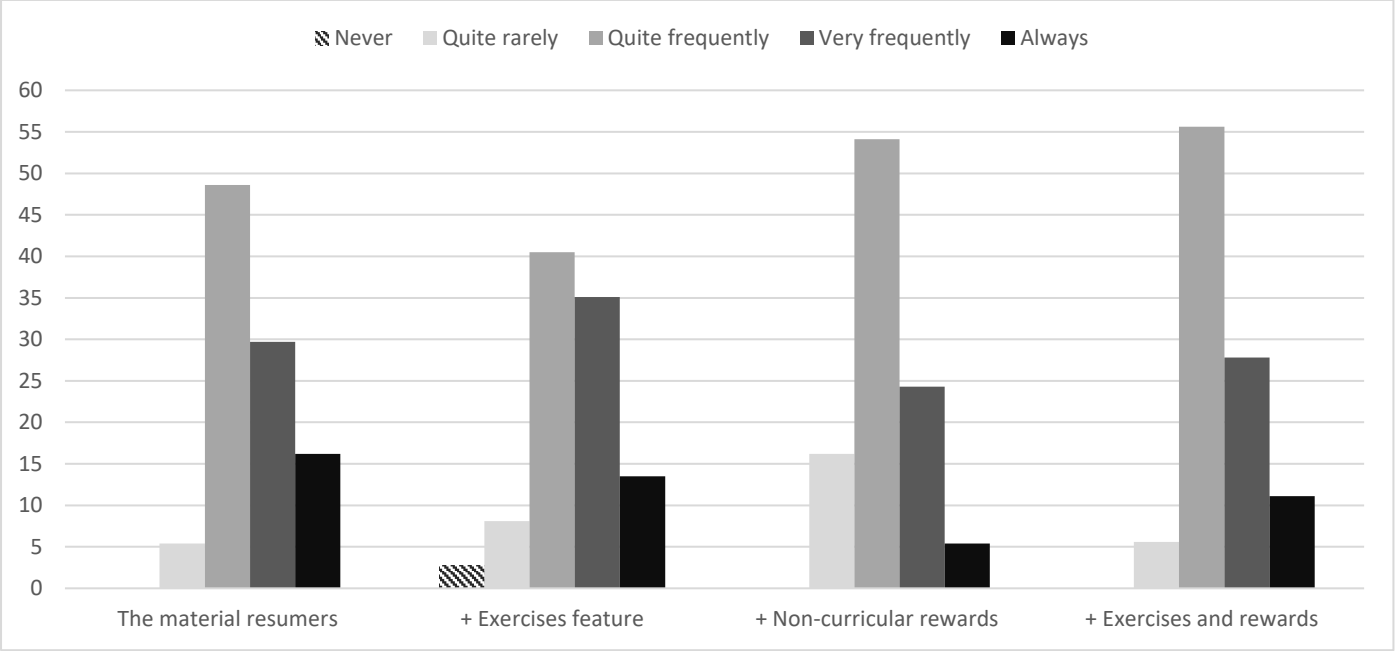

Figure 1. Utilization frequency of the material resumers with or without exercises feature and/or non-curricular rewards. The vertical axis is cut at maximum 60% to optimize visualization.

Their reasons choosing the answer of each closed question had been qualitatively assessed. The respondents would like the material resumers because of more concise and repeatable. They also like the material resumers that are definitely synhronized with the exam question from the teachers. The material resumers in video were preferred. Since most of medical textbooks are in English, the material resumers in Indonesian as their native language were also preferred.

DISCUSSION

Flipped-classroom model had been developed by many disciplines with several names. It is introduced by J. Wesley Baker in discipline of communication as the 'flipped classroom' (18), and by Maureen J. Lage, Glenn J. Platt and Michael Treglia in discipline of economics as the 'inverted classroom', on the same year about 18 years ago (19). An employment of this model in medical education is emerging since the widespread

use of MOOCs in recent years (7). The MOOCs have promoted the self-directed learning skill that is required by medical graduates for the continuing medical education (16). The openness of education is the main spirit that emerges the MOOCs (12). This makes us to name the learning system in this study as e-Bandongan since the same spirit is found in *bandongan*. It is a traditional learning method with mass approach that the *kyai* (Islamic cleric term in Indonesian) did textbook-based teaching for *santri* (Islamic boarding school students term in Indonesian) for hundred years (17).

Self-directed learning atmosphere is confirmed on flipped classroom model in this study as described in previous studies (8–11). This is because the addition of exercises feature and/or non-curricular rewards did not change the utilization frequency. The respondents' qualitative answer indicated their urgent needs for the material resumers. Interestingly, the addition of exercises feature made the 'never' utilization was admitted insignificantly. The 'quite rarely' utilization also tend to be higher by addition of exercises feature and/or non-curricular rewards.

More concise, repeatable and synhronized with the exam question from the teachers were the reasons why they would like the material resumers. Similar condition was found in The Falk Library Program that the key informants or the topic experts were the most use feature that is provided by the library in University of Pittsburgh School of Medicine (2). They chose to discuss with these key informants because of to-the-point, relevant and confirmable information the informants given.

The video lectures were preferred in this study. Although the students prefer video lectures, they supposed to integrate the live lectures with it rather than to subtitute the live lecture, and the mean post-test score was still better for the live lectures rather than for the video lectures ($p=0.049$) (20). In addition, other study demonstrated 74% of students admitted that they watch video to review concepts they missed in live lectures, and the student attendance to the live lectures did not affected also (21).

Most of medical textbooks which are in English were perceived by the respondents as the barrier that can be solved by the material resumers in Indonesian. The language barrier in education is also described in Japan that no ideal English textbook for students regarding dental medicine was admitted (22). Medical textbook translation from English to other language should be contextually in manner of the other language native speaker rather than in manner of the English native speaker (23).

CONCLUSION

Future utilization of the offered material resumers is admitted by the respondents. The material resumers from their own teachers is preferred, especially the video lectures. However, the difference between the utilization based on on-page website statistics and these self-assessed perceptions may be exist that should be investigated further.

TAKE HOME MESSAGE

The e-Bandongan as a learning system with or without both exercises feature and non-curricular rewards was acceptable for the medical students for flipped-classroom and MOOCs.

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Perceptions of health students on learning interprofessional education

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Stikes Karya Husada Kediri

ABSTRACT

Interprofessional education (IPE) learning method is still very rarely applied in educational institutions in Indonesia. IPE is an activity to learn about, from and with each other which is followed by two or more health professions as a provision to collaborate in an effort to provide quality services. The purpose of this study was to analyze the relationship of knowledge with perceptions about the learning of IPE in Stikes Karya Husada Kediri students. The design of this research is correlational research with cross sectional approach. The population is students of Stikes Karya Husada Kediri academic year 2015/2016, using random sampling technique obtained by the sample with the number of 185 students consisting of nursing S1 program, D4 Midwifery, D3 Nursing, D3 Midwifery, D3 Nutrition. The result showed that 38% students have good knowledge, 33% moderate knowledge and 29% less knowledge. Students' perceptions about IPE resulted in 49% having positive perceptions and 51% having negative perceptions about IPE learning. The data were analyzed using Spearman Rho test. The result of p-value = 0.001 (a) = 0,05 and r = 0,333 hence can be concluded there is correlation of knowledge with perception about learning IPE with low relation strength. Knowledge of IPE is influenced by many factors, with good knowledge of IPE has not always formed a positive perception of IPE. Efforts to create an interprofessional learning atmosphere in an academic setting need to be improved so that students will be able to collaborate with other professions in the clinical setting.

Keyword: *Perception, Interprofessional Education, Student.*

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INTRODUCTION

Interprofessional Education (IPE) is an activity that is followed by one or more knowledge of learning, which contributes to quality education (Royal College of Nursing, 2006). IPE is a necessary step in the preparation of good health and ready for health problems (WHO, 2010). For a student with knowledgeable health education, to assist them in solving health concerns, then from the beginning they should be able to understand the concept of IPE. (Coster, et al., 2008) explains that IPE is important in helping to develop the concept of cooperation between existing professionals with positive performance and relationships among the professions involved.

Based on data DIKTI (2012) there are 14 State Universities in Indonesia that organize formal education that exist in doctor education program and nursing education. Most have already implemented interprofessional education programs in their education systems and with the universities that run some professional health education programs will often occur interaction and collaborate between health professions. This is one of the advantages for the development of the concept of IPE in Indonesia and IPE has now begun to be developed in various health

institutions. Already disrupt the issue of IPE developed and followed up with education for health in Indonesia.

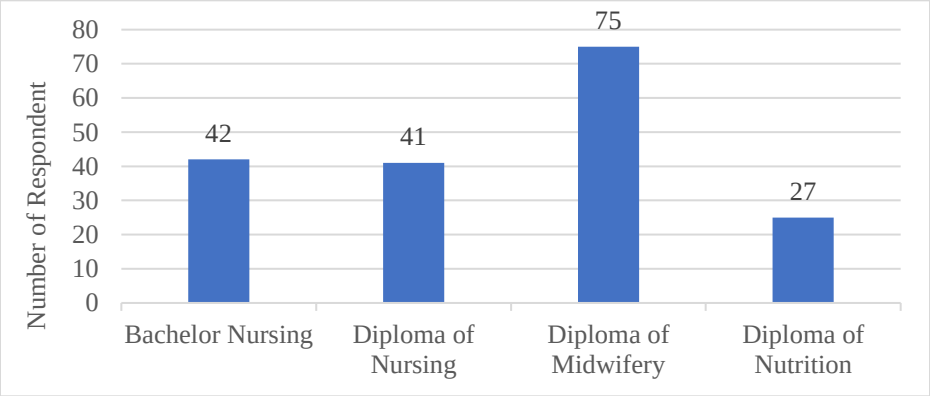
Development of IPE curriculum has not been developed equally in educational institutions. WHO (2010) released data on the implementation of IPE in some countries, institutional arrangements as much as 10.2% of doctors, 16% nurse or midwife, 5.7% nutrition, and other health workers have received IPE-based learning. In the university setting the survey results from 42 countries stated that as many as 24.6% have received the IPE curriculum at the academic stage. In this research is a preliminary study that has never done previous research and Stikes Karya Husada Kediri is a private higher education institution that conducts formal education for undergraduate and diploma which is included in the criteria can implement the organizers of IPE program, which consists of courses of Department of Nursing, Diploma of Midwifery, Diploma of Nursing, Diploma of Nutrition. Based on the phenomenon, the researcher will identify how the health student perception about the existence of interprofessional education method in Stikes Karya Husada Kediri campus.

RESEARCH METHODOLOGY

This research was conducted on March 7 to 11, 2018 in the student class of 2015/2016 at Stikes Karya Husada Kediri. Design of this research is correlational research with cross sectional approach. The number of population are 341 student, consisting of Bachelor of Nursing, Diploma of Midwifery, Diploma of Nursing, Diploma of Nutrition. Data collection is done by first giving informed consent willingness to be respondent. After the respondent is willing to be the next research respondent the data collection about the students perception about interprofessional education were collected by Interdisciplinary Education Perception Scale (IEPS) questionnaire (Zeeni, 2016). The questionnaire is directly filled by the students at that time, if the student does not understand the content of the question, then directly can ask question to the researcher. After the questionnaire has been completed, the researcher will take the questionnaire and giving code for each study program. The data then tabulated and processed by computerized to get the results of perception scores in each study program.

RESULT

a. Distribution of Respondent Characteristics Based on Study Program



b. Cross Tabulation of Student Knowledge Result With Perception About Learning of Interprofessional Education (IPE) at STIKES Karya Husada Kediri.

Students Knowledge	Students Perception				Total	
	Positive		Negative			
	f	%	f	%	f	%
Good	38	54	32	46	70	38
Moderate	32	52	29	47	61	33
Less	21	40	33	61	54	29
Total	91	49	94	51	185	100
	Spearman's Rho Test P value = 0,001 (α=0,05)			r = 0,333 (low relation strength)		

DISCUSSION AND CONCLUSION

Freeth (2005) states that students who have not been exposed to clinical experience have the same perception as students who have been exposed to clinical education. Previous studies have suggested that students who have not been exposed to IPE or who have been exposed have positive perceptions of IPE. Different from the results obtained by the researcher that partial perception is negative this is because all respondents have been exposed to clinical practice, or who have been exposed to IPE or who have not been exposed to IPE. Furthermore, regarding the different perceptions of students about IPE, while based on research Hall (2005) explained that the lack of understanding of other professions because of the lack of ambiguity between the role of professionals, for example: nurses and doctors and other medical personnel. This is reinforced by the research Fauziah (2010) which explains that IPE is required in the learning system to clarify the roles and responsibilities of each profession. Good knowledge and perception can be a precursor to the formation of a good behavior according to the concept of K-A-P (knowledge attitude-practice).

Knowledge and perception should proceed synergistically because the formation of new behaviors will start from the cognitive domain or knowledge which will then generate an inner response in the form of attitude or perception and will be proven by the action, behavior or practice for the result and the goal to be optimally as expected, will but knowledge and perception will not be followed by action or behavior (Notoatmodjo, 2007). Good knowledge can affect a person better in perceiving something, as well as on knowledge about good IPE can affect a person to have a good perception or positive perception, because if a person's knowledge is judged less as knowledge of IPE can affect a person's perception becomes negative, this is because introducing the novelty of the development of science or applied for health students who some have gained knowledge about the IPE or have not got it.

Positive perceptions of interprofessional education (IPE) learning on STIKES Karya Husada Kediri students are influenced by the knowledge of the respondents who are considered good. But the perception of most respondents in perceiving IPE is negative, the research data shows that 70 respondents (38%) have good knowledge on IPE and 61 respondents (33%) have enough knowledge of IPE and there are 54 respondents (29 %) have less knowledge of IPE. As many as 91 respondents (49%) who have positive perceptions on learning IPE, and there

are 94 respondents (51%) have a negative perception. This may be the case because the respondents who have sufficient knowledge are negative, and may be sufficient knowledge can lead to good enough or quite less about IPE knowledge and ultimately the negative perception gets more dominant even though the percentage level is not far away with that has a positive perception on the learning of IPE is almost balanced because it refers to the relationship of both obtained value r = 0.333 which means the relationship of knowledge with the perception of learning interprofessional education (IPE) is low. Perception of IPE is influenced by many factors, IPE has not always formed a positive perception of IPE. Efforts to create an interprofessional learning atmosphere in an academic setting need to be upgraded.

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Dramatics in medical education: an experience of online listserv discussion through mentoring and learning web sessions of gsmc faimer fellowship programme

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ABSTRACT

Online learning environments are becoming more frequent in teaching and learning than ever before. Asynchronous learning provides "high degree of interactivity" between participants and also help them to reflect upon their ideas or thoughts before sharing them with others leading to more insightful responses and in depth learning. Three principles are crucial to facilitate effective online learning viz cognitive presence, social presence and teacher presence which make group discussion meaningful and collaborative. Moderating an online discussion is an art and challenging task which needs meticulous planning and effective execution approaches. One of the major challenges in online discussion is to ensure active participation and interest among participants and it reiterates the need for interactive and interesting strategies to overcome this challenge. The present article is to share our experiences in moderating session on 'Dramatics in Medical Education' as a part of ML web discussion of the FAIMER (Foundation for Advancement in International Medical Education and Research) Fellowship programme at GSMC regional institute in Mumbai, Maharashtra, India. In present study, various engagement triggers were used like *effective introduction with real life situation case scenarios, motivational quotes, competitions and rewards, script writing, script editing exercises by using Forum Theatre method, discussion on uploaded academic videos on You Tube, sharing of useful articles on dramatics, use of mnemonics etc*. The constructive feedback from participants showed that task based exercises within authentic or realistic situations, team work and interaction were favourable factors for their effective learning and ability to give reflective responses in online discussion.

Keywords : *Asynchronous learning, Dramatics in medical education, Online moderation, Threaded discussion*

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INTRODUCTION

Online learning environments are becoming more frequent in teaching and learning than ever before.[1] Asynchronous online discussion, like Online Threaded Discussion (OTD) and other more sophisticated environments are widespread tools for supporting a large number of educational activities in online and blended courses.[2]

Asynchronous learning provides "high degree of interactivity" between participants and also help them to reflect upon their ideas or thoughts before sharing them with others leading to more insightful responses and in depth learning.[3]

To foster an optimal online learning community, three components are essential: cognitive presence, social presence and teacher presence.[4,5] Cognitive presence emphasizes on critical thinking and

collaborative problem solving skills while social presence is the ability to project oneself socially and affectively and getting to know each other as three-dimensional people despite not meeting face-to-face.[6] Teacher presence includes the work of teaching that is done *before* and *during* the course. It includes all the preparatory work in designing and developing the course and the hands-on teaching of directing and supporting the learners during the course delivery.[6]

The present article is to share our experiences in moderating session on 'Dramatics in Medical Education' as a part of ML web discussion of the FAIMER (Foundation for Advancement in International Medical Education and Research) Fellowship programme at GSMC regional institute in Mumbai, Maharashtra, India.

METHODS

As a part of FAIMER Fellowship Programme, 32 participants (FAIMER Fellows) were involved in asynchronous threaded mentoring –learning web discussion on 'Dramatics in Medical Education' (DIME) through LISTSERV. Of 32, sixteen (50%) junior fellows moderated session and 16 (50%) senior fellows accompanied them as a guide and mentor. The entire session of one month was supervised by experienced FAIMER faculty and other fellows. The whole moderation session was implemented through three phases;

1. Planning / preparation phase
2. Moderation phase
3. Feedback/ reflection phase

Planning / preparation phase

Specific Learning Objectives (SLOs): Considering time constraint of session, learning goals were clarified and four major topics in 'Dramatics in Medical Education' were identified namely '*Basic concepts in DIME'*, ' *Preparing scripts in academic topics*', '*Challenges in using DIME'* and '*Discussion on academic videos*'. Each topic was divided into subtopics.

Effective communication among moderators:

We did not get an opportunity to have face to face discussion due to various geographical locations; we preferred to use social media (Whats App, Facebook), Skype, E-mail and mobile phone. After having consensus, the complete week wise plan of action was formulated. This preliminary discussion helped a lot to channelize our thoughts/ideas.

Table 1. Monthly Plan of action for online discussion

Duration	Main task	Sub tasks
Week 1 (1st – 9th Nov)	Introduction of DIME	1. Brief introduction about DIME 2.Discussion will be proceeded in preference to following points; -**Concept** of 'Dramatics' - **Scope** of dramatics in medical education - **Rationale/background** for use of DIME - **Applications/uses/role** of DIME - **Summary** of discussion
Week 2 (10st – 16th Nov)	Scripts	1. What is script? What are the **general things that need to be considered while writing the script?** 2.**Allocation** of participants into 4 groups 3. Each group will be asked to prepare **half/one page script** on specific academic topic in respective discipline. Preference may be given to those academic topics which **students find it difficult to understand.** 4. Comments of all groups on each other's scripts. - **Summary** of discussion
Week 3 (16th – 23rd Nov)	DIME – sources & challenges	**1.Advantages&disadvantages** of using DIME **2. Challenges** in using DIME and how to overcome it? 3**. Innovative suggestions** for the effective use of DIME 2. **Obtain the list of institutes/organizations/medical schools** in India which are providing Theatre Based Medical Education as a 'Resource'
Week 4 (23rd – 30th Nov)	Discussion on academic videos	1. Upload **one academic video** from any source (Individual activity) which is based on academic topic in respective

		discipline/subject.(23rd Nov-25th Nov) 2. Comments on these uploaded videos as well as academic videos(26th Nov to 30th Nov) 3. **Summary** of discussion and winding up the activity.

Advance preparation:

We started our preparation well in advance to ensure the availability of all required sources. Simultaneously alterative plan for each activity was kept ready in case of any inevitable situations where we were unable to conduct any specific activity.

Preparation of conducive environment

The success of managing online discussion lies in the preparation of the environment.[7] We administered a pre-test survey to the participants to assess their learning needs and SLOs were formulated based on these needs as well as on initial discussion of moderators.

Moderation phase

Preamble to the session: An effective introduction at the beginning of the session is important. We started our moderation session with an outline of *weekly* activities rather than *entire month activities* in order to create an interest and curiosity among participants about forthcoming discussion topics in DIME. The session was introduced by giving '*case scenario* of *real life situation' and 'motivational quote on dramatics'.* Since the topic was dramatics in medical education, interesting names were given to our groups like *producers, directors, assistant directors* and *actors* etc. Some ground rules were made to achieve relevant and meaningful discussion on given topic. Clear instructions about tasks and responsibilities were provided.

Making discussion interesting throughout the session

We experienced that maintaining an interest of participants for entire month session was challenging task. Therefore we incorporated various innovative ideas for each week's activities to ensure *maximum and active participation*.

a) Division of sessions: Sessions were divided on weekly basis so that participants should get adequate time to explore and reflect on their learning.

b) Sharing of resources: We provided various resources to participants on dramatics in medical education. They were encouraged to share useful information on DIME in the form of research articles, e-books, websites etc. All participants were asked to highlight essential aspects of articles which could be utilized by the participants at a later date.

c) Script exercises: To maintain participants' interest, they were asked to prepare script on four important medical topics viz. promoting empathy among medical residents, stressing the importance of good communication to UG students, teaching medical ethics to UG students and sensitizing people about organ donation etc. The participants were divided into subgroups and asked to prepare and share structured script on given topic. We received overwhelming response from all participants for this activity and all scripts made by participants, were collected and shared in the form of small booklet.

d) Use of motivational quotes: Various quotes were selected based on learning theme and it was posted at the beginning of each day.

e) Sharing of personal experiences: Experiences always foster learning process. The participants were asked to share their experiences about use of any dramatics like role play, drama, mock drill etc. in their own teaching-learning activities.

f) Use of innovative form of dramatics: All participants were divided into four groups and they were given common script of drama; asking them to live the drama and participate as an actor and modify the script as and where they felt ethics and professionalism were jeopardized. This activity was based on '*Forum Theatre (Theatre of Oppressed).* Our experience showed this type of challenging task enabled the participants to think, explore their ideas and stimulate their reflective capacity.

g) Mnemonics: Whenever needed, we provided mnemonics to participants so that they could remember information for long time.

h) Uploading academic videos on 'You Tube' – Video clips based on use of dramatics were uploaded on 'You Tube' by moderators. Participants had to watch the clips and answer the questions posted.

i) Best participant awards – We announced prizes for prompt responses and best answers etc. This initiative helped us to achieve maximum participation and to create healthy competitive spirit among participants.

j) Prompt reply to each mail: During online discussion, it is of utmost importance to give prompt reply to participants' mail. It makes

discussion live and gives stimulus to participants to proceed discussion. As moderators, we made it a point to go through every mail and included a brief summary or a question in our replies to participants. This helped to build confidence among participants that their inputs were being read thoroughly before responding.

k) Summary: At the end of every week, summary of discussion was posted by moderators to make all participants understand how much they have learnt in particular week. Presentation of the previous week's discussion as a summary helped to form the ground work for the next week's discussion. It also proved to be a ready reference for further discussions.

