



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
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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.

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

**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.

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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)
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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-3-7

Identification of Patient Satisfactory Profile for Outpatient Pharmaceutical Service at Private and Government Hospital within Semarang District

Pramitha Esha Nirmala Dewi^{1*}, Novita Dwi Dahliyanti²

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Abstract

In this era of hospital rivalry in Indonesia, patient satisfaction is becoming more important than ever. A hospital has to be able to maintain its quality by meeting patient's expectation for their satisfaction. Indonesian assumption of a condition where private hospitals give better pharmaceutical care than government hospital became a basis of this study to prove scientifically from patient perspective and expectation towards pharmaceutical care in each hospital. Dr Kariadi General Hospital was chosen to represent a government hospital while St Elizabeth as a private hospital representative. Those hospitals was the top referral hospitals in Semarang district, and can be assumed reflecting the population circumstances. This study was a descriptive, cross-sectional study and data acquisition was done through questionnaire based on ServQual model and in-depth interview on 60 out-patient subjects in each hospital. Using Mann Whitney test to find out the difference of satisfactory score between hospitals, he results showed significant differences in empathy dimension ($p = 0.014$) and reliability dimension ($p = 0.000$). From the empathy dimension, it shows that patients feel pharmaceutical care in St Elizabeth hospital gives better concern, where from reliability dimension the patients feel Dr. Kariadi Hospital is more able to give a reliable and accurate service compared to St Elizabeth hospital.

Keywords : Satisfaction, Pharmaceutical Care, Hospital, Semarang

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INTRODUCTION

Patient satisfaction has often been used repeatedly as an indicator for quality measurement in health services. It is mainly because patient satisfaction might influence patient retention, clinical outcomes, and medical malpractice claims.¹ Meanwhile, hospital pharmaceutical practice has been in a constant gradual change. Patient satisfaction depends on the service quality. The term service refers to any kind of attempt done by the service provider to fulfil the customer's needs by giving the specific service. A good service for a patient is determined by the reality that the given service can fulfil the patient's need by using patient's perception of the received service (whether they are satisfied or disappointed, and also the service length of time). A satisfaction is started from the first time patients arrived, until the time they are discharged. A service is formed by 5 service quality principles; tangibles, empathy, assurance, reliability and responsiveness. The established health service system in Indonesia has a potential to make a difference in consumer's expectation and the received pharmaceutical service between private and government-driven hospitals. Based on the patient expectation and perception pattern, the management might take a strategic plan to apply an effective and efficient pharmaceutical service standard. Currently there are numerous hospital pharmaceutical installation in Indonesia incapable of giving a standard pharmaceutical service and, subsequently, unable to achieve the expected patient satisfaction toward pharmaceutical installation service. The management, including hospital management, should attempt their highest effort to achieve the highest consumer's satisfaction. Sometimes maximum effort does not give optimal result because the management does not anticipate the existence of any gaps between their and patient's perception toward the received service. Pharmaceutical service in hospital pharmaceutical installation often face similar obstacles due to their lack of understanding of what kind of service needed by the patient and what opinion the patient have towards the given service done by hospital pharmaceutical installation. These obstacles should be overcome by doing survey regarding the difference in consumer's expectation and patient's perception towards the received pharmaceutical service done by hospital pharmaceutical installation. Currently there had been no patient satisfaction analysis in outpatient setting done in Dr Kariadi central hospital's and Elizabeth hospital's pharmaceutical installation; thus whether development done by these hospitals might improve patient satisfaction or not hasn't come into light. Moreover, these hospitals has often been subjected to become sample hospitals because they are big, often become referred hospitals, have more complicated patients and thus might represent population circumstances.

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MATERIALS AND METHODS

This study used a closed questionnaire formed by SerQual model method developed by Parasuraman et al. The questionnaire involved 5 quality dimensions; tangibles, reliability, responsiveness, assurance and empathy. The questionnaire used Likert scale to acquire quantitative data.

Table 1. Response and score based on Likert scale

Response	Favourable score	Unfavourable score
Highly disagree	1	4
Dissagree	2	3
Agree	3	2
Highly agree	4	1

This study used non-experimental design study. The discrepancy between the expected quality in each hospital and patient's expectation towards pharmaceutical care in government-driven hospital (represented by Dr. Kariadi Hospital) and private hospital (represented by Elizabeth hospital) was analysed in statistical analysis where the source data had been acquired in one shot observation.

