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The comparison of sexual function based on female sexual function index between primiparous after vaginal delivery and post cesarean section

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ABSTRACT--- *Sexual health after delivery is considered to be new and interesting. The purpose of the research was to find* ***out*** *mode about female sexual function index between primiparous after vaginal delivery and post cesarean section. The research was using cross sectional analytical design. The samples was taken by using consecutive samping from January-June 2019. There were 86 samples that are characterized as inclution, which consist of 43 vaginal delivery and 43 cesarean section. After that, the sexual function was scored by filing in the FSFI (female sexual function index) questionnaires. The total score of the questionnaire was analyzed by having independent test, the Chi square test to differ the suxual function, with level of trust* $p \leq 0.05$*. The character of the subject from the two groups appeared to be similar, for the result of the research could be ignored. The average periode to have sexual intercourse for both groups is on the third month after the delivery. The were some statistically meaningful differences between the groups, on the domain, desire, orgasm, satisfaction, and pain. On both sexual function, it was found 18.6% on vaginal delivery and 2.3% on cesarean section. Therefore, it can be considered that there has been a significat difference in the sexual function between after vaginal delivery and post cesarean section.*

Keywords--- *Sexual dysfunction, Female sexual function index, After vaginal delivery, Post cesarean section.*

I. INTRODUCTION

According to the Worlrd Health Organization (WHO), sexual health truly concerns the stability of the body, emotion, mental, and social welfare that relate to sexuality, which is not only relating to disease, dysfunction, nor weakness. Sexual health after delivery is a news and interesting research. Pregnancy and the transition in becoming parents, and other factors, can truly affect the post labor sexuality.

During pregnancy, the stomach wall is enlarging for 40 weeks. The pelvic is having strong stretch during the delivery. This changes do not come back as the Way they are after the delivery. It is assumed that vaginal delivery,

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especially throughout actions, might have negative impact to pelvic supporting system and sexual function to women (Herbert, 2009).

One of the benefits of going through cesarean section is having less mechanical damage to pelvic muscles, which May protect the sexual function. Comparing to vaginal spontaneous delivery, it is logical to assume that women that go through cesarean section have less chance of gaining perineum pain, for they do not get episiotomy treatment nor any additional equipment. But, cesarean section itself can also cause some damages, even to the sexuality itself.

The main complications of going through cesarean section are, the damages of the organ such as vesical urinary and uterus during surgery, anesthesia complication, infectious bleeding, and thromboembolism. The number of death cause by cesarean section is higher than the one by vaginal delivery. It is difficult to make sure, the main cause of death, whether it is cause by the surgical procedures or the reason why they have to undergo the surgery. In general, episiotomy or cesarean section that has complication may give negative result post partum to the women, physical and psychological (Abdool et al., 2009).

Sexual function can be measured by using Female Sexual Function Index (FSFI). FSFI is a questionnaire that consist of 19 questions ; score ≤ 26 means sexual dysfunction, ≥ 26 (score higher) means sexual function is better, which has been developer as an instrument used for self-reported instrument, that works in multidimensional to measure the sexual function on women. FSFI is formulated in the USA in order to measure every sexual aspect in a woman (desire, arousal, lubrication, orgasm, satisfaction, and sexual pain disorder) with proven validity old researches concerning woman sexual dysfunction (Gerstenberger et al., 2010).

On the previous research, done by El Sayed et al (2017), in Egypt, they did not find any significant differences statistically ($p > 0.05$) between groups that have undergone vaginal and cesarean section of every FSFI element including, desires, arousal, lubrication , orgasm, satisfaction, and pain.

During puerperal, disruption may come, such as sexual pain as the consequences of perineum trauma. Women of any age have stated that satisfying sexual life has important role in the quality of their lives. For gynecologists, it essential to identify the sexual problem of those who come routinely for treatment, more than 50% of women have at least one sexual issues. Therefore, every medical worker must realize this hidden problem, sexual morbidity can damage women's quality of life that can impact their social, physical, and emotion al needs (Domoney, 2009).

Until now, there has not been any data about FSFI on primiparous post vaginal delivery and post cesarean section in Makassar.

II. METHODOLOGY

Location and Time of Research

This research took place in the education network hospital Obstetrics and Gynecology Department, Medical Faculty of Hasanuddin University during the period of January-June 2019.

Design and Variable of Research

The research is using cross sectional study. The variable consist of: free variable (vaginal delivery, cesarean section), dependent variable (sexual function based of female sexual function index), control variable (age, education, occupation, gestational age, newborn baby, episiotomy, perineum rupture, extraction vacuum).

Population and Samples

The Population on this research are all women with first delivery experience by vaginal and cesarean section. The samples are those with inclusion and exclusion criteria. The samples are from 86 women, with 43 coming from the vaginal delivery group and another 43 coming from the cesarean section group.