"We presented an experience of our online moderation in one of the contact sessions in the form of a role-play, the script and practice of which was done through E-mails and Skype sessions."

Feedback / reflection phase

Reflective learners assimilate new learning, relate it to what they already know, adapt it for their own purposes, and translate thought into action. Over time, they develop their creativity, their ability to think critically about information and ideas, and their metacognitive ability. (Assessment online reference). We concluded the session with post-test and participants were asked to provide feedback/reflection on the entire month's activity.

CONCLUSION

Asynchronous threaded discussion with interaction enhances not only learning process of participants but also ability to give reflective responses. Engagement activities like script writing, competitions, sharing of personal experiences make learning experience interesting for participants. Prior preparation for conducting moderation session and creating conducive environment while conducting session is very crucial. Moderation of the session on 'Dramatics in medical education' was an excellent learning experience for us in terms of planning, co-ordination and conduct of online discussions.

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Evaluation of video-based communication skills teaching learning in prosthodontics based on kirkpatrick model to improve the quality of health professionals for better health services in future

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ABSTRACT

Background : The Quality of Health Professionals can be improved by making them empowered to be able to learn and apply appropriate communication skills successfully in any dentist patient interaction for Better Health Services in Future. Complete denture treatment procedure is unique in many aspects and literature revels that there is no single factor/factors that can influence the success of it. However communication skills have been found to play a significant role in adaptation of complete dentures. There is lack of studies which have observed the influence of videobased communication skills training and assessment of postgraduates while treating edentulous patients.

Methods : Complete denture treatment dyad interactions was videorecorded for 50 completely edentulous patients in the Department of Prosthodontics. The videorecordings were analyzed using Kalamazoo scale for assessments of communication skills of postgraduates were identified. Based on the findings a customized training program involving general and individualized sessions were planned. Post training the same process of videorecording and analysis was done for another set of 50 patients to see the difference in attitude of postgraduates. The outcomes of the training were evaluated using Kirk Patrick model.

Result : Notable improvements were identified in various aspects of communication skills and change in attitude was evident at all four levels in the post training videoanalysis and self reflection of postgraduates.

Discussion and conclusions : Training and valuation based on Kirkpatrick's framework helps in achieving a targeted outcome and bring change in attitude at all the four levels thus contributing towards improving quality of health professionals for better patient centered care.

Take home message : Kirkpatrick model is useful for Evaluation of Video-based Communication Skills Teaching Learning in Prosthodontics at all the 4 levels and thereby can be used to improve the Quality of Health Professionals for Better Health Services in Future.

Key words : *Communication skills, Complete denture treatment, Evaluation, Kirkpatrick's model, Postgraduates, Prosthodontics, Training.*

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INTRODUCTION

Edentulous patients generally expect new complete dentures to fit, function and look equal to or even better than their original natural teeth, not taking into account their own baseline situation such as physical changes that had occurred in their oral cavities. When the artificial dentures do not match the patients' expectations, the patients become anxious, depressed, develop mistrust, chronic dissatisfaction and persistent complaints which if not addressed may lead to maladaptation with the denture.[1] The reason this procedure is unique is that it involves multiple visits, lengthy procedures, participation of patient and relatives in decision making about future appearance, different expectations &satisfaction ratings of the dentist and patient regarding the same denture, previous experiences with dentist or denture, patients adherence to instructions, compliance for wearing regularly and most importantly oral health related quality of life is low among such patients owing to affected function, esthetics, speech and psychosocial issues.[2] Literature reveals that among the various factors influencing the satisfaction with complete dentures, improving dentist-patient communication was found to be the most useful strategy.[3,4]

Assessing any training is critical. Therefore a simplified and systematic method is required to assess any training. One of such a reliable method for evaluation of any training model is Kirkpatrick model. It was developed by Donald Kirkpatrick in late 50s to evaluate training.[5, 6] Decades have passed since and no one has come with a more effective method. The KP model has 4 levels namely learners reaction to the training, improvement in knowledge, attitude and skills, capability to apply it in the job, and impact of it on the job results. [5, 6]

With this background we planned for a study on videobased teaching learning of communication skills for Prosthodontic postgraduates and to evaluate it using Kirkpatrick (KP) model. The aim was to study the effectiveness of the video based communication skills teaching learning for Health Professionals (Prosthodontic Postgraduates) using Kirkpatrick model and to assess the feasibility and evaluation of training based on 4 levels of KP model.

MATERIALS AND METHODS

After receiving approval from the Ethical Committee the study was conducted in the Department of Prosthodontics. Before starting the study, an informed consent was obtained from the postgraduates as well as their patients. This study was qualitative in nature and focused on descriptive outcomes. The study was conducted from April 2016 to November 2017 in 4 phases:

In the **first phase** doctor patients Interactions were Video-recorded for 50 patients. The videorecordings were analyzed using Kalamazoo scale because of the advantages of being a validated and user-friendly scale. [7, 8] The overall & individual strength and weakness in communication skills were identified.

Second phase was planned based on the findings of Phase 1.In this capacity building phase, sessions were conducted for training the postgraduates in communication skills. It involved 9 general sessions and 1 individualized session .The sessions were conducted by three resource persons (a senior health professions educator and master-trainer on communication skills, a clinical psychologist, and a prosthodontist.The outline of the course was based on the book authored by one of the resource person. [9] The mode of teaching was interactive power points, think pair share sessions, role play by participants, role play videos etc.Various topics like questioning ,listening, answering and non verbal skills, patient psychology etc were taken. For individualized sessions the participants were given feedback individually using video tags for showing their strengths and weakness in communication skills.

Same steps as in first phase were followed in **Phase-3** with a different set of 50 patients.Analysis was done using Kalamazoo Scale of communication skills assessment to check for any difference.

During the feedback, the postgraduates revealed that they wanted continuous monitoring and feedback. Therefore, it was planned to conduct follow up sessions based on Balint method .[2] These feedback sessions were conducted every two months depending on the patients load treated during that period. The sessions were conducted by the same resource persons who conducted the training. Discussions involved sharing of experience about the patients treated, difficulties faced in handling dyads, peer sharing of experiences and self reflection of performance etc.

Results

Level 1 of KP model i.e. participants reaction to the training was evaluated using participants feedback taken before and after training and it was found that the postgraduates valued the training communication skills in dyad which was obvious from the comments for General sessions like "*I learnt the importance of structured training in communication skills*" ; and for Individual sessions as "*I am very thankful for providing me an opportunity to correct my weakness in communication skills, I was surprised and amazed to see the way I interacted with patients in the videorecordings*."

The level 2 of KP model i.e. Improvement in knowledge/attitude/skills was assessed using the Pre-Post videoanalysis using Kalamazoo scale. The Video analysis revealed, constant implementation of learning, utilization of more patient centered approach and practicing skills within Kalamazoo as well as "Beyond Kalamazoo" skills.[2]

Level 3 of KP model i.e. capability to apply it in the job was evaluated from videorecordings as well as self reflection of the postgraduates. The *video-recorded observations* revealed that they started eliciting agenda, non verbal expression, showed care and concern ,were more clear in information giving and limit setting, had internalized the skills and transference of skills to procedures other than those of edentulous patients was observed. It was revealed from their *self reflection* that they felt that confident in convincing patients for accepting treatment plan and to handle paranoid and patients with disbelief.

Level 4 of KP model i.e. impact of training on the job results. This level is Difficult and time consuming yet completes the purpose of any training. It was found that the patients were more satisfied with treatment, more thankful; had good rapport with the doctor, felt free to approach them; this in turn helped them to adapt to the prosthesis better, they gave blessings, token-gifts&referrals and considered them like family member.

RESEARCH METHODOLOGY

This study was qualitative in nature and thus focused on descriptive outcomes.

DISCUSSION

In the present study, the in-depth communication skills training of Prosthodontic postgraduates for dealing with complete denture patients was evaluated using the Kirkpatrick's model of evaluation for training and evaluation of communication skills. Our study was unique in many aspects as compared to the previous studies. [2, 10, 11] (Table-1)

The proponents of KP model appreciate it for being systematic, simplified ,having straightforward language for outcomes and range of responses from most immediate to most distant, it focusing on learning transfer process i.e. reaction to learning to behavior and outcomes.[5,6]

Whereas the opponents justify their stand by quoting it as incomplete and over simplified method to assess training effectiveness and that it does not consider individual (e.g. self efficacy) or contextual influence (e.g. supervisors or peer) or other intervening variables (e.g., motivation to learn, baseline knowledge, personality etc), it having assumption of causality that level 1 causes level 2 and so on. They also believe that though it provides information on "how to evaluate", it does little for "what to evaluate".

Even with these controversies it is preferred method for evaluation of any training program because it is oldest, reliable and widely used and in-demand. Despite criticism, this model remains useful for framing new training as well as for doing development evaluations in existing program. It is effective in framing different points at which measurement can take place and can be used to evaluate both classroom training and e-learning.

The limitations of the study were that it involved small group of postgraduates which is ok for a qualitative study and videobased assessment is time consuming and labor intensive. Such training can be extended to other branches of dentistry to achieve more patient centered care. It can be customized for graduates, postgraduates as well as faculty as well as for any specialty.

CONCLUSION

Based on Kirkpatrick model, this study has provided empirical evidence that video-based communication skill teaching learning is feasible and effective in improving the quality of dental professionals for providing patient-centered services.

TAKE HOME MESSAGE

Kirkpatrick model is useful for Evaluation of Videobased Communication Skills Teaching Learning in Prosthodontics at all the 4 levels and thereby can be used to improve the Quality of Health Professionals for Better Health Services in Future

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Table-1 Uniqueness of the present study

S.No	**Present Study**	**Previous Studies**
1	Real patients	Simulated patients
2	Postgraduate cohort	Undergraduate cohort
3	Need-based individualized & group training &assessment	Usually group training/either of the two (individualised or group training)
4	Indian population	Western population
5	Within treatment procedure	Pre-post
6	Videobased T&E	Conventional T&E
7	Incorporation of Balint method	Unstructured/Semi-structured methods

Indonesian Islamic educational tradition meet emerging technologies: Implementation of the e-Sorogan learning technological model in medical education

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ABSTRACT

Background : Indonesian Islamic boarding schools had implemented *sorogan* as one-by-one learning method for hundred years. It takes more time, but, it is highly individualized and has deeper-guidance on text-book analysis. We had developed e-Sorogan as its implementation on learning methods in medical education using tablet PC, clinical search engine and neural-network voice recognition. This work aims to elucidate time-efficiency and the acceptability of e-Sorogan in medical education.

Summary of Work : The e-Sorogan consists of three sets of learning technologies that facilitate nine existing learning methods: 1) Self-assessed individual learning (SAIL) for audio-based, video-based, reading-based and writing-based learning; 2) Voice-recognized real-time collaboration (VR-RTC) for project-based, inquiry-based, case-based dan problem-based learning; and 3) Visually-extended skill training (VEST). The SAIL used Samsung Galaxy Tab A tablet PC with Google Form, YouTube and Wordpress. The VR-RTC used Google Docs, the tablet PC with neural-network voice-recognition and ClinicalKey clinical search engine. The VEST used the tablet PC camera and Samsung Sidesync. We identify perception of students on time-efficiency and their acceptability to e-Sorogan using online anonymous questionnaire. Thirty-seven respondents were taken.

Summary of Results : Most respondents admitted that SAIL was 'quite efficient' (75,7%) and 'quite helping' (62,2%). Their qualitative answers indicated that video-based SAIL was the most acceptable. Most respondents admitted that VR-RTC was 'quite efficient' (45,2%) and 'quite helping' (37,5%). Their qualitative answers indicated that VR-RTC were difficult at the beginning. They perceived that practices make it easier, however, their answers were widely-varied from two times (30,0%) to >10 times (23,3%). Most respondents admitted that VEST improve their practical learning outcome (76%) and it was contributed by visual extention (91,7%). Their qualitative answers indicated that VEST was acceptable and better with larger screen.

Discussion & Conclusions : The e-Sorogan was timely-efficient and acceptable. However, more improvement is needed. Future investigations will analyze improvement of their scientific capability and the impact on the Indonesian medical exit exam results.

Take-Home Messages : Indonesian Islamic educational tradition improved by learning technologies, the e-Sorogan, have potential role in improvement of medical education.

Keywords : *e-sorogan learning, medical education, islamic educational tradition*

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INTRODUCTION

Islamic boarding schools in Indonesia, particularly *pesantren*, have conducted self-directed and self-paced education for hundred years using methods called *sorogan* (individual approach) and *bandongan* (mass approach) as described previously (1). The *sorogan* was described that the student offers some text-book to be read and explained by the teacher, then the student should repeat it and will be corrected. It demonstrated an individual, private, elective and textually-analytical learning method. Since it takes more time that make it unacceptable in medical education with overcrowded curriculum, we applied the *sorogan* tradition to our student using emerging devident of information technologies that make it called e-Sorogan. However, time-efficiency and the acceptability of e-Sorogan learning technological model in medical education have not been elucidated yet.

Self-directed learning skill is essentially-required by medical graduates for the continuing medical education (CME) instead of instructor-directed program that is more popular for acquiring CME (2). There are 106 original researches published in English that study their self-directed learning method for health professionals, but, only particular Knowles key components of self-directed learning were described (3). Self-directed learning readiness were lower by students in particular health profession educational institutes from different countries (4–6). Other institutes have higher readiness, but, the student self-management skills need to be improved (7,8). Therefore, any institute that will conduct self-directed educational practices should elucidate the holistic framework (i.e. Knowles components), the readiness and the supporting factors. Time-efficiency and the acceptability of e-Sorogan learning technological model is an initial step to elucidate this method in medical education.

Learning technology is emerging due to disruptive development of information technology, including in medical education. A new type of online class, called massive open online courses (MOOC), that allow anyone to participate via video lectures, computer-graded tests and discussion forums, had been explored by its mean for medical education (9). Although it is actually a mass approach for education, it reflects needs of individually-directed and individually-paced education similar as conducted by *pesantren*. The video lectures is only the modern form of individual, private and elective face-to-face learning method. Learning technology in medicine has been reviewed in many articles and studied on its use by physician postgraduately, but, a few learning technological models have been studied on its use by medical students (10,11). Indeed, there is no study that investigate learning technological model based on traditional practices in medical education, particularly the Indonesian Islamic educational tradition.

The learning technological model based on *sorogan* should emphasize higher individual accessibility to more private learning and assessment, which are equivalent to lesser student-to-teacher ratio. We developed three sets of learning technologies that facilitate existing learning methods in blended model of both online and face-to-face learning. They mainly consist of tablet PC, clinical search engine and neural-network voice recognition, and were supported by online form, video-streaming service, blogging platform, online word processor and screen sharing application. Tablet PC provides technology integration to enhance achievement of learning outcome and supports students to develop self-directed learning with digital technologies (12). Clinical search engine as a type of e-learning also promotes self-directed learning, provides flexible learning opportunities and engages learners to augment CME (13). Voice recognition technology have been involved and have a positive impact in medical education, however, it is less reliable and more time-consuming at period of those studies (14,15), before particular online translation services adopted deep neural-network technology in 2012 (16). This work aims to elucidate time-efficiency and the acceptability of e-Sorogan in medical education.

RESEARCH METHODOLOGY

This study is a posttest-only experimental design. We used the e-Sorogan in School of Medicine, University of Nahdlatul Ulama Surabaya, Indonesia, as a pilot project conducted by several teachers since April 2017 until January 2018. We identify perception of students on time-efficiency and their acceptability to e-Sorogan at March 2018. The e-Sorogan consists of three sets of learning technologies that facilitate nine existing learning methods: 1) Self-assessed individual learning (SAIL) for audio-based, video-based, reading-based and writing-based learning; 2) Voice-recognized real-time collaboration (VR-RTC) for project-based, inquiry-based, case-based dan

problem-based learning; and 3) Visually-extended skill training (VEST).

We used SAIL either before or after lecture meeting. The SAIL used Galaxy Tab A tablet PC (Samsung®, Seoul, South Korea) with Google Form (Google®, CA, USA), YouTube (YouTube®, CA, USA) and Wordpress (Automattic®, CA, USA). The students were asked either to listen audio, to watch video or to read article provided specifically-relating to the lecture topic before the lecture meeting. They answered questions after doing those tasks and knew their mark after finish this posttest. The students were also asked to write a concise and original article in their own university blog. They saw which parts of their article were plagiarism, automatically. They should revise it by themselves to get access for submitting the article.

The VR-RTC used Google Docs (Google®, CA, USA), the tablet PC with neural-network voice-recognition (supported by Google Voice, Google®, CA, USA) and ClinicalKey (Elsevier®, NY, USA) clinical search engine. The students used VR-RTC in tutorial. The teacher created online blank document using Google Docs and the students join to edit this same file. They discussed the topics and turned on default neural-network voice-recognition feature in the tablet PC. The opinions were automatically-typed in the online document along with voice-recognition. The teacher and all students saw the typing for real-time in their own tablet PC screen. The students should use the clinical search engine as on-the-spot tools to give evidence-based opinion and made hyperlink to the sources near their own opinion. The teacher reviews the opinions back and forth while the discussion is continuing. The project-based learning was conducted to do on-the-spot article writing by students based on the specification. The inquiry-based learning was conducted to answer several questions simultaneously which are given by the teachers at that time only. The case-based and problem-based learning were conducted to response the case/problem scenario using clinical examination steps/Maastricht seven jumps. Case-based learning was ended by answers from the teacher, while problem-based learning was ended by new questions and clues from the teacher to stimulate the students for further learning. The project-based and inquiry-based learning used either manual typing or voice-recognized typing, while the others used only voice-recognized typing to enhance oral communication ability.
The VEST used the tablet PC camera and Sidesync (Samsung®, Seoul, South Korea). The skill training was live-streamed on the projecting screen, thus, the students could see the demonstration through similar vision the teacher was seeing. The students did not have to circle around the teacher that the students who are on opposite position with the teacher might not see at the good angle.

We used online questionnaire to identify perception of students on time-efficiency and their acceptability to e-Sorogan. The questionnaire consists of closed and opened questions. The closed questions were using 4-points Likert scale, which ask both time-efficiency and the acceptability of the SAIL and VR-RTC, but, only the acceptability of the VEST. Time-efficiency was not identified for the VEST since it does not intend to save time, however, we identified contribution of the visual extention to practical learning outcome improvement. The acceptability was defined as how much the e-Sorogan help them to improve their learning outcome as perceived by themselves. The respondents were students who are exposed to e-Sorogan by giving specific uniform resource locator (URL) link to them, but, no name is required. This ensures honest answer from targeted respondents. Thirty-seven respondents were taken.

RESULT

Thirty-seven respondents consist of first-year (32,4%), second-year (21,6%), third-year (27%) and fourth-year (18,9%) students. Their responses about time-efficiency of the SAIL were ‘not efficient’ (2,7%), ‘less efficient’ (10,8%), ‘quite efficient’ (75,7%) and ‘very efficient’ (10,8%) (Figure 1). Their responses about the acceptability of the SAIL were ‘not helping’ (2,7%), ‘less helping’ (10,8%), ‘quite helping’ (62,2%) and ‘very helping’ (24,3%) (Figure 2). Their qualitative answers to “What makes you admit that the SAIL is efficient and/or helping?”, indicated that video-based SAIL was the most acceptable, and most of them emphasize that availability of material resumers before the learning meeting contributes improvement of their learning outcome.

Their responses about time-efficiency of the VR-RTC were ‘not efficient’ (12,9%), ‘less efficient’ (29%), ‘quite efficient’ (45,2%) and ‘very efficient’ (12,9%) (Figure 1). Their responses about the acceptability of the VR-RTC were ‘not helping’ (12,5%), ‘less helping’ (28,1%), ‘quite helping’ (37,5%) and ‘very helping’ (21,9%) (Figure 2). Their qualitative answers to “What makes you admit that the VR-RTC is efficient and/or

helping?", indicated that VR-RTC were difficult at the beginning that they need to adapt their speech to avoid misrecognition of the voice, but, they perceived that practices make it easier. We also ask them using closed question to identify how many practices they need to adapt to this method. Their answers were widely-varied from two times (30%) as the most answered to >10 times (23,3%) as the second most answered. Some of them answered that they need practice for one time (10%), three times (16,27%), four times (10%), five times (6,7%) and six times (3,3%). No one answers 7 to 10 times, but, they might be the ones who choose the '>10 times' option

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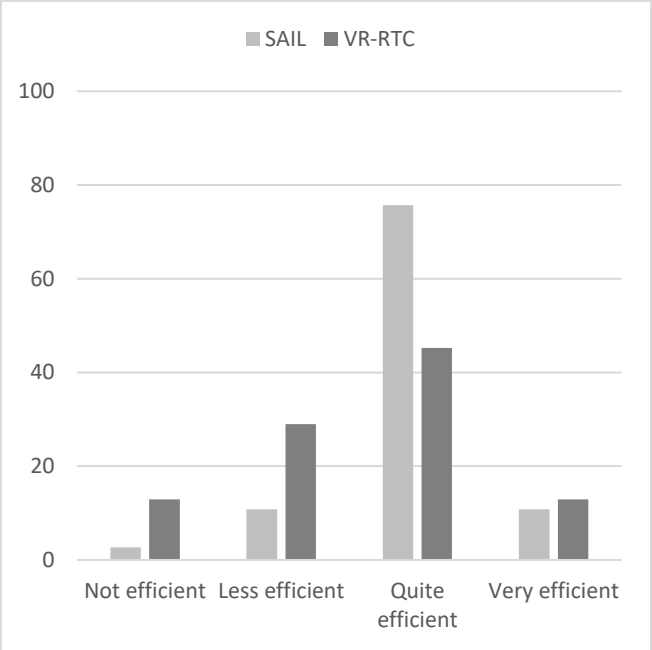

Figure 1. Time-efficiency of the self-assessed indvidual learning (SAIL) and voice-recognized real-time collaboration (VR-RTC). The vertical axis is proportion (%) of the respondents who choose each option.

Their responses about the acceptability of the VEST demonstrated that they agree about improvement of their practical learning outcome (76%) and the visual extention was 'less helping' (8,3%), 'quite helping' (66,7%) and 'very helping' (25%) (Figure 2), thus, it contributes 91,7% improvement of the practical learning outcome. Their qualitative answers to "What do you suggest to improve the VEST?", also implied that VEST was acceptable and indicated that the VEST would be better with larger screen.