The population of this study was all patients taking their prescribed medicine in hospital pharmaceutical installation in Dr Kariadi Central Hospital and Elizabeth Hospital, both were in out-patient setting, between September and October 2011. The subject of this study were patients receiving purposive sampling-based pharmaceutical care and fulfill inclusion criteria as: 1. Have been receiving pharmaceutical care service at least twice in Dr. Kariadi hospital's pharmaceutical installation or in Elizabeth hospital's pharmaceutical installation, 2. Took the prescribed medicine in pharmaceutical installation, whether in Dr Kariadi Hospital or in Elizabeth Hospital, during the study time and working time as non-insurance covered patients, 3. At least 17 years of age and at least have a senior high school degree when the questionnaire were given, 4. Willing to fulfil the questionnaire and were able to communicate well.

Using Lemeshow calculation, 49 respondents were needed for this study. However, at the end of this study 60 respondents were involved for each hospital.

This study was held in Dr Kariadi Hospital and Elizabeth Hospital; both were in Semarang city, between September and October 2011.

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RESULTS AND DISCUSSION

Descriptive analysis done in this study were aimed to show respondent characteristics based on sex, age, education level, occupation and residence area. The result is as below:

Table 2. Description of Respondent Characteristics in this Study based on Sex, Age, Education Level, Occupation, and Residence Area

Dr Kariadi Hospital			Elizabeth Hospital		
Description	Sum	Percentage	Description	Sum	Percentage
Sex:			Sex:		
Male	21	35 %	Male	16	27 %
Female	39	65 %	Female	44	73 %
Age (Years):			Age (Years):		
17-20	5	8 %	17-20	5	8 %
21-25	12	20 %	21-25	13	22 %
26-30	3	5 %	26-30	11	18 %
31-35	8	13 %	31-35	10	17 %
36-40	5	8 %	36-40	3	5 %
41-45	9	15 %	41-45	6	10 %
46-50	7	12 %	46-50	5	8 %
>50	11	18 %	>50	7	12 %
Education Level:			Education Level:		
High school	25	41,67 %	SMA	29	48,33 %
Diploma	9	15,00%	Diploma	5	8,33 %
Bachelor	25	41,67 %	Bachelor	23	38,33 %
Master	1	1,67 %	Master	3	5 %
Occupation:			Occupation:		
Student	12	20 %	Student	15	25 %
Entrepreneur	8	13 %	Entrepreneur	10	17 %
Private worker	12	20 %	Private worker	14	23 %
Civil government worker	5	8 %	Civil government worker	3	5 %
Teacher	1	18 %	Teacher	6	10 %
Housewife	7	12 %	Housewife	10	17 %
Retirement	5	8 %	Retirement	2	3 %
Residence Area			Residence Area		
Semarang	36	60 %	Semarang	48	80 %
Outside Semarang	24	40 %	Outside Semarang	12	20 %
Total	60	100 %	Total	60	100 %

Based on Table 2. it can be seen that the most distinctive difference was that more respondents from outside Semarang went to Elizabeth Hospital compared to Dr Kariadi Hospital.

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Zarei et al. (2012),² mentioned on his research that SERVQUAL is a valid, reliable, and flexible tool for monitoring and measuring services quality of private hospitals and enabling the hospital manager to identify particular areas which need improvement by analysing patient's perspective. ServQual analysis in this study showed that both hospitals had negatif gaps in all dimensions, which have a meaning that respondents expectation were higher compared to their perception. However, from more detailed information it was found that, according to respondents, information accuracy given by Dr Kariadi Hospital Pharmacy were higher compared to the expected service. They felt that information given from Dr Kariadi Hospital were reliable. Meanwhile, ServQual analysis for Elizabeth Hospital samples showed that respondents felt they have reached the expectation in terms of pharmacist concern regarding patient's condition during taking medicine, drug administration, and pharmacist willingness in answering patient's questions. Positif gaps in Elizabeth Hospital samples were found in the punctuality of pharmaceutical installation open time, accuracy in handing over the medicine, and medicine stock in pharmaceutical installation.

Patient expectations towards pharmaceutical service were influenced by many factors such as information they have from their surroundings, their previous experiences regarding having pharmaceutical services, and their impression towards organizations responsible for the services. Zarei et al. (2012),² found that quality improvement efforts should be focused on creating good relationship between patients and hospital practitioners, also considering hospital practitioners to be responsive, credible, and empathetic to the patients.

