



**INTERNATIONAL CONFERENCE
ON EDUCATION, TECHNOLOGY, AND SCIENCE**

**Improving The Quality of Education
To Face The Impact of Technology**

University of Muhammadiyah Purwokerto

December 28th, 2013

P R O C E E D I N G S



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**International Conference on Education, Technology, and Science
NETS 2013**

Improving The Quality of Education to Face The Impact of Technology

PROCEEDINGS

**Universitas Muhammadiyah Purwokerto
Purwokerto, December 28th, 2013**

Preface
Rector of UMP

Assalamu'alaikum wr. wb.

Alhamdulillah, that UMP will carry out prestigious event namely “National Olympiad and International Conference on Education, Technology, and Science (NETS) 2013” is a very great news for me. NETS 2013 is the first event which is conducted in collaboration between UMP and PWM Central Java. It is a great event which is constructively supported by ITB, UNiSA, UTeM, and several institutions under UMP partnership to smoothen the event.

Recently, technology grows very fast. This fast growth affects on the quality of education in Indonesia. Based on this condition, UMP and PWM Central Java formulate a program which later it is formed into “NETS 2013”. This event is also a contribution to Islamic Higher Education Institution to prepare candidate of future leaders who have competitive skills to compete positively in comprehending knowledge and technology.

In NETS 2013, there are some events which are arranged in a sequence such as: International Conference on Education, Technology, and Science (ICETS) with Prof. Dr. Ir. Imam Robandi, M.T., Mr. Ganjar Pranowo, Mr. Simen Lourds, and Dr. Hiroshi Takeda; Seminar (Call for Paper) including some disciplines of science covering Education, Engineering, Medicine, Science, Social, Politic, Religion, Law, Culture, Arts, Agriculture, and Technology; National Olympiad for Student and Teacher (NOST) which is joined by students, teachers, and schools; and Expo. In NETS 2013 competitions, participants are fighting over trophies, medals, certificates, and advisory fund reaching up to Rp250.000.000,- ; furthermore, there is also a fellowship to study in UMP.

As the Rector of The University of Muhammadiyah Purwokerto, I do really expect that conducting this event could encourage all of us to be more advanced nation not only on economic side, but also on social life. It is also expected that this event will increase our awareness on how important it is to develop and advance technology in education.

That is all I could deliver now, for further information you may access our website on www.ump.ac.id.

Last but not least, “Let’s join and support NETS 2013 in UMP”.

Wassalamu'alaikum wr. wb.

Purwokerto, 28th Decembe 2013

Rector,

Dr. H. Syamsuhadi Irsyad, M. H.

Preface

The Chairman of NETS 2013

Assalamualaikum, wr. wb.

Today is the valuable and precious milestones for education in Indonesia in general and Muhammadiyah in particular because all levels of education from elementary schools to university get together to build relationship and networking in the national Olympiad and international conference hosted by University of Muhammadiyah Purwokerto.

We deserve rejoice and pride because there are more than 1705 participants, 215 officials and 300 invited guests. This is also a great honour for University of Muhammadiyah Purwokerto to have the Governor of Central Java and the staffs, the regents from four regions and the staffs, the chief of Central Muhammadiyah Board , the Education division of Muhammadiyah Board, the directorate of higher education, Rectors of University of Muhammadiyah throughout Indonesia and rectors of universities in Purwokerto, companies and stake holders, media , travel biro as well as the colleagues, persistent fighters for Muhammadiyah in the region and territory.

As the chairman of this events, I'd like to report that there are more than 1616 teachers and students who will be joining the national Olympiad and there are more than 311 researchers, lecturers and students will be taking part in the International Conference. Again, I'd like to emphasis that this event is really a pride for us because the participants are coming representing five big islands in Indonesia, they are Sumatra, Kalimantan or Borneo, Java and Sulawesi.