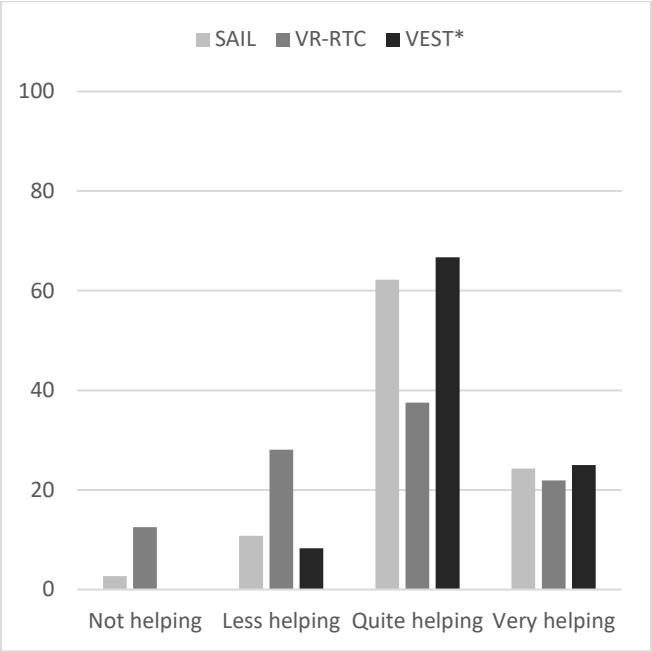

Figure 2. The acceptability of the self-assessed indvidual learning (SAIL), voice-recognized real-time collaboration (VR-RTC) and visually-extended skill training (VEST). The vertical axis is proportion (%) of the respondents who choose each option. * = perceptual contribution of the visual extention to improve practical learning outcome in skill training from 76% who agree about improvement of their practical learning outcome.

DISCUSSION

The studies which investigate information technologies as tools in medical education confirmed that the technologies are beneficial (12–15). However, technological skill and learning readiness of both students and teachers are considerably challenging (4,5,14,15). More acceptable learning teachnologies were respectively the visual extention of the VEST, the SAIL and the VR-RTC. Since the SAIL was more efficient than VR-RTC, lower acceptability to VR-RTC might be contributed by inefficiency due to widely-varied skill using the voice-recognition technology. The SAIL was being most acceptable learning technologies since it is just similar with internet browsing skill, as the students did with social media. The internet browsing skill may be common for the students that make them do the SAIL efficiently. Issues related to the technological skill also made the VEST as the most acceptable learning technologies since no technical procedures done by the students. Therefore, the e-Sorogan should be accustomed for the users by structured, systematic and massive programmes.

Video-based SAIL is a promising method to improve self-directed learning. It may be subtitution to face-to-face lecture as conducted by flipped-classroom (17). Most respondents actually appreciated the availability of all kind of material resumers before lecture meeting, but, the video-based SAIL was highly appreciated. However, we are still providing audio for SAIL since they can listen it while doing others. The articles, either for reading-based or writing-based SAIL, are also practical since they can search for the spesific contents easier than both video and audio. The diverse media are needed because each person has his own learning style. A study in Romania demonstrated that the 73% of students who prefer one learning style are divided into 33% visual, 26% auditory and 14% kinesthetic learners (18). Therefore, it is worth to develop any SAIL media variants.

Accustomization strategies of VR-RTC on project-based, inquiry-based, case-based and problem-based learning are noteworthy. Both students and teachers should be targeted by these strategies. We invited the teachers at the beginning of the pilot project for attending workshop about VR-RTC implementation. It did not work well that indicated continous encouragement and cultural development are needed to succeed VR-RTC implementation. Then we introduced this method to students and urged the students to encourage its implementation in tutorial by others faculty members who had not been yet familiar with it. This strategy tend to initiate the teachers exploring the VR-RTC. Previous study demonstrated that it took 35 months implementing voice-recognition technology to promote faster and more accurate reporting of surgical pathology, and to achieve positive impact on the resident education (15). Therefore, it only takes time to

accustomize the students and teachers, especially using voice-recognized technology.

The VEST have two elements that make it different to other video-based skill training, which are: 1) Live-streaming; 2) On-site streaming. These elements provide intensive interaction and flexible modification while conducting demonstration and simulation. Almost all similar studies investigate the recorded and/or online (off-site) video for skill training. One previous study used video-streaming to improve the effectiveness of skill training (19). The students satisfied with valuability and self-efficacy for eight medication administering skills, which are 4,23 ± 0,9 and 4,38 ± 0,42 in 5-point Likert scale, respectively. The students also achieved higher scores in the skill tests ($p<0,05$). The VEST also easy-to-adapt the students in each session providing whether flawless or flawed demonstration with correction. It improved skill performance by students based on global rating analysis (20). Although the VEST is on-site live-streaming, it can be recorded and watch it later. Students who perform skill with their peers using instructional video after instructor-led workshop demonstrated more effective and more confidence skill training (21). However, video-recording while the students is simulating the skill was reported them having high anxiety and high public awareness beyond the improvement of their skill as benefit from video feedback (22). Therefore, it is important to define number of the audience to improve VEST usability

Future studies need to be conducted since this study is lack of information for validation and improvement. The holistic framework by Knowles components, the readiness and the supporting factors should be elucidated. It is also needed to analyze its impact on the Indonesian medical exit exam results. However, the evidences of time-efficiency and the acceptability of e-Sorogan learning technological model make it worth to be developed further.

CONCLUSION

The e-Sorogan that consists of the SAIL, VR-RTC and VEST was timely-efficient and acceptable. More improvement are needed, i.e. more material resumers production in SAIL, consistent accustomization for VR-RTC and standard implementation of the VEST. Improvement of the students scientific capability and the impact on their Indonesian medical exit exam results are also needed to be investigated further.

TAKE HOME MESSAGE

The e-Sorogan as a learning technological model inspired by Indonesian Islamic educational tradition may have a putative role in improvement of medical education.

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On-the-spot project collaboration in medical article writing using clinical search engine and online word processor

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ABSTRACT

Background : Nowadays, the information technology had been applied in many aspects of life, including in medical education. Clinical search engine was widely-used and online word processor became familiar because of its real-time collaboration feature. These information technologies have potential role for improvement of students capability to master rapidly-growing medical sciences.This work aims to describe medical students' perception of on-the- spot project collaboration in medical article writing using clinical search engine and online word processor.

Summary of Work : We invited eight medical students in their second-year to create on-the- spot project collaboration in medical article writing. They were given an hour to gather information from clinical search engine (ClinicalKey™) and online word processor (Google Docs™s) collaboratively. The topic was the role of Nigella sativa in cardiovascular health. Then the medical students were given a questionnaire in their native language to assess their perceptions of the learning process given.

Summary of Result : Most participants perceived that (ClinicalKey™) was 'very helpful' (75%), 'more convenient' (87.5%), 'much better quality' (62.5%), 'faster' (62.5%), and 'most recommended' (75%). Most participants perceived that (Google Docs™) was 'helpful' (50%), 'more convenient' (50%), 'much better quality' (62.5%), 'faster' (62.5%), and 'most recommended' (87.5%).

Discussion and Conclusion : The medical students perceived that on-the- spot project collaboration in medical article writing using clinical search engine and online word processor was helpful, more convenient, much better quality, faster, and most recommended.

Take-home Messages : On-the-spot project collaboration in medical article writing using clinical search engine and online word processor is acceptable by medical students and has potential role in medical education.

Keywords : *medical article writing, clinical search engine, online word processor*

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INTRODUCTION

Information technology is growing very rapidly and have been used in various field. Future medical doctors must develop information technological skill (1). Finding clinical trials is easier because of search engines, however, the doctors should improve their literacy to help them finding relevant clinical trials (2). An online word processor was also successful to integrate clinical best practices for making guidelines (3). Both of them potentially improve medical students capability to extract abundance information in medical sciences into concise self-achieved knowledge as they will do as future medical doctors. It can be showed by on-the-spot project-based learning in medical article writing. However, students' perception about the benefit of these tools in the project-based learning was unclear.

Health information technology (HIT) can be useful to improve clinical care if it is used properly, and has been proven to provide a significant improvement of medical practitioners (4). However, the users perception to the benefit of the HIT may be varied. As example,

compared with other personalities, only person with optimism trait that feels ease of use of mobile electronic medical record (5). Therefore, it is important to identify the users perception and using the results to improve the way of using the HIT.

Google Docs™ is a promising online word processor to do project collaboration that allow multitasking students to work together in the same time. Although it is not a novel concept, multitasking is popular among younger generation (6). However, working together by these multitasking generation is cumbersome. Each individual need to know others work while solely finishing his own tasks to give integrated results, particularly in medical article writing. In addition, because of the abundance of unselective information uploaded into internet, the students were also difficult to notice the misleading information to be cited in their collaborative medical article writing (7). ClinicalKey™ is one of the highly-controlled clinical search engines (8). According to experimental study, the mobile assistant learning system, including clinical search engine, and strategy of project-based learning can improve both effectiveness and efficiency of students' learning (9). However, no study was found to investigate the use of both online word processor and clinical search engine for project-based learning, particularly by medical students.

Project-based learning has proven its effectiveness in the medical education, that is, promoting better recall of multidisciplinary materials and encouraging higher-order thinking abilities (10). Writing ability in medicine has also become important skills for everybody in academic environment (11), and it is relevant to improve value of patient-centredness in clinical setting (12). Medical article writing as project based learning can be implemented by gathering medical students together to write a medical article using online word processor and clinical search engine. To ensure each individual actively involved in the collaboration, it is necessary to do the article writing on-the-spot. This study aim to describe medical students' perception of on-the-spot project collaboration in medical article writing using clinical search engine and online word processor.

RESEARCH METHODOLOGY

Eight second-year students in Medical Doctor Programme, School of Medicine, University of Nahdlatul Ulama Surabaya were invited to participate in this study. They were asked to create on-the-spot project collaboration in medical article writing. Each participant used a tablet PC with Google Docs (Google®, CA, USA) as online word processor and access to ClinicalKey (Elsevier®, NY, USA) as clinical search engine. The participants were given an hour to write medical article collaboratively with topic "cardiovascular effects of black cumin (*Nigella sativa*)".

In the end of the task, they were given an anonymous and online questionnaire in their native language (Bahasa Indonesia) to assess their perceptions of the learning process given. The questionnaire identified how helpful, convenient and fast the article writing process was. It also identified how the quality of the article was and how much they will recommend either the online word processor or the clinical search engine. There were two questions for each identified aspect, which are for the online word processor or the clinical search engine. Four-options Likert scale was used in the questions identifying how helpful and how much they will recommend, while five-options Likert scale was used in the rest of questions (**Table 1**)

Table 1. Four-to-five-options Likert scale description for each question on using clinical search engine (ClinicalKey™) or online word processor (Google Docs™) for on-the-spot project collaboration in medical article writing.

Question*	Answers				
	A	**B**	**C**	**D**	**E**
How helpful was the ClinicalKey™ / Google Docs™ to write on-the-spot medical article collaboratively?	No helpful	Less helpful	Helpful	Very helpful	-
How convenient was the ClinicalKey™ / Google Docs™ to write on-the-spot medical article collaboratively?	No convenient	Less convenient	Equally convenient	More convenient	Much more convenient
How was the quality of your on-the-spot medical article using ClinicalKey™ / Google Docs™?	Much worse	Worse	Equal quality	Better	Much better
How fast do you write the on-the-spot medical article using ClinicalKey™ / Google Docs™?	Much slower	Slower	Equally faster	Faster	Much faster
How much will you recommend on-the-spot medical article writing using ClinicalKey™ / Google Docs™?	Not recom-mended	Less recom-mended	Recom-mended	Much recom-mended	-

*Question to either ClinicalKey™ or Google Docs™ are asked individually.

RESULT

Most participants (75%) perceived that using the clinical search engine was very helpful. Most participants (87.5%) also perceived that using it was more convenient. Sixty-two and a half percents participants perceived that the article had much better quality. Most participants (62.5%) perceived that using it was faster. Using the clinical search engine was most recommended by most participants (75%).

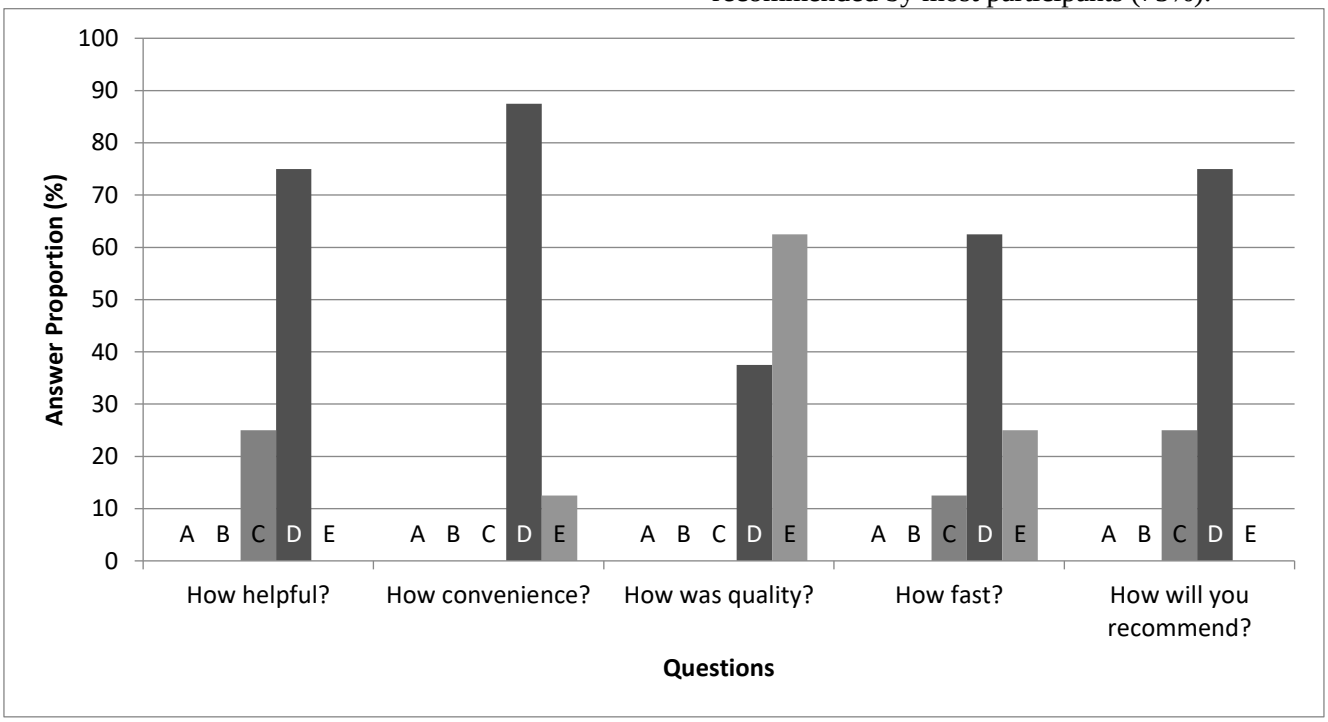

Figure 1. Perception of students on using clinical search engine (ClinicalKey™) for on-the-spot project collaboration in medical article writing. The alphabets' description are explained in Table 1.

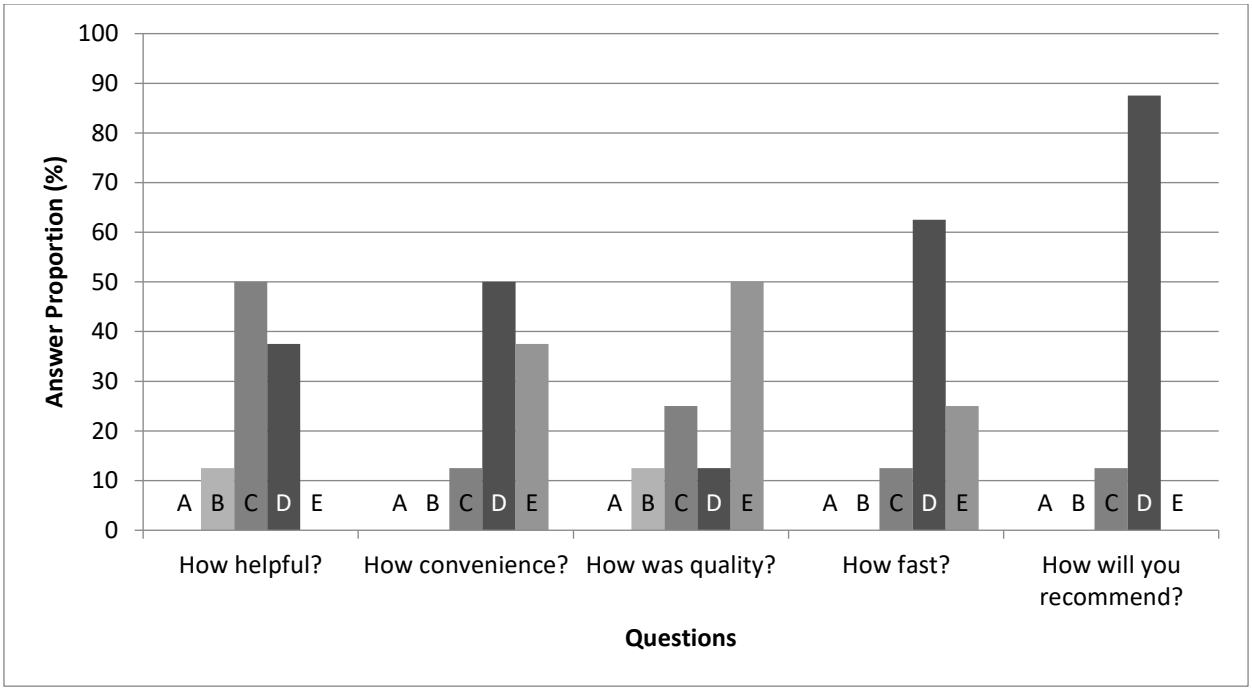

Figure 2. Perception of students on using online word processor (Google Docs™) for on-the-spot project collaboration in medical article writing. The alphabets' caption are explained in Table 1

Most participants (50%) perceived that using the online word processor was helpful. Most participants (50%) also perceived that using it was more convenient. Fifty percents participants perceived that the article had much better quality. Most participants (62.5%) perceived that using it was faster. Using the online word processor was most recommended by most participants.

DISCUSSION

Project-based learning demonstrated improving of both learning effectiveness and efficiency (9), and increasing of both multidisciplinary memorizing and analytical thinking ability (10). Writing article as the project are relevant and practical to medical students' needs (12). To ensure each student in group was actively involved, it is necessary to do this method on-the-spot and to use information technologies that encourage real-time collaboration. Fast and trusted sources of references were also needed. The online word processor, Google Docs™, is the information technology which supports real-time collaboration, but, since it brings new interface, both students and teachers should train themselves to use it for learning and teaching, respectively. The clinical search engine, ClinicalKey™ , is second most effective and efficient search engine for trusted references compare to Up-to-Date™, however it is preferred by both medical students and teachers in classroom, while they who are in clinical rotation prefer the competitor (13). Therefore, these online word processor and clinical search engine support on-the-spot project collaboration in medical article writing.

The participants tend to highly perceive that using the clinical search engine was very helpful and most recommended, however, lower proportion was found for the convenience and the speed in relative to each options group, and lower difference between 'better' and 'much better' as options group for the article quality. Students' ability to use clinical search engine was considerably varied. It makes the ones who are difficult to use it tend to choose 'more convenient' rather than 'much more convenient', and tend to choose 'faster' rather than 'much faster'. The English proficiency was also considerably as its cause since ClinicalKey™ was only provided in English while the students' native language was Indonesian. The lower difference between both options of 'better' and 'much better' was considerably because of the time limit and their confidence on article writing ability. Speed ($p=0.72$) and quality to give correct answers ($p=0.40$) were found insignificantly better for using evidence-based search engine rather than using the conventional one (14).

Using the online word processor was also highly perceived as most recommended, however, lower proportion was found on options group for the speed, and lower difference between options group of the benefit and convenience. Interestingly, some students perceived that using online word processor made equal or even worse article quality while others perceived that using it made much better article quality. Using online word processor with tablet PC was supposed to make them tend to choose 'faster' rather than 'much faster'. Furthermore, the students have already accustomed with interface of common word processor in Indonesia, so it makes lower difference between 'helpful' and 'very helpful', and between 'more convenient' and 'much more convenient'. They might also perceived

that the article quality is not contributed by the online word processor, so it made two patterns of perception on the article quality as described above. Other study demonstrated that the online scientific writing workshop using Google Docs™ had better article quality ($p<0.01$) and better trainee satisfaction ($p<0,01$) (15). (4.3 ±0.73) (3.09 ±1.11) ($p=0.001$) (15).

Limitation of this study are limited duration of the project collaboration, lower students proficiency in English and uncomfortable device used by participants for writing article. These might affect their perception on the benefit of the tools and their convenience. The English proficiency and the device (tablet PC) might also affect their perception on their speed in article writing. The limited duration and the English proficiency might also affect their perception on the article quality. Therefore, there is a possibility that all of them affect how they will recommend either the clinical search engine or online word processor.

CONCLUSION

The participants perceived that on-the-spot project collaboration in medical article writing using clinical search engine and online word processor was helpful, more convenient, much better quality, faster and most recommended. However, the students need accustomization with the interface of both information technologies and improvement of either English proficiency or writing ability. Further studies need to investigate quality and speed of the article writing based on quantitative assessment and the effect of this method on their learning outcome.

TAKE-HOME MESSAGE

Using clinical search engine and online word processor for on-the-spot project collaboration in medical article writing is beneficial for medical students although it needs more technological resources and information access.

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Anxiety overview of medical students undergraduate

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ABSTRACT

Background: The anxiety is mental disorder that can happen to all people especially medical students. Medical students were reported having a high stressor or they have more stressful than others. The anxiety affects students learning outcome, it also produces confusions and perceptual distortions that can disturb the learning process and it will decrease concentrating skill, decrease memory, disturb a skill in connecting one thing to the others.

Research Purpose: The purpose of this study is to analyze the description of anxiety toward students at medical faculty of Halu Oleo University.

Summary of Work: The type of this research is observational analytic with cross sectional study design. The population was 496 students in medical faculty of Halu Oleo University. The sample was 222 respondents. The sampling technique was proportionate stratified random sampling. The respondent characteristic was known by questioner and the anxiety level was measured by Hamilton Anxiety Rating Scale (HARS). The data was analyzed by SPSS 16 for Windows with a one way Anova statistical test and is considered meaningful if $p < 0.05$.

Summary of Result:The result of this study is to know the description of students anxiety at medical faculty of Halu Oleo University, level I of 19%, level II of 24,6%, level III of 47,7%, level IV of 27,6%.

Conclusion: The conclusion is there is significant difference toward description of students anxiety at medical faculty of Halu Oleo University.

Keywords : *Anxiety, Hamilton Anxiety Rating Scale (HARS), Medical Students*

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INTRODUCTION

College student are individual who are studying at the college level, both public and private or other institutions at the same level with universities. These student appraised to have a high intellectuality level, thinking intelligence and planning in action (Papilaya and Huliselan, 2016).
Medical students have been reported to have a high stressor level or full of stress, and experiences much more pressure, depression and anxiety than general population (Lallo et al, 2012). Anxiety affects student's learning outcome because anxiety tend to develop confusion and perceptual distortion. This distortion can intrude studying process by decreasing the ability to focus attention, lowers memory, and intruding ability to connect one thing to other (Sadock et al, 2015).
Student's anxiety is affected by environmental factor (external factor) that comes externally from itself such as demands on self from home, school, or community, and individual factor (internal factor) that related with the individual itself

including attitude and personality trait (Rosma, 2013).