Method of Collecting Data

The collection of data is using FSFI questionnaire that go around sexual function. Additional data comes from patients, identification, social economy demography, taken from respondents, medical records.

Data analysis Technique

After reevaluating the completeness of the data, analysis has been taken by using computer software: 1) descriptive statistics analysis to demographic samples data. 2) Stated by the scoring from every question from the FSFI questionnaire with the subject and the level of dysfunction of every subject. 3) Kolmogorov-Smirnov normality test to test the normality of the data. 4) The relation between control variable and dependent variable tested by using multivariate analysis with logistic regression. 5) Scoring difference of FSFI between the group of vaginal delivery and the group of cesarean section delivery, to test the difference of sexual function, t-test is conducted if the data is normally distributed. If the distributed data is abnormal, Mann-Whitney test will be conducted. 6) Statistics analysis using 95% interval of trust. The relation can be significant if the $p<0.05$.

III. RESULTS

The research with cross sectional study design has been conducted to find and rete the Female Sexual Function Index post vaginal delivery and post cesarean section on primiparous women. The research was conducted in the education network hospital Obstetrics and Gynecology Department, Medical Faculty of Hasanuddin University during the period of January-June 2019. During the period of research, the researchers collected 86 samples, 43 from the group of vaginal delivery and another 43 come from the group of cesarean section delivery.

Sample characteristic comparison distribution of the research showed the average age of the vaginal delivery group is 24.5±4.2, while on the group of cesarean section is 23.7±4.2. Most of the research samples on both groups are high school graduates (81.4% vaginal delivery and 69.7% cesarean section), employees (39.5% and 54.4%), gestational age between 37-42 weeks (81.4% and 93%), delivering the baby weighing 2500-4000 grams (72% and 76.7%) and breast feeding (90.7% and 83.7%). Characteristic differences are not found between vaginal delivery and cesarean section samples ($p>0.05$). From all vaginal delivery samples, 37.2% had episiotomy, and 32.5% had perineum ruptures. Meanwhile, 16.2% women that underwent vaginal delivery by vacuum extraction and 9.3% that underwent cesarean section experienced failure by vacuum extraction (attachment, Table 1).

Table 1. Sample characteristic comparison distribution

Variable	After Vaginal Delivery (n=43)		Post Cesarean Section (n=43)		P
	N	%	N	%	
Age	24.5±4.2		23.7±4.2		0.375
Education Level					
Basic School	0	0	4	9.3	0.250
Elementary School	6	13.9	6	13.9	
High School	35	81.4	30	69.7	
Bachelor Degree	2	4.6	2	4.6	
Occupational Status					
House Wife	20	46.5	18	41.8	0.371
Employee	17	39.5	23	53.4	
Entrepreneur	4	9.3	1	2.3	
Social Government	2	4.6	1	2.3	
Gestasional Age					
<37 weeks	6	13.9	2	4.6	0.264
37-42 weeks	35	81.4	40	93	
>42 weeks	2	4.6	1	2.3	
Delivering the Baby Weighing (gram)					
<2500	12	27.9	10	23.2	0.621
2500-4000	31	72	33	76.7	
Breast Feeding					
Yes	39	90.7	36	83.7	0.330
No	4	9.3	7	16.2	
Episiotomy					-
Yes	16	37.2	0	-	
No	27	62.8	0		
Perineum Ruptures					
Yes	14	32.5	0	-	-
No	29	67.4	0		
Vacuum Extraction					
Yes	7	16.2	4	9.3	0.270
No	36	83.7	39	90.7	

Based on the period of first sexual intercourse post partum, it is known that most research sample on vaginal delivery (60.4%) begin having sexual intercourse 3 month after the delivery, this is also found in the samples of cesarean section group (46.5%). There have been no difference of Time to begin having sexual intercourse on both groups, the vaginal delivery and the cesarean section (p=0.215) (attachment, Table 2).

Table 2. The period of first sexual intercourse post partum

Variable	After Vaginal Delivery (n=43)	Post Cesarean Section (n=43)	P
First Sexual Intercourse Post Partum (a months)	11 (25.5%)	17 (39.5%)	
2	26 (60.4%)	20 (46.5%)	
3	6 (13.9%)	4 (9.3%)	0.215
4	0 (0%)	2 (4.6%)	
5			

The average score of FSFI to the groups of vaginal delivery and cesarean section indicates that the FSFI total score is higher on the group of cesarean section delivery, the difference if statically significant (p=0.006). The score for sexual desire, orgasm, satisfaction and pain are higher for the cesarean section group, the difference between the two groups is also statistically significant (p=<0.05). While the score for arousal and lubrication, although it is higher on the cesarean section group, the difference between the two groups is not statistically significant (p>0.05). Vaginal delivery group has higher score on sexual dysfunction and the difference on that matter between the groups is statistically significant (p=0.030) (attachment, Table 3).