This event holds thirty one types of competitions and organizing six international conferences. There are twenty five competitions for students, four competitions for teachers and three competitions for schools. The international conference covers fields of Educations, Engineering, Science and Agriculture, Health and Medicine, Culture and Arts, social, Politics, Economics, Religion and Law.

We are proud to mention that we have at least fifteen experts coming from higher education, one from high schools, two industries and one national research centre (LIPI). The experts and scholars are coming from some outstanding universities and institutes such as University of South Australia, Tottori University Japan, Institute Teknologi Melaka, Malaysia, Henderson Secondary School Singapore, Boromanjani College of Nursing Thailand, Surabaya Technology

Institute Bandung Technology Institute, Gadjah Mada University, Bogor Agriculture Institute, and University of Muhammadiyah Purwokerto.

On behalf of the committee, we'd like to express our deep gratitude and thanks to all sides for their sincere helps and supports that make this event possible to happen in UMP. Last but not least, we have tried and done our best in organizing this event, however, we realized that weaknesses and shortcomings may exist. And for that particular reason we'd like to apologize to you all. Hopefully, the next year NETS will be much better and much improved. Have a great competition and conference!

Wassalamualaikum wr.wb.

Purwokerto, 28th Decembe 2013

The Chairman

Regawa Bayu Pamungkas, ST., MT.

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Editor	: Sularso, Amd. Nur Afifah Indriyani

Keynote and Invited Speakers

Keynote Speakers

Prof. Imam Robandi (ITS, Indonesia)
Mr. Simen Lourds (Singapore)
Dr. Hiroshi Takeda (Tottori University, Japan)

Invited Speakers

Elvia Shauki, Ph.D. (University of South Australia, Australia)
Prof. Dr. Mifedwil Jandra Mohd. Janan (UTM, Malaysia)
Panarut Wisawatapnimit (Boromarajonani College of Nursing, Bangkok, Thailand)
Dr. Ir. Danu Ariono (ITB, Indonesia)
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Prof. Dr. Sugeng Priyadi (UMP, Indonesia)
Herman Soemantri, ST., M.Si. (PT. Pertamina)

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CORRELATION BETWEEN KEGEL EXERCISE WITH NEEDLE PERINEUM INJURY HEALING AT NORMAL POSTPARTUM WOMAN IN RB AFIATUN HASANAH BANDUNG

Annisa Ridlayanti
STIKes Aisyiyah Bandung

Abstract

Kegel exercise is a pelvic floor exercise which has a purpose to make strengthen pelvic muscle especially pubococcygeal muscle. In postpartum period, kegel exercise can help or speed up the perineum laceration injury healing. Recovery of needle perineum injury is influented by many factors, one of them is blood supply which contains O₂ and nutrient to transfer for injury tissue. Contraction and relaxation which resulted by kegel exercise can increase blood supply to that injury tissue.

Total of perineum hecting on postpartum woman in RB Afiatun Hasanah was 69,91% periode of January to June 2010. Based on medical record, about 43 from 79 patient (54,43%) still felt the pain of needle perineum injury and 'felt' not healing at own perineum injury in sixth days pospartum visit.

This research purpose is to know there is correlation between kegel exercise and needle perineum injury healing in normal postpartum woman. And there is difference needle perineum injury healing in normal postpartum woman who doing kegel exercise and not doing kegel exercise. This riset analysis method uses desain of quasy experimental. Population contained 29 early normal postpartum woman (24 hours) during November 2010. Sample that was taked, early normal postpartum woman with needle perineum injury. For taking sample uses convinience sampling technique. The result, got 24 samples that's divided into two groups. First groups was given kegel exercise and second groups wasn't given kegel exercise. Independent variable is kegel exercise and dependent variable is needle perineum injury healing. To analyse data for correlation and comparison use Pearson and Mann Whitney test.