Complex and dense learning system at the study program can be a heavy burden for student. Inability to fulfill academic demand, family and community expectation and time limitation to finish the task can cause anxiety so efforts that used to complete the task is considered as a burden, which will affect student achievement and can be a risk to inhibit study. This condition can disadvantage the student in terms of psychic, time, effort and cost (Armayanti et al, 2011).

A study that has conducted to 266 medical students of Andalas University obtained result 46,99%, with 30,45% prevalence of mild anxiety, 12,78% prevalence of moderate anxiety, and 3,76% prevalence of severe anxiety (Apriady, et al 2016). Other study shows that 25,29% of first semester students have anxiety with mild to severe as predominant anxiety level (Hasiana et al, 2014). Furthermore, second level preclinical medical student that not have anxiety (41,9%), mild anxiety (25,8%), moderate anxiety (19,4%), and severe anxiety (12,9%) (Safar, 2016). Chandratika and Purnawati (2015) toward seventh semester students obtained result 11,7% of anxiety disorder. There is no research that compare anxiety description among every academic level at Medical Faculty, therefore researcher attracted to research the comparison of anxiety description among students at Medical Education Study Program Faculty of Medicine Halu Oleo University.

METHOD

This research is an analytical observational research with cross sectional design. This research was done at November 2017 at Medical Education Study Program, Medical Faculty of Halu Oleo University. We use Proportionate Stratified Random Sampling as sampling method, with total sample assessed were 222 respondent with 42 respondent were first level students (2017 generation), 57 respondent were second level students (2016 generation), 65 respondent were third level students (2015 generation), and 58 respondent were fourth level students (2014 generation).

Data collecting done by direct interview using HARS (Hamilton Anxiety Rating Scale) anxiety questionnaire. The data were analyzed by using One Way Anova statistical test and significance level was $p < 0,05$. This research was approved by Health Research Ethical Commision Research and Public Service Institution of Halu Oleo University.

RESULT

a. Characteristic of Subject

Table 1 shows that gender distribution of the subjects were predominantly 158 (71,2%) female and male 64 (28,8%) fewer. Age distribution were 20 years old 60 (27,0%) predominant and 22 years old 8 (3,6%) fewer. The subjects without anxiety were 153 (68,9%) and subjects with anxiety were 69 (31,1%).

Table 1. Characteristic of Subjects

Variable	Nominal (n)	Percentage (%)
Gender		
Male	64	28,8
Female	158	71,2
Age		
17	20	9,0
18	38	17,1
19	52	23,4
20	60	27,0
21	44	19,8
22	8	3,6
Anxiety		
No	153	68,9
Yes	69	31,1

Table 2 shows that first level students with anxiety (HARS score ≥ 14) were 8 (19,0%) students, and without anxiety (HARS score < 14) were 34(81,0%) students. Second level students with anxiety were 14 (24,6%) students and without anxiety were 43 (75,4%) students. Third level students with anxiety were 31 (47,7%) students and without anxiety were 34 (52,3%) students. Fourth level students with anxiety were 16 (27,6%) students and without anxiety 42 (72,4%) students. Students with anxiety were predominant in female students (50 students) and fewer in male students (19 students).

Table 2. Anxiety Distribution Based on Student's Lecturing Level

Lecturing Level	Anxiety				Not Anxiety				Total	
	Male	**Female**	**Sum**		**Male**	**Female**	**Sum**		**n**	**(%)**
			n	**(%)**			**n**	**(%)**		
First Level	4	4	8	19,0	9	25	34	81,0	42	100
Second Level	2	12	14	24,6	11	32	43	75,4	57	100
Third Level	9	22	31	47,7	11	23	34	52,3	65	100
Fourth Level	4	12	16	27,6	19	23	42	72,4	58	100
Total	19	50	69	31,0	50	103	153	69,0	222	100

b. Comparison of Anxiety Description based on Student's Lecturing Level Table 3 shows the result of One Way Anova test with p value < 0,05 that means there is a significant difference of anxiety description toward undergraduate medical students on Medical Education Study Program Medical Faculty of Halu Oleo University.

Table 3. Comparison of Anxiety Description Based on Student's Lecturing Level

Medical Student	Mean	SD	F	P
First Level	8,9048	6,34308	6,439	0,000
Second Level	8,9474	6,30878		
Third Level	13,3538	6,49623		
Fourth Level	10,2414	6,19085		

DISCUSSION

a. Characteristic of Subject

This research shows that sebject's gender distribution was predominantly female than male. Generally, female medical students are more than male medical students. Recently, Medical Faculty of Halu Oleo University was dominated by female with comparison rasio of female and male is 2:5 of total population.

From adolescent development point of view, female is tend to be mature faster than male at the same age which can be important while undergo the lecture. Female has a better adaptation ability than male, otherwise male has a better emotional stability than female, which can influence him to overcome the problems (Wardhani et al, 2014).

Based on age distribution, medical student of Halu Oleo University vary between 17 to 22 years old. Most of students are 20 years old, which are final teenage age range (17-21 years). At this age, students are susceptible to have behavioral problem such as emotional instability that impact on anxiety of many things desired but not able to fulfill everything (Dhamayanti, 2013). Students will find ways to overcome the problem and apply the problem solving system, with individual self-direction at the cognitive behavioral process that involve awareness, rasional thinking, and activity in order to identify or to find effective or adaptive ways to

solve the problem that faced daily. Of course, age and experience affects students problem solving. The youngers people will experiences condition that never happened before so there isn't coping mechanism toward the problem (Widanti et al, 2013).

1) **Anxiety Description Among First Level Medical Student**

From total 42 first level medical students of Medical Education Program Faculty Of Medicine Halu Oleo University that assessed in this research, there are 8 (19,0%) students with anxiety. This result shows that description of anxiety among first level medical students were less. Factor that can cause anxiety at first level medical students is interaction with new environment. A very significant environmental change from high school student to college student needs a better self adaptation. These student prosecuted to be adaptable with college environment, new homestay environment and social environment around. Adaption inability can cause anxiety at student (Diferiansyah, 2015).

At Medical Faculty of Halu Oleo University there is a matriculation system that be held for first level medical student before they enter the lecture. This matriculation system was a knowledge equalization for student candidate that appraised have not enough basic knowledge yet to undergo the lecture (KBBI, 2016). This system expected that the student can be more adaptable to the lecture at Medical Faculty of Halu Oleo University, so that can reduce the incidence of anxiety among first level medical student that can caused by college environmental adaptation. The result of this research was similar to Hasianna et al (2014) research which shows that anxiety level of first level student was less enough.

2) **Anxiety Description Among Second Level Medical Student**

Among 57 second level medical students of Halu Oleo University, there are 14 (24,6%) students with anxiety. Factor that can cause anxiety among these second level medical students such as academic factor that related to academic evaluation as an implementation of Drop Out (DO). The middle evaluation program was did to all of third semester student that have programming the lecture less than 30 SKS with cumulative achievement index less than 2,00 (Noor, 2014). This phase often become the own stressor for students because the target of SKS (Semester Credit Unit) provided must be passed to pass through the evaluation (Safar, 2016).

Second level students of Medical Education Program Faculty Of Medicine Halu Oleo University based on previous Cumulative Achievement Index tend to haven't enough cumulative achievement index. Attributed to semester evaluation, the level of students anxiety should be high. Based on the result of this research, a low student anxiety level can not yet able to describe anxiety level based on evaluation. This is caused by these second level students still undergo lecture process on third semester so they are not eligible yet to get mid semester evaluation.

3) **Anxiety Description Among Third Level Medical Student**

Anxiety description among 65 third level students of Medical Education Study Program Faculty of Medicine Halu Oleo University that assessed on this research, there are 31 (47.7%) students with anxiety. Factor that can cause anxiety a,ong these students such as academic factor, that is a high academic burden.

Previous cumulative achievement index shows that third level students that have less achievement index were 36 (55,4%) from 65 students at Medical Education Program Faculty Of Medicine Halu Oleo University. This fact tend to increase student's anxiety. Similar to Akbar (2015) which result there is significant correlation between anxiety and student academic achievement. The higher level of student anxiety will affect their academic achievement. This is caused by a high anxiety level can affect memory performance, lowers memory and intruding concentration of studying.

4) **Anxiety Description Among Fourth Level Medical Student**

There are 16 (27,6%) students with anxiety of 58 fourth level students at Medical Education Program Faculty of Medicine Halu Oleo University. Factor that can caused anxiety among fourth level students such as academic factor to immediately complete the college and the final task to get bachelor degree.

To obtain bachelor degree, there is requirement that should be fulfilled by students such as minimal cumulative achievement index is 2,75 in order to program essay as their final task.

Some students that get back to previous semester and repeating the course are considered to be able increasing their cumulative achievement. Generally, fourth level medical students at Medical Educstion Study Program Faculty of Medicine Halu Oleo University based on previous cumulative achievement index tend to have enough cumulative achievement index. So that can be assumed that most of fourth level medical students progrsming essay to complete their college.

While the student finishing their final task, that is essay, should have a high totality, either by doing research through observation, interview, collecting opinion, or through library search. Therefore, according to the students, final task is a very heavy burden and can cause anxiety. Various factors that can be a burden to student such as internal factor that is laziness to searching for literature and dependence in finishing final task. Familial factor such as family demands to finish final task at the time and lack of emotional support. Factors from friends, such as giving slow study label, and student whose have less intellectual and effortless level, and factor from lecturer who provide difficulties, perfectionist, inconsistent and additional factor that prevent the lecturer such as education, illness, and accident (Papilaya, 2013).

5) Anxiety Description Based On Student's Gender

Anxiety description based on student's gender of Medical Education Study Program Faculty of Medicine Halu Oleo University shows that female is tend to have anxiety more than male. Theoretically, this can caused by individual hormonal and psychological condition. Hormonally, estrogen and progesterone hormone fluctuation trusted to increasing body response from stress so that can increase susceptibility to depression an anxiety. Estrogen has anxiogenic effect mediated by ERα (Estrogen Receptor α). Estrogen activity at this ERα can increase hypothalamo-pituitary adrenal axis activity so that either increase secretion of stress hormone. Androgen hormone in male can inhibit hypothalamo-pituitary adrenal axis activity, an inverse effect with estrogen hormone in female (Ariana, 2016). Psychologically, female tend to more anxiety than male. This can caused by female is more sensitive with their emotion and tend to observe everything she faced from a detailed point of view, whereas man is tend to not too detail. Those individual whom observe anything more detail is susceptible to be anxiety because they have too many informations that can truly suppress their feeling (Wijaya et al, 2015).

b. Comparison Of Anxiety Description Based On Student Lecture Level

Medical student appraised to be more sufficient to anxiety compared to other student. Anxiety is affected by individual emotional maturation, a more mature individu can more able to control emotion while they faced certain situation (Paramitasari and Alfian, 2012). Coping mechanism rated to has a role while resolving problem, self adaptation to changes and response to self threatening condition (Nasir and Muhith, 2011) so that able to handle the anxiety. This mechanism can't applied by a low emotional maturity student. Emotional maturity is affected by individual age. This age related condition is caused by an individual learning process that experiences along with age increment (Goleman, 2009).

Based on that theory, we can conclude that student who have a long study period is tend to have a lower anxiety level. The teory is contradiction with this research's result that shows highest student's anxiety prevalence is sequently comes from third level, fourth level, second level, and first level. This research obtain a significant difference of anxiety description based on lecture level among students of Medical Education Study Program Medical Faculty of Halu Oleo University. Statistical analitycal test obtained a significant difference between average anxiety description of third level and first, second, and fourth level students. This result shows that students anxiety is tend to be fluctuate, depend on situation that faced by these students in every lecture level.

One of factors that can affects anxiety is accumulation of stressor that frequently occure to the student. Students stressor can be originate from academics life, especially from external demand and their own hope demand. The trigger factor of stress among students can be related to personal factor such as a far separate from parent and family, economic or financial condition (financial management and money pocket), interaction problem with new friend and new environtment, and other personal problem. On the other hand, academic factor

potentially to trigger stress such as study form change from senior high school to college, lecture tasks, value attainment target, academic achievement and other academic problems (Legiran et al, 2015).

CONCLUSION

There is a significant anxiety description difference based on lecturing level among student of Medical Education Study Program Faculty of Medicine Halu Oleo University that showed by obtained p value = 0,000 which anxiety description among first level students were 19%, second level students were 24,6%, third level students were 47,7%, and fourth level students were 27,6%.

SUGGESTION

For the next researcher to research the factors that cause anxiety among students of Medical Education Study Program Faculty of Medicine Halu Oleo University. For the Medical Educational Study Program to establish the Medical Education Unit to assist students to resolve their anxiety caused by academic stressor.

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THE INFLUENCE OF VISUAL AND AUDIOVISUAL LEARNING STYLE TO MEMORY RETENTION OF MEDICAL STUDENTS

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ABSTRACT

Background: Medical students are required to be able to independently use various learning resources. One of the easiest ways to absorb information is learning style. The value of study of medical students is still oftenly shows a low average. The average student can learn optimally during learning activities need combining multimodal of visual, auditory, and kinesthetic learning style.

Method: This study uses quasi experimental design. The sample was taken by simple random sampling. This study uses a VARK questionnaire to assess its learning style. The sample size is 45 respondent. Short-term memory retention is measured by the posttest result shortly after the delivery of the material. After ten days lapse is done posttest back to measure long-term memory retention. Data analysis used in this research is paired T test.

Result: The visual retention normality test result of short-term visual group showed that p = 0,321 and audiovisual group showed p value = 0,250. The results of the long-term memory retention normality test in the visual group showed p value = 0.056 and the audiovisual group showed p value = 0.063 which meeting the requirement for paired T test. The result of paired T test for short-term visual retention of visual group showed result p = 0,00 and audiovisual group showed result p = 0,00. Paired T test for long-term visual retention of visual group showed result p = 0,00 and audiovisual group showed result p = 0,00. The difference in pretest-posttest STM visual group by 8.13 and audiovisual groups was 8.50. The difference in pretest-posttest LTM visual group is 4.34 and audiovisual group is 5.18.

Conclusion: the use of bimodal audiovisual learning style is significantly influence to memory retension better than unimodal visual learning style.

Keywords: *visual learning style, audiovisual learning style, memory retention.*

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INTRODUCTION

Learning is an activity that proceeds and is a very fundamental element in the implementation of each type and level of education. Success or failure of the achievement of educational goals is very dependent on the learning process experienced by learners.[1] One of the easiest ways that can be done to absorb, organize, and process information is with learning styles.[2] The appropriate learning style is the key to the success of the participants in learning. By realizing this, students are able to absorb and process information and make learning easier with their own student learning styles.[3] However, in fact the academic achievement of medical students at Muhammadiyah University of Yogyakarta according to Kusumawati[4] showed a low figure that is average GPA> 2.5 about 32.47% and CBT MCQ> 60 graduation rate of 33.1%. Whereas, the value of study of medical students of Muhammadiyah University of Surakarta also shows a low average of 56.69.[5]

Results of learning style analysis by Hardiansyah[6] in medical students at Diponegoro University showed 24.1% visual, 24.1% auditory, 18.5% read / write, 11.1% kinesthetic, 1.9% auditory audit, 5 , 6% visual reading, 1.9% visual kinesthetic, 5.6% auditory reading and 7.4% kinesthetic auditory. Unimodal 77.8% and multimodal 22.2%.. According to Grinder in Siberman[7] who states that every 30 students, 22 of them on average can learn effectively as the teacher presents learning activities that combine visual, auditory, and

kinesthetic. Therefore, medical students must have an effective learning style so that the information obtained will go into long-term memory and unforgettable lifetime.

LITERATURE REVIEW

Learning styles can be defined as attempts by individuals to achieve their learning objectives. As a first step learning experience is to know the learning style.[8] Learning styles are the easiest way that individuals have in absorbing, organizing and processing information received.[9]

According to DePorter and Hernacki[10] there are three kinds of learning styles: visual, auditorial and kinesthetic learning styles. The learning style of VAK is based on the theory of modalities, although in every learning process learners receive information from all three sensory, but there is one or two dominant sensory (Wiyono et al, 2012).

Visual Learning Styles. Students who can learn visual style can be seen from the main characteristics of using learning modalities with the power of the eye senses. Generally, visual-style people in absorbing information apply a strong visual strategy with images and phrases that are visual.[11]

Auditorial Learning Styles. Auditorial learning style is learning style by listening. Individuals with this learning style, more dominant in using the sense of hearing to do learning activities. Individuals easy to learn, easy to capture stimuli or stimuli when through the sense of hearing (ear). Individuals with auditorial learning styles have strength in their ability to hear.[12]

Kinesthetic Learning Styles. The kinesthetic learning style is the style students learn by doing, touching, feeling, moving and experiencing. Those who have a kinesthetic learning style rely on learning through moving, touching and performing actions. Students like this are hard to sit still for hours, because their desire for activity and exploration is very strong. Students who learn style like this learn through motion and touch.[13]

Fleming and Mills in Sulistyaningrum[14] formulated the Fleming VARK Learning Model. This theory divides learning styles into four general types, namely visual, auditory, reading, and kinesthetic. Visual types have a tendency to see (think in pictures, visual aids like diagrams, powerpoint, etc.), auditory types are more likely to learn through listening (lectures, discussions, tapes, etc.), whereas kinesthetic prefer to learn through experience-move, touch, and do. According to DePorter and Hernacki[10] the type of reading is the same as the type of visual learning style.

Retention is a term that shows the quality or strength of a person's memory.[15] While DePorter and Hernacki[10] explain that memory is an ability to remember what has been known. According to Shah (2010) there are three factors that influence one's success in learning, namely: internal factors of learners which is the condition of the physical and spiritual learners; external factors learners which is an environmental conditions around the students; factor approach to learning which is the type of learning efforts of learners that include strategies and methods used by learners to conduct activities to learn lesson materials.

Furthermore Syah[16] explains that the internal factors of learners include: 1) physiological aspects, such as the state of the eyes and ears; 2) psychological aspects, such as intelligence, attitudes, talents, interests, and motivation of learners. While the external factors of the students include: 1) the social environment of learners; 2) non-social environment (houses, school buildings).

According to Lisiswanti and Saputra[17]; Triastuti[5], Problem Based Learning has an effect on self directed learning (SDL) of students that they are accustomed to self study. Knowledge of learning style, learning approach and learning skill are needed by students especially those learning process using PBL model (Problem Based Learning). Learning styles can be a catalyst for effective learning.

Learning styles determine how to absorb and process information, then the learning style will make a learner able to learn and communicate more easily.[18] If learners capture information / materials according to their learning style, then there will be no difficult lessons.[19] According to Barbara Prashning in Chatib[20] that the absorption of information depends on the way people work it out. Thus, it can be said that the characteristics of learning styles possessed learners is one of the modalities that influence in learning, processing, and comunication.

Learning styles include factors that support the success of learners during the learning process in the classroom. The use of appropriate learning styles and in accordance with the ability of learners,

will lead to an increase in memory capacity.[21] The similar research is also expressed Chatib[20] that learning style like the opening door. Each item of information that enters through the door is wide open, will make it easier for learners to understand the information. At the peak of understanding, the information will go into long-term memory and unforgettable lifetime.

METHODS

The research method used in this research is quasi experimental design. This method is a development of the actual experimental method. This is in line with the statement Sugiyono[22] that the quasi experimental design is a development of true experimental design that is difficult to implement. Therefore, to overcome the difficulties in determining the control group in the study, a quasi-experimental method was developed. The quasi-experimental method of the main feature is the non-random assignment, but by using existing groups.

The research design used in this study is the control times series design. The design of this research is like the pretest posttest design, unless it has the advantage of making repeated measurements and using the control group.[23]

Sampling in this study using simple random sampling. Simple random sampling is a random or random sampling technique in which each unit or member of a population is homogeneous or assumed to be homogeneous. The sampling method is by drawing a member of the population (lottery technique).[23] The actual population is the third semester students of the Faculty of Medicine UMS. All third semester students are required to complete the VARK questionnaire. Then analysing the results of the questionnaire to determine the subject that fall into the category of visual learning style.

After that, randomization is done to be divided into two groups, ie groups with visual learning styles and groups with audiovisual learning style. Groups of visual learning styles as a control group, asked to read pneumothorax-themed of power point materials. The audiovisual learning style group as the experimental group was asked to read pneumothorax-themed using power point material while listening to the sound recording.

RESULT AND DISCUSSION

After giving VARK questionnaire to respondent then from results obtained a number of 54 students have a tendency visual learning style. Furthermore, from 54 respondents are measured memory retention however only 45 respondents who follow the data up to the end. Based on these data (table 4.3), the posttest value of short-term visual group has an average of 11.56 with the lowest value of 7, the highest score 14, and the standard deviation of 2.04. While in the audiovisual group, it was obtained that an average value of 12.32 with the lowest value 8, the highest value 14, and standard deviation 1.70. Based on these data (table 4.4), the long term posttest value of the visual group has an average of 7.91 with the lowest score of 5, the highest score of 13, and the standard deviation of 2.44. While in the audiovisual group, it was obtained that an average value of 8.90 with the lowest value 5, the highest value of 12, and standard deviation 1.77.

Tabel 4.1 Characteristics of Respondent based on Learning Style

Characteristics	Frequency	Percentage
Learning Style		
Visual	12	12,50%
Auditori	12	12,50%
Kinesthetic	21	21,88%
Visual Auditori	2	2,08%
Visual Kinesthetic	7	7,29%
Auditori Kinesthetic	9	9,38%
Visual Auditori Kinesthetic	33	34,38%

Source: Primary Data November 2017

Tabel 4.2 Characteristics of Respondent Based on *Pretest Score*

Group	n	Mean	Lowest Score	Highest Score	Standart Deviation
Visual	23	3,48	1	6	1,44
Audiovisual	22	3,82	1	7	1,65

Source: Primary Data November 2017

Tabel 4.3 Characteristics of Respondent Based on *Posttest* STM (Short Term Memory)

Group	n	Mean	Lowest Score	Highest Score	Standart Deviation
Visual	23	11,56	7	14	2,04
Audiovisual	22	12,32	8	14	1,70

Source: Primary Data November 2017

Tabel 4.4 Characteristics of Respondent Based on *Posttest* LTM (Long Term Memory)

Group	n	Mean	Lowest Score	Highest Score	Standart Deviation
Visual	23	7,91	5	13	2,44
Audiovisual	22	8,90	5	12	1,77

Source: Primary Data November 2017

Before data is processed using both parametric and non parametric tests, the data should be tested for normality. Data distribution is said to be normal if p> 0,05.[24] With Shapiro-Wilk test obtained p value > 0.05 This means that data is normally distributed.

