



2nd ICHMS & 2nd 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, 9th-10th December 2016
The Alana Hotel and Convention Center

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

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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, 1st December 2016

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

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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.

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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)
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15. Dr. Elsy Maria Rosa, M.Kep (Universitas Muhammadiyah Yogyakarta, Indonesia)
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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-O-1-8

Correlation Interdialytic Weight Gain towards Physical and Psychological Health in Quality of Life Hemodialisa Patients

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Abstract

Hemodialysis is an ongoing treatment and takes in the long term. One of the complications of hemodialysis is interdialytic weight gain-IDWG and influences quality of life. Physical and psychological health dimension become focus in this research because both dimensions have more influence on morbidity and mortality. The objective of this study to determine the correlation IDWG and physical and psychological health to quality of life in patients with hemodialysis. Cross-sectional study with samples of 66 patients in Hemodialysis Unit of PKU Muhammadiyah Gamping Hospital from September to October 2016. Quality of life in patients with hemodialysis was examined using questionnaires of WHOQOL-BREF. Results showed that 54.5% of patients with hemodialysis had IDWG in the average category. It showed that IDWG influenced physical health ($p=0.002$) and psychological health ($p=0.000$) to quality of life in patients with hemodialysis. IDWG influenced physical and psychological health in quality of life in patients with hemodialysis.

Keywords: interdialytic weight gain, hemodialysis, quality of life, physical health, psychological health

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INTRODUCTION

Patients with a final stage of renal disease should immediately get renal replacement therapy to survive.¹ UK (United Kingdom) reported that there are 230 people per 1 million or (0.03%) suffer from a final stage of renal failure undergoing dialysis therapy and as much as 60.4% of these patients choose hemodialysis therapy.² In 2009, there were 5,450 patients with kidney failure who received hemodialysis in Indonesia and these conditions increased in 2010 as many as 8034 people and in the following year as many as 12 804 patients.³

Complications which is common in hemodialysis patients is an Interdialytic Weight Gain (IDWG) caused by the inability of renal excretion function, so that regardless of the amount of fluid taken the weight gain will always increase. In other words, the weight gain as much as 0 ml is unlikely to occur. A higher additional IDWG value can lead to negative effects experienced by the patient, such as; hypotension, muscle cramps, hypertension, asphyxiate, nausea, vomiting, and others.⁴ Pace (2007),⁵ revealed the complications of excess fluid in patients with CKD are hypertension, peripheral edema, and ascites. Even the data from the United States Renal Data System (USRDS) showed that an increase in mortality with weight gain between the two time hemodialysis more than 4.8% weight.⁶ The ideal weight gain between the two time hemodialysis is 1.5 kg.⁷

Hemodialysis patients have ($P < 0.05$) a lower quality of life in all domains of WHOQOL-BREF questionnaire if they are compared with patients who have a kidney transplant. In hemodialysis patients, the value of the quality of life on the physical and psychological tends to be lower than the social and psychological as stated by a study conducted by Sreejitha, N., et al (2012),⁸ that shows the physical and psychological domains have lower WHOQOL-BREF score than other domains. Hemodialysis causes complications to the patient's physical health, which makes patients experience fatigue and weakness in carrying out daily activities, especially after the hemodialysis process.⁹ This is in accordance with Kring & Crane (2009),¹⁰ 91% of patients who carry out hemodialysis experienced weakness and fatigue. This happens because the resulting anemia caused by disruption of the production process of erythropoietin in the kidneys. Hemodialysis process will also give a psychological impact on patients and is associated with physiological factors. The psychological impact of depression in particular is an important factor in quality of life because it can lead to increase morbidity and mortality.¹¹ Depression is related to physical health, sleep problems, and anxiety. Based on research conducted by Bayat, et al. (2012),¹² 43.6% of patients were depressed and 43.1% of patients experience anxiety. The psychological impact will affect the quality of life of patients. This is supported by a study conducted by Curtin (2001),¹³ Mc Cann & Boore (2000),¹⁴ which concluded that the hemodialysis clients have a lower quality of life and reject the coping strategies when compared with clients who have Peritoneal Continuous

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Ambulatory Dialysis (CAPD). The purpose of this study to determine the relationship between interdialytic weight gain (IDWG) on physical and psychological health of the quality of life of patients undergoing hemodialysis.

MATERIALS AND METHODS

This research is a descriptive correlation study. The approach used is cross sectional. This research was conducted at Unit Hemodialsia PKU Muhammadiyah Hospital from September-October, 2016.

