



2nd ICHMS & 2nd LSC

PROCEEDING

PROCEEDING

The 2nd International Conference of Medical and Health Sciences (ICMHS) and The 2nd Life Sciences Conference (LSC) 2016

*"Towards a Better Quality of Life
through Interdisciplinary Research"*

Yogyakarta, 9th-10th December 2016
The Alana Hotel and Convention Center

ISBN: 978-602-757-793-0



9 786027 157793 0



PROCEEDING

The 2nd International Conference
of Medical and Health Sciences (ICMHS)
and
The 2nd Life Sciences Conference (LSC)
2016

*"Towards a Better Quality of Life
through Interdisciplinary Research"*

Yogyakarta, 9th-10th December 2016
The Alana Hotel and Convention Center

**The 2nd International Conference of Medical & Health Sciences
and
The 2nd Life Sciences Conference 2016**

TABLE OF CONTENT

COMMITTEE	viii
WELCOMING SPEECH	
Welcome Message from Committee	ix
Welcome Message from Dean	x
Welcome Message from Rector	xi
Welcome Message from the Head of Provincial Health Office Special Region of Yogyakarta	xiii
KEYNOTE SPEAKER OF INTERNATIONAL CONFERENCE	xv
REVIEWER	xvi
FULL ARTICLE	
Diabetic Neuropathy - A Chance Towards A Better Treatment <i>Tri Wahyuliati</i>	2
Herbal Medicine a Holistic Approach; in Case of Food Supplement Formulation of <i>Sauropus androgynus</i> and <i>Elephantopus scaber</i> to Modulate Immune and Hormonal System in Pregnant <i>Salmonella typhi</i> Infected Mice <i>Muhammad Sasmito Djati</i>	10
Continuing Competence of Practicing Nurses in Indonesia <i>Fitri Arofiati, SKep.,Ns, MAN Ph.D</i>	19
The Influence of Neuromuscular Taping (NMT) in Walking Speed for the Patients After Ischemic Stroke <i>Umi Budi Rahayu</i>	29
Correlation between Larvae Free Number with DHF Incidence in Sleman, Yogyakarta, Indonesia <i>Tri Wulandari Kesetyaningsih, Sri Andarini, Sudarto, Henny Pramoedyo</i>	34
Correlation Interdialytic Weight Gain-Idwg towards Physical and Psychological Health to Quality of Life in Patients with Hemodialisa <i>Cecilya Kustanti, Maria Putri Sari Utami</i>	42

**The 2nd International Conference of Medical & Health Sciences
and
The 2nd Life Sciences Conference 2016**

Quality of Life in Hemodialysis Patiens with Hypertension <i>Maria Putri Sari Utami, Elsy Maria Rosa, Azizah Khoiriyati</i>	48
Environmental Housing Characteristic of Pulmonary Tuberculosis Sufferers in Slum Area <i>Iwan Stia Budi, Yustini Ardillah, Indah Purnama Sari, Dwi Septiawati</i>	55
Exploration Study in Psychological Changed on First Trimester Pregnant Women at Kembaran II Health Center, Banyumas <i>Wilis Dwi Pangesti, Dewi Ambarwati, Inggat Ratna Kusuma</i>	63
The Anxiety of Pregnant Mother with History of Abortion in Health Service 2 Banyumas Qualitative Study <i>Evicenna Naftuchah Riani, Wilis Dwi Pangesti, Diah Atmarina Yuliani</i>	72
Analysis of Infection Control Risk Assessment and Strategies to Reduce Health-Care Associated Infections in RS PKU Muhammadiyah Gamping Yogyakarta <i>Nurmalita Sari, Elsy Maria Rosa</i>	76
Health Promotion Program for Disaster Eruption of Mount Merapi Refugee in Youth Centre Sleman Distric, Yogyakarta Special Province, Indonesia <i>Novitasari Ratna Astuti</i>	91
Pap Smear is Important Screening of Cervical Cancer for Women <i>Ivanna Beru Brahma</i>	100
Analysis of Compliance on Implementing Standard Precautions on Dental Health Service at PKU Muhammadiyah Gamping Hospital of Yogyakarta <i>Maria Margaretha S Nogo Masa, Elsy Maria Rosa</i>	108
Qualitative Study of Stakeholders' Knowledge Regarding Alert Village Program in Ogan Ilir Regency <i>Asmaripa Ainy, Iwan Stia Budi</i>	123
The Influence of Parents Knowledge and Health Care Access to the Identification of Children with Hearing Impairment <i>Asti Widuri, Alazi, Muhammad Pringgo Arifianto</i>	131