In order to determine the effect of visual and audiovisual learning styles on memory retention that has normal data distribution, the statistical test used is paired T test. The results obtained are as follows:

Tabel 4.5 Data Analysis Using Paired T Test STM

	Pretest	Posttest STM	Mean Difference	Std. Deviation	p
Visual	3,48	11,56	8,13	2,34	0,000
Audiovisual	3,82	12,32	8,50	2,34	0,000

Tabel 4.6 Data Analysis Using Paired T Test LTM Visual

	Pretest	Posttest LTM	Mean Difference	Std. Deviation	p
Visual	3,48	7,91	4,34	2,34	0,000
Audiovisual	3,82	8,90	5,18	2,34	0,000

In this study found that Medical Students of Muhammadiyah University of Surakarta have a tendency of visual learning style for 54 students or 56.25%. Comparison of long-term pretest-posttest in visual groups with long-term pretest-posttest in audiovisual groups also showed the results of audiovisual groups having a greater increase than visual groups. This is in line with the research conducted by Firdaus[25] which has proven the improvement of better learning outcomes with

audiovisual learning media rather than just with visual media.

Another study conducted by Adittia[26] proves learning by using audiovisual media further improves student learning outcomes. This study also supports research conducted by Anugeranto[27] which has proved the significant difference between the effectiveness of audiovisual learning and the effectiveness of learning without using audiovisual media.

Miftakh and Samsi[28] also explained in his research that applied to the students that based on the results of his research, the ability to listen to students after following the learning by using audiovisual media at least increased so that it can be seen that the student learning outcomes increased. In addition, students tend to be more enthusiastic and motivated in learning. Research conducted by Aminullah et al[29] also proves that bimodal stimuli have better memory efficiency compared to unimodal stimuli.

For more durable learning information in memory, learners must adapt learning styles with brain power.[21] The following efforts can be expected to further improve the brain's ability to record information, in this case related to how learning can run optimally[30]: (1) Make something to be learned into something interesting, or at least sought - interesting side. So the brain's ability to remember is greater. (2) The principle of repetition. Something that is always repeated will become a habit, from the habit that memories that have been recorded in the brain at any time can be called back. (3) People who are accustomed to using their minds to build an idea, or attempt to solve problems by considering causation or futuristic outlook, usually have the skills to think systematically.

Students who are less or even unhealthy, the process and learning outcomes will be disrupted. In addition, he will feel tired more quickly, uninspired, easily dizzy, easily drowsy if his body is weak, and difficult to accept lessons. This will have a negative effect on the learning outcomes.[31] Likewise a person who learns in a tired state, he can not run the learning process well and learning outcomes would not be perfect. In other words, students who suffer disease will experience weak sensory and motorist fatigue function.[3]

CONCLUSION

In this study, it can be concluded that memory retention with audiovisual learning style is better than the visual learning style.

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A review on patient satisfaction level on BPJS participants who come in outpatient room with SERVQUAL method, encourage medical education institution simulate empathy attitude in learning process

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ABSTRACT

Background: BPJS as a public legal entity which is directly responsible to the previous president named ASKES (Health Insurance). Law No. 24 in 2011 on the Social Security Administering Board stipulates that the National Social Security will be organized by BPJS, which consists of two main program; BPJS for Health and BPJS for Employment. Especially for the National Health Insurance (JKN) will be held by BPJS for Health which implementation begins January 1, 2014. BPJS performance and reputation is often a concern, patient dissatisfaction of the service in the facility became the biggest complaint in the community. By 2019 the number of participants BPJS Health is targeted to reach 99 percent of the total population of Indonesia or reach 254.8 million participants. Applying a sense of empathy in the learning process for prospective doctors, later on whether to increase the participation BPJS.

Methods: Quantitative research, with descriptive correlation design, using cross sectional approach using 60 BPJS participants who went to outpatient room in Private Hospital in East Jakarta area, based on the dimensions of Reliability, Assurance, responsiveness, and Empathy.

Results: Patient Satisfaction Level of BPJS on the quality of health service based on Empathy dimension is quite low, as much as (56,7%) dissatisfied with attitude of medic in giving service to patient BPJS, lack of attention of the medic to know requirement and to handle the complaint of BPJS patients, which distinguishes services to patients BPJS and non BPJS. The data were analyzed using chi-square test. The bivariate test showed that there was a significant relationship between patient satisfaction of BPJS user on the quality of health service with p value of 0.000 (p value less than 0.05) significant between patient satisfaction BPJS toward service quality dimension (tangible, assurance, responsiveness, empathy, and reliability).

Keywords: Patient satisfaction, quality of service, BPJS, SERVQUAL

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INTRODUCTION

One indicator of the success of health services that must be considered by the hospital is patients' satisfaction (MOH, 2010). Through the measurement of the level of satisfaction, it can be seen how far the dimensions of the quality of health services that have been held has met the expectations of patients. Patient satisfaction is the rate at which a person expresses the results of the comparison of the performance received with the expected. Patient satisfaction will be achieved when balanced between effort and patient outcomes from health services, taking care of patients and their families, such as paying attention to complaints, physical environment conditions, and always responsive to meet patient needs.

According to Hartono (2010) patient satisfaction is a situation that patients feel after experiencing an action or outcome and meet expectations. Meanwhile, according to Pohan[1] patient satisfaction

is a level of patient feeling that arise as a result of health care performance obtained after the patient compares it with what is expected.

Law No. 36 of 2009 on health emphasizes the importance of efforts to improve the quality of health services. Quality is the extent to which health services are provided in accordance with standard operating procedures or medical fixed procedures (Gufran, 2007). Azrul[2] states that the quality of health services is the degree of fulfillment of the community or individual to health care in accordance with good professional standards with the utilization of resources reasonably, efficiently, effectively in limitations safely and satisfy customers in accordance with good norms and ethics.

According to Parasuraman, Zeithmal, Berry[3] suggest that the concept of service quality related to patient satisfaction is determined by five elements known as quality of SERVQUAL service (tangible, assurance, responsiveness, empathy, reliability/reliability). Quality of health services shows the level of perfection of health services in causing a sense of satisfaction in each patient. The more perfect the satisfaction, the better the quality of health services (Moh, 2010).

After the implementation of the Social Security Administering Agency (BPJS) program in 2014 based on the Law of the Republic of Indonesia Number 24 in 2011 from the government, people can be easier using health services, ranging from people with low economic status to high-status society. BPJS Kesehatan (Public Health Insurance Implementing Board) is a Public Legal Entity that is directly responsible to the President and has the duty to organize National Health insurance for all Indonesian people, especially for civil servant, pensioner of civil servant and national army and national police of Indonesia, veterans, pioneers of Independence along with his family and other business entities or common people.

BPJS for health together with BPJS for employment (formerly Jamsostek) is a government program in National Health Insurance (JKN) unity which was inaugurated on December 31, 2013. For BPJS Health start operation since January 1, 2014. BPJS Health previously named Askes (Health Insurance) which is managed by *PT Askes Indonesia* (*Persero*), but according to Law no. 24 in 2011 on BPJS, *PT. Askes Indonesia* changed to BPJS for Health since January 1 in 2014. The target members of BPJS in 2019 reached 99 percent of the total population of Indonesia or reached 254.8 million participants.

The result of research on "Patient Satisfaction Relationship of BPJS to Quality of Health Service in Polyclinic of Internal Medicine of RSU UKI" conducted in Polyclinic of RSU UKI from December 2017 to February 2018 is as much (56,7%) from 60 respondents feel dissatisfied with quality service of empathy dimension.

Empathy has many definitions depending on the context, when used in the general sense and outside of the medical profession. The empathy is the ability to understand the experiences of others, to communicate and confirm that understanding with others and then act in a useful way (Buckman, Tulsky, & Rodin, 2011). Regarding the use of empathy in health settings, the Society for General Internal Medicine defines empathy as "the right act of acknowledging the emotional state of others without experiencing the state itself.

According to Zoll and Enz (2012) empathy can be interpreted as the ability and the tendency of a person ("observer") to understand what other people ("target") think and feel in certain situations. According to the Center for Medical Humanities, Compassionate Care and Bioethics at Stoney Brook University in the United States-research shows that patients who feel treated well by doctors tend to feel more satisfied with their care. The fewer doctors who pour out the affections face less malpractice claims.

RESEARCH METHODOLOGY

The research method used in this study is quantitative, with descriptive correlation research design, using cross sectional approach. The researchers conducted sampling of a population using a questionnaire as a data collection tool.

Primary data collection related to the spread of questionnaires conducted by researchers at Poly Disease Inside RSU UKI. Against research data will use the applied statistical science tailored to the objectives to be analyzed. This research is an analytic research, so the analysis used inferential statistics (drawing conclusion) is statistics which is used to infer parameter (population) based on statistic (sample) or better known as generalization and

inferential process. Univariate analysis serves to summarize the measurement data collection in such a way that the data set is transformed into useful information and data processing only one variable only (sujarweni, 2014). Univariate analysis aims to explain or describe the characteristics of each research variable, which includes the calculation of mean and standard deviation of each variable (Notoatmodjo, 2010).

Analysis of two variables suspected of correlation or correlation (Notoatmodjo, 2005). This analysis is done to see there is correlation of independent variable that is health service quality at Poly Disease In RSU UKI with dependent variable of patient satisfaction level of BPJS. The analysis technique is done by using Chi Square Test, so if the value of P (p value) <0,05 means the result of statistical calculation significant (significant) or show there is relationship between independent variable with dependent variable, and if p value> 0,05 the result of static calculation is not significant or there is no relation between independent variable with dependent variable .

RESULT

Result of Univariate Analysis

From Table 1 below, There are 26 people (43.3%) are satisfied with the quality of health services in the poly disease in RSU UKI and there are 34 people (56.7%) are not satisfied with the quality of health services in poly disease in RSU UKI

Table 1 Patient Satisfaction Level BPJS on health service quality based on Empathy dimension

Patient Satisfaction Levels Dimension of Empathy	Frequency	%
satisfied	26	43.3
not satisfied	34	56.7
Total	60	100.0

Results of Bivariate Analysis

Table 2 Relationship Level Satisfaction of BPJS patient on Quality of Health Service based on Empathy dimension

QUALITY	Satisfaction				amount		Asymp. Sig. (2-sided)
	Satisfied		Un satisfied				
	N	%	N	%	n	%	
Less	0	0.0	34	56.7	34	56.7	0.000
Enough	11	18.3	0	0.0	11	18.3	
Good	15	25.0	0	0.0	15	25.0	
Total	26	43.3	34	56.7	60	100.0	

Based on table 2 above, it can be seen that from 60 respondents 20 people feel dissatisfied with the quality of the less, 15 people are satisfied with enough quality, and 25 people feel satisfied with the good quality.

Based on the results of analysis using chi square test obtained p value of 0.000 (p value smaller than 0.05). This means there is a relationship between the level of patient satisfaction BPJS on the quality of health services in the poly disease in RSU UKI based on the dimensions of empathy.

DISCUSSION

The level of patient satisfaction BPJS on the quality of health services dimension emphati is still low, the results obtained from the research most Most respondents 34 people (56.7%) are not satisfied with the quality of empathy services provided Hospital and as many as 26 people (43.3%) are satisfied with the quality of health services based on the empathy dimension.

CONCLUSION

Empowering skills module as an integrated module of communication science with other health sciences, application of module in medical education process, packaged in expert lecture and skill. Students are trained with trigger scenarios, then simulate by sharing roles among students achieving learning outcomes such as:

1. Be able to feel what is felt by the patient so that later become a sensitive doctor
2. Able to express empathy through verbal and non verbal channels such as: Active involvement through appropriate facial expressions and movements, concentrated concentration, including eye contact, an attentive posture, physical closeness, touch (proper caress)
3. Able to control the intonation, volume, rhythm and speed of sound that describes the natural feelings
4. Reflecting back to the patient, the feeling (and intensity) that the doctor is experiencing (sad, happy, happy, angry, frustrated, frustrated and so on)
5. Conduct self-disclosure related to the person's events and feelings to communicate the understanding and understanding of what is being experienced by the person. Example: I can feel your sadness

SUGGESTION

The value of patient satisfaction will be high if the doctor in doing services by implementing professionalism where the greatest point is the doctor has empathy, reflected in communicate able to reflect behind the feeling of the patient, so as to create a sense of flavor, focus on emotions and cognition, because Empathy is the basic skills of hanging out, an empathic person will be better able to capture hidden social signals that indicate what is needed or desired by others. Empathy also means reacting to the feelings of others with the same emotional response to the response of others

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Impact of reflective writing on medical student attitude

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ABSTRACT

Background : Reflective writing has been described as an effective mechanism for promotion of self-reflection and self-directed learning within medical education. Reflective writing within medical education to foster development of reflective capacity, extend empathy, and promote practitioner well-being. This researche aimed to determine the impact of reflective writing on medical student Attitude

Methods : This research uses quantitative research design with cross sectional approach. Respondents consist of students who have done reflective writing. We use reflective writing for student who have misconduct behavior. A total of 55 students filled out questionnaires about the impact of reflective writing. Questionnaires using lickert scale with the terms 1 strongly disagree, 2 disagree, 3 neither, 4 agree and 5 strongly agree.

Result : For statement that reflective writing helps students in raising awareness of misconduct behaviors that have been done, as many as 54,6% respondents strongly agree, 43,6% agree and 1,8% neither. For statement that reflective writing helps students to think about plan of action as many as 56,4% agree respondents and 43,6 strongly agree. For statement that the process of reflection while reflective writing has been used independently in other condition as many as 47,3% respondents agree, 27,3% strongly agree and 25,4 neither.

Discussion and Conclusion : Learners must then be encouraged to reflect often upon these experiences in a safe environment so that the process of reflection becomes habitual. Reflective writing can be used to increase student awereness about their mistake and plan of action. It can be concluded that reflective writing is useful to encourage student reflection and to plan next action.

Take home Message : Everyone, student included, can't avoid making mistakes. But the important is how to make student recognize the mistake and make the mistake as a lesson to become a better individual and one to do that is through reflective writing.

Keywords : *reflective writing, medical student attitude, medical education*

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INTRODUCTION

Branch and Parajepe[1] define reflection in medicine to include consideration of the larger context, the meaning, and the implications of an experience or action, while reflective writing, defined as "writing with the goal of finding significance in personal experience".[2]

Literature suggests that narrative writing can have an impact on medical student professional and humanistic attributes.[3] Reflective writing has emerged as a solution to declining empathy during clinical training.[2]

Creative writing as a process for reflection on patient care and socialization into medicine ("reflective writing") has important potential uses in educating medical students and residents. Reflective writing might be one way of promoting these aspects of medical professionalism. By its nature, writing is a solitary act. Even when part of a group exercise, each individual must retreat into herself, contemplate events, and give free rein to imagine their various meanings.[4]

Through writing, students may be able to explore preferred professional identities by embracing their own values and emotions while challenging what strikes them as problematic or untrustworthy about the normative world of medicine.[4] This research aimed to determine the impact of reflective writing on medical student attitude.

METHODS

This research uses descriptive quantitative design. Respondents in this study are students who perform misconduct behavior and do reflective writing about the misconduct behavior that has been done and the reasons underlying the behavior. Students are also required to write a plan of action to improve their behavior. The reflective writing activities on students with misconduct is done from December 2016 until March 2018. A total of 63 students do reflective writing and 55 people who fill the questionnaire. Data collection using questionnaires about the impact of reflective writing. Questionnaires using lickert scale with the terms 1 strongly disagree, 2 disagree, 3 neither, 4 agree and 5 strongly agree.

RESULT

Table 1. Respodent characteristic

Gender	
Male	15
Female	40
Age (yr)	
Mean	20,6
Max	23
Min	18

Table 2. Impact of student in reflective writing

No	Item Questionaire	Strongly disagree	Disagree	Neither	Agree	Strongly agree
1	Writing reflections helps me realize the mistakes that I have made	0	0	1,8	43,6	54,6
2	Writing reflection helps me think about the improvement plan that I need to do	0	0	0	56,4	43,6
3	The reflection process I do when reflective writing has been used independently in other circumstances	0	0	25,4	47,3	27,3

DISCUSSION

Results show that for the items “Writing reflections helps me realize the mistakes that I have made “ and item “Writing reflection helps me think about the improvement plan that I need to do”, many students choose agree and strongly agree. This result support the result of Wong and Trollope-Kumar[5] that illustrates the power of reflective writing for students and tutors in the professional identity formation process.The enhanced self-awareness developed through reflective writing can improve the ability of students to integrate concepts learned in the formal curriculum into clinical environments. In this research reflective writing succeeds in making the student realize the mistake they have made. The process of realizing this error is important because without realizing the mistake the student cannot correct their mistake.

For item “The reflection process I do when reflective writing has been used independently in other circumstances” as 47,3% student choose agree dan 27,3% choose strongly agree. By encouraging reflective writing after they do misconduct we aim to develop students’ attitudes to reflective practice so that they will continue to use it in encounters with other condition, not only while they are studying, but throughout their professional lives. The results of this study indicate that although the reflection ability at the time of reflection has been used by students, but there are still 25.4% of students who answered neither. This should be of concern to policymakers that the ability of reflection has not been fully facilitated by reflective writing.

CONCLUSION

Reflective writing can be used to increase student awereness about their mistake and plan of action.

TAKE HOME MESSAGE

Everyone, student included, can't avoid making mistakes. But the important is how to make student recognize the mistake and make the mistake as a lesson to become a better individual and one to do that is through reflective writing.

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The description of medical students' interest and achievement on anatomy at faculty of medicine universitas kristen indonesia

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ABSTRAK

This research is about the description of medical students' interest and achievement on Anatomy at faculty of medicine at *Universitas Kristen Indonesia*. The purpose of this study is to know the description of medical students' interest and achievement on Anatomy. The research method used was survey method by using qualitative research approach. The respondents were the students first, third and fifth semester of 2015-2017 which consists of 110 students. The instruments used in this study were questionnaires (consisting of 30 statements) and interviews. Likert Scale is used as a technique in analyzing the obtained data through questionnaires while descriptive techniques used to analyze the obtained data through interviews. From the data collected through questionnaires and interviews found that the description of student interest in studying anatomy is high (71%) while the learning achievement in the subject of anatomy is in low category. Thus, it can be concluded that student failure on Anatomy courses is not caused by their interest.

Keywords: *interest, learning achievement, Anatomy, description*

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INTRODUCTION

It is a major problem that a learning process could not achieve maximum results, this can occur due to several factors. The factors that can cause it to happen can be categorized into three, such as; a) factors in the students (Internal factors) such as the spiritual and physical condition of students, b) factors that come from outside the students (external factors) such as environmental conditions around students, c) learning approach (learning approach) can affect learning outcomes (Shah, 1995).

The reality says that the faculty of medicine in anatomy courses. From the results of observations made by the author can be seen that 80% of students in each generation has a low learning achievement. Anatomy course as a basic course that becomes the foundation of science in other medical courses, should be studied very seriously so that students understand the course so that he/she can achieve maximum learning result or at least achieve the minimum value of completeness as required in that course is C score with the range (60-65).

Another observation found by the author from everyday circumstances in the classroom is the discovery of low student interest in the subject of anatomy. But this can not be proven scientifically and also empirically, because it still tends toward assumptions obtained by the author of the daily learning activities undertaken. This is what must be proven scientifically by the author is to map or provide an overview of the interests of medical students in anatomy courses.

In learning activities, interest can lead to high learning activities, which ensure the continuity of learning activities, so that the desired goal by the subject of learning can be achieved (Sadirman, 2003). With the interest, the students become diligent during the process of teaching and

learning, and with that interest also the quality of student learning outcomes can be realized properly. Students who are in the process of learning have a strong interest and clearly will be diligent in learning and this is what makes him successful, it is very influential on the results of learning it has, because the high learning outcome is determined by interest in learning with learning achievement of learning owned by someone. Based on the results and information obtained by the researchers that in the faculty there are still many students who have low achievement in learning, especially in anatomy course. The details of the level of anatomy learning outcomes in several classes of medical students are as follows:

Table 1. The Description of Students Learning Outcomes of 1st, 3rd, and 5th Semesters on Anatomy

Angkatan	Theory					Practice				
	Stundent number	Pass	%	Fail	%	Stundent number	Pass	%	Fail	%
2015 Block 6 : *life cycle* Block 9 : *moleculer endokrin*	-	-	-	-	-	218	102	46,79	116	53,21
	-	-	-	-	-	214	165	77,10	49	22,90
2016 *Biomedic* Block 2 : Anatomy *Biomedic* Block 3 : Anatomi Block 7 : *respiration* Block 8 : *disgestion, Hepatobylerr and Pancreas* Block 9 : *Kidney system and urination*	183	126	68,85	57	31,15	179	75	41,90	104	58,10
	182	25	13,74	157	86,26	181	81	44,75	100	55,25
	-	-	-	-	-	183	69	37,70	114	62,30
	-	-	-	-	-	183	19	10,38	164	89,62
	-	-	-	-	-	184	53	28,80	131	71,20
2017 *Biomedic* Block 2 : Anatomy *Biomedic* Block 3 : Anatomy	171	56	32,75	115	67,25	173	25	14,45	148	85,55
	162	83	51,23	79	48,77	166	46	27,71	120	72,29

Data source: Anatomy lecturer in semesters 1, 3 and 5

From the data listed above and the results of a small-scale survey conducted by the researchers found that more than 65% of the first semester students did not pass the course, and this is evenly distributed in each class of medical faculty for anatomy courses, both theory and practice.

From the results of a study, there is the influence of learning interest on improving learning achievement, where the interest can increase learning achievement by 21.4% (Sudarmanto, 2010). Students' interest is more effective and more influential for learning achievement compared to the effort of learning, because with the interest, students can pay more attention and can be more active in learning. The low interest of students also resulted in a curious attitude towards the subjects of Anatomy Sciences and a sense of solidarity among students in Anatomy Science lessons. This condition is also coupled with the subjects that are considered difficult for most students and the less interesting learning process causes the students less appreciate the usefulness of the course.

Therefore, the authors designed a study with the title: "The Description of Medical Students' Interest and Achievement on Anatomy at Faculty of Medicine *Universitas Kristen Indonesia*". The purpose of this research is to know the description of interest and achievement of medical students on Anatomy. So a useful further research can be done to improve the students' learning interest on Anatomy and other courses.

LITERATURE REVIEW

Education plays an important role in the development of quality human resources. Quantitatively, the progress of education in Indonesia is quite encouraging, but in quality, the development of science has not been evenly distributed (Sukamadinata, 2007). From this learning process then learners will get the learning result which is the direct impact of learning events

and teaching and learning process between students and teachers.

To be able to see the success of the process of teaching and learning activities, all factors related to lecturers and students must be considered. Starting from the behavior of lecturers in teaching up to student behavior as a reciprocal of the results of a teaching. Student behavior when following the teaching and learning process can indicate the student's interest in the lesson or vice versa, he was not interested in the lesson. This student interest is one of the signs of interest. Furthermore there are some notions of interest include: Interest is the tendency to always pay attention and remember something continuously, this interest is closely related to feelings of pleasure, because it can be said that interest occurs because of the attitude of happiness to something, people who are interested in something means he his attitude is pleased with something (Sabri, 1995). Interest is the tendency of the soul to something, because we feel there is an interest in it, generally accompanied by feelings of joy about it (Marimba, 1980). Interest is a high tendency and excitement or a great desire for something (Shah, 2001). Interest or interest may be related to the motive that forces us to tune in or feel attracted to people, things, activities, or can be effective experiences stimulated by the activity itself (Abdul, 1993). Interests are a source that encourages people to do what they want when they are free to choose (Hurlock, 1995).