Table 3. The average score of FSFI

Variable	After Vaginal Delivery (n=43)	Post Cesarean Section (n=43)	P
FSFI total score	13.5±3	14.9±0.9	0.006
Desire	4.7±1.1	5.2±0.6	0.014
Arousal	4.9±1.4	5.2±0.5	0.160
Lubrication	5.4±1.2	5.8±0.5	0.067
Orgasm	5.4±1.2	5.8±0.4	0.045
Satisfaction	5.1±1.4	5.7±0.5	0.018
Pain	5±1.6	5.8±0.4	0.002
Sexual Dysfunction (score ≤26)			
Yes	8 (18.6%)	1 (2.3%)	0.030
No	35 (81.4%)	42 (97.6%)	

IV. DISCUSSION

The research has shown that there has been statistically meaningful difference on women sexual function post vaginal delivery compare to cesarean section delivery.

Based on characteristic analysis of research result, there are no findings on the age difference, occupations, educational background, gestational age, weight, breast feeding activity between both groups of vaginal delivery

and cesarean section (p>0.05). This is indicates that both groups have comparable characteristic, therefore the result of the research can be ignored.

It is theoretically reported that age also plays an important role in sexual dysfunction. There are several research reports that stated that the older the person, the higher the sexual dysfunction. In a cross section research at a teaching hospital in Turkey, they found significant connection between the group of age participants and the subgroup of sexual desire, passion, lubrication, satisfaction, and the FSFI total score. According to this research, the sexual desire on women aged 31-40 is higher, while the passion, lubrication, satisfaction, and the FSFI total score on women aged 41-50 is significantly lower, compare to the other groups of age. But, there is no significant difference found on orgasm and pain between groups of age (Tekin et al., 2014).

Connection between educational background and sexual satisfaction is still debatable. The high educational background has negative relation with men or women sexual dysfunction. Some research reports that career women with high educational background must able to manage their time and often care less about their sexual issues (Stamatiou et al., 2016).

In this research, the women in the groups of vaginal delivery and cesarean section delivery begin their sexual intercourse period 3 month post partum. Different period of time to begin the sexual intercourse between groups are not found (p=0.215). The average time to begin sexual intercourse post partum is reported 7.8 and 7.06 weeks from the research in Turkey and Uganda (Anzaku & Mikah, 2014). Meanwhile, the research in China reports only one third of the 550 samples that reported their sexual activity in 3 month post partum. Another research reports sexual intercourse 2 months port partum reported on 48.2% to 73.1% respondents (Zhuang et al., 2019).

The different timing of the beginning of sexual intercourse post partum is probably caused by variety of cultural and religion practice and the women sexual behavior around the world. The timing to begging having sexual intercourse in the research can also be caused by traditional practice and it is forbidden to have sexual intercourse post partum in the our community.

The FSFI total score is higher on the group of cesarean section, the difference is statistically significant (p=0.006). The score covers sexual desires, orgasm, satisfaction and pain is higher on the group of cesarean section, the difference between groups is statistically significant (p=<0.05). Even if the score for arousal and lubrication is higher, the difference between group is not statistically significant (p>0.05). The sexual dysfunction is experienced more by the group of vaginal delivery and the difference between both groups is statistically significant (p=0.030).

In the research, it is found that 27 women out of 43 samples post partum have vaginal trauma such as episiotomy, perineum rapture, and vacuum extraction, which is also known that the score for sexual desire, orgasm, and lubrication is lower compare to the group of cesarean section. Besides that, the pain caused by sexual intercourse is higher on the group of vaginal delivery compare to cesarean section group. This occurs to the research of McBridge & Kwee (2017), who stated that the relation of type of delivery, in this case vaginal trauma and perineum, increase the frequency of pain during sexual intercourse.

Margarita et al (2019) found that 19% of 434 women that have undergone vaginal delivery with vaginal trauma experienced severe pain 3 months post partum, another research discovered 14% of 51 women that have undergone vaginal delivery with vaginal trauma experienced pain 6 months post partum. In the research, there are 27 samples of women that have undergone vaginal delivery vaginal trauma and 15 women from the samples experienced pain during the intercourse and 9 out of these 15 women experienced pain 3 months post partum.

Type of delivery might affect sexual dysfunction to women post partum. There are many proofs around the relation between the type of delivery and the vaginal trauma and perineum. There are also some evident that delivery with help (forceps, vacuum, or episiotomy) might increase the frequency of pain during sexual intercourse. Vaginal delivery indicates the cause of perineum rips spontaneously. Compare with the women with no perineum rips, women with minor to average rips (second degree) 80% proven to have more complaints on the pain they have during sexual intercourse than those with no perineum rips, while the ones with heavy perineum rips (third and fourth degree) increase 270% of pain 3 months post partum (McBridge & Kwee, 2017).