**The 2nd International Conference of Medical & Health Sciences
and
The 2nd Life Sciences Conference 2016**

The Comparison of Maternal Leukocytosis Incidence between Preterm Premature Rupture of Membranes and Premature Rupture of Membranes at Term in Panembahan Senopati Hospital Bantul Yogyakarta <i>Choirotun Jum'iyatin Nisak, Supriyatningsih</i>	137
Analysis of Patient Safety Culture Instrument by MaPSaF <i>Arum Astika Sari, Arlina Dewi</i>	143
The Relationship of Fish Consumption to Cognitive Development in Students of SD Saptosari, Gunungkidul, Yogyakarta <i>Dewi Ngaisyah</i>	158
Inter Professional Education and Collaborative Practice: Reflection from Health students <i>Wiwik Kusumawati, Ika Setyawati, Romdzati, Likky Tiara Alphianti</i>	164
Steroidal Saponin in Ethanol Extract Tuber of Purple Yam (<i>Dioscoreaalata L.</i>) Decrease IL-4 Density of Blood Sera on BALB/c Mice Model Digestive Tract Allergy <i>Sri Nabawiyati Nurul Makiyah, Muhaimin Rifa'i, Widodo, Muhammad Sasmito Djati</i>	173
Managerial Leadership Competence in PKU Muhammadiyah Hospital of Gamping <i>Ranggit Oktanita, Qurratul Aini, Ekorini Listiowati</i>	184
Malaria Occurrence Factor Analysis Based on Elevation of Sea Surface in the District of OganKomeriungUlu, South Sumatra <i>Pademi Alamasyah, Chairil Anwar, Dwi Setyawan, Laila Hanum</i>	200
Increasing Family Involvement to Reduce of Cigarette Consumption with Participatory Learning Action (PLA) Approach <i>Tri Hastuti Nur Rochimah, Salmah Orbayinah</i>	212
Air Pollution Effect to Human Health in Palembang City <i>Marsidi, M.T. Kamaluddin, Fauziah N. Kurdi, Novrikasari</i>	230
Identification of Patient Satisfactory Profile for Outpatient Pharmaceutical Service at Private and Government Hospital within Semarang District <i>Pramitha Esha Nirmala Dewi, Novita Dwi Dahliyanti</i>	241

**The 2nd International Conference of Medical & Health Sciences
and
The 2nd Life Sciences Conference 2016**

Intervention of Family Nutritional Awareness to Increase Family's Food Security <i>Fatmalina Febri, Anita Rahmiwati, Fenny Etrawati</i>	249
The Effects of Exercises in Molecular Neuron Cells of Cerebellum in Congenital Hypothyroidism Rats <i>Idiani Darmawati, Marten Bhara Suryo Aji, Zulkhah Noor</i>	258
The Effect of Air Freshener Exposure on Corneal Thickness of White Rat (<i>Rattus norvegicus</i>) <i>Yuningtyaswari, Pajar Sigit Nugroho</i>	265
The Correlation between Education about Personal Hygiene and Knowledge and Attitude of Personal Hygiene of the Adolescent <i>Kusbaryanto, Wahana</i>	272
The Relationship between Sports Activities and Premenstrual Syndrome In SMA N 1 Sentolo, Kulon Progo <i>Fenthy Vabiella, Alfaina Wahyuni</i>	277
Relationship Thyroid Status to the Physical Growth and Psychomotor Development on Children Under 2 Years in Endemic Areas of Iodine Deficiency Disorders in District Samigaluh of Kulonprogo Regency <i>Adang Muhammad Gugun, Zulkhah Noor, Jifani Rasyad, Mardylla Nur Fitriany..</i>	282
Baby Blood Vessel Detection-Based Touch Sensors <i>Ade Pajar Pirdianto, Anna Nur Nazila Chamim</i>	299
Analysis of Factors that Influence Smokers Using Alcohol among Students in a Private University in Yogyakarta <i>Iman Permana, Gibran Ilham Setiawan</i>	306
The Effectiveness of Combined Warm Water Foot Submerging and Breath Relaxation Therapy on Lowering the Blood T Pressure in Hypertensive Patients in the Work Area of Puskesmas Penumping Surakarta <i>Prima Trisna Aji, Novita Kurnia Sari, Sri Nabawiyati Nurul Makiyah</i>	315
Assessment of Interprofessional Communication and Collaboration: Using Multi Methods <i>Sri Sundari Purbohadi</i>	335

**The 2nd International Conference of Medical & Health Sciences
and
The 2nd Life Sciences Conference 2016**

Bed Side Teaching as Effort for Decreasing Needle Stick and Sharp Injury in Clinical Practice Students of PSIK FKIK UMY <i>Azizah Khoiriyati, Novita Kurnia Sari</i>	342
The Relationship between Working Period and Cholinesterase Blood Levels among Pesticides-Spraying Workers in the Oil Palm Plantation <i>Restu Dewi Lestari, Merry Tiyas Anggraini</i>	350
The Effect of Interpersonal Relationship toward Birth Satisfaction <i>Hema Dewi Anggraheny</i>	356
Effect of Early Mobilization Education of The Level Anxiety and Independence of Patients After Total Knee Replacement in Hospital <i>Amik Muladi, Sagiran, Azizah Khoiriyati</i>	363
The Effect of Normal Dose Extract Gempur Batu Kejibeling (<i>Strobilanthus crispus.BL</i>) to the Histological of Rat's Digestive Tract <i>Yoni Astuti, Ali Usodo Mulyo, Harminani</i>	371
Effectiveness of Alcohol 70%, Clorhexidine Gluconate 4% Soap and Irgasan DP 300 as Hand Sanitizers in Reducing Bacterial Growth <i>Inayati, Pinter Hartono</i>	377