Of the five meanings can be concluded that interest will arise when getting stimuli from the outside. And the tendency to feel attracted to a field is sedentary and feels a happy feeling when it is actively involved in it. And this happy feeling arises from the environment or comes from an interesting object. With this explanation, if a lecturer wants to succeed in doing teaching and learning activities should be able to provide stimulation to the students that he is interested in following the learning process. If the student already feel interested to follow the lesson, then he will be able to understand easily and vice versa if students feel not interested in doing the learning process he will feel tortured to follow the lesson.

Interest has several aspects including; cognitive, affective, and psychomotor aspects. Based on these descriptions, the interest in an anatomy subject that a person possesses is not innate, but is studied through a process of cognitive assessment and a person's affective judgment expressed in attitude. Relation to student interest then the indicator is as a monitoring tool that can provide a clue to the direction of interest. There are several indicators of students who have a high learning interest include: feelings of pleasure, attention in learning, learning materials and attitudes of lecturers are interesting, as well as the benefits and functions of subjects (Imran, 1996).

One of the driving forces in the success of learning is interest, especially high interest. That interest does not appear on its own, but many factors may influence interest. There are several factors that may affect student's learning interest, such as: a) motivation, b) learning (Singgih, 1989), c) learning materials and attitudes of lecturers (Slamento, 1991), d) family, e) social friend, f) (Crow and Crow, 1988; Dalyono, 1997), g) ideals, h) talent, i) hobbies, j) mass media, k) facilities

Interests are divided into 2, namely: a) Primitive interest is also called biological interests, namely the interest that revolves around food and freedom of activity. b) Cultural interest is also called social interest, ie interest derived from higher-level deeds (witherington, 1999).

The interest of a person can be classified into 3 as follows: a) Low if someone does not want the object of interest, b) Medium if someone wants the object of interest but not in the immediate time, c) High if someone really wants the object of interest in the immediate time (Nursalam, 2003).

The ways that can be done to generate student interest are as follows: a) generating a need, b) connecting with past experience, c) providing opportunities for better results, d) explaining to students , the reasons for a subject area included in the curriculum and its usefulness for life, e) linking the subject matter with student experiences outside the campus, f) showing enthusiasm in teaching the subject of study, g) encouraging students to view learning on campus as a task not necessarily suppressing, so students have the intensity to learn and explain the tasks as well as possible; h) create a climate and atmosphere in the classroom that is appropriate to the student's needs; i) reproduce in the shortest time possible; j) use the form of competition competition) between students, k) intensive use like praise, ha diah naturally.

According Sardiman there are several forms and ways to foster interest in learning activities on campus. Some forms and ways of interest include: 1) Giving a number, 2) Gifts, 3) Competitors, 4) Repetition, 5) Knowing outcomes, 6) Praise, 7)

Punishment 8) Passion to learn, 9) Interests, 10) A recognized goal (Sudirman, 1990).

Furthermore, will be presented some definition of learning submitted by experts. Some of them are; "Learning is a change in a person that comes about as a result of experience" *(*Woolfolk & Nicolich*, 1984)*. That is, learning is the process of changing a person's behavior that arises as a result of experience. While Sujana said that learning is a change as a result of the learning process that can be shown in various forms such as changing knowledge, skills and abilities, reactions, acceptance and other aspects that exist in the individual (Sujana, 2004). Meanwhile, according to Slameto that learning is an attempt by a person to gain a whole new change of behavior, as a result of his own experience in interaction with his environment (Slamento, 2003). Muhibbinsyah added that learning is the stage of change in the overall behavior of individuals which is settled relatively as a result of experience and interaction with the environment that involves cognitive processes. So also according to Soemanto definition that learning is a process where behavior is caused or changed through practice and experience (Soemanto, 1990).

Based on some opinions above that learning is a conscious and routine activities conducted on a person so that will experience individual changes both knowledge, skills, attitudes and behavior resulting from the process of exercise and experience of the individual itself in interacting with the environment.

Learning achievement is a sentence consisting of two words, namely "achievement" and "learning", has a different meaning. To understand more about the meaning of learning achievement, researchers describe the meaning of both words. Achievement is an activity that has been done, created either individually or in groups. Another suggestion is that achievement is a result or in a shorter definition that achievement is a "result that has been achieved" (W, J, S, 1987). In line with the above understanding, achievement is a result that has been achieved from what is done / already cultivated (J.S Badudu and Sutan, 1994). From the above understanding that achievement is the result of an activity a person or group that has been done, created and menyenagkan heart obtained by way of work.

Learning achievement is the result of a process in which there are a number of factors that affect each other, the high low student achievement depends on these factors. There are various factors that affect the process and the results of student learning on campus, the outline can be divided into two parts, namely (Sabri, 1995); 1) internal factors (factors from within students), ie the state or condition of the physical and spiritual students, and 2) external factors (factors from outside the student self), consists of environmental factors and instrumental factors as follows. Indicators of student achievement in this study will be obtained from the assessment in terms of cognitive, affective and psychomotor aspects are summarized in the student test scores in the field of anatomy (Gronlund, 1985).

Anatomy courses as subjects that form the basis of all medical courses (Abdullahi, 2012; Nguyen, 2014; Sturges and Maurer, 2013) and also have close links in other fields of health sciences such as; normal and pathological physiology to genomics, pharmacology, biochemicalimplications of laboratory medicine for the patient's therapies, the physics of gas in the lungs, cell-level transport of oxygen for the acutely ill patient, as well as the human experience of illness and normal growth and development –and much more (Benner, Sutphen, Leonard, and Day, 2009) must be understood or mastered by all medical students without exception. Anatomy as one of the Basic Medical Sciences is needed in studying and developing clinical medicine. Anatomy studying the shape, structure and location of organs, its position alongside other basic sciences, in this case is Physiology (body function), Biochemistry (biological process) and Histology (micro anatomy) which is actually part of the science of theatomy also.

Basically, Anatomy courses are taught in semesters 1 to 5 semesters, where the theory and laboratory practice are incorporated in the two semesters. Anatomy course is basically a course that should be conditional ie the student must first pass the course before entering the other medical subject (Abdullahi & Gannon, 2012; Sturges & Maurer, 2013). In addition, anatomy courses are also the basis for all health-related courses such as nursing, radiography, physical therapy assistants, occupational therapy assistants and many others. To be successful in the health profession, then a student should have good anatomy knowledge (Sturges & Maurer, 2013). It has been documented in previous studies that good achievement in anatomy courses has a strong relationship to the success of future health programs (Crane, 2013,

Harris, Hannum, and Gupta, 2004; Maurer, Allen, Gatch, Shankar and Sturges , 2012).

Anatomy education fosters essential abilities for someone who will connect with the patient, and many of these abilities are not found in the same degree in other disciplines in the medical curriculum. In studying the science of Anatomy, students are introduced with the use of technical language description which is the basis of all medical terminology. In addition, the professional information received by students in Anatomy study allows him to understand the functional and clinical lessons. Anatomy is a significant foundation for the pathology and the material studied in Anatomy can help in establishing an appropriate diagnosis and assist in acting safely in emergency situations in clinical practice.

In addition to the observations found by the researchers, Abdullah and Gannon (2012) also found that almost all students who take the course has a low achievement. Harris also found that one-third of the students he taught earned D or F scores, and furthermore 8% (9 out of 107 students) dropped out of anatomy courses. While Maurer found that 50% of the students who took anatomy courses scored C in the class; so they lack of quality in the health program, then many of them were drop out.

RESEARCH METHODS

This research was conducted at *Universitas Kristen Indonesia* in Education Medical Faculty Study Program and was done in November 2017 - March 2018. In this research, the writers used descriptive qualitative research, and occurrence that happened in the field, and the technique of analyzing the data was qualitative analysis by describing the situation and description of the data found (Naibaho, 2016). The subjects in this research were the students who were in the first semester, third and fifth from 2015-2017 batches which were amounted to 110 students. The research instruments used in this study are documents, questionnaires and interviews.

RESEARCH RESULTS AND DISCUSSION

From the total questionnaires (110 questionnaire sheet) filled out by the 110 students, then the student's answers are classified as follows:

Table 2. Classification Student's Answer Score Average (1st Semester)

clarification	**frequency**	**(%)**
always	386	24.75
often	677	43.42
sometimes	378	24.24
never	118	7.56
total	1559	**100%**

Be hold on the following diagram:

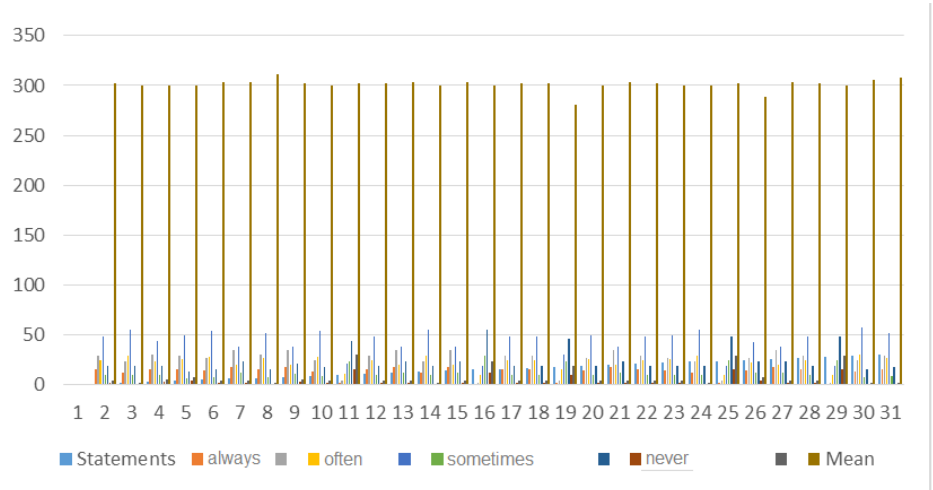

Diagram 1. Classification of Student's Answer Score Average (1st Semester)

The diagram above shows that 78% of students in the 1st semester have a high interest in learning anatomy courses, but if they are concerned with the results they get at the end of the semester then 50% of the first semester students do not graduate in the course so they have to take remedial exams. It can be concluded that in fact, the failure of the students of first semester is not majorly caused by their low interest in studying anatomy subjects.

Table 3. Classification of Student's Answer Score Average (3rd Semester)

Clarification	**frequency**	**(%)**
Always	283	26.95
Often	459	43.71
sometimes	207	19.71
Never	101	9.61
Total	1050	**100%**

Be hold on the following diagram:

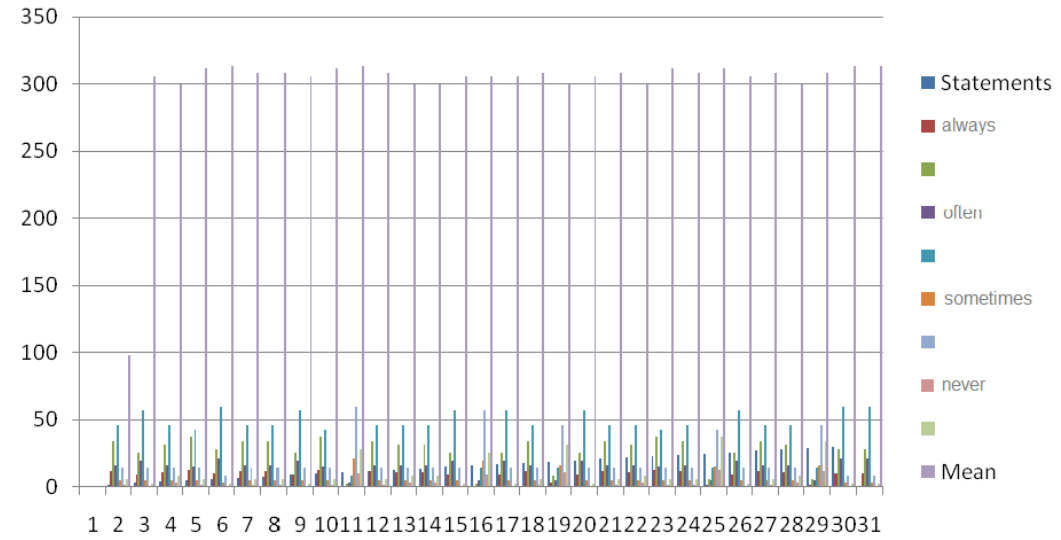

Diagram 2. Classification of Student's Answer Score Average (3rd Semester)

The above diagram shows 71% of 3rd semester students have a high interest in learning anatomy courses. When compared with the results of the study they obtained from anatomy lecturers, it was found that 50% of students did not reach the prescribed graduation limit in the course. This resulted in all students who did not achieve the minimum score criteria should follow remedial. From this analysis it is found that the failure of the 3rd semester students in the Anatomy course was not due to their low interest in learning Anatomy, but caused by other factors which are not mentioned/analyzed in this study.

Table 4. Classification Student's Answer Score Average (5th Semester)

Clarification	**Frequency**	**(%)**
Always	229	32.62
Often	273	38.88
sometimes	120	17.09
Never	80	11.39
Total	702	**100%**

Be hold on the following diagram:

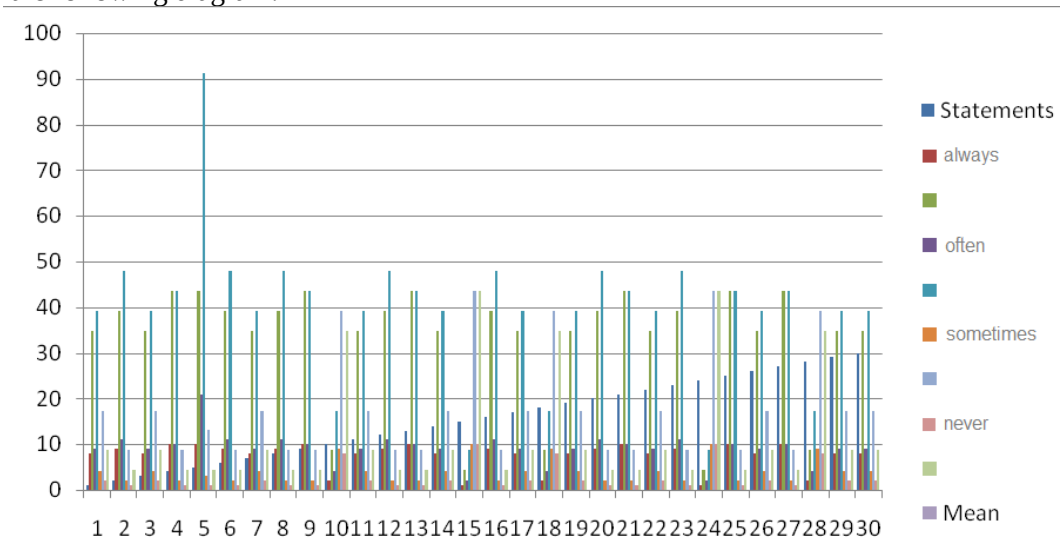

Diagram 3. Classification Average Score Student's Answer Semester 5

The diagram above shows the same thing with semesters 1 and 3, which is about 71% of 5th semester students have a high interest in learning Anatomy courses. When compared with the results of the study they obtained from anatomy lecturers, it was found that 50% of students did not reach the prescribed graduation limit in the course. This resulted in all students who did not achieve the minimum score criteria should follow remedial. From this analysis it was found that the failure of the 5th semester students in the Anatomy course was not due to their low interest in studying anatomy courses, but caused by other factors not mentioned/analyzed in this study.

Table 5. Classification Student's Answer Score Average (1st, 2nd and 3rd Semester)

Clarification	**frequency**	**(%)**
Always	893	27.06
Often	1408	42.66
sometimes	697	21.12
Never	302	9.15
Total	3300	**100%**

If made in the form diagaram it will get the following diagram:

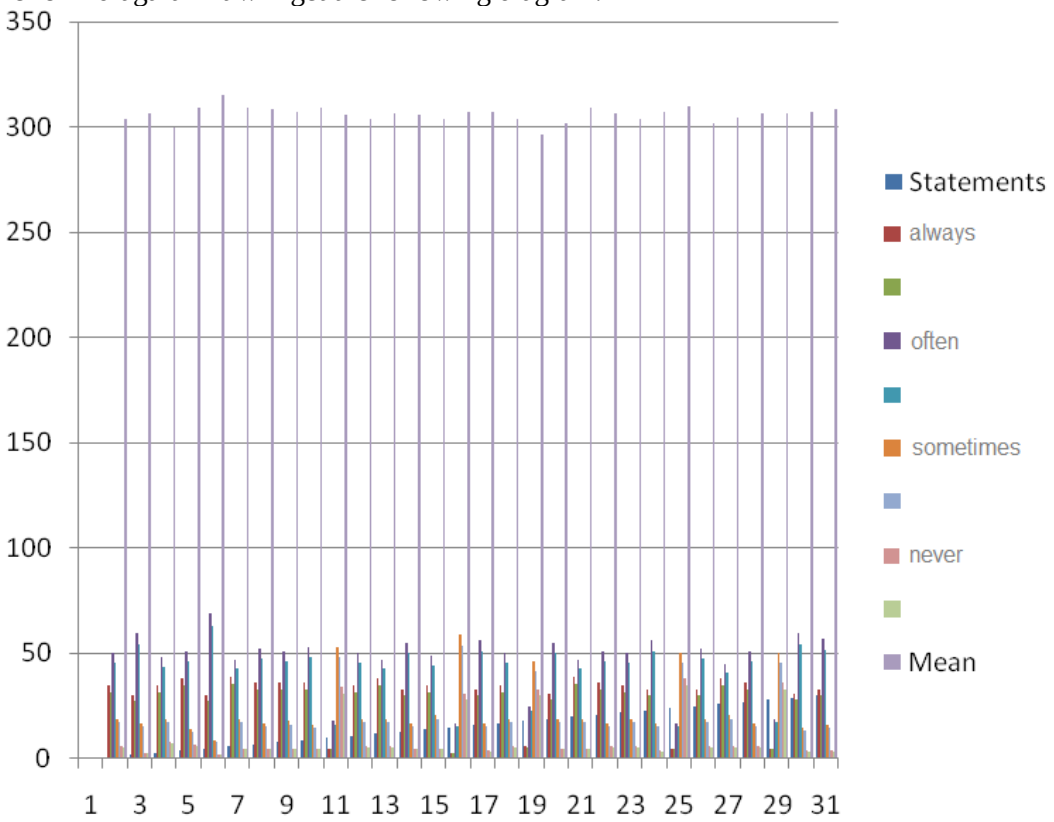

Diagram 4. Classification Student's Answer Score Average (1st, 2nd and 3rd Semester)

From the overall data taken in this study (Tabel 4) above shows that 70% of students with a total of 110 students who become respondents of this study, have a high interest in learning anatomy courses. When compared with the results of the study they obtained from anatomy lecturers, it was found that 50% of students did not reach the prescribed graduation limit in the course. It was found that both semesters 1, 2 and 3 have similar characteristics, namely: that their failure in anatomy courses is not due to their interest. If we look at the results of previous studies and theories used in the study of literature in this study, there are several factors that cause failure so that student achievement is low in a subject.

The factors are as follows; a) Motivation: A person's interest will be higher if accompanied by motivation, whether internal or external. According to Tampubolon interest is a blend of desire and ability that can develop if there is motivation. b) Learning: Interests can be gained through learning, this is in accordance with the opinion that the interest will arise from something known and we can know something by learning, because it is increasingly learning the broader the field of interest. c) Learning Materials and Lecturers' Attitudes: Factors that can generate and stimulate interest are the factors of lesson material that will be taught to the students. As Slameto has pointed out that interest has an enormous influence on learning, because if the lesson learned does not match the student's interests, the student will not learn as well as possible, since there is no appeal to him. Lecturers are also one of the objects that can stimulate and arouse students' interest in learning. Lecturers who are smart, kind, friendly, disciplined, and well liked by students are very influential in arousing student interest. d) Family: Parents are the closest person in the family, therefore the family is very influential in determining a student's interest in the lesson. e) Friends Intercourse: Through association someone will be influenced the direction of interest by friends, especially friends familiar f) Environment: Through the interaction of a person will be affected interest. This is underscored by the opinion expressed by Crow & Crow that interest can be gained from then as from their experience of the environment in which they live. The magnitude of environmental influences on growth and development depends on the circumstances of the child's own environment and physical and spiritual. g) Ideals: Every human being has an ideal in his life, including the students. Ideals also affect student interest in learning, even ideals can also be said as a manifestation of one's

interest in the prospects of life in the future. h) Talent: Through talent a person will have an interest. This can be proved by example: when a person from childhood has a singing talent, he will indirectly have an interest in singing. i) Hobbies: For everyone a hobby is one of the things that cause interest. j) Mass Media: What is displayed in mass media, whether print or electronic media, can attract and stimulate audiences to pay attention and imitate it. k) Facilities: Facilities and infrastructure, both at home, on campus and in the community, have positive and negative effects.

Thus it is found that student interest in anatomy courses in 1st, 2nd, and 3rd semesters at *Universitas Kristen Indonesia* is quite high. This is supported by data analysis which says that 70% of students have a high interest in learning. The factors that cause student failure in this course are from factors outside of interest as mentioned above.

CONCLUSIONS AND RECOMMENDATIONS

Thus, it can be concluded that the description of interest is not one of the factors that lead to low student learning outcomes, but rather tend to be influenced by factors beyond the interests of students. Thus, to look for factors that are more influential on the low learning outcomes, then this research needs to proceed to the research berkutnya, which is looking for what factors are the most dominant for students so that the problem of low student learning outcomes can be overcome by providing solutions that most appropriate.

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Virtual patients technology for quality improvement of medical personnel

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ABSTRACT

Background : Currently, the world especially Indonesia is facing serious problems in the term of health services. Every year this problem has always been a hot topic of conversation both in the public and the medical personnel itself. According to the data from WHO (2012), mortality rate in Indonesia is dominated for example cases of cardiovascular disease reaches 37% of all cases.

Result : Based on some articles from last 10 years about virtual patient and it's effect on medical education, and some rules about medical education and clinical clerkship.

Discussion : VPs becomes a time-saving training method in developing clinical skills for medical student to reduce the number of accidents, developing the promotive work, and better prognosis with proper supervision. In Indonesia, we can use ECG-based VPs. Using ECG-based VPs in curriculum might help medical students easier to train their skills in ECG, and might be able to reduce the mortalitiy rate of cardiocascular cases in Indonesia.

Conclusion : By implementing an ECG-based VPs within the curriculum, it can help medical student to improve their skills in ECG interpretation so they can properly diagnose and complete their competences and might reduce the mortality rate of cardiovascular cases in Indonesia.