The result from 24 sample on the 1st evaluation got 10 persons at the first groups and 4 persons at second groups who showed the normal perineum appearance. And on the 2nd evaluation at the first groups, all sample (12 persons) than at the second groups only 8 persons who showed normal perineum appearance. Pearson test result showed correlation as size as 0,742 with p value is 0,006 and p value < 0,05. This means there was

correlation between kegel exercise and needle perineum injury healing. Comparison analisis test, based on statistic counting was gotten z Mann Whitney value -2,611 with P value is 0,020. Statistic test result showed that P value (0,020) < 0,05, so zero hipotesis was rejected. It could be concluded that there was difference needle perineum injury healing in normal postpartum woman who doing kegel exercise and not doing kegel exercise.

Keywords: *kegel exercise, needle perineum injury healing, normal postpartum*

INTRODUCTION

In Indonesia, no data about hecting of perineum after childbirth definitely. Wordpress (2010) shows that more than 85% pervaginam delivery with perineum lacerations. It can be spontaneoustly or episiotomi and 70%-80% in that case needs hecting of perineum.

Total of perineum hecting on postpartum woman in RB Afiatun Hasanah was 69,91% periode of January to June 2010. Based on medical record, about 43 from 79 patient (54,43%) still felt the pain of needle perineum injury and 'felt' not healing at own perineum injury in sixth days pospartum visit. It shows that more than 50% patients after hecting perineum still feel uncomfot because of painful in sixth day postpartum period. Of course it needs perineum injury healing care optimally.

Many factors which influent of tissue injury healing. One of them depends on cellular proliferations and syntetic activity because of sensitivity to deficiency local blood supply and patient's nutrient condition.^{1,3,4,7}

In normal delivery with perineum lacerations, tissue injury healing without infection usually needs 4-7 days for recovering.^{2,4,7}

Kegel exercise can help perineum injury healing in postpartum with make a contraction and relaxation regulary at pubococcygeal muscle. It also can make perineum hecting become well and heal faster. Kegel exercise also can reduce the haemorroid and incontinencia urine. It can reduce

the painful by making the flexibility area. It is very simple and easy to do kegel exercise. It can do anywhere privatly in any positions like sit down, stand-up, and lying.^{3,17,18,30}

METHOD

This riset purpose is to know there is correlation between kegel exercise with needle perineum injury healing in normal postpartum woman. And there is difference needle perineum injury healing in normal postpartum woman who doing kegel exercise and not doing kegel exercise.

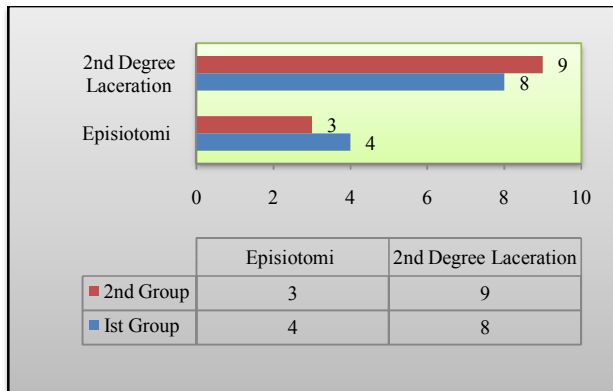
This research method, analysis which use desain of quasy experimental. Population contained 29 early normal postpartum woman (24 hours) during November 2010. Sample that was taked, early normal postpartum woman with needle perineum injury. For taking sample uses non random sampling (convinience sampling) technique. Inclusion criterias are postpartum normal, baby’s weight about 2500-4000 grams, getting perineum lacerations at least second degree or because of episiotomi, understanding the questions, patients can finish kegel exercise completly, there is an infomed consent. Exclusion criterias are postpartum haemorrhage when research is done and no informed consent or patient denial. The result, got 24 samples that’s divided into two groups. First groups was given kegel exercise and second groups wasn’t given kegel exercise. Independent variable is kegel exercise and dependent variable is needle perineum injury healing. To analyse data for correlation and comparison use Pearson and Mann Whitney test.

RESULT

This research is done from 1 November until 15 December 2010. Take place at “Rumah Bersalin Afiatun Hasanah Bandung”.