On the other hand, there are some contradictive evidence. Some research reports types of delivery do not affect the post partum sexual health. In a research conducted on 831 women, no connection was found between the types of delivery with post partum sexual function (McBridge & Kwee, 2017). The result of El Sayed et al (2017) research, in Egypt they did not find any difference which is statistically significant ($p>0.05$) between the groups of vaginal delivery and the cesarean section on every FSFI element including passion, lubrication, orgasm, satisfaction, and pain. The total sexual function score on both groups is 21.4 ± 2.8 and 22.2 ± 2.2, and there were no difference found which is statistically significant ($p>0.05$). Another findings also reported the same result. Baghdari et al (2012). Did not find any sexual function significant difference between the group of women with spontaneous delivery and the group of women with cesarean section delivery.

The difference of the result of this research and the previous one can be caused by the compared groups of the research. On some research correspondents are divided into some categories, taken from the status of perineum and episiotomy rips. While in this research the Comparison of rips category of the degree of episiotomy are not conducted.

Man need to understand that women need more time to recover emotionally and physically post partum before they participate in any sexual activity. Because sex between couple is an important factor to create happiness and satisfaction which also affect the quality of their lives, and even may affect their perception on motherhood, post partum sexual counseling is required. Some women fear having vaginal delivery, and ask for cesarean section. One of the cause of fear to have vaginal delivery is the sexual problem post partum itself, which increase the number repeated cesarean section and morbidity of the mother and the infant. The health service providers need to reduce the cause of fear of vaginal delivery by giving counseling during prenatal visits.

V. CONCLUSION

The researcher concludes that most of the samples begin their sexual intercourse 3 months post partum which also occurs the group of cesarean section. Different timing on beginning their sexual intercourse on both groups, vaginal delivery and cesarean section, were not found. The total score of FSFI is higher on the group of cesarean section. The score for sexual desire, orgasm, satisfaction and pain is higher on cesarean section. Although, the score of arousal and lubrication is higher on the group of cesarean section, the group of vaginal delivery have more sexual dysfunction.

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REFERENCES

1. Abdool Z et al (2009). Postpartum Female Sexual Function: A Review. Eur J Obstet Gynecol. doi:10.1016/j.ejogrb.2009.04.014.
2. Anzaku A.S & Mikah S. (2014). Postpartum Resumption of Sexual Activity, Sexual Morbidity and Use of Modern Contraceptives among Nigerian Women in Jos. Ann Med Health Sci Res. 4(2): 210-216.
3. Baghdari N et al. (2012). Comparison of women's Sexual Function after Natural childbirht and Cesarean Section in Women Reffering to the Healthcare Centers of Mashhad. Iran J Obstet Gynecol Infertil. 15: 8-14
4. Domoney C. (2009). Sexual Function in Women what is Normal. Int Urogynecol J. S9-S17.
5. El Sayed H.A et al. (2017). The Effect of Mode of Delivery on Postpartum Sexual Function and Sexual Quality of Life in Primiparous Women. American Journal of Nursing Science. 6(4): 347-357.
6. Gerstenberger E.P et al. (2010). Sexual Desire and the Female Sexual Function Index (FSFI) : A Sexual Desire Cutpoint for Clinical Interpretation of the FSFI in Women with and without Hypoactive Sexual Disorder. Journal Sex Med. 7: 3096-3103.
7. Herbert J. (2009). Pregnancy and Childbirth: The Effects on Pelvic Floor Muscles. Nursing Times. 105(7): 38-41.
8. Margarita M et al. (2019). Incidense of Perineal and Dyspareunia Following Spontaneous Vaginal Birth: a Systematic and Meta-analysis. The International Urogynecology Association.
9. McBridge H.L. & Kwee J.L. (2017). Sex After Baby: Women's Sexual Function in the Postpartum Period. Current Sexual Health Reports. 9(3): 142-149.
10. Stamatiou K et al. (2016). Female Sexual Dysfunction (FSD) in Women Health Care Workers. Materia Socio-Medica. 28(3): 178.
11. Tekin Y.B et al. (2014). Evaluation of Female Sexual Function Index and Associated Factors among Married Women in North eastern Black Sea Region of Turkey. Turkish Journal Obstetrics and Gynecology. 11(3): 153-158.
12. Zhuang C et al. (2019). Resumption of Sexual Intercourse Post Partum and the Utilisation of Contraceptive Methods in China: a Cross-Sectional Study. BMJ Open. 9(3): e026132.