Table 3. showed the discrepancy in patient expectation of Dr Kariadi Hospital as a government-driven hospital representative and Elizabeth Hospital as private hospital representative.

Table III. Difference in Patient Expectation Score in Dr Kariadi Hospital and Elizabeth Hospital

NO	Hospital	Median	Total Score	Mann Whitney Test	Conclusion
1	Dr Kariadi Hospital	3	5102	0,063	Non-significantly differ
2	Elizabeth Hospital	3	5006		

In general, patient expectation in Dr Kariadi Hospital is higher than in Elizabeth Hospital, even though the difference was not statistically significant. This difference was due to patient's dimensional pattern of priorities.

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Table 4. showed the results of significance test on score difference regarding every dimension between those hospital as follow:

Table 4. Significance Test Result in Score Difference regarding every Dimension in Dr Kariadi Hospital and Elizabeth Hospital

No	Dimension	Dr Kariadi Hospital Score	Elizabeth Hospital Score	Mann Whitney Test	Conclusion
1	<i>Tangibles</i>	963	956	0,922	Non-significant
2	<i>Empathy</i>	884	924	0,014	Significant
3	<i>Assurance</i>	1240	1226	0,557	Non-significant
4	<i>Reliability</i>	1039	964	0,000	Significant
5	<i>Responsiveness</i>	975	936	0,058	Non-significant
Total		5101	5006	0,064	Non-significant

Despite the difference in every dimension score, only empathy and reliability dimension that differy significantly between Dr Kariadi Hospital and Elizabeth Hospital. In empathy dimension, patient expectation in Elizabeth Hospital were higher than those who went to Dr Kariadi Hospital, while in reliability patient expectation were by much higher in Dr Kariadi Hospital than in Elizabeth Hospital.

Empathy dimension in service refers to the willingness to give attention, give concern to the consumers, being sensitif towards consumer's expectation, and always make an attempt to fulfill the consumer's need. Patient's expectation in Elizabeth hospital as a private hospital were higher compared to those who seek for help in Dr Kariadi Hospital. Meanwhile, reliability dimension refers to the ability to do service accountably and accurately as advertised or promised. Those who went to Dr Kariadi Hospital had higher expectancy in this dimension compared to those who went to Elizabeth Hospital as private hospital.

Glober and Rivers (2008),³ mentioned that generally consumers seek the best care with the lowest cost. In the setting of health service this condition is seldom found. Mission, target, and financial support in an institution allows them to hire the best doctors, nurses, supporting staffs, and to get the most sophisticated tools and technology to attract patients. Meanwhile, patients have to choose between these options, and, unfortunately, it often sacrifice on option to get the other option.

According to Undang-Undang No 44 in Year 2009 regarding hospital, the service cost in government-driven hospital is decided by Health Minister or local government, while in private hospital the hospital director make the decision.⁴ It can be said that private hospital might make decision regarding service cost deliberately. In accordance

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with Glover and Rivers, many patient in private hospital ready to sacrifice higher cost in order to get a more comfortable service, thus, in turn, they will have higher expectation in empathy dimension which is the willingness to give attention, give concern to the consumers, being sensitif towards consumer's expectation, and always make an attempt to fulfill the consumer's need.

Rama et al. (2011),⁵ defined patient satisfaction as patients' emotions, feelings and their perception of delivered healthcare services, while other authors defined patient satisfaction as a degree of congruency between patient expectations of ideal care and their perceptions of real care received. Lin et al. (2004),⁶ showed that ServQual might be used for satisfactory study in the setting of outpatient clinic. They have found out that assurance and empathy dimensions were the highest priorities according to the patients also found out that the highest gap belongs to reliability, assurance, and empathy dimensions.⁷ Their study also showed that patients expected the doctors to give more time in doctor-patient discussion. Moreover, a study held in Bangladesh by Syed (2007) found out that tangibles dimension were one of the most important factor in health service.⁷ This statement might explain that the assumed important factors might differ in one place and another.

CONCLUSION

Patient expectation in Dr Kariadi Hospital is higher than in Elizabeth Hospital due to patient's dimensional pattern of priorities, even though the difference was not statistically significant. Empathy and reliability dimension are different significantly between Dr Kariadi Hospital and Elizabeth Hospital. On empathy dimension, patient expectation in Elizabeth Hospital were higher than those who went to Dr Kariadi Hospital, while on reliability patient expectation were by much higher in Dr Kariadi Hospital than in Elizabeth Hospital.

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