**The 2nd International Conference of Medical & Health Sciences
and
The 2nd Life Sciences Conference 2016**

Committee of ICMHS & LSC 2016

Supervisor	dr. Ardi Pramono, Sp.An, M.Kes
Chair	dr Iman Permana, M.Kes, Ph.D
Partner	Dr Zahid Iqbal, Ph.D
Secretary	Winnie Setyonugroho, S.Ked, MT, Ph.D
Secretariat	dr Bramantyas Kusuma H, M.Sc Futuh Hidayat, SEI Elida Tri Grahani, SE
Treasury	dr Hidayatul Kurniawati, M.Sc
Scientific section	Dr dr Ikhlas M Jenie, M.Med, Sc Dr Sri Nabawiyati Nurul Makiyah, S.Si, M.Kes Lia Fitriana, SP
Programme section	dr Ika Setyawati, M.Sc dr Imaniar Ranti, M.Sc dr Ahmad Ikliludin, SpM
Publication and Documentation section	dr April Imam Prabowo Arif Hadiano, ST
Logistic and Transportation	dr Muhammad Kurniawan, M.Sc Aris Nuryanta, SH Muhammad Ma'rifatullah Katiga Putra Dwi Hatmo Budi, S.IP
Fund Raiser	dr Maria Ulfa, MMR dr Akhmad Syaiful Fatah Husein, SpAn

**The 2nd International Conference of Medical & Health Sciences
and
The 2nd Life Sciences Conference 2016**

**Chair person of The 2nd International Conference of Medical and
Health Sciences and The 2nd Life Sciences Conference 2016**



Welcome to Jogja, sugeng rawuh!

For the second time, the Faculty of Medicine and Health Sciences Universitas Muhammadiyah Yogyakarta is going to conduct the 2nd International Conference of Medical and Health Sciences (ICMHS) this December in vibrant Yogyakarta, Indonesia. This year we are going to collaborate with the Life Sciences Society of Pakistan for their 2nd Life Sciences Conference (LSC) with Dr. Zahid Iqbal as the general secretary.

This year's conference theme "Towards a better quality of life through interdisciplinary research" will be celebrating an era of seamless interdisciplinary integration and collaboration in scientific innovations with the involvement of more extensive topics and disciplines in the conference. We aim to exhibit the products of that kind of approach in solving challenges, improving the quality of life, and creating sustainable developments. We are happy to announce that our conference is filled with Invited speakers from Pakistan, United States of America, Uni Emirates Arab, Malaysia and Indonesia. Presentations will be conducted in oral as well as poster that covers topics from medicine, public health, dentistry, pharmacy, biomedical to agriculture. To put more credibility to the conference we are collaborating with Isra Medical Journal and the Asian Journal of Agriculture and Biology to publish selected papers from the event. Other paper will be published in the ISBN Proceeding book.

The last but not least, enjoy the conference, start networking and sharing ideas, and let immerse yourself to the heritage cultural ambient of Jogja, sumonggo!

Yogyakarta, 1st December 2016

dr. Iman Permana, M.Kes, Ph.D.

**The 2nd International Conference of Medical & Health Sciences
and
The 2nd Life Sciences Conference 2016**

**Dean of Faculty of Medicine and Health Sciences,
Universitas Muhammadiyah Yogyakarta**



Assalamu'alaikum Wr. Wb.

Science, especially in the areas of health and life growing more rapidly. We need to work together in the research of various disciplines to the advancement of science and to provide benefits to human life.

After successfully organized international scientific meeting last year, the Faculty of Medical and Health Sciences Universitas Muhammadiyah Yogyakarta, held the second scientific meeting ICMHS along with "2nd Life Sciences Conference". In this second scientific meeting, FKIK UMY collaborates with various researchers, among others from Pakistan, Malaysia, and the United States. Taking the theme "Towards a better quality of life through interdisciplinary research" we hope to establish cooperation with various parties to be able to contribute ideas to the civilization of human life.

Finally, we congratulate the scientific meeting in the city of Yogyakarta Indonesia. Enjoy the beautiful city of Yogyakarta with priceless historical relics. We hope that this meeting can run smoothly and provide benefits to the advancement of knowledge.

Wassalamu'alaikum Wr. Wb.

Yogyakarta, 1st December 2016

dr. Ardi Pramono, M.Kes, Sp.An.

**The 2nd International Conference of Medical & Health Sciences
and
The 2nd Life Sciences Conference 2016**

Rector of Universitas Muhammadiyah Yogyakarta



Assalaamu'alaikum Wr. Wb.

Ladies and Gentlemen,

Welcome to the 2nd International Conference on Medical and Health Science in conjunction with the 2nd Life Sciences Conference 2016

Welcome to Yogyakarta City of Tolerance

Our Faculty of Medicine and Health Sciences has been doing such international conference almost every year for the last ten years. This and other previous conferences are the things that supporting our vision as an excellence and Islamic university, a young and global university. We will always try to keep monitoring the development of science through sending more lecturers to do the sabbatical leave overseas, doing international research collaborations and also the international conference. Each department should do this strategy of internationalization so that each department has its own network. Faculty of medicine and health science is one of the most progressive units in implementing this strategy by inviting international experts on a regular basis. This program will certainly strengthen our vision.

International conference on medicine and health sciences is a smart choice to offer our lecturers access to the most recent development of the subjects. The participants will also gain the same knowledge and latest information on medicine and health sciences. As everyone knows that the development of science and technology are faster today compared to the previous period. Information technology, computer, and other development havefastened the transformation of medicine and health science into the different and more complex stage.