In the first picture shows that kinds of perineum injury. There are laceration and episiotomi. Both of them are second degree perineum rupture.

The first table shows about result of kegel exercise in the treatment group. More than 50% the subject do it completly. The second table tells about normal perineum appearance in twice examinations in 6th and 14th days. The third table is Output Pearson Correlations Analysis (SPSS). And the fourth table shows that there’s a difference perineum appearance between the first group (treatment kegel exercise) and second group (control).



Picture 1. Subject Research Criteria From Kinds Of Perineum Injury

Table.1 Result of Kegle Exercise in First Group

Kegle Exercise	Person	Percentage
Done completly	7	58,33%
Done partly	5	41,67%
Not Done	0	0%
Total	12	100%

Table 2. Perineum Examinations In Normal Postpartum

Normal Perineum Appear	Tampilan Perineum Normal	
	1 st Group	2 nd Group
6th Day	10	4
14th Day	12	8

Table 3. Output SPSS Correlations Analysis

		Kegle Exercise	Perineum
Kegle Exercise	Person Correlation	1	.742**
	Sig.(2-tailed)		.006
	N	12	12
Perineum	Person Correlation	12	1
	Sig.(2-tailed)		12
	N		12

** . Correlation is significant at the 0.01 level (2-tailed)

Table 4. Mann-Whitney Test

Perineum lacerations Injury Healing	Average	Z	P value	Conclusion	
Treatment	3.83	-2,611	0.020	Ho	Ada perbedaan
Kontrol	3.00				

The result from 24 sample on the 1st evaluation got 10 persons at the first groups and 4 persons at second groups who showed the normal perineum appearance. And on the 2nd evaluation at the first groups, all sample (12 persons) than at the second groups only 8 persons who showed normal perineum appearance. Pearson test result showed correlation as size as 0,742 with p value is 0,006 and p value < 0,05. It means there was correlation between kegel exercise and needle perineum injury healing. Comparison analysis test, based on statistic counting was gotten z Mann Whitney value -2,611 with P value is 0,020. Statistic test result showed that P value (0,020) < 0,05, so zero hipotesis was rejected. It could be concluded that there was difference needle perineum injury healing in normal postpartum woman who doing kegel exercise and not doing kegel exercise.

DISCUSSIONS

Based on table.3, Pearson correlation test shows that there's a correlation between kegel exercise with needle perineum injury healing in normal postpartum.

In the first evaluation, about 83,33% (10 from 12 person) in treatment group shows normal perineum appearance which needle close fastly, reduce the painful, no infection although signs of inflamations still be showed from some subjects but it is normal because inflamation process will be felt until 5-7 days. In the second evaluations, all subjects (12 person) shows normal perineum appearance. It is compatible that kegel exercise is not only prevent the incontinetia urine but also help the injury healing because of increasing blood supply to the tissue injury.^{1,12}

So kegel exercise is a pelvic floor exercise which has a purpose to make strengthen pelvic muscle especially pubococcygeal muscle. In postpartum period, kegel exercise can help or speed up the perineum laceration injury healing by make the needle closed fastly and reduce the painful of perineum. Contraction and relaxation which resulted by kegel exercise can increase blood supply which contains the O₂ and nutrient to injury tissue recovery.^{8,25,30,34}

Based on table 4, Z-Mann Whitney comparrison test shows that there's a difference between needle perineum injury healing in normal postpartum who do kegel exercise and not do kegel exercise. Injury healing process to be seen from clinical perineum appearance.

Perineum appearance in the treatment group shows no opened-needle, no infection signs, no fistula rectovaginalis, and no long great painful at 10 subjects in the first evaluation. And 12 subjects (100%) show normal perineum appearance. It's different with the control group which only 4 subjects in the first and 8 subjects (66,66%) in the second evaluation which show the normal perineum appearance.

Can be concluded that postpartum normal who do kegel exercise procedurally will get needle perineum injury healing fastly.

