DOI: https://doi.org/10.53350/pjmhs211551326

ORIGINAL ARTICLE

The Correlation Between Coping Mechanisms and Stress Levels in Childbearing Women with Infertility

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ABSTRACT

Background: In Indonesia, in 2012, there were 39.8 million fertile age couples, 10-15% of whom were declared infertile. Infertility often develops into a social problem because the wife is considered to be the cause. Coping mechanisms are used in dealing with stress infertility.

Aim: This study aims to determine the relationship between coping mechanisms and stress levels in childbearing women with infertility at PKU Muhammadiyah Yogyakarta Hospital.

Method: Research design using cross-sectional. The sampling technique with total sampling found 38 female respondents of childbearing age with infertility—data collection with DASS 42 instrument and Brief Cope 28. Data analysis used Kendall's tau.

Results: The results showed that the p-value was 0.002 <0.005, and the Correlation Coefficient value was 0.516.

Conclusion: There is a relationship between coping mechanisms and stress levels in childbearing women with infertility at PKU Muhammadiyah Yogyakarta Hospital with moderate closeness.

Keywords: coping mechanisms, infertility, stress level

INTRODUCTION

Infertility occurs in one in 10 married couples scattered throughout the countries of the world. About 50-80 million couples experience infertility globally with the age of still fertile [1]. Infertility in developing countries is higher at around 30% than in developed countries, only 5-8%. In 2012, Indonesia had a population of around 238 million. An estimated prevalence of infertility is 2,647,695 or, in other words, from 39.8 million fertile age couples (EFA) in Indonesia, 10-15% of whom are declared infertile [2]. The prevalence of idiopathic infertility varies between 22-28%. A recent study shows that among couples who visited a fertility clinic, 21% of women aged under 35 years and 26% of women aged over 35. An estimated 4-6 million couples require infertility treatment to get offspring [3]. Simultaneously, the number of fertile women (WUS) in Yogyakarta is 972,980 million, with ± 200,000 people experiencing infertility [4]. Infertility is a reproductive health problem that often develops into a social problem because it is always considered the cause. Many couples with this reason for infertility choose to divorce or polygamy, even adopt children. Infertility problems can have a significant negative impact on couples who experience them; in addition to causing medical problems, infertility can also cause economic problems and psychological problems. Couples who experience infertility will undergo a comprehensive evaluation and treatment process, where this process can be a physical and psychological burden for infertility partners [5]. The above problems make women often cornered and subjected to violence, neglected by their health, especially reproductive health, and given infertile women labeling as a problem. So that women often experience feelings of depression. Research conducted by Alhassan (2014) states that the culture of people who consider children as a form of social security in old age and perpetuate family lineages makes infertile couples experience negative views in the surrounding community [6].

Several factors and people's assumptions make women of childbearing age with infertility very susceptible to experiencing stress until severe depression. Stress due to infertility can harm the body's response both psychologically and physiologically. This is because the couple must always survive day to day, month to month, year to year, to manage themselves always to be patient waiting for a child's presence. To deal with stress, coping mechanisms are needed to survive stress and achieve marriage goals [7]. A preliminary study conducted at PKU Muhammadiyah Yogyakarta Hospital in October 2017-February 2018 found that 43 couples came to the hospital with complaints of wanting to have children and in a state of primary or secondary infertility. Of the 43 couples, 2 of them interviewed said that the stress level was quite severe, and the coping strategies they had tried were always patient and infertility treatment.

METHODS

This study uses a correlational method with a cross-sectional approach. The population in this study were 38 women of childbearing age from 18-49 years old; the sample data collection technique used total sampling, with inclusion criteria (women of childbearing age who experienced infertility and categorized as women of childbearing age 18-49 years), and exclusion criteria (not willing to be a respondent, having physical disorders such as visual impairment, deafness, so that they cannot communicate properly, mothers who cannot write and read, mothers do not understand Indonesian, mothers who did not come during the study). The instrument in this study used the DASS 42 questionnaire and Brief Cope 28. The data analysis used was univariate, bivariate analysis with Kendall's Tau, and relationship closeness.

RESULT AND DISCUSSION

From the results of the frequency distribution Table 1, it is known that the age range at PKU Muhammadiyah Yogyakarta Hospital is at 19-35 Years in the age category

of not as risky as 33 people (86.8%) while for the length of marriage age of 26 people (68.4%) have the age of marriage is more than five years and has a secondary education level of 22 people (57.9%). As many as 25 people (65.8%) are not working by choosing to be housewives.

