



2<sup>nd</sup> ICHMS & 2<sup>nd</sup> LSC

PROCEEDING

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## 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, 9<sup>th</sup>-10<sup>th</sup> December 2016  
The Alana Hotel and Convention Center

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**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 Hadianto, 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



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**Chair person of The 2<sup>nd</sup> International Conference of Medical and  
Health Sciences and The 2<sup>nd</sup> 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 2<sup>nd</sup> 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, 1<sup>st</sup> December 2016

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

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**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, 1<sup>st</sup> December 2016

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

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**Rector of Universitas Muhammadiyah Yogyakarta**



Assalaamu'alaikum Wr. Wb.

Ladies and Gentlemen,

Welcome to the 2<sup>nd</sup> International Conference on Medical and Health Science in conjunction with the 2<sup>nd</sup> 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.

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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

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***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);

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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**

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**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"*

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**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)



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**SPEAKER OF  
INTERNATIONAL CONFERENCE**

ICMHS-P-1-14

## **The Correlation between Education about Personal Hygiene and Knowledge and Attitude of Personal Hygiene of the Adolescent**

**Kusbaryanto<sup>1\*</sup>, Wahana<sup>2</sup>**

<sup>1</sup> Public Health Department of Health and Medicine Faculty of Muhammadiyah University of Yogyakarta

<sup>2</sup> Health and Medicine Faculty of Muhammadiyah University of Yogyakarta

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### **Abstract**

Personal hygiene refers to acts that can lead to good health and cleanliness, such as frequent handwashing, face washing, and bathing with soap and water. A significant amount of disease could be prevented through access to safe water supply, adequate sanitation services and better hygiene practices. The aim of this study was to analyze correlation education about personal hygiene and knowledge and attitude of personal hygiene of the adolescent. This study was a quasy experiments with non equivalent control group design. The sample of this study uses purposive sampling with 30 respondents in experiment group and 30 respondents in control group. The data was analyzed by Wilcoxon and Mann Whitney. Collecting data through a questionnaire. The result in this study showed that in experiment group, the value of knowledge was  $p = 0,03$  ( $p < 0,05$ ), while value of attitude was  $p = 0,06$  ( $p < 0,05$ ). In control group, the value of knowledge was  $p = 0,221$  ( $p > 0,05$ ), while value of attitude was  $p = 0,016$  ( $p < 0,05$ ). The result showed that in experiment group there was a significant difference, while in control group there wasn't a significant difference. The conclusion of this study is there is correlation between personal hygiene education toward knowledge and attitude of personal hygiene on adolescent.

Keywords: Personal hygiene , education, knowledge, attitude, adolescent

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## INTRODUCTION

Personal hygiene refers to activities in maintaining the health and cleanliness such as, hand washing, face washing and taking a bath with water and soap. Keeping the hands clean is one of the important ways to avoid and prevent the spreading of infection and diseases. Nevertheless, in several countries in the world, personal hygiene is something that difficult to be well implemented due to shortage in clean water. Many diseases are spread from hands, faces, and bodies where a good personal hygiene was poorly implemented. It estimated that washing hands with soap may reduce death that caused by diarrhea up to 50 % and prevent diseases that contaminated through food.<sup>1</sup>

A significant amount of disease could be prevented through access to safe water supply, adequate sanitation services and better hygiene practices. Diarrhea disease alone amounts to an estimated 3.6 % of the total global burden of disease and is responsible for the deaths of 1.5 million people every year. It is estimated that 58% of that burden, or 842 000 deaths per year, is attributable to unsafe water supply, sanitation and hygiene and includes 361000 deaths of children under age five, mostly in low-income countries.<sup>2</sup>

Improvement in water supply access and good hygiene along with promotional efforts on good hygiene plays an important role in preventing the disease. Latest report form WHO collaborated with UNICEF mentioned that approximately 2.5 billion of global citizen has inadequate access to a good sanitation, other than that, there is 1 of 4 persons in developed countries defecates in an open field.<sup>3</sup>

Living in a tropical country, like in Indonesia make the body condition became moist and sweaty. This condition causing bacteria to be easily developed and it resulting in a bad odors. Personal hygiene should be taken into consideration to keep the body clean. Personal hygiene is very important because it affect to the health.<sup>4</sup> One of problems often occurred to adolescent is caused by inadequate personal hygiene.<sup>5</sup>

Surveys in several countries showed that the adolescent have inadequate knowledge on which health service that available and how to access them. Adolescents have inadequate or have no access to counseling and good awareness, so the health education is necessary to provide them with positive knowledge.<sup>6</sup>

Objective of the research is to discover correlation between education of the personal hygiene toward knowledge and attitude of the adolescent on personal hygiene.