**The 2nd International Conference of Medical & Health Sciences
and
The 2nd Life Sciences Conference 2016**

Cellular technology, for instance, can be used for several functions including those that directly impacts our daily life. There is no long distance call anymore today because cellular phone can do everything we need to contact other people far from where we stand anytime anywhere. People will finally innovate cellular phone for the sake of personal health services. We will in the future using our simple cellular phone to detect our body temperature, blood pressure, even how much fat we have in our body and how much it is supposed to be. We may also be able to check the health of our body without leaving our house and order medicine without going into the drug store. Everything is almost possible as long as we think hard for the better of people in the future. Enjoy the conference and don't forget to visit our rich tourist destinations, mountains, beaches or caves (underground waterways).

Thank you

Wassalaamu'alaikum Wr. Wb.

Prof. Dr. Bambang Cipto, MA

**The 2nd International Conference of Medical & Health Sciences
and
The 2nd Life Sciences Conference 2016**

Keynote Speech

**by Head of Provincial Health Office Special Region of Yogyakarta
in International Conference
of Medical and Health Sciences and Life Sciences Conference**

The Alana Hotel and Convention Center, Yogyakarta, December 9-10, 2016

The honorable:

- Rector of Muhammadiyah University of Yogyakarta,
- The Dean of Medical and Health Sciences Muhammadiyah University of Yogyakarta,
- The chairman of organizing committee of the international conference of medical and health,
- Distinguished guests and colleagues.

Assalamu'alaikum Warahmatullahi Wabarakatuh,

First of all, we thank God for His blessings that today we may attend the International Conference of Medical Health Towards a Better Quality of Life Through Interdisciplinary Research in Yogyakarta.

My distinguished colleagues,

In Indonesia National Long Term Development Plan (2005-2024), the Indonesian Ministry of Health have determined a paradigm shift that have governed health services in health development plan. There has been a shift from Curative Health Services to Preventive and Promotive Health Services.

Recently, Indonesia suffers from a triple burden of diseases as health development challenges. The triple burden of diseases are: 1) the backlog of common infections, undernutrition, and maternal mortality; 2) the emerging challenges of non-communicable diseases (NCDs), such as cancer, diabetes, heart disease; and 3) mental illness, and the problems directly related to globalization, like pandemics and the health consequences of climate change.

Dear colleagues,

Here are some data that show several health problems in Indonesia:

1. Maternal mortality rate in 2015 is 4,809 cases, infant mortality rate in 2015 is 22,267 cases;
2. Regarding to children under the age of five, the national stunting rate is 37.2% which consists of 18% for very short dan 19.2% for short (Riskesdas 2013);

The 2nd International Conference of Medical & Health Sciences and The 2nd Life Sciences Conference 2016

3. HIV testing coverage is 14% dan antiretroviral (ARV) therapy coverage is 65.58% (Directorate General of Disease Control and Prevention Ministry of Health, 2015);
4. Tuberculosis (TB) notification rate in 2015 is 73.5% and tuberculosis treatment success rate is 72% (Directorate General of Disease Control and Prevention Ministry of Health, 2015).

Distinguished guests,

Indonesia Health Development Program in 2015-2019 strengths in improving human quality life through Health Indonesia Program with family approach. The Indonesian Ministry of Health issued The Minister of Health Regulation (Permenkes) No. 39 Year 2016 as a Guideline of Implementation of Health Indonesia Program with Family Approach. This program has 12 main indicators as markers of a family health status. Currently, many health programs have been implemented by Indonesian Ministry of Health, Provincial Health Offices, and District Health Offices. However, many health problems, some as mentioned above, still become health burdens. We may ask a question whether the programs that we conducted have answered the health problems we have in Indonesia.

It would be better if all health programs that we implement based on scientific health research, especially interdisciplinary research. The research should be related to detection, prevention, and treatment of diseases or problem solving for better health.

My dear colleagues,

Being a province with speciality, Special Region of Yogyakarta placed Traditional Medicine as one of the priority programs in Provincial Medium Term Development Plan (2017-2022). We still encounter many challenges in developing Traditional Medicine, especially in providing services which are based on scientific evidence.

Distinguished colleagues,

We look forward to results of interdisciplinary research which would support health problem solving, especially by developing traditional medicine in Yogyakarta. We believe that collaboration in interdisciplinary research would improve quality of human life.

Finally,

Thank you for your attention. We wish you a successful conference.

Wassalamu'alaikum Warahmatullahi Wabarakatuh,

On behalf of
the Head of Provincial Health Office
Special Region of Yogyakarta

Drg. Pembajun Setyaningastutie, M.Kes

**The 2nd International Conference of Medical & Health Sciences
and
The 2nd Life Sciences Conference 2016**

**SPEAKER OF
INTERNATIONAL CONFERENCE**

Zahid Iqbal

Al-Nafees Medical College Isra University Islamabad Campus Islamabad, Pakistan
“One Health Program for Public Health Benefit”

Prof. Dr. Abdul Khaliq

Professor, Department of Agronomy, University of Agriculture, Faisalabad
“Role of Agriculture in Poverty Alleviation of Rural Areas”

Fitri Arofati

Universitas Muhammadiyah Yogyakarta, Indonesia
“Continuing Professional Development of Practicing Nurses in Indonesia”

Tri Wahyuliati

Universitas Muhammadiyah Yogyakarta, Indonesia
“Diabetic Neuropathy - A Chance Towards A Better Treatment”