From that research, every midwives can implementate kegel exercise when their's patients get tears in perineum. Concelling and demonstrate how to do kegel exercise in postpartum period can be given by midwives. Make sure that patients do not be affraid with the hecting of perineum. It's not dangerous, but it can help theirs perineum injury gets healing early and fastly. It also very easy, cheap, advantagable, and privatly. It is not need money to practice as we do an exercise daily. It also can reduce the medical treatment when the postpartum women get normal perineum injury.

It is one of the core midwives competencies which giving a care to the physiologis client naturally not medicinally.

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THE CORRELATION BETWEEN SELF-CONFIDENCE AND DEPRESSION LEVEL OF TEENAGE ORPHANAGES IN PANTI ASUHAN YAYASAN SATU UMAT IN MAGELANG

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Abstract

Psychological burden, such as inferior, passive, apathetic, introvert, pessimistic, fearful, and anxious personality that happens to teenagers in orphan house can make them difficult in making social interaction with others. This situation leads to self-confidence lost. This study aims to find out the correlation between self-confidence and depression level of teenaged orphanages. The research method uses cross sectional approach to 105 teenagers as the sample. The result of the research shows that there are correlation amongst age, self-confidence, and depression of the teenage orphanages.

Keywords: *self-confidence, depression, teenage orphanage*

BACKGROUND

Adolescence is also called as storm and stress phase, a situation that is full of problems, demands, and life stresses. Therefore, as people on the age level of important roles in the nation development productivity, adolescents or teenagers need to be prepared and their condition has to be kept healthy both physically and mentally. One of the environments that plays role in the teenagers development and which is ready to face their development tasks, is family. It would be different with teenagers who live in orphan house, as the role of family has been replaced (Napitupulu, 2007).

Psychological burden, such as inferior, passive, apathetic, introvert, pessimistic, fearful, and anxious personality that happens to teenage orphanage can make them difficult in making social interaction with others. This situation leads to self-confidence lost. The lives of teenagers in orphan house are not free from problems and difficulties so that they have to avoid depression.

Teenager and adult are the age groups that suffer depression the most. It happens as in those age there are important phases and development tasks that is the transformation from childhood to

teenage, teenage to adult, school to college or work, or puberty to marriage. Age factor is included to physical factor that can affect depression factors (Lumongga, 2009).

The depression occurs in a teenager can be very dangerous as it causes the difficulty in concentrating or the decrease of memory, discouragement, the loss of fun and interest, that can decrease the teenage productivity and affect the school achievement (Yosep, 2007). Unsolved depression on teenagers can disturb their ability in doing activities effectively which then negatively affects their physical and psychological health, and their wealth. The symptoms of depression can be decreased by self confidence, as self-confidence is a belief in the abilities owned, belief in the intent or purpose in life, and belief in the intellectuality are able to carry out what is wanted, planned, and hoped (Davies, 2004). Orphanages are population which is prone to depression, because they were apart from the most important figure, parents, so that they get less affection (Rusanto, 2007).

RESEARCH METHOD

This research was descriptive correlation with cross sectional approach which was done in July 2013. The sample taking technique was purposive sampling. The research was obtain to find out whether there were any correlations between self-confidence and depression level on teenagers in orphanage.

The sample of this research was 105 teenagers. Statistic analysis used was univariate and bivariate with Spearman Rank Correlation Test (Rho) analysis and multivariate analysis used Logistic Regression.

RESULT AND DISCUSSION

Confounding variables in this research were including age, sex, and the length living in the orphanage. The most orphanages were female (61,9%), average age were 16-20 years-old

(55,2%), and average length of stay in the orphan house was 1 year (53,3%).

The result of teenagers' self-confidence measurement showed that 62.9% were in medium category, 31.4% were in low category, and 5.7% were in high category. Teenaged orphanages with depression level in mild category were 46.7%, and 1.9% were in weight category.