Keywords : *virtual patients technology, health service, VPs, ECG-based VPs, cardiovascular*

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Currently, the world especially Indonesia is facing serious problems in the term of health services. Every year this problem has always been a hot topic of conversation both in the public and the medical personnel itself. According to the data from WHO (2012), mortality rate in Indonesia is dominated for example cases of cardiovascular disease, reaches 37% of all cases.[1] The efforts do not show a significant changes seen from the percentage of cardiovascular disease incidences in the year of 1990-2013 increased by 55% .[2,3] Competences of medical students for cardiovascular cases is very important. However, medical students think that they still not complete the competences for cardiovascular cases, especially the interpretation of ECG.[17]
World medical organizations have been trying some efforts to overcome this problem by utilizing the era of digital, by developing the technology as a medium of learning and medical training.[7] One of the technology that could be used for this purpose is the Virtual Patients Technology. Virtual Patients is a web-based learning media in which there are various cases that can be used as a medium of learning and training.[6, 13, 14, 15] In my opinion, using this Virtual Patients Techonolgy is a very effective way of overcome this problem.

In the medical context, the term of Virtual Patient (VP) refers to all types of software that enables clinical training for various cases.[8,10] In the world, VP has been used for many years in the context of : (1) health education, (2) electronic patients records, and (3) clinical research. The developement of VP has been conducted since 1991 with consistent annual case presentation as a references followed

by the development of interactive patient scenarios, VP games, high fidelity software simulations, standard human patients, high standard virtual mannequin, and virtual based patients. [4, 8, 12] This software is packaged to enhance knowledge by case presentations, understanding clinical reasons by interactive patient scenarios, co-operation by using VP games and high standard virtual mannequin, basic procedural and basic understanding with high fidelity software simulations and high standards virtual mannequin, and doctor-patients communication by the standard of human based patients and virtual-based patients.

The VP system is designed to make a realistic and interesting VP cases for basic skills training. Starts from seeking approval, history taking, asking for physical examination and supportive examination, interpretation of examination results, giving therapy and education. There are many types of VP has been currently in use, from the complex one to the very simple form. The forms of VP has been curently in use such as :

1. Case Presentation
   Review cases which related to patient to strengthen and apply medical concepts to the real situations.
2. Interactive Patient Scenarios
   Multimedia patient cases which designed to teach clinical reasoning skills such as performing a physical examination of diagnostics and it's interpretations.
3. Virtual Patient Games
   A truly virtual interactive clinical scenarios which designed to do a team training in high-risk situations.
4. Virtual Reality Scenario
   Virtual reality-based exercises to teach procedural skills in situations with various complexities. (eg. simulated virtual reality operations) .[7]

VP becomes a time-saving training method in developing clinical skills for medical student to reduce the number of accidents, developing the promotive work, and get better prognosis with proper supervision. [9.12] Complete data and easy to access support the data availability, ease of patient watch, and improve the competences as expected. Besides, VP can also create a sense of comfort and safe for medical student when faced with virtual cases, which if directly faced can threat the students itself. For example, when confronted with cases of Pulmonary TB and Diphtheria, which are known as highly infectious diseases, students should not be afraid of being infected from the patients because they are trained virtually and can be more focused when interacting and treating patients. So, it can increase self confidence when working directly in the real situation. And then, there are several other benefits that can be gained by using VP technology, include:

1. Simple operation
2. Can simplify and reduce the training period of medical student
3. Can help student to find rare cases
4. Cases can be repeated and modified according to the student's needs
5. Create the student's mental when facing the patient
6. To train softskill during history taking of the patient
7. Can be used as a media tester to monitor the student's progress in facing a case[6]

But behind all these benefits, VP has a weakness that may be a dilemma when starts using it. The budget needed for this VP is not cheap. To get a VP that can complete the learning needs the government attention and participation, developer of technology and competent medical personnel. In addition, there will be some problems, because the sensation when dealing with virtual patients will not be the same when dealing with real patients. So it's good if medical student keep exposed by virtual patients but interspersed with real patients.

During education, medical student should passed the clinical clerkship in the available health agencies. Clinical clerkship is a learning process of competency which is done in hospital, PUSKESMAS, and the related institution. In the process, students must passed in according to competences as a future medical personnel. To become a general practitioner, students should mastered all cases with 4th competences in the hope of being able to diagnose, and giving a complete fit therapy.[5] Based on the general rules of the clinical clerksihp, students are permitted to do what general practitioners do if only under the instructions and supervision of the medical staff. According to Undang-Undang No: 29 Pasal 35 Tahun 2004, this what general practitioners do :

1. Interviewing the patients
2. Do the physical and mental examinations
3. Do the supportive examinations
4. Making diagnose
5. Giving theraphy
6. Doing medical action
7. Write down the drugs prescription and medical devices

8. Mixing and giving drugs to patient

However, the problem is how can a medical student fulfill their competences completely if was not under the supervision and not all 144 diseases are found in practices during the clinical clerkship? What if some diseases are endemic and can only be found in certain areas? What if high-infectious diseases such as Pulmonary TB and Diphtheria become a threat when studying cases? Once more, using Virtual Patients Techonolgy is a very effective way of overcome this problem.

Oregon Health & Science University (OHSU) has implemented a Sim-Emergency Health Record (Sim-EHR) curriculum in which already use the VP technology inside. At first, it needs adaptation from students and takes a lot of consideration in terms of which VP cases will be use, technical precision, and the benefits. However during the program, it shows improvement in performance.[16] Indonesia can also start by creating a curriculum that requires the use of ECG-based VP during the clinical clerkship process in the form of a clinical skill. By implementing a ECG-based VP system within the curriculum, it can help medical student to improve their skills in ECG interpretation so they can properly diagnose and complete their competences and might reduce the mortality rate of cardiovascular cases in Indonesia.

There are many medical faculty in Indonesia, but can all be facilitated with this technology? There are still only some medical faculty in some areas that can run this VP based training. Then what about other areas that can not yet? Well, this problem can be solved by choosing ECG-based VP in case percentage and interactive scenario. This form can be use in artificial intelligence that has been inherent in society. Goverment of Indonesia and technology developers can starts by creating android based application of ECG-based VP. Scenarios can be arranged in accordance with defined medical service competences and in accordance with the cases commonly encountered in the community.

Based on the explanation above, we can draw the conclusion that the Indonesian health problems in cardiovascular disease can be overcome by complete the competences of the medical student through the ECG-based VP, so that the medical student will be trained to complete their competences and expertise in dealing with patients. Eventhough there might be some problems, the medical students have to do some adaptation to this technology and should be able to differentiate the situation when dealing with a real patient or virtual patient. Some forms of VP that can be used such as:

1. Case Presentation
2. Interactive Patient Scenarios
3. Virtual Patient Games
4. Virtual Reality Scenarios

Some of the benefits that we can get when using VP technology, include:

1. Simple operation
2. Can simplify and accelerate the training period of medical student
3. Can help student to find rare case
4. Cases may be repeated and modified according to the student's need
5. Create the student's mental when facing the patient
6. To train softskill during history taking of the patient
7. Can be used as a media testers to monitor the student's progress in facing a case

By implementing an ECG-based VP system within the curriculum, it can help medical student to improve their skills in ECG interpretation so they can properly diagnose and complete their competences and might reduce the mortality rate of cardiovascular cases in Indonesia.

By the use of VP technology by the medical student, then the quality of health services in Indonesia can be improved and will be able to create a healthier Indonesia. It is important to take advantage of the development of the digital world as a simpler tool, with no limited time and location to facilitate understanding, data collection, and quality improvement. Because later, we will replace the medical personnel that first struggled in the community by bringing the abilities and knowledge we gained during education and training so as to produce a new and useful innovations in the medical world.

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Bridging high school student to medical student

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INTRODUCTION

Matriculation is an orientation programme for new students at faculty of medicine Ciputra University which aim to introduce educational process at medical school and introduction to campus environment. There is a general agreement in the medical education community about the academic competencies that medical students should demonstrate when they matriculate. The general agreement is made in the United States, they are MCAT and UGPA. MCAT stands for Medical College Admission Test[6], which is developed by Association of American Medical Colleges (AAMC) to know applicant's way of critical analysis, reasoning skills, biological and biochemical knowledge and phsychological and social behavior[7]. While UGPA stands for undergraduate grade point average[12]. In Indonesia, we dont use MCAT nor UGPA, we use SPPDI (Standar Pendidikan Profesi Dokter Indonesia)[11] UU no. 20 year 2013 about medical education[8] and SNPT (Permenristek dikti no. 44 tahun 2015). SNPT (Permenristek dikti no. 44 tahun 2015) talks about national standards of higher education[9].
Medical faculties are required to have an open policy regarding new student admission selection to take in only students who are fit in academic talents and skill.. Aside from excellence in academic setting, students also need other skills to be prepared for medical school. Medical curricula use SPICES method which is student-centered and problem-based, both entails student to be critical in thinking and also, sharpen their ability in problem-solving[10]. Briefly, PBL or problem based learning enables students to learn while engaging actively with meaningful problems[3]. Students are given opportunities to solve a problem in a collaborative setting. Train its mental for learning habits through practice and reflection.on the other hand, student-centered learning or SCL is a direct way to engage students to be active in learning process.for example, brain storming in groups. which is usually conducted in small groups to encourage participation[4].This learning environment is not common in Indonesia K-12 education, hence, adaptation process is required.

Matriculation at FMCU is used to optimize student's preparation mentally and physically once the school year begins; introducing students to new ways of learning at medical school, cue in what are their demands, familiarize students with PBL system and introducing learners to mind mapping appliance and scientific writing. Other advantages are social benefits and peer is proven to aid learning problems. Peers had the effect on individuals, usually students whom attend the same school would share similar observed and un-observed characteristic. Such as motivation, affecting their preference, skill and abilities[5].
In Ciputra University matriculation programme is held for 7 days. activities and schedule in matriculation programme is introduced by the committee. The schedule include : teaching medical-themed song about future lessons, getting direction from the lecturer on how to mind map for oral exam, Introduction to SKDI (Standar Kompetensi Dokter Indonesia)[13] and education on how to make a scientific report and good reference to avoid plagiarism. The Committee have a disciplinary team called ephineprine, its task is to tcrack down fouls with atribute, timing and attitude form participants. Being a doctor must have good moral, integrity and profesionalism.
the participants can gave feedback and suggestion to matriculation Committee programme about this programme and can be evaluated for better service next year. The feedback can also be addressed to lecturer, staff and the PBL curriculum to make it even better.

METHODS

We are using a quantitative questionnaire via Kahoot.Why Kahoot? Because it can be completed simultaneously and can be done Live in class. Doing questionnaires live had its advantages, for example : to minimize ignorant correspondents and get the results right away[14]. The questionnaire, had 15 'yes or no' questions about campus introduction,

lecture, curriculum, tutor performance, matriculation schedule and intersting material in matriculation programme. The questionnaire were given to the student afterclass in the classoom.the respondents are, student that had participated in matriculation last year. We analysed the quantitative data result by SPSS (Statistical Package for the Social Science) which is the most popular statistical packages which can perform highly complex data manipulation and analysis with simple instructions.

RESULTS

The response rate was 92% with 50 students filling in the provided questionnaire. These students had participated in the matriculation program in previous semester. Forty-six questionnaires (95.8%) were from students who had participated fully throughout the whole week of matriculation program and the other four (4.2%) were students who participate partly throughout the whole week of the matriculation program. Thirty-four (70.8%) of the respondents were female. At the time the matriculation occurs, student's age vary from 16-17 years old (56.5%), 18 years old (32.6%), older than 18 years old (8.7%) and younger than 16 years old (2.2%).

Students' Opinion on the Matriculation Program

In a span of a week of the matriculation program, 93.5% of total respondents felt there was a significant difference from the learning process as a high school student to a medical school student and 2.2% of total respondent didnt find any differences. Amongst the students who found a significant difference, 67.4% chose that the difference was from the studying method, 13% chose interaction process with the lecturers, 10.8% chose finding the materials from lecturers and the other 6.5% chose the assignments given. The most difficult adjustment from high school to medical school include; the study material (56.5%), the schedules (19.6%), scoring (13%) and social interactions (10.9%). Thirty-nine students (84.8%) found the matriculation program was helpful in adapting to medical school while six students (13%) found it was no help.

Figure 1. "Do you remember the material given in the Matriculation Program?"

Perceived Benefits by Students

Twenty-five students (54.3%) agreed that the matriculation program was similar to daily learning process, yet twenty students (43.5%) disagreed. Among those students, 78.3% of total respondents concluded that they would not be ready for the medical school learning process without the matriculation program and 17.4% of respondents concluded that they would be ready regardless of the matriculation program. there were few materials that were lacking from the matriculation program, 52.2% of total respondent chose to add clinical skill laboratories while the other 21.7% of total respondents chose practicums, 10.7% chose Small Group Discussion (SGD) and the remainder 8.7% chose lectures.

From day one activities, 21.7% students found the curriculum introduction was the most useful while the 10.8% chose campus introduction, 8.7% chose

introduction to lecturers and 4.3% chose introduction to scoring methods and code of conducts. During the matriculation program, students were introduced to some methods of studying. Among those study methods, 63% chose SGD was the most useful, 15.2% chose the learning process in university, 10.9% chose determine resource and 8.7% chose note taking. Other than study methods, students were also introduced to technologies and resources which potentially help during the study process. The resources that were known by students previously were Microsoft Office which include Word, Excel and PowerPoint (41.3%), Edmodo (34.8%), Mind Mapping (10.9%) and Google which include Calendar, Mail, Forms and Drive (8.7%).

Determine resource which was one of the study methods introduced in the matriculation program. 26% of respondents use this method to answer learning issues on SGD, 21.7% of respondents use it to write practicum reports, 17.4% of respondents use it to write SGD reports and 13% use it for reading materials outside of the textbooks used by lecturers. Another study method introduced was note taking, 43.5% of students reported using this method by 50-70% on lectures, 23.9% of students reported using it by 70-90% while 19.6% of students reported using this method by less than 50% and 8.7% students reported using this method by more than 90%.

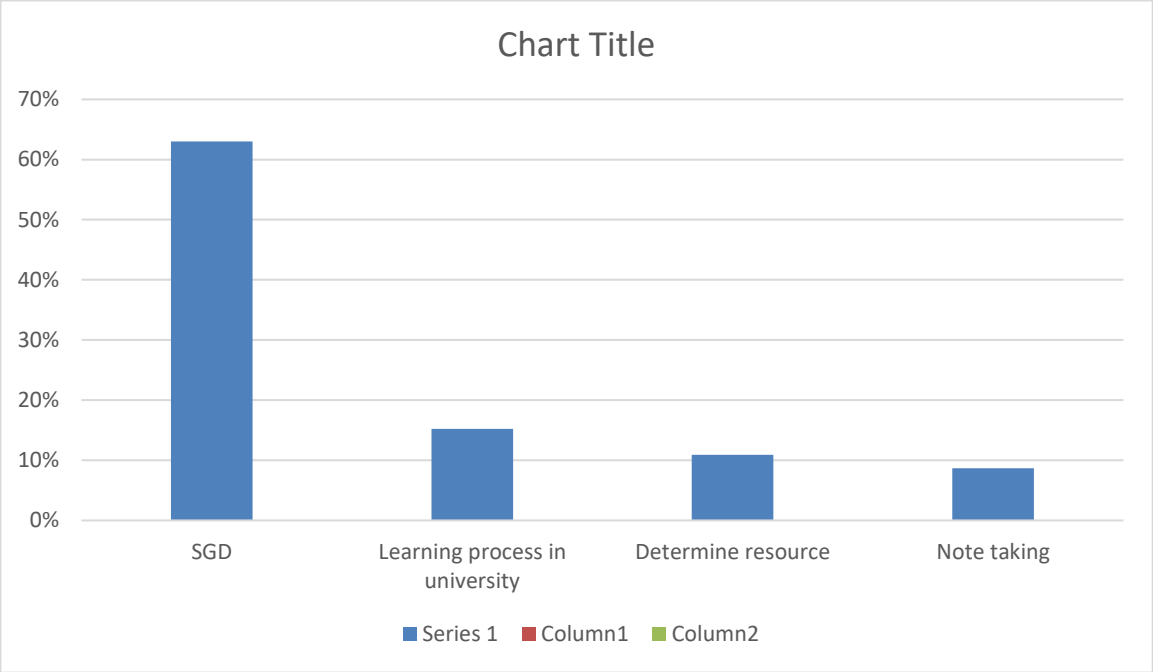

Figure 2. Most useful study methods introduced in the Matriculation Program.

DISCUSSION

Students' Interest in Matriculation Program

The students were interested in the matriculation program because it helped them to adjust smoothly to medical school. The strongest factor that differ high school and medical school was the study method. In high school, the usual curriculum is a mathematics learning process with science, technology, engineering, mathematics approach (STEM) [15]. This was also supported by the materials given. Other factors include interaction with lecturers that also played a large part on the learning process as it signifies the motivation received by students from the lecturers. The last factors were the difficulties in receiving materials discussed by the lecturers and also the assignments given. Students found it was the most difficult to adjust to the study materials as it includes a broader form of knowledge than what they used to received in high school. In correlation, they also found it difficult to adjust to the schedules which brought longer than in highschool school hours and smaller time span per semester, scoring for each assignment, tests and also the social interactions amongst their peers.

Perceived Benefits

From the matriculation program, the students get to experience the medical school learning process

before starting the semester with the matriculation program. The matriculation program was made as a simulation to help high school student's transition into medical student. More than three quarters of the students agreed that without the matriculation program, they would not be ready for the learning process in medical school.

The matriculation program helped introduced students to the way of the medical school with introduction towards the daily learning process which is a gateway to help students understand better at what goes on during the day to day conduct of medical school. Campus introduction entails a tour of the campus to show where students needed to be on certain classes and how they can get access to the library and also the way the university system works. Alongside those, there was also an explanation in which the lecturers and the faculty scored assignments, student's daily actions in meetings such as SGD and inform the students of the code of conducts in medical school which includes dress code and other rules.

Students will also get to experience the different methods of studying used in medical school including SGD which was a session of students in small groups discussing over a case scenario created by the lecturers around the topic that was discussed in that semester, learning process in university, determine resource where students were taught how to find sources that was both significant and credible for reading materials, writing reports and also note taking where students can write down what they thought would be important being said by the lectures.

The matriculation program also introduced the technologies used for the learning process such as Microsoft Office for writing reports and to assist presentations, Edmodo which the university use to post schedules, scores and lecture materials, Mind Mapping for presentation and help students get a better grasp on the materials given by lecturers and also Google Calendar to make event with other people via email, Google Mail which the university provided for each students as a student email where they post announcement and notification, Google Forms for making, answering and commenting on surveys and lastly, Google Drive to post large files and videos.

CONCLUSIONS

The result of the finished Matriculation program questionnaire is that matriculation program gave big effects and prepare them to keep up with PBL curriculum on faculty of medicine. Overall Student viewed the matriculation program at Faculty of medicine Ciputra University the positively and students do gain notable benefits.

TAKE HOME MESSAGE

Many factors could be included in the matriculation program to help better the transition which included clinical skill laboratories which included practical clinical training such as investigation skills, patient management, clinical reasoning and many more. Also other factors needed to be add includes practicums skills, a more thorough SGD introduction and lectures.

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Development of low cost ultrasound phantom for simulation training in follicle growth monitoring during control ovarian stimulation

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ABSTRACT

Background : Phantoms are important for clinical procedure simulations for residents including ultrasound phantoms. The model/mannequin or computer simulator is rather expensive compared to homemade ultrasound phantoms. Many advantages can be retrieved from homemade ultrasound phantoms such as low cost, easily reproducible and easily made. Residents must demonstrate their skill in performing and interpreting follicle growth when using ultrasound during control ovarian stimulation or predicting the ovarian reserve through anthral follicle counting. The aim of this research is to develop low cost ultrasound phantoms for simulation training in follicle growth monitoring.

Method : Anthral follicle count phantom development. The artificial follicles were made from the fingers of latex gloves filled with water and tightly compressed with sizes between 5 mm till 10 mm in diameter and knotted off at the end. The gloves were turned inside out and poured with liquid gelatin that embeds the 15 till 25 numbers of follicles within each glove. The gelatin mixture was created using 100 grams of gelatin powder in 200 milliliters of water. The artificial ovarieswere then left to cool and harden in the refrigerator. Follicle growth monitoring phantom development. By using the same technique, we created artificial ovaries with different sizes and number of follicles, depending on the phase of menstrual phase simulation, time of monitoring ovulation and dosage of drugs for ovarian stimulation. The sizes of follicles vary from 10 mm till 18 mm in diameter (this size is a critical point in deciding induction of ovulation). Artificial ovaries were then placed within a hollow female pelvic mannequin model.

Results : Transvaginal ultrasound results showed the ability of artificial ovaries as an ultrasound phantom for simulation training. The observer can count every single follicle in artificial ovaries that mimics development of follicles in the 3rd day of menstrual cycle. Anthral follicle count can be done on this phantom model. Counting the number of follicles and measuring the sizes can be done as well on the artificial ovaries. It was easier for the observer to count on these ovaries than on the ovaries that were filled with artificial anthral follicles due larger size of the follicles. The next step is validation of this phantom for residents.

Conclusion : The low cost ultrasound phantom for simulation training in follicle growth monitoring during control ovarian stimulation were easy to develop and resulted nice ultrasound imaging.

Keywords : *simulated learning, low cost learning media, ultrasound phantom, simulation training, follicle growth*

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INTRODUCTION

Phantoms are important for clinical procedure simulations for residents including ultrasound phantoms. The model/mannequin or computer simulator for commercialization is rather expensive compared to homemade ultrasound phantoms(Cooper and Taqueti, 2008). On the other hand, mannequin simulation models require maintenance (He *et al.*, 2013). Many advantages can be retrieved from homemade ultrasound phantoms such as low cost, easily reproducible and easily made.

The usage of the ultrasound phantoms were published in many journals. For example, superficial soft tissue abscess ultrasound phantom have been made using gelatin and sugar-free psyllium hydrophilic mucilloidfibreby Lo et al. They successfully developed inexpensive and easy reproducible way to introduce identification of abscesses.(Lo, Ackley and Solari, 2012). He et al used the same materials to develop artificial gallbladder. Models were created of normal bladder anatomy and various gallbladder pathologies. With these models they can train users to obtain and interpret sonographic images of gallbladder (He *et al.*, 2013).

Ovarian anthral follicle count (AFC) can be done using transvaginal ultrasound (US) for ovarian reserve evaluation. Various reasons such as infertility assisted reproductive technique, predicting risk of menopause e.t.c need AFC for supporting diagnosis and management. Those reflect that AFC is good surrogate marker. Diameter of the anthral follicles range from 2 to 10 mm. Anthral follicle in diameter less than 2 mm is debatable too include in AFC or not include. (Coelho Neto *et al.*, 2018)

AFC is important in clinical setting. Commonly, in normal fertile women, women age 25-34 years, 35-40 years, and 41-46 years have 15 , 9 and 4 follicles (median value) respectively. By using this standard we can predict the response of ovaries and asses the chance of pregnancy following IVF(Scheffer *et al.*, 2003). Follicle monitoring during controlled ovarian stimulation is transvaginal ultrasound use for mature follicle detection. The study suggests that 20-40 exams are required to perform this analysis, and maybe also be required for counting anthral follicle count. (Coelho Neto *et al.*, 2018).Repeated exams to the patients will raise inconvenient feeling of the patients. In the other hand, residents must demonstrate their skill in performing and interpreting follicle growth when using ultrasound during control ovarian stimulation or predicting the ovarian reserve through anthral follicle counting.