Mohammad Khalid Ashfaq

University of Mississippi, USA
“Natural Products –Use or Misuse”

Muhammad Mukhtar

American University of Ras Al Khaimah, United Arab Emirates
“Emerging Biotechnologies and Genomic Medicines in Human Health and Well-Being”

Muhammad Sasmito Djati

Brawijaya University Malang, Indonesia
“Herbal Medicine a Holistic Approach: in case of food supplement formulation of Sauropusandrogynus and Elephantopuscaberto modulate immune and hormonal system in pregnant Salmonella typhi infected mice”

**The 2nd International Conference of Medical & Health Sciences
and
The 2nd Life Sciences Conference 2016**

REVIEWER

1. Dr. Zahid Iqbal, Ph.D (Isra University, Islamabad, Pakistan)
2. Prof. Dr. Abdul Khaliq (University of Agriculture, Faisalabad)
3. Dr. Mohammad Khalid Ashfaq, DVM, DTVM, MS, Ph.D (University of Mississippi, USA)
4. Dr. Muhammad Mukhtar, Ph.D (American University of Ras Al Khaimah, United Arab Emirates)
5. Dr. Ir. Muhammad Sasmito Djati, MS. (Brawijaya University Malang, Indonesia)
6. Fitri Arofiati, S.Kep., Ns., MAN., Ph.D (Universitas Muhammadiyah Yogyakarta, Indonesia)
7. Dr. SN Nurul Makiyah, S.Si., M.Kes (Universitas Muhammadiyah Yogyakarta, Indonesia)
8. dr. Iman Permana, M.Kes, Ph.D (Universitas Muhammadiyah Yogyakarta, Indonesia)
9. Dr. dr. Ikhlas M. Jenie, M.Med, Sc (Universitas Muhammadiyah Yogyakarta, Indonesia)
10. Dr. dr. Arlina Dewi, M.Kes, AAK (Universitas Muhammadiyah Yogyakarta, Indonesia)
11. dr. Oryzati Hilman, M.Sc, CMFM (Universitas Muhammadiyah Yogyakarta, Indonesia)
12. Dr. Dra. Yoni Astuti, M.Kes, Ph.D (Universitas Muhammadiyah Yogyakarta, Indonesia)
13. Dr. drg. Tita Ratya Utari, Sp. Ort (Universitas Muhammadiyah Yogyakarta, Indonesia)
14. Dr. dr. Tri Wahyuliati, Sp.S, M.Kes (Universitas Muhammadiyah Yogyakarta, Indonesia)
15. Dr. Elsy Maria Rosa, M.Kep (Universitas Muhammadiyah Yogyakarta, Indonesia)
16. Dr. dr. Titiek Hidayati, M.Kes (Universitas Muhammadiyah Yogyakarta, Indonesia)
17. Dr. Shanti Wardaningsih, M.Kep., Ns., Sp.Kep.J., Ph.D. (Universitas Muhammadiyah Yogyakarta, Indonesia)
18. Dr. dr. Sri Sundari, M.Ke (Universitas Muhammadiyah Yogyakarta, Indonesia)
19. Dra. Lilis Suryani, M.Kes (Universitas Muhammadiyah Yogyakarta, Indonesia)
20. Drh. Tri Wulandari K, M.Kes (Universitas Muhammadiyah Yogyakarta, Indonesia)
21. Dr. dr. Wiwik Kusumawati, M.Kes (Universitas Muhammadiyah Yogyakarta, Indonesia)
22. Sabtanti Harimurti, S.Si., M.Sc., Ph.D., Apt. (Universitas Muhammadiyah Yogyakarta, Indonesia)

**The 2nd International Conference of Medical & Health Sciences
and
The 2nd Life Sciences Conference 2016**

**SPEAKER OF
INTERNATIONAL CONFERENCE**

ICMHS-O-1-42

Inter Professional Education and Collaborative Practice: Reflection from Health students

Wiwik Kusumawati*, Ika Setyawati, Romdzati, Likky Tiara Alphianti

Faculty of Medicine and Health Sciences

Universitas Muhammadiyah Yogyakarta, Indonesia

*Email: wiwik_fk_ummy@yahoo.com.sg

Abstract

Implementation of interprofessional education and collaborative practice (IPECP) in Faculty of medicine and Health Sciences Universitas Muhammadiyah Yogyakarta (UMY) at Asri Medical Centered has been moved to PKU Gamping Hospital since early 2016. This implementation consists of several learning activities that involve real patients in hospital. The aim of this study is to know the reflection of health students after finished experience in IPECP rotation. Qualitative data from students reflection were code by authors independently. Participants were 20 medical students, 20 nursing students and 10 dentistry students. Constant comparative method used to analyze the qualitative result. There were 7 final theme i.e.1)feeling,2)role/responsibility, 3) inter professional communication,4) collaborative practice, 5) teaching learning process, 6) patient safety, and 7) respect. Collaborative practice during clinical stage was valuable experience to improve understanding in team work, inter professional communication, and role of health profession in managing the patient problems. The students are happy, interested and enthusiastic during this collaborative experience even though there were some students who feel confuse and less confidence in the early process. This study indicates 7 final themes on students reflection of IPECP. IPECP as an innovative learning model was very important and useful to prepare students to work collaboratively in the future in order to get better patient outcome, assure patient safety and build respect to each other. This program should be implemented in enough time and initiate as early as possible, even from academic phase.

