INFLUENCE OF KEGEL EXERCISE ON URINE INCONTINENCE MOTHERS

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Abstract

One common problem faced by mothers is urinary incontinence. If not treated well, urinary incontinence can bring about negative effects. Urinary incontinence can be treated by doing kegel exercises, which help strengthen the pelvic floor muscles so that the problems caused can be eliminated. This study aimed to determine the effects of kegel exercises on urinary incontinence of mothers. The research used Quasy experiment with Posttest With Control Group design, divided into two groups: experiment and control. The study was conducted in the area of Tangkerang Timur Tenayan Raya Pekanbaru with total samples of 34 respondents, using purposive sampling technique. The research instrument used on both groups was International Consultation on Incontinence Questionnaire Short Form (ICIQ-SF). Data were analyzed using both dependent t test and independent t test. The statistic test results using dependent t test with α 0.05 showed that kegel exercises were effective to treat urinary incontinence on both the experiment group with p value (0.000) and the control group with p value (0.033), while the results of independent t test showed that there were effects of kegel exercises on urine incontinence of both the experiment group and the control group with p value (0.004). The results of this study can be used as a reference in using kegel exercises as one of the method of treating urine incontinence mothers.

Key words: Kegel exercise, mother, urinary incontinence.

INTRODUCTION

One of the disorders experienced in mothers is disruption of the breeding system. Among the disruption of the urinal system is urine incontinence (Ambarwati, 2010). According to WHO data (2016), 200 million people experience urinary incontinence. There are 13 million Americans who suffer from urine incontinence and 85% of them are women. Indonesia's case of urine incontinence is very significant in 2016 estimated 5.8% of the population is experiencing urine incontinence (DinKes, 2018). From 62 mothers who experience urine incontinence, there are 55 mothers with normal of vaginal delivery (DinKes, 2018).

Karjoyo's research (2017), explained that most of the respondents who were in the urine incontinence had a history of the vaginal delivery of a total (70%) Respondents and a fraction of the post of Sectio Caesarea (SC) delivery as much (30%) respondents. Almost 50% of women who have been born have had a prolapse of genitourinary organs is 40% accompanied by urine incontinence (Ambarwati, 2010).

Urinary incontinence occurs due to increased vascularity to pelvic organs, also affecting kidney activities such as more frequent urination frequencies. Increased blood supply to the kidneys and ureters also leads to dilation due to the adaptation of renal and ureteric glumerulus cells. Frequent urination frequencies are also due to decreased organ density due to decreased hormones of estrogen. Repeated frequent stresses due to heavy loads can weaken the pelvic floor muscles resulting in urinary incontinence

Treatment for urine incontinence can be done among them, with the basic pelvic muscle exercises (Kegel Exercise), bladder training, the use of external tools, modification of treatment and surgery. One of the techniques that can be used to prevent and overcome urine incontinence is Kegel exercise. Kegel exercise is an exercise to help strengthen the pelvic floor muscles Kegel exercises were originally developed by Arnold Kegel in 1948 as a method for controlling urine incontinence in childbirth. The exercise Kegel movement aims to strengthen the periurethra and perivaginal muscles so that mothers are able to control the maximum urinary production so that the problems caused by urinary incontinence can be resolved (Purnomo, 2011). Achirda (2016), pointed out that with a combination treatment of biofeedback and Kegel exercise obtained results of increased muscle strength base stage with the value P = 0,004 (P < 0,005) on the urine incontinence type of elderly stress that has a normal partus history. The results of Hidayat, A. (2018] with Kegel exercise gained 68.4% of women in the Stress Urine Incontinence (SUI) group and 41.2% of women in the Missed Urine Incontinence (MIU) group experienced statistically significant improvements. The study demonstrates

home-based Kegel exercises, unattended, effective in lowering Stress Urine Incontinence and Mised Urine Incontinence in women who experience urinary incontinence.