Based on the analysis of the correlation between sex and depression level, the result showed that female teenagers experienced mild depression (28.6%), while male teenagers (18.1). Percentage of depression on female teenagers was bigger than on male teenagers because the number of female teenagers was bigger than the number of male teenagers. The coefficient correlation value, based on Spearman Rank data analysis was 0.316 which meant the correlation between sex and depression level was small.

The most significant difference between depression on male and female was on the frequency, so that as the result the research on depression and gender has historically focused on why women are more susceptible to stress or depression. In this research sex did not affect depression on teenaged orphanages in Yayasan Satu Umat Orphan House. It was possibly caused by the number of female orphanages were bigger than male orphanages.

Correlation between teenage orphanages' characteristics based on age and depression level showed that teenage orphanages aged 16-20 experienced mild depression the most (26.7%) Teenagers aged >20 years old experienced medium-weight depression 1.0%. Coefficient correlation values based on Spearman Rank test analysis was 0.267 which is small (not close).

The above finding was probably because the teenage orphanages have not realized or recognized some symptoms that led to depression. According to Blackman (in Lubis, 2009), most depression in teenagers are not diagnosed until they find serious difficulties in school and self adaptation which often continue in adulthood.

The analysis result on the correlation between the length of stay and depression level on teenage orphanages showed that most of orphanage that experienced mild depression was 26.7% who lived in the orphan house for 0-1 years. Coefficient correlation values based on the result of Spearman Rank analysis was 0.044 which was very small.

One of the efforts of the teenage orphanages to overcome the experienced changes from the previous home environment to orphanage environment is by coping mechanism. It is

supported by Ahyar's (2010) opinion that if the coping mechanism can be applied well, someone can adapt with the changes or burden (Ahyar, 2010) Coping mechanism done by teenage orphanage is the effort to cope with changes or burden accepted by body and the burden can cause nonspecific body response that is stress or depression.

The analysis result used to find out whether there was a correlation between self-confidence and depression level by comparing correlation value with alpha 5% (0.05), it obtained r value 0.358 with significance value 0,000 less than 0.05. Coefficient correlation had value as big as -0.358 which meant the correlation was small. Significance value $0.000 < 0.05$ so that it can be concluded that there was a significant correlation between self-confidence and depression level.

From the bivariate analysis result, there were 3 variables that will be continued to multivariate analysis (p value < 0.25), they were self-confidence, sexes, and age. The variables were then analyzed by using logistic regression simultaneously. The variable included in multivariate analysis is variable with p value < 0.25 (Dahlan, 2012) The researcher performed logistic regression analysis because the data to be processed is categorical data

The multivariate analysis result showed that self-confidence, sex, and age had correlation with and role in teenage orphanages' depression. OR with value more than 1 (OR > 1) meant that the correlation was significant. Age variable had the most significant correlation that affected the orphanages depression as the obtained p value = $0.029 < 0.05$ and had OR value = 3.09 (IK 95%, 1.21-8.51), it means that age had possibility 3.09 times more affected depression compared with self-confidence with p value = 0.951; OR = 1,06 (IK 95% 0.18-6.24) and sex with p value 0.117; OR = 2.29 (IK 95% 0.81-6.45).

Orphanages are population which is prone to depression, because they were apart from the most important figure, parents, so that they get less affection (Rusanto, 2007). One of the environments that plays role in the teenagers development and which is ready to face their development tasks, is family. It would be different with teenagers who live in orphan house, as the role of family has been replaced (Napitupulu, 2007)

CONCLUSION

The characteristics of teenage orphanages in Panti Asuhan Yayasan Satu Umat Magelang are, from 105 people mostly are female, aged range from 16 to 20, and have lived in orphan house for less than 1 year. Teenage orphanages' self-

confidence levels were mostly in medium category as many as 66 people (62%). Depression levels of teenagers in Panti Asuhan Yayasan Satu Umat orphan house were mostly mild depression, as many as 64 people (61%).

From the analysis result, it was figured out that there was correlation between self-confidence and depression. Age was the variable with tightest correlation with depression on teenage orphanages in Yayasan Satu Umat orphan house.

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