Table 1. Frequency Distribution of Characteristics of Respondents by Age, Age of Marriage, Latest Education and Employment

Characteristics	N	%
Age		
1. Not At Risk (≤35 Years)	33	86,8
2. At Risk (>35 Years)	5	13,2
Age of Marriage(Years)		
1. 1 - <3	5	13,2
2. 3 - <5	7	18,4
3. ≥5	26	68,4
Latest Education		
1. Primary	12	31,6
2. ddling	22	57,9
3. High	4	10,5
Employment		
1. Not Working	25	65,8
2. Working	13	34,2
Total	38	100

Based on Table 3, women of childbearing age with infertility at PKU Muhammadiyah Yogyakarta Hospital of 38 respondents, none had mild stress levels. In the same amount, respondents were divided into moderate and severe stress of the 19 people (50%).

Based on Table 2, women of childbearing age with infertility in PKU Muhammadiyah Yogyakarta Hospital have many adaptive coping mechanisms as many as 30 people (78.9%).

Table 2. Frequency Distribution of Koping Mechanisms in Infertile Age Women with Infertility at PKU Muhammadiyah Hospital Yogyakarta

Coping	Frequency (n)	Presents (%)
Adaptif	30	78,9
Maladaptif	8	21,1
Total	38	100

Table 3. Distribution of Frequency of Stress Levels in Infertile Age Women with Infertility at PKU Muhammadiyah Hospital Yogyakarta

Stress Level	Frequency (n)	Presents (%)
Mild	0	0
Medium	19	50
Heft	19	50
Total	38	100

Table 4. shows the relationship between coping mechanisms and stress levels in women of childbearing age. Most respondents with adaptive coping mechanisms have moderate stress levels based on the data above, which are 19 people (63.3%). The results of Kendall's Tau correlation obtained-value = 0.002 <0.05 with a correlation coefficient of 0.516. The analysis states a relationship between coping mechanisms and stress levels of women of childbearing age with infertility at PKU Muhammadiyah Yogyakarta Hospital with moderate closeness.

Table 4. Correlation between Koping Mechanism and Stress Level in Fertile Age Women with Infertility at PKU Muhammadiyah Hospital in Yogyakarta

Coping	Stress Level				Total	p-value	*Correlation coefficient*
	Medium		Heft				
	F	%	F	%			
Adaptif	19	63,3	11	36,7	30	0.002	0.516
Maladaptif	0	0	8	100	8		
Total	19		19		38		

DISCUSSION

A. Coping mechanisms for fertile women with infertility at PKU Muhammadiyah Yogyakarta Hospital

Most of the women of childbearing age with infertility at PKU Muhammadiyah Yogyakarta Hospital were respondents who had a high school education, which was included in the secondary education category, as many as 22 people (57.9%). 19 out of 22 people have adaptive coping mechanisms, with a percentage of 86.4%. Besides, there were four respondents (who had graduated from undergraduate education) (10.5%), with 2 (50%) people having adaptive coping mechanisms. This shows that most respondents with adaptive coping mechanisms have secondary education to higher education. In this regard, women of childbearing age at PKU Muhammadiyah Yogyakarta Hospital who have studied higher education stated that they often try always to pray, look for sources of very stressful, and divert problems. However, they often fail to reduce problems related to infertility, following Bennett's research, which states that a person with a high level of education has a logical mindset and is more alert in taking the right attitude to overcome the problems in his life due to concerns about the increasing problems of his life [8]. The mechanism of adaptive religious coping is most often applied by women of childbearing age at PKU Muhammadiyah Hospital in Yogyakarta. Religious coping is classified as emotion-focused coping [9]. The coping mechanism used by most infertile women focuses on emotions because infertile women always feel that there is no sense of security from themselves that can maintain their marital relationship so that infertility women feel fear and despair. Thereby, getting closer to God is the only way to impact peace of mind, peace, and abstinence from despair. This result was obtained by the researcher when taking the data, the respondents said that infertility that happened to them was a trial from God, respondents also had confidence that there must be a way out of each problem, besides that respondents tended to get closer to God by praying/meditating. This is in line with Himawan's theory that religion is one of the ways included in the adaptive coping mechanism and classified as emotion-focused coping [10]. Xu (2016) said that religion is one coping that

can be used by religious people who can bring true peace and make spiritual and physical good [11].