The high incidence rate of urine incontinence leads to the need for appropriate treatment, because if not immediately handled urine incontinence can cause various complications such as urinary tract infections, pubic skin infections, sleep disorders, and rash symptoms. In addition, psychosocial problems such as the disregard of others because of smelling, not-confident, irritability also often occur and this results in depression and social isolation (Purnomo, 2011). The exercise Kegel movement aims to strengthen the periurethra and perivaginal muscles so that elderly mothers are able to control urinary production due to decreased elasticity so that urinary incontinence can be resolved (Purnomo, 2011).

Based on preliminary studies at Puskesmas Rejosari on may 6-10st 2019 against six mothers who say often secrete urine unknowingly, two people can not resist the destruction of urine and feel a sore around his throat because Irritation, two people said it could not resist urine before it got to the bathroom, and two other elderly mothers said when coughs Based on preliminary studies at Puskesmas Rejosari on may 6-10 st 2019 against six mothers who say often secrete urine unknowingly, two people can not resist the destruction of urine and feel a sore around his throat because Irritation, two people said it could not resist urine before it got to the bathroom, and two other mothers said when coughs secrete urine. This interview was conducted on each elderly mother with a normal childbirth history. The effort of mothers to care about it is to use sanitary pads and often change underwear and restrict drinking water. From the background above researchers want to give a kegel exercise to urine incontinence in mothers.

RESEARCH METHODOLOGY

This study was conducted in the area of Tangkerang Timur village in Tenayan Raya Pekanbaru which was conducted in September – December 2019. The research was quantitative with the design of the research quasi experiment with Pre and Posstest With Control Group Research Draft. The study involved two groups of Group 1 (experiment) and Group 2 (control). The population of this study is mothers who experience urine incontinence. Sampling in this study used purposive sampling techniques. Large samples were used in this study as much as 34 respondents.

The research instrument used for data collection is International Consultation on Incontinence Questionnaire Short Form (ICIQ-SF) (Tamanini JT, Dambros M, D'Ancona CA, Palma PC, Rodrigues Netto N Jr: Validation of the "International Consultation on Incontinence Questionnaire - Short Form" (ICIQ-SF) for Portuguese. Rev Saude Publica. 2004). Kegel exercise is performed four times a day in a full month.

RESULTS

A. UNIVARIAT ANALYSIS

1. Characteristics of respondents

Table 1
Frequency distribution of respondents based on respondent characteristics

Characteristics	Total (n=34)	%
Age		
< 44	-	-
45-59	15	44,1
>60	19	55,9
Total	34	100
Education		
Elementary School	14	41,2
Secondary School	14	41,2
College	6	17,6
Total	34	100
Job Type		
Public servants	3	8,8
Private	6	17,7
Housewives	25	73,5
Total	34	100

In table 1 shows that of 34 respondents, the majority of the respondents ' age was at the age of > 60 with a total of 19 respondents (55.9%), the frequency of respondents based on education was largely basic

education and secondary education with 14 respondents (41.2%). While the respondent based on the type of work is largely a housewife is 25 respondents (73.5%).

2. Average pre test results and post test conducted Kegel exercise in the Mother experiment Group of urine incontinence

Table 2
Average pre test results and post test conducted Kegel exercise in the Mother experiment Group of urine incontinence

Urinary Incontinence	N	Mean	SD	Min	Max
Pre test	17	12,18	3,957	6,00	19,00
Post test	17	9,29	2,779	4,00	13,00

Based on table 2 above, the mean pre test of urine incontinence in the experiment Group is 12.8 with a minimum score of 6.00 and a maximum score of 19.00 as well as standard deviation 3.957. The mean post test is 9.29 with a minimum score of 4.00 and a maximum score of 13.00 as well as a standard deviation of 2.779.

3. Average results of pre test and post test without doing Kegel exercise in control group

Table 3
The frequency distribution of the average pre test and post test without the performed Kegel exercise in the control group.

Urinary Incontinence	N	Mean	SD	Min	Max
Pre test	17	11,12	2,288	7,00	16,00
Post test	17	11,88	1,996	8,00	16,00

Based on table 3 above, the mean pre test of urine incontinence is 11.12 with a minimum score of 7.00 and a maximum score of 16.00 as well as standard deviation of 2.288. The mean pre-test urine incontinence is 11.88 with a minimum score of 8.00 and a maximum score of 16.00 as well as a standard deviation of 1.996.