Keywords: Implementation of interprofessional education and collaborative practice, reflection, health students

The 2nd International Conference of Medical & Health Sciences and The 2nd Life Sciences Conference 2016

INTRODUCTION

Faculty of Medicine and Health Sciences, Universitas Muhammadiyah Yogyakarta (FMHS-UMY) Indonesia, has implemented inter professional education and collaborative practice (IPECP) formally since 2013. Implementation of this program involves clinical stage students from medicine, nursing, and dentistry. Third year pharmacy students also participate in some activities of this programme. IPECP was conducted as one week rotation since it was still in Asri Medical Center (AMC). In the early of 2016 IPECP programme moved from AMC to PKU Muhammadiyah Gamping Hospital. Patients who were involved in both places were different. In the former place, IPECP was conducted by inviting the patients to come to the clinic, whereas in the newer, it was held by involving real patients as a learning trigger.

Learning activities consist of didactic lectures, bedside teaching (BST), small group discussion, case presentation and reflection. Lectures are conducted in the first day. It gives the students understanding on IPECP, communication among health professions, role of each health profession, technical activities and assessment of IPECP. On the end of week, the students take examination and case reflection using multiple choice questions (MCQ) and Gibbs form, respectively. This form enables the students to be back to the experience and re-evaluate learning experience against collaborative practice with other health professionals. The students' reflection will be discussed with the supervisor so that they will get feedback from him or her. Through this research, we want to identify how the students feel and think about IPECP program from their reflection after getting experience in collaborative practice.

The aim of this study was to know the reflection of health students after finished experience in IPECP program.

MATERIALS AND METHODS

This study was qualitative approach using constant comparative method to analyze the qualitative result. The sample (n = 50) was chosen purposively from medical, nursing and dentistry students. Pharmacy students were not involved in this study because they only joined in bed site teaching and small group discussion. Twenty medical students, 20 nursing students and 10 dentistry students made reflection based on their collaborative practice experiences at the end of rotation by fulfilling Gibbs reflection form. This form consists of description, feeling, evaluation, analyze, and conclusion.

Qualitative data from students' reflection were initially coded by 4 authors (WK, IS, RZ, LTA) independently and the frequency of occurrence was counted. The authors identified the categories and emerging themes. The findings were reviewed by author (WK). The areas of divergence as well as consensus among authors were also

The 2nd International Conference of Medical & Health Sciences and The 2nd Life Sciences Conference 2016

considered as the data that were further interpreted. Four authors discussed together to make same perception of the emerging themes. Emerging themes were categorized into some categorizes (constant comparative method) until were found the final categories.

RESULTS

Seven final themes emerging from the data are shown below.

1) **Feeling**

The students showed various feeling expressions such as happy, interested, enthusiasm, even confuse in the early program implementation.

Feeling happy was shown by students from all of health profession.

"After following the IPECP, I felt happy." (Nursing student 22)

"I felt happy, it was a valuable experience." (Nursing student 34)

"During inter professional education and collaborative practice (IPECP), I felt happy because we can view a case from multi aspect so the better patient care....." (Medical student 1 & 7)

Feeling interested was showed by students from all of health profession.

"When conducting tutorial process, it was very interesting since there were many professions." (Nursing student 24)

Feeling enthusiastic was shown by students from all of health profession

"...I felt very happy and enthusiastic because we could share our mind..."
(Nursing student 21)

Motivated was shown by students from all of health profession

"I was very motivated with IPE." (Nursing student 24)

Confuse and less confidence were showed by some students from nursing

"...I worried and confused about learning process." (Nursing student 39)

"...in the beginning, I felt less confident..." (Nursing student 28)

2) **Role/responsibility**

"...we understood more and more about the role of each health profession."
(Nursing student 40)

**The 2nd International Conference of Medical & Health Sciences
and
The 2nd Life Sciences Conference 2016**

"... all participants showed their role." (Nursing student 37)

"Education to the patient is responsibility of all health profession according to each competence. Education can improve the effectiveness of healing and patient may be more satisfied with care provided by professionals"
(Medical student 4)

3) Inter professional communication

"We could share our mind when took care the patient." (Nursing student 23)

"...could discuss with other professions when we have the same patient."
(Nursing student 24)

"...we also learned how to communicate with other professions effectively."
(Nursing student 35)

4) Collaborative practice

"...we got experiences, especially on the collaboration and responsibility..."
(Nursing student 40)

"We understood the process of collaboration." (Nursing student 23)

"...so, we learn more about collaboration with other health professions."
(Nursing student 26)

"The IPECP program improved teamwork. Inter health professionals communication including doctor, nurse, pharmacist, and dentist will reduce medical error and improve the patient safety" (Medical student 2)

"Patient management using IPECP include communication, core competence, role, and negotiation in order to solve the problem" (Medical student 5)

"IPECP is an interaction process of health profession that have the goal to collaborate in promotion, prevention, rehabilitation and other services"
(Medical student 1)

The 2nd International Conference of Medical & Health Sciences and The 2nd Life Sciences Conference 2016

Teaching learning process

"We did BST together and took turn for conducting assessment ...when doing tutorial, we also solved the problem together." (Nursing student 23)