## MATERIALS AND METHODS

This research is using *design quasy experimental* with design of *non equivalent control group design*. The sampling is using purposive sampling with 30 respondents in experimental group and 30 respondents in control group. Data analysis that applied is *wilcoxon and Mann Whitney*, data in this research is collected through questionnaires.

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**RESULTS**

**Table 1. Result of the Normality Test between Experiment and Control Group**

Age	Age of the experimental group		Age of control group	
	Frequency	Percent (%)	frequency	Percent (%)
14 years old	2	6,7	2	6,7
15 years old	20	66,7	19	63,3
16 years old	7	23,3	7	23,3
17 years old	1	3,3	2	6,7
Total	30	100,0	30	100,0

$p = 0,482$

Result of the normality test with *wilk Saphiro test* on all data showed that the value of  $p < 0,05$  that means data distribution was not normal. Hypothesis test that applied when data were not normally distributed was non parametric test. The non parametric test that applied in this research is *Mann-Whitney test*, to determine the homogeny non parametric test is conducted using *Mann-Whitney test*. From this test, result that obtained for the age is  $p = 0,482$  ( $p > 0,05$ ), it indicating that research subject is homogeny intergroup (control and experimental group).

**Table 2. Difference of Knowledge on Personal Hygiene in Control Group and Experimental Group**

Variable	Control group n	Experimental group N
Pre-test knowledge	30	30
Pos- test knowledge	30	30
p	0,221**	0,030*

\*Significant ( $p < 0,05$ ), \*\*Non significant ( $p > 0,05$ )

The result of the knowledge measurement on personal hygiene before and after experiment on control group where *Saphiro Wilk test* was carried out, it is concluded that the data was not normal. From this result *Wilcoxon test* is carried out, it discovered that  $p = 0,221$  ( $p > 0,05$ ), then, it concluded that there is no difference between pre-test and post-test in the control group.

Result of the measurement on knowledge of personal hygiene before and after the experiment on the experimental group, where *Saphiro Wilk test* was carried out, it concluded that data was not normal. From the result, *Wilcoxon test* was carried out and the result is  $p = 0,030$  ( $p < 0,05$ ), it concluded that in the experimental group, there is difference between pre test and post test.

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**Table 3. Difference of Attitudes on Personal Hygiene in Control Group and Experimental Group**

Variable	Control group n	Experimental group n
pre test attitude	30	30
post test attitude	30	30
p	0,102**	0,016*

\*Significant ( $p < 0,05$ ), \*\*Non Significant ( $p > 0,05$ )

Result of the measurement on personal hygiene before and after experiment in the control group where *Saphiro Wilk test* was carried out, it concluded that data was not normal. From this result, *Wilcoxon test* was carried out, and the result is  $p = 0,102$  ( $p > 0,05$ ), it concluded that there is no difference in control group between pre test and post test.

Result of the measurement of attitude on personal hygiene before and after the experiment. To the experiment group *Saphiro Wilk test* was carried out. It concluded that data was not normal. From this result, *Wilcoxon test* was carried out and the result is  $p = 0,016$  ( $p < 0,05$ ), it concluded that in the experiment group, there is a difference between pre test and post test.

## DISCUSSION

Knowledge is outcomes of human senses or result of cognizant of a person to an object through senses that he has. During the sensing until he yield the comprehension is influenced by intensity of attention and perception on the object. Knowledge gained by someone is mostly derived from hearing and seeing senses.<sup>7</sup>

In this research, between the control and the experimental group, there is a significant difference. In the control group, there is no difference in the pre test and post test, while in the experimental group; there is a significant difference between the pre test and post test. This due to the acceptance of education that given to experimental group. Attitude is a reaction or response of someone to a stimulus or object. Attitude in daily live is emotional reaction to social stimulus. An attitude has not yet an action or activity, but predisposition of an action. Attitude has 3 components, namely: (1) belief or faith, idea, and concept of an object. (2) Emotional life or emotional evaluation to an object. (3) A tendency to act (trend to behave). Those three components altogether manifested in an intact attitude. Attitude if attributed to education means a response of the students to education materials that is given.<sup>8</sup>

In this research, there is a significant difference between the control and experimental group. In the control group, there is no significant difference between

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pre-test and post test, while, in the experimental group, there is significant difference between pre test and post test. This due to acceptance of education given to the experimental group.

Acceptance of the education material that resulted in knowledge enhancement and attitude toward personal hygiene, the acceptance of this education material plays a role in positive reinforcement and become a stimulus to knowledge enhancement and attitude to personal hygiene.<sup>9</sup>

## CONCLUSION

There is a correlation between education on personal hygiene to adolescent's knowledge and attitude on personal hygiene. The acceptance of this educational material plays a role as a positive reinforcement and a stimulus to knowledge and attitude enhancement to personal hygiene.

Keywords: personal hygiene, education, knowledge, attitude, adolescent.

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