B. BIVARIATE ANALYSIS

Bivariate analysis is used to see the influence of Kegel exercise against the mother of urine incontinence in the experiment and control group, as well as see the influence of kegel exercise on urine incontinence. The research results are said to be effective if the P value is < (0.05). Data analysis used to distinguish the average frequency of urine incontinence in the experiment Group and the control group pre test and post test using the dependent T test, while to know the difference in average frequency of urine incontinence post test given Kegel exercise between the experiment Group with the control group using independent T test. Data processing using statistical methods obtained the following results:

4. Average frequency of urine incontinence in experiment groups and pre-test and post-test control groups

Table 4
Average frequency of urine incontinence in the experiment Group and control group pre-test and post-test

Variable	Inkontinensia urine	Mean	Change Mean	SD	*p value*
Exsperimen t	*Pre test* *Post test*	12,18 9,29	2,89	3,957 2,779	0,000
Control	*Pre test* *Post test*	11,12 11,88	0,76	2,288 1,996	0,033

From table 4, the average urinary incontinence before exercise gives Kegel exercises in the experimental group is 12.18 with a standard devision of 3.957 and the average urinary incontinence requires Kegel exercises is 9.29 with a standard deviation of 2.777. Mean exercise between before and after Kegel exercises is 2.89. Obtained p = 0,000 <α 0,05. It can be concluded that there is a significant difference between pre-test and post-test urinary incontinence tests and administration of exercise kegs. The average urinary incontinence before exercise without Kegel exercises in the control group was 11.12 with a standard deviation of 2.288 and the average urinary incontinence before exercise without Kegel administration was 11.88 with a standard deviation of 1.996. Mean exercise between before and after without Kegel exercises is 0.76. P value = 0.033 <α 0.05 was obtained. It can be concluded that there is a difference between pre-test and post-test urinary incontinence tests without the provision of training centers.

5. The average difference in frequency of urine post-test incontinence given Kegel exercise between the experiment Group and the control group

Table 5
Difference in average urine incontinence post test given Kegel exercise group experiment with control group

Variabel	N	Mean	SD	*p value*
Experiment	17	9,29	2,779	
Kontrol	17	11,88	1,996	0,004

Based on table 5 above, the test results of independent T test obtained mean post Test of urine incontinence in the experiment Group is 9.29 with standard deviation 2.779. The Mean post test incontinence of urine control group is 11.88 with a standard deviation of 1.996. The statistical test results using the Independent T Test obtained p value 0.004 < α 0.05. It can be concluded there is a significant influence of kegel exercise against urine incontinence in the experiment group with the given Kegel exercise and control group without being given Kegel exercise.

DISCUSSION

a. Characteristics of respondents

1) Age

Based on the results of the study, that the age of respondents at the age of > 60 years as many as 19 respondents (55.9%). According to WHO (2014) in the age of women hormones have drastically decreased but if routine and continuing to undergo kegel exercise, it can be realized that the muscle firmness of the bladder starts to improve, then it can decrease the incidence of urine incontinence. Although at the age of > 60 years are considered to be too old, as well as hormones in the body are also decreasing but exercises to tighten muscles are very helpful to prevent urinary incontinence (Sistriani, 2008).

Age is one of the risk factors of urine incontinence. Increased age leads to a decrease in the base muscle tone of the pelvis which can lead to disruption of Spingter's external muscle control of the urethra and

bladder muscles (Hastono, S. P. (2007). Hidayat, A. (2018). states that women over the age of 60 have a risk of two times higher than women under 60 years of urine incontinence but also to other complications such as uteri prolapse.

2) Education

Most of the primary and secondary respondents were educated with a total of 14 respondents (41.2%). Hastono, S. P. (2007). explains that education is one of the factors that support increased knowledge related to absorption of information. The higher the education of a person, the better his knowledge. People who have higher education are assumed to be more readily absorbing information and vice versa.