With affordable ultrasound phantom and easy to maintain, residents can train by him/her selves to achieve the standard skill as gynecologist. The aim of this research is to develop low cost ultrasound phantoms for simulation training in follicle growth monitoring.

METHOD

Anthral follicle count phantom development. The artificial follicles were made from the fingers of latex gloves filled with water and tightly compressed with sizes between 5 mm till 10 mm in diameter and knotted off at the end. The gloves were turned inside out and poured with liquid gelatin that embeds the 15 till 25 numbers of follicles within each glove. The gelatin mixture was created using 100 grams of gelatin powder in 200 milliliters of water. The artificial ovarieswere then left to cool and harden in the refrigerator.

Follicle growth monitoring phantom development. By using the same technique, we created artificial ovaries with different sizes and number of follicles, depending on the phase of menstrual phase simulation, time of monitoring ovulation and dosage of drugs for ovarian stimulation. The sizes of follicles vary from 10 mm till 18 mm in diameter (this size is a critical point in deciding induction of ovulation). Artificial ovaries were then placed within a hollow female pelvic mannequin model.

RESULT AND DISCUSSION

Transvaginal ultrasound results showed the ability of artificial ovaries as an ultrasound phantom for simulation training. Sonoluscent rounded images represented the follicles. The observer can count

every single follicle in artificial ovaries that mimics development of follicles in the 3rd day of menstrual cycle and developed follicles during control ovarian stimulation. Anthral follicle count can be done on this phantom model. Counting the number of follicles and measuring the sizes can be done as well on the artificial ovaries. It was easier for the observer to count on these ovaries than on the ovaries that were filled with artificial anthral follicles due larger size of the follicles (figure 1). To make small anthral follicles by using water bubbles covered with latex gloves were not easy. We noted that the smallest anthral follicle were 0.8 mm in diameter. Female pelvic mannequin helped trainee to get sensation like doing transvaginal ultrasound examination to the patient (figure 2). Figure 2a showed the artificial ovaries with different sizes. Ovaries marked with B letter were developed for follicle growth phantom, and ovaries marked with C letter were developed for anthral follicle count phantom.

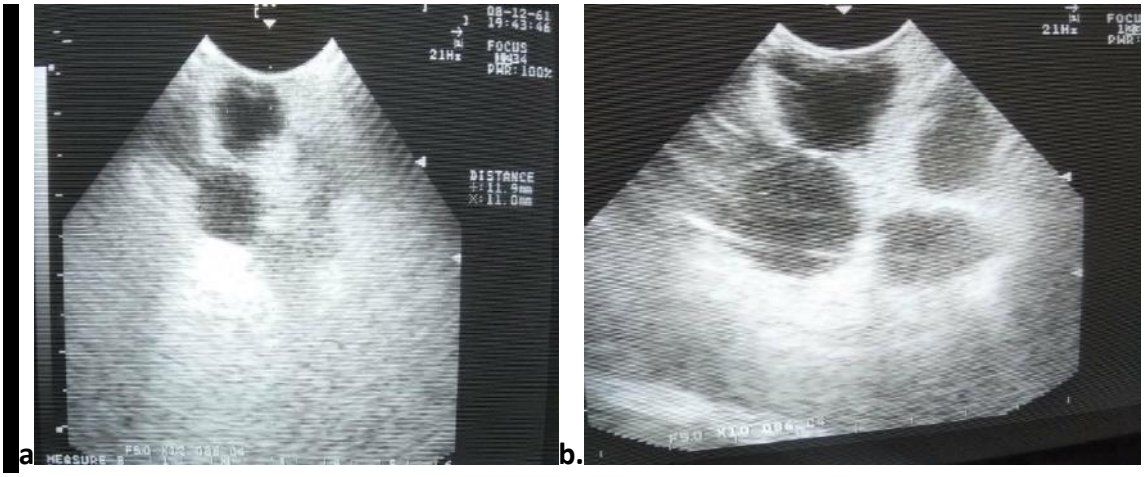

Figure 1.a and 1.b. Transvaginal ultrasound imaging for anthral follicle count phantom (a) and follicle growth monitoring phantom (b). Follicles can be identified easily with a sonoluscent rounded image. Those images were easy to count as well.

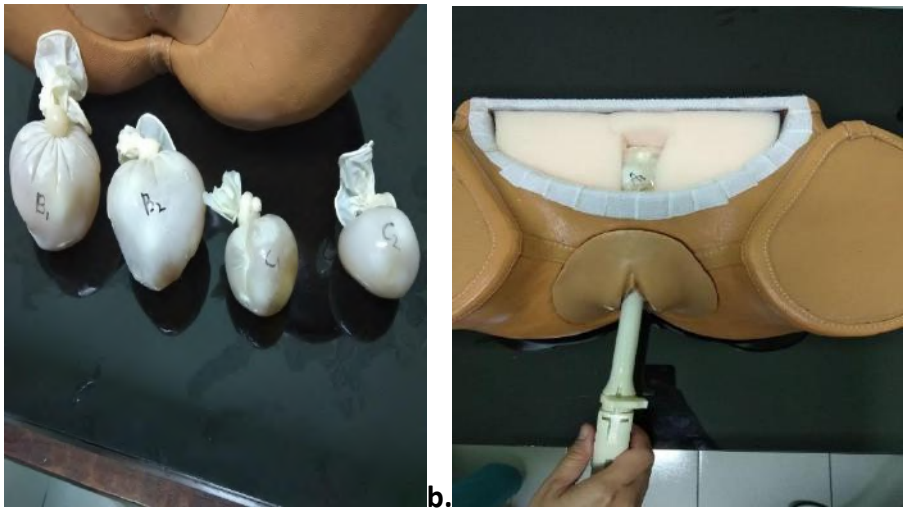

Figure 2a and b. The artificial ovaries (a) and placement of artificial ovary in pelvic mannequin (b). Artificial ovaries made from gelatin and water bubbles covered by latex gloves.

The cost of artificial ovaries spent less than Rp 150.000. This low cost ultrasound phantom was feasible and affordable to adapt in low source setting of medical education especially in developing country. The computerized ultrasound phantom PickUpSim™ that can be used as follicle growth monitoring as well but the price must be more expensive. The gelatin artificial ovary cannot be stored in room temperature for long time because the gelatin will rot.

CONCLUSION

The low cost ultrasound phantom for simulation training in follicle growth monitoring during control ovarian stimulation were easy to develop and resulted nice ultrasound imaging. Nevertheless some backwards such as limitation to make small anthral follicles and the gelatin cannot be store in room temperature for long time. The next step is validation of this phantom for residents.

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Development of an artificial model for ovum pick up simulation

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ABSTRACT

Background : Assisted Reproductive Technology (ART) consists of procedures and treatments that include in vitro handling of human oocytes, sperm or embryos for the purpose of establishing a pregnancy [3]. As more couples seek ART and more clinics established [1], OBGYN residents/specialist consultants-in-training need training on the previously mentioned procedures. One of those procedures is the Ovum Pick Up (OPU). The aim of this study is to develop an inexpensive model as a training and educational tool for residents/specialist consultants-in-training for OPU simulation.

Method : The artificial follicles were created using the fingers of a latex glove filled with water and tightly compressed, creating a circular shape from the previous elongated shape, and knotted off at the end. The gloves were then turned inside out and filled with either agar or gelatin engulfing the artificial follicles. The Agar Mixture was created by gradually dissolving 14 grams of Agar powder in 800 milliliters heated water. The Gelatin Mixture was created using 100 grams of Gelatin powder and 800 milliliters of water. Both mixtures were then left to cool and harden in the refrigerator. The Gelatin mixture was then reheated using a double broiler and re-cooled. Both models were then placed within a hollow female pelvic model that contained artificial female labia, vaginal introitus and vaginal wall and tested as an OPU simulation. The OPU simulation aims to observe the success of follicle aspiration in both models using a double lumen aspirator needle with transvaginal ultrasound guidance.

Results : Against a transvaginal ultrasound probe, the artificial follicles within both models were visible on the screen. For the Agar-Ovarium Model, when pierced with the double-lumen needle, the needle could reach the follicle but the fluid could not be aspirated because the agar would clog the lumen when the needle passed through the agar medium that surrounded the follicles. For the Gelatin-Ovarium Model, the double-lumen needle was able to pass through the gelatin medium without getting clogged and able to pierce the artificial follicle and aspirate the fluid.

Conclusion : The Gelatin-Ovarium Model was the most favorable when used with a double-lumen aspirator needle with ultrasound guidance technique.

Keywords : *Assisted Reproductive Technology, ART, OBGYN, simulation, simulated learning*

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INTRODUCTION

Assisted Reproductive Technology (ART) consists of procedures and treatments that include in vitro handling of human oocytes, sperm or embryos for the purpose of establishing a pregnancy[3]. One of those procedures is Ovum Pick Up (OPU). OPU is an invasive procedure consisting of a transvaginal ultrasound guiding the needle through the vagina towards the fornix and piercing the ovarium, into the follicle and eventually aspirating the follicular fluid. Therefore, adequate training is needed for specialists who perform OPU. As more couples seek ART and more clinics are established[1], more qualified and experienced specialists are required. Thus, training programs on OPU should be conducted.

With our experience in a teaching hospital, OBGYN residents at a certain semester and specialist consultants-in-training can sit-in an OPU procedure with the IVF OBGYN specialist performing the procedure, perhaps even assisting the procedure. However, this does not provide the residents or specialist consultants-in-training with many opportunities to try and perform the procedure on their own.

There have been artificial models created as a training tool for OPU however, none have been seen in our teaching hospital. Not many artificial models are found in Indonesian teaching hospitals because they are quite costly and difficult in transporting from country to country. To our knowledge, no artificial model for OPU simulation has been manufactured in Indonesia. Therefore, we thought to develop an inexpensive artificial model that could be used for OPU simulation. Previous studies have been conducted in creating simulation or training models for other procedures[2]using gelatin thus we developed an OPU model using gelatin and a similar compound that is widely found in Indonesia, agar. We emulated the study's gelatin preparation.

MATERIALS AND METHODS

Artificial Model Design

First, we created the artificial follicles using standard latex gloves. We filled one of the fingers of the latex glove with tap water until the base of the finger. Once filled, we rotated the base of the finger slowly and continuously (Fig.1a) compressing the water towards the tip of the finger until it becomes a circular shape from an elongated shape (Fig. 1b). As the shape becomes circular, the latex gets more and more stretched, tightening the follicles, keep in mind that the latex shouldn't get too stretched to avoid rupture when knotted off. Once the shape becomes an adequately tight-stretched circular shape, knot off the rotated end (Fig.1c). Repeat the process for the remaining fingers (Fig. 1d). Once all of the fingers have become follicles, turn the glove inside out, holding all the follicles within the glove (Fig. 1e.1 & 1e.2). Place the inside-out turned glove, follicles within the glove, into a cup (Fig. 1f) and stretch the wrist band over the rim of the cup (Fig.1g) to make it easier for the agar or gelatin solution to be poured in. After the follicles have been prepared, we made the gelatin and agar solution.

Figure 1. Step by step development of artificial ovary filled with mature follicles made from water and gloves

For the gelatin model, we measured 800 mililiters of tap water and placed it into a pan. To dissolve the gelatin, the water needs to be hot but not boiling thus we heated the pan/water on a stove until steam was visible atop the water. While the water was being heated, we measured 100 grams of gelatin. A previous study used 12 packets of ¼-oz gelatin in 1 qt water[3], having a gelatin-water ratio of 1:11, however due to limited resources we were only able to use a pan amounting to 800 mililiters of water. We also believed that perhaps a 1:8 gelatin-water ratio would have a denser consistency and less likely to melt quickly at room temperature.

Once the water has steamed, slowly pour the gelatin powder into the water whilst stirring gently to completely dissolve the gelatin. Once all of the gelatin has been poured and dissolved, pour the gelatin solution into a rectangular container and refrigerate for 3-4 hours. Once the gelatin has hardened, remove the gelatin block onto another container, place it in a double broiler and wait for the gelatin block to melt but not boil. Once the gelatin has melted, pour the solution into the follicle-filled inside-out turned glove.

For the agar solution, we used two packets/sachets of Swallow Globe Brand agar powder, amounting to 14 grams of Agar powder, and dissolved it into 800 mililiters of

steaming water whilst stirring gently. Once all of the agar powder has dissolved into the water, we poured the solution in the follicle-filled inside-out turned glove. Contrary to the gelatin mixture, we did not have to use a double broiler for the Agar solution. 800 mililiters of water can fill 2-3 follicle-filled latex gloves.

Simulation Design

Before we conducted the OPU simulation, we placed the artificial follicle-filled ovarium into an artificial hollow female pelvic model. The model was created by the Anatomy Department, Faculty of Medicine UniversitasGadjahMada. The model consisted of the female labia, vaginal introitus and vaginal wall. The hollow pelvis was padded with foam keeping the artificial ovarium in place. The ovarium was then connected straight to the vaginal wall (Figure 2a). Anatomically, the placement of the artificial ovarium is not correct, however due to limited time and resources we were only able to create the model as described above. The Ovum Pick Up Simulation was conducted after working hours in the sterile OPU Procedure Room of Permata Hati RSUP Dr. Sardjito. We used standard OPU equipment such as the OPU suction machine, a double lumen aspiration needle and a 5cc syringe to irrigate the follicle. We used a transvaginal ultrasound to guide the needle for follicle aspiration. We began the simulation process by placing ultrasound gel on the transvaginal ultrasound and guiding it through the introitus towards the artificial ovarium (Figure 2b). Once the ultrasound has reached the ovarium, the double lumen will pierce the ovarium making its way towards the follicle to aspirate.

Figure 2. Placement of the artificial ovary in the female pelvic mannequin

RESULTS

When the ultrasound probe reached the artificial ovarium, the ultrasound waves were able to pass through the latex and the medium that engulfed the artificial follicles, whether filled with agar or gelatin, making the follicles visible on the ultrasound screen (Figure 3a). The double lumen was also able to reach and pierce the artificial follicles through the medium with the guide of the transvaginal ultrasound. For the Agar-Ovarium Model, the double lumen was able to reach the artificial follicles however when the suction power was turned on to aspirate the fluid, the fluid could not be aspirated. The use of the double lumen allows us to aspirate the fluid with one lumen and irrigate the follicle with the other lumen (figure 3). When we injected saline into the irrigation lumen, water turbulence could be seen on the ultrasound screen however when we attempted to aspirate the fluid once more using an empty 5 cc syringe, the fluid still could not be aspirated, thus we presume that fragments of the agar had clogged the aspirating lumen when passed through. The

Gelatin-Ovarium Model had a denser consistency. The double lumen needle was able to reach the follicles and successfully aspirate the fluid without being clogged. However, the follicular fluid was aspirated using a double lumen connected to a 5 cc syringe, not to an OPU suction machine. Both models would melt after 1 hour if placed in room temperature, thus continuous refrigeration is needed
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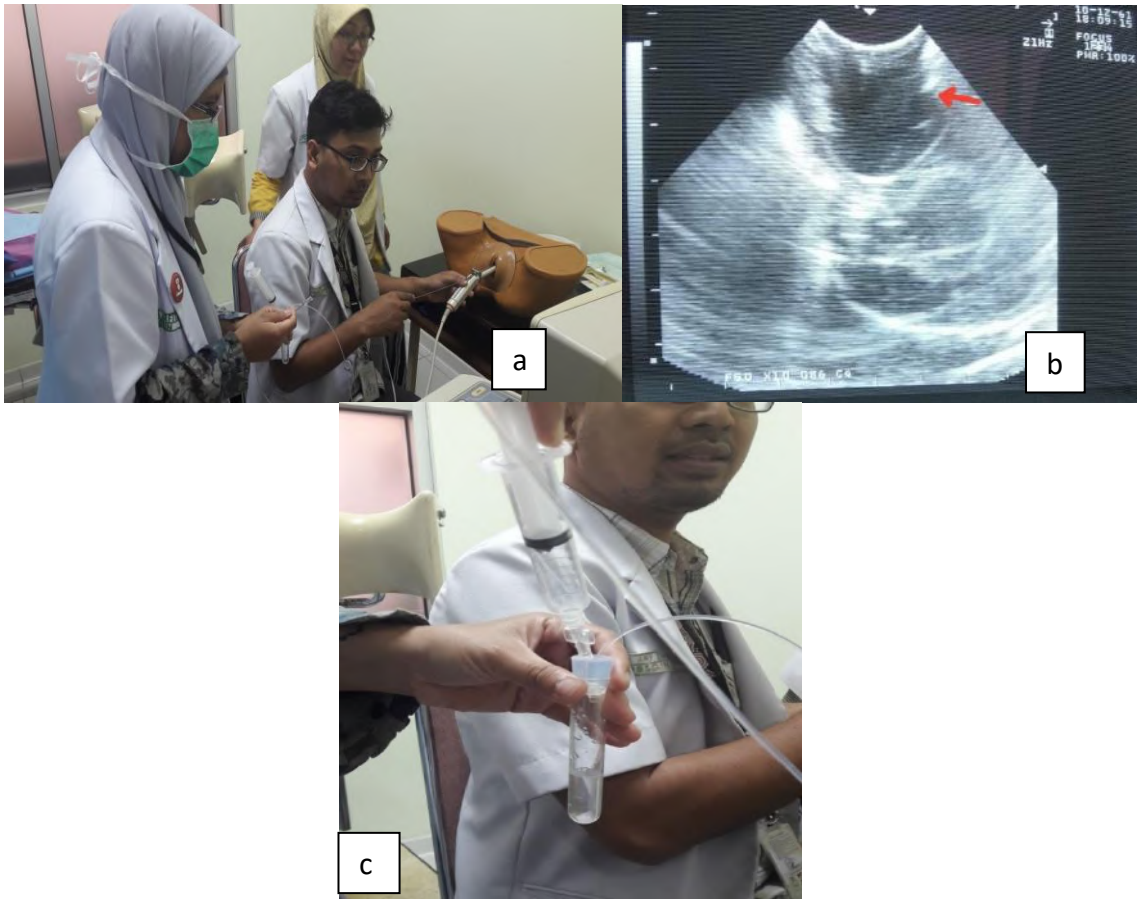

Figure 3. Application of phantom simulation has done by residents. Figure 3b showed the tip of needle puncture marked with red arrow. Figure 3c showed the water has been aspirated from follicle.

DISCUSSION

Simulation training in invasive procedures is needed in the field of medicine. Training using an artificial model can provide students or practitioners with skills needed before performing on a live patient. An artificial model can also provide the students or practitioners a calmer non-pressurized setting when practicing the procedure. As Assisted Reproductive Technology has become and is still becoming more advanced, not only in Indonesia but in other countries as well[1], training in ART procedures are needed. However, when searching for Simulation Models or Simulators for ART procedures such as Ovum Pick Up or Embryo Transfer not many have been developed and those that are available and commercialized are quite expensive. Thus, the traditional training method of "see one, do one, teach one" is practiced[2].

In order to progress from the traditional training method, we developed a cheaper model using gelatin and agar. Previous simulation models for ultrasound-guided breast procedures have been created thus we tried to emulate the study's technique[2]. Adjusting to the condition in Indonesia, where gelatin is not commonly found and not cheap as well, we tried to create a model using agar. However, gelatin is still the favorable medium when used with a double lumen needle. The only constraint with gelatin is that it is not

commonly sold in Indonesia and that to obtain the Gelatin-Ovarium Model the amount of time needed is approximately 17 hours as opposed to agar that is widely sold, cheaper and needs around half the time of the Gelatin-Ovarium Model. We briefly discussed whether Agar could be used with a single lumen needle, that way the lumen that was clogged with Agar could be unclogged when irrigated, however no further discussions have been conducted.

Since we had only just begun to develop a model, the simulation procedure was conducted by a licensed OBGYN Specialist Consultant that had IVF experience. With their experience they were able to use the transvaginal ultrasound, locate the artificial follicles, pierce the ovarium model and follicles and aspirate the fluid. Further studies should be conducted to validate this artificial model for OPU simulation training. One constraint however for this artificial model is that we only used one ovarium per simulation and the ovarium is placed proximal to the artificial vaginal wall, where the cervix should be thus making the model anatomically incorrect. An artificial model with complete female reproductive pelvic organs should be created for further testing and validation. Once validated, further studies should be conducted to test the model as a training model.

CONCLUSION

In conclusion, the Gelatin-Ovarium Model is more favorable than the Agar-Ovarium Model for OPU simulation. Artificial follicles are visible and aspiration of follicular fluid is possible in the Gelatin-Ovarium Model. Further testing should be conducted to validate the Gelatin-Ovarium Model and later on used as an OPU training model for residents. The Gelatin-Ovarium Model is time consuming to make but not expensive, although agar is cheaper.

TAKE HOME MESSAGE

A Gelatin-Ovarium Model can be used for OPU simulation.

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Table 1

Materials

- Gelatin
- Latex gloves
- Tap water
- Boiling pan
- 1 L volume rectangular container

Follicle Preparation

1. Fill one of the fingers of a standard latex glove with tap water
2. Compress the water-filled finger from an elongated shape into a circular shape by slowly and continuously rotating the base of the finger thus compressing the water towards the tip of the finger
3. Once the finger has become a tight-stretched circular shape, knot-off the end. Make sure that the latex is not too stretched to avoid rupture
4. Repeat steps for the remaining fingers
5. Once all 5 fingers are filled with water, circular-in-shape and knotted-off, turn the glove inside out
6. Place the inside out glove in a cup with the elastic wrist stretched over the rim of the cup to await the gel or agar solution to be poured in

Gelatin preparation

1. Measure 100 grams of gelatin
2. Measure 800 mililiters of water and place it into a pan, on stove, and heat until steam is slightly visible from the water
3. Dissolve the gelatin powder into the water whilst stirring slowly
4. Place solution into a rectangular container and refrigerate 3-4 hours
5. Remelt the harden gelatin using a double broiler, without allowing the gelatin to boil
6. Pour melted gel into the inside-out turned glove, that is in a cup, until all the follicles are engulfed (Gelatin-Ovarium Model)
7. Refrigerate for 12 hours
8. After the gelatin has harden, remove glove from the cup and knot off at the wrist end
9. Keep within the refrigerator until use

Agar Preparation

1. Use 2 Agar packets/sachets (14 grams; 7 grams/sachet) and dissolve into steaming water (800 mililiters)
2. Stir slowly to completely dissolve agar
3. Pour agar solution into inside-out turned glove until all the follicles are engulfed (Agar-Ovarium Model)
4. Refrigerate for 12 hours
5. After the agar has harden, remove glove from the cup and knot off at the wrist end
6. Keep within the refrigerator until use

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