6) Patient safety

"...and we were able to find the best practice for our patient." (Nursing student 40)

"...and patients got many advantages as each profession collaborated to improve patient's health status comprehensively." (Nursing student 39)

"...because we put effort to take care the patient based on our profession." (Nursing student 37)

"..... Before conducting patient examination, we have to hands wash to prevent the spreading of infection" (Medical student 4)

"During examination, we have to facilitate patient comfortable, safe, and careful....." (Medical student 3)

7) Respect

"IPE made us respect with other profession." (Nursing student 28)

"...to improve professional relationship by putting respect on each role." (Nursing student 29)

"Respect the dignity and privacy of patients while maintaining confidentiality in the delivery of health profession" (Medical student 4)

DISCUSSION

There were seven final themes i.e. 1) feeling, 2) role/responsibility, 3) inter professional communication, 4) collaborative practice, 5) teaching learning process, 6) patient safety, and 7) respect.

The students from all profession showed happy, interested, motivated and enthusiastic feeling. They felt such feeling because IPECP program gave them valuable learning experience in which they could share the knowledge to perform better patient

The 2nd International Conference of Medical & Health Sciences and The 2nd Life Sciences Conference 2016

care. Some nursing students felt confuse and less confidence in the beginning of IPECP. This fact suitable with the evidence of barrier in implementing inter professional collaborative that is sub ordinate from certain profession.

The students also learned how to communicate inter professionally and the process of collaboration with other health profession. They said that by improving teamwork and communication among health care professional would reduce medication error and improve patient safety. The students discussed patient problem not only about clinical aspect and collaboration but also patient safety. In examining the patients, they practiced principle of patient safety including hands washing to prevent the spreading of infection. Moreover, the students had to make patient comfortable, safe, and careful.

IPECP as an innovative learning model for health students is able to train communication and collaboration. In a clinical rotation stage, bed side teaching (BST) is a learning trigger as well as small group discussion. The students have more understanding on the importance of collaboration, communication, and the role of each profession in managing the patients. Patient problems will be solved together by health professionals effectively. By practicing effective collaboration and building good culture in communication among health care professional will improve patient safety and prevent medication error.

Inter Professional Education (IPE) occurs when students from two or more professions learn from one to the others for enabling an effective collaboration and improving health outcomes¹. Another definition of IPE is any conditions when two or more professionals learn from and about each other in order to cultivate collaboration and professional insights². Inter professional collaboration is the process of developing and maintaining effective inter professional working relationships with learners, practitioners, patients/clients/families and communities to enable optimal health outcomes³. Based on the definition above, two important keywords in IPE are collaboration and improving health outcomes or improving service quality.

There are six competencies need to be developed in a collaborative practice: 1) communication; 2) strength in one's professional role; 3) knowledge of professional role of the others; 4) leadership; 5) team function; and 6) negotiation for conflict resolution⁴. According to panel expert report⁵, collaborative competency comprises of 4 domains, namely: 1) value/ethics for professional role; 2) role/responsibility; 3) inter professional communication; 4) teams and teamwork.

Competencies required in a teamwork includes: 1) team cohesion, the collective forces that influence members to remain become a part of a group; an attraction to the team concept as a strategy for improving efficiency; 2) mutual trust, positive attitude that team members have for one another; the feeling, mood, or climate of the team's internal environment; 3) collective orientation, the common belief that a team approach

The 2nd International Conference of Medical & Health Sciences and The 2nd Life Sciences Conference 2016

is more conducive for problem solving than an individual approach; and 4) importance of teamwork, the positive attitude that team members exhibit with reference to their work as a team. Effective collaboration can promote positive interaction, trust, reduce stress, and increase quality of patient care⁶.

Related with role and responsibility of health professional, in managing the patients, it will be explained below. Nurses provide a care from a holistic framework: seeing the client as a whole person. The primary goal of nurse-client relationship is to achieve therapeutic outcomes. Nurses perform a diversity of role and function when helping clients to fulfill their needs. These roles are caregiver, counselor, teacher, client advocate, change agent, team member, and resource person. Meanwhile, the functions of nurses are dependent, independent, and interdependent role. In term of providing nursing care, nurses have a framework namely nursing process⁷. It consists of assessment, nursing diagnostic, nursing care plan, implementation, and evaluation. During conducting this process, nurses also collaborate with other health professions⁸.

Doctor has role as five stars doctor i.e. care provider, community leader, communicator, manager, and decision maker⁹. In collaborative context there was share of role among health care provider. Role of doctor will focus on clinical care consists of how to make proper diagnosis and treatment, as well as giving clinical advocacy.

Dentist is often the first line to defense in the prevention, early detection, and treatment of both oral and systemic diseases. Therefore, the dentist must involve in assessing and ensuring the overall health of the patients through screening, diagnosis, and referral. A collaborative network among dentists and other health professionals would be more beneficial for both patient and healthcare professionals. Dentistry is a critical component of the primary care system and the practitioners must be able to communicate effectively with other primary care providers. Management of chronic health condition, such as diabetes, has consequences for patients' oral health and is affected by their oral health. Such patients require coordination between dentistry and other health professions. Efficient and quality oral health care for both prevention and treatment of oral disease can be best achieved when members of oral health care team work together collaboratively as well as with members of other health professions^{10,11,12}.