3) Job

The research results of the most characteristic work type is the housewife, which is 25 respondents (73.5%). The research is in line with Hidayat's research (2018) showing the results that most of the respondents have a job as a housewife of 23 respondents (70%). This is in accordance with the research of Rochmawati, L. (2010), stating that most subjects do heavy physical activity, doing regular activities as housewives such as cooking, washing, house cleaning, washing dishes, and activities such as lift heavy objects and others. Pinem Research (2012), stating that mothers who give birth to easy urine incontinence is a normal delivery of more than three.

b. Difference between the average frequency of urine incontinence pre-test and post-test in the experiment group with given Kegel exercise

In this research was obtained pre-test value in Exsperiment Group is 12.18 and after the Kegel exercise intervention obtained post test 9.29 results. It can be concluded that a significant decline in the post test value in the experiment Group is 2.89. Statistical test results obtained there is a pre test influence and post test of the intervention of kegel exercise against urine incontinence in the group Exsperiment with P value $0.000 < \alpha\ 0.05$. This means that there is the influence of kegel exercise on urine incontinence in elderly mothers who have repeated normal labor history.

Based on research in 17 people of experiment, the majority of urine incontinence is in the category of moderate and severe incontinence, but after a month of Kegel exercise intervention, most of the respondents have decreased incontinence into moderate and mild urine incontinence.

This research is in line with Hidayat's research (2018), that there is influence of kegel exercise to decrease urine incontinence level in post-partum mother with p value value $0.000 < \alpha\ 0.05$. Changes occurring in almost all body organs including the urination organs are the impact of the post-partum process, the weakness of the pelvic floor muscles that support the bladder and the urethral sphincter. The uncontrolled contraction of the bladder creates stimulation for prematurely urination and imperfect bladder discharge. This causes an elimination disorder of urine i.e., urinary incontinence. Administration of Kegel exercise can prevent even cure urinary elimination disorders of urine incontinence.

c. The average difference in frequency of urine post-test incontinence given Kegel exercise between the experiment Group and the control group

In this study was obtained mean post test of urine incontinence in Exsperiment Group is 9.29 with standard deviation 2.779. The Means post-test incontinence of urine control group is 11.88 with a standard deviation of 1.996. The statistical test results obtained p value $0.004 < \alpha\ 0.05$. The research is in line with the research results of Melania (2013), that there is a difference in average value of urine post test after the intervention between the experiment group and the control with the value of P value 0.002.

There is a meaningful difference in the value Post-test group Exsperiment and control is due to the presence of Kegel exercise which is a gymnastics to strengthen the pelvic floor muscles especially pubococcygeal muscles so that a woman can strengthen the muscles of the urinary tract, Widianti, (2010) and Karjoyo, J. D. (2017). This research is also in line with the research results of Hidayat (2018), stating that the administration of Kegel exercise is very influential to reduce the level of urine incontinence. Changes occurring in mothers of almost all body organs including the urination organs are impactful the weakening of the pelvic floor muscles that support the bladder and the urethral sphincter, the incidence of uncontrolled contractions in the bladder raises the stimulation to prematurely urination and imperfect bladder discharge. All this leads to elimination disorders of urine incontinence. Administration of Kegel exercise can prevent even cure the elimination disorders of urine incontinence (Hidayat, 2018).

CONCLUSION

The study gained that most of the respondents were at the age of > 60 years (55.9%), the education of respondents was largely primary and secondary education (41.2%) And some types of job respondents were housewives (73.5%). Based on the results of the statistical Test in the experiment Group and the control group acquired there was an average influence on the frequency of urine incontinence in the experiment group and the prior and after control groups with the value of P value 0.000 in the group of experiment and 0.033 in the control group, it can be concluded that the Kegel exercise is effective against urinary incontinence in mothers and there is the influence of kegel exercise on urine incontinence in the experiment group with the given Kegel exercise and Control group without being given a kegel exercise with P value 0.004 ($p < 0.05$).

RECOMMENDATIONS

Kegel exercise is one of the interventions that can be administered to reduce urine incontinence in elderly mothers. It is hoped to serve as one of the non-pharmacological therapies to reduce urine incontinence in mothers who have a normal maternity history, Caesaria section and vacuum extraction.

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