The population in this study is all patients who carry out hemodialysis at PKU Muhammadiyah Hospital Gamping. The Inclusion criteria for this study is over 18 years old; Hemodialysis patients run 2x/week, on a regular basis in the last three months; Patients are able to communicate using Indonesian language; Patients are willing to become respondents. Exclusion criteria include patients who have malignant disease, tumor, or damage to multiple organs; Hearing disorders; Patients who had surgery three months earlier. The sampling is a simple random sampling and 66 patients are used as the sample.

Data are collected using a questionnaire which consisted of a questionnaire respondent characteristics, and quality of life. Quality of life questionnaire in this study using the WHOQOL-BREF, based on the question on the quality of physical and psychological dimension. The physical health dimensions consists of seven items of questions, namely question No. 3, 4, 10, 15, 16, 17, and 18. The psychological dimension consists of six questions, namely the question number 5, 6, 7, 11, 19, and 26 . the questionnaire WHOQOL-BREF has been tested for the validity and reliability by Nurcahayarti (2011),¹⁵ with the results of the validity 0.390 to 0.798 and reliability 0.941. IDWG data obtained by measuring the previous weight of post HD and the recent pre HD.

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RESULTS

Table 1. Distribution Characteristics of Respondents in Hemodialysis Unit of PKU Muhammadiyah Hospital Gamping in October 2016 (n = 66)

Karakteristik	N (%)
Age (years)	
< 40 years	17 (25,8)
≥ 40 years	49 (74,2)
Sex	
Male	39 (59,1)
Female	27 (40,9)
Education level	
Low	17 (25,8)
High	49 (74,2)
Occupation status	
unemploy	33 (50)
employ	33 (50)
Marital status	
Not married	8 (12,1)
Married	58 (87,9)

Source : Primer Data (2016)

Table 2. Analysis on IDWG Relationship with Physical and Psychological Health of Quality of Life in Hemodialysis Patients at Hemodialysis Unit of PKU Muhammadiyah Hospital in October 2016 (n = 66)

	IDWG	p*
Physical health	1,893	0,002
psychology	2,226	0,000

*value p < 0,05

DISCUSSION

The relations of IDWG and Physical Health on the quality of Life of Hemodialysis patients. The results showed that there was a significant relationship between IDWG and physical health in the quality of life of hemodialysis patients with $p = 0.002$ ($p < 0.05$).

Fluid intake control is one of the main problems for dialysis patients, because in normal conditions humans can not survive much longer without fluid intake compared to food. But for people with chronic kidney disease, they should exercise to control fluid intake to improve the quality of life. IDWG is the increased volume of fluid that is manifested by an increase in body weight as a basis to determine the amount of fluid intake during the period interdialitik.¹⁶

In the study Riyanto (2011),¹⁷ showed that the analysis of the quality of life

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of physical health domain based on the weight gain between two hemodialysis found that the higher the weight gain, the lower the quality of life ($p = 0.000$ $\alpha = 0.05$). This is due to a buildup of fluid in the body causing the function of the heart and lungs increasingly severe, resulting in rapid response to patients' physical fatigue and tightness, experiencing physical activities problems even though the activity is mild to moderate. Anees (2011),¹¹ revealed that the research, conducted in 3 dialysis centers in Lahore Iran, found that the physical health of the patient is at the low category. It is also obtained from studies conducted Ibrahim (2005),¹⁸ in 3 hemodialysis unit in Singapore. He found that the quality of life of physical health domain average value at the level of 18.49 (SD 4.45).

The Relation of IDWG with Psychological on the quality of Life of Hemodialysis patients. The results showed that there was a significant relationship between IDWG and psychological on the quality of life for hemodialysis patients with $p = 0.000$ ($p < 0.05$).

The results of the psychological domain of life quality research based on the weight gain between two hemodialysis. It is identified that the higher the weight gain, the lower the quality of life ($p = 0.000$ $\alpha = 0.05$).¹⁷ Patients with CKD who undergo hemodialysis are likely to experience weight gain, due to accumulation of fluid and remnants of metabolism arises changes on the skin, decreased reproductive function and malfunctioning of the heart and lungs. Changes in physical appearance and physical health has raised concerns moreover that they have to undergo hemodiliasa for life.¹⁹

CONCLUSION

Based on the analysis that has been done, it can be concluded that the characteristics of patients who had hemodialysis at Hemodialysis Unit PKU Muhammadiyah Hospital Gamping are mostly male, age > 40 years, higher education, unemployed, and married; IDWG has a significant relationship to the physical health of the quality of life on hemodialysis patients; IDWG has a significant relationship to the psychological of the quality of life for hemodialysis patients.

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