Being student on an inter-professional clinical ward seems to provide unique experiences for future team activities in healthcare. The students stressed that every member of the team contributed with their own knowledge and that good communication between the team members was needed for both patient safety and for feeling secure within the team. The structure, interaction, and insight into one's own and other's professional tasks were important aspects that facilitate team collaboration.

Related to the teaching learning process, the limitation of IPECP implementation including the duration of teaching learning was very short. The students visited the

The 2nd International Conference of Medical & Health Sciences and The 2nd Life Sciences Conference 2016

patient only one time, so they didn't follow up the patient condition. All health professions (doctor, dentist, nurse and pharmacist) do not always join together caused by technical factor. Technical factor in scheduling is the first problem for health institutions in implementing IPECP. It needs strong coordination and good will among coordinators or person in charge to manage this program in order to overcome the difficulty in arranging schedule (to meet various profession in the same time)¹³.

The students said that it will be better if the collaborative practice involving psychologist, nutritionist, and other health professional. The large number of students in group some time made real patients in wards uncomfortable during BST. The number of cases was still limited (only 2 cases). In general, students' preparation was not so well. Schedule and discussion room were still often changeable.

IPECP program made the students more confidence in managing the patients. The students suggested the importance of inter professional collaboration in managing patients. The duration of teaching learning should be longer and implemented in all teaching hospitals. Health institutions have responsibility to facilitate training in communication and collaboration inter professionally. Education can play a part in preparing students for collaborative practice. Teacher as facilitator is an important factor that must be prepared by institution. Teacher in practice or classroom, planning, commitment enthusiasm and the modeling of collaborative practice with other educational colleagues are all essential elements of successful initiative¹⁴.

CONCLUSION

This study indicated 7 final themes on students reflection of IPECP those are 1) feeling, 2) role/responsibility, 3) inter professional communication, 4) collaborative practice, 5) teaching learning process, 6) patient safety, and 7) respect. Collaborative practice during clinical stage was valuable experience to improve understanding in team work, inter professional communication, and role of health profession in managing the patient problems. The students were happy, interested and enthusiastic during this collaborative experience. IPECP as an innovative learning model was very important and useful to prepare students to work collaboratively in the future in order to get better patient outcome, assure patient safety and build respect to each other. This program should be implemented in enough time and initiate as early as possible, even from academic phase.

ACKNOWLEDGMENT

The authors wish thank to the Dean of Faculty of Medicine and Health Sciences Universitas Muhammadiyah Yogyakarta and Director of PKU Muhammadiyah Gamping Hospital for their support.

The 2nd International Conference of Medical & Health Sciences and The 2nd Life Sciences Conference 2016

REFERENCES

1. World Health Organization (WHO), 2010, *Framework for Action on Interprofessional Education & Collaborative Practice*. Geneva: WHO, department of human resources for health.
2. Barr H, 2001, *Inter-professional education: today, yesterday and tomorrow* Learning and Teaching Support Network Centre for Health Sciences and Practice.
3. Canadian Interprofessional Health Collaborative (CIHC), 2010, *A National Interprofessional Competency Framework*. Canada: Collage of Health disciplines.
4. Mac Donald MB., Bally JM., Ferguson LM., Murray BL., Fowler-Kerry SE., Anonson JMS, 2010, Knowledge of the professional role of others: A key interprofessional competency. *Nurse education in Practice* 10: 238-242.
5. Expert panel report, 2011, Core Competencies for interprofessional collaborative practice. *Report of an expert panel*.
6. Barr H., Kopel I., Reeves S., Hammick M.& Freeth D. 2005. *Effective Inter-professional education: Argument, Assumption and Evidence*. 1st ed. Oxford: Blackwell Publishing.
7. Delaune, Sue C., Ladner, Patricia K. 2011. *Fundamental of Nursing Standards & Practice*. United States of America: Delmar Thompson Learning.
8. Zamanzadeh, et al. 2013. Challenges Associated with the Implementation of the Nursing Process: A Systematic Review. Retrieved from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4525336/#>
9. World Health Organization. 1998.
10. Rebecca S. Wilder, Jean A. O'Donnell, J. Mark Berry, Dominique M. Galli, Foroud F. Hakim, Lavern J. Holyfield, Miriam R. Robbins. Is dentistry at Risk? A case for interprofessional education. *Journal of Dental Education*, November 2008.
11. Allan J. Formicola, Sandra C. Andieu, Judith A. Buchanan, Gail Schneider Childs, Micaela Gibbs, Marita R. Inglehart, Elsbeth Kalendarian, Marsha A. Pyle, Kim D'Abreu, Lauren Evans. Interprofessional Education in U.S. and Canadian Dental Schools: An ADEA Team Study Group Report. *Journal of Dental Education*, Vol. 76 No. 9.
12. Reeves S, Lewin S, Espin S, Zwarenstein M. 2010. *Promoting Partnership for Health: Interprofessional Teamwork for Health and Social Care*. Chichester, Blackwell.
13. Kusumawati W., Orbayinah S., 2015, Inter Professional Education from Pilot to Formal Curriculum in *Leadership and Collaboration Further Development for Inter Professional Education*. Editors: Forman D., Jones M., Thistlethwaite J. Palgrave MacMillan.
14. Cable S. 2003. Multiprofessional Education in *A Practical Guide for Medical Teacher*. Ed. Dent JA., Harden R. London: Elsevier Science Limited.