Stress Level in Childbearing Women with Infertility at PKU Muhammadiyah Yogyakarta Hospital: Based on age, as many as 33 people (86.8%) were in the age category not at risk. Age ≤35 years is a fertile age that is very good for pregnancy. According to Vogl, the peak of a woman's fertility is 20-29 years. Based on the respondents' answers, women of childbearing age who do not get pregnant in this age period will experience anxiety because it is feared that the golden period which is the peak of fertility, is likely to get pregnant [12]. In this study, the age range of women of childbearing age is 19-39 years, which is included in early adulthood. According to the theory put forward by Morton (2017) states that early adulthood is a transitional period of dependence on independence, self-determination, and views about the future are more realistic [13]. Most of the respondents stated that early adulthood was a time where the purpose of their lives would be more and more. The desires that were still not reached would be a burden on life, such as the desire to get a side job for homemakers, go to the holy land, own a luxury house, and so forth. This stressor is the pressure on infertile women other than infertility. This is in line with Chelsea's (2017) research that infertility stress can be due to early adult development: to marry or build a family, manage the household, educate or care for children [14]. Most respondents have a high school education (middle); Jallinjoa (2000) states that the higher the education, the higher the level of knowledge [15]. According to the theory of Delbaere (2007) which states that the recommended age for pregnancy is the age range of 20-35 years, and before or after it is the age at risk of getting a pregnancy [16]. In this study, 5 of them had an age above 35 years; the respondent knew that and also knew that fertility could decrease after 35years could put a woman under psychological stress, which contributed to stress. In this study, some respondents stated that even though women's age in this study was still ≤35 years, worries and anxieties about an ever-increasing age would add more stress. In addition to education-related to knowledge, PKU Muhammadiyah Hospital was also delivered by health workers who were midwifery polyclinics that the age of 35 years and above is an age at risk if pregnant.

B. The Relationship between Coping Mechanism and Stress Level of Childbearing Women with Infertility at PKU Muhammadiyah Hospital in Yogyakarta: The results obtained from 38 respondents involved in this study showed a significant relationship between coping mechanisms with stress levels in women of childbearing age with infertility. Respondents with adaptive coping mechanisms stress the medium category, while respondents with maladaptive coping mechanisms stress the heavy category. The coping mechanism is the process through which individuals adjust to their stressful situations. Coping involves trying to manage a burdensome situation to reduce stress; if this coping is successful, someone will adapt to stress. In this study, based on the results of respondents answers to the questionnaire contained in item no. 1, 2, 7, 19, 22, 27, coping mechanisms related to stress levels of women of childbearing age with infertility at PKU Muhammadiyah Hospital in Yogyakarta which is often carried out namely adaptive coping mechanisms that are carried out religiously, active coping and self-distraction. In religious elements, women of childbearing age always pray, get closer to God, be patient, and think positively of gifts from God. In the element of active coping and self-distraction, women of childbearing age very often do things that can overcome stress infertility, such as seeking herbal or medical treatment, seeking support and motivation from the closest person like family, active in social activities such as family gathering, RT associations, recitation and recreation. While the mechanism of maladaptive coping associated with severe stress levels in this study is coping strategies by self-blame, emotional support, and venting. In this regard, infertile women also tend to do this by blaming themselves, seeking support from people not from the family, causing new problems by being self-indulgent in the community, and expressing feelings by crying the time to cause passivity in activities social. This is following Høeg research (2017), which states that maladaptive coping causes sadness and envy towards other families, making women hampered by integrating functions, breaking growth, reducing autonomy, and controlling their environment [17].

Infertility stress makes guilt and other psychosocial effects. As a result, mental symptoms arise among women of childbearing age under these stress conditions until five respondents (100%) are in severe stress with maladaptive coping mechanisms. Five respondents who use maladaptive coping have the same initial goal: to eliminate stressors due to infertility problems, but maladaptive coping mechanisms will create new problems. This is consistent with the research conducted by Peterson (2011), which suggests that high levels of stress infertility can be overcome by choosing the right coping strategies [18]. Infertility women have their way of choosing adaptive and maladaptive coping strategies to overcome the effects of infertility stressors, including marital stress, moral, social, self-esteem and divorce stress. Besides, Gourounti (2012) also added that an adaptive coping mechanism is needed [19]. This adaptive coping mechanism will stress infertility change to eustress, stress that belongs to a suitable category.

In contrast, maladaptive coping will only cause temporary loss of stress. In this study, seven respondents had adaptive coping but had severe stress. Based on respondents' answers in this study, the selection of adaptive coping mechanisms only focuses on problem-solving (problem-focused coping) does not include emotional stress. In contrast to respondents who have adaptive coping mechanisms but have moderate stress levels due to using problem-focused coping and emotion-focused coping simultaneously / balanced. This research is not following Samani's research (2017), which states that the selection of coping strategies can be problem-focused coping or emotion-focused coping. The use of one strategy can reduce stress infertility [20].

The closeness of the relationship between the coping mechanism and the stress level in women of childbearing age with infertility at PKU Muhammadiyah Hospital in Yogyakarta: In this research, determining the relationship's direction (negative and positive relationships) can be seen in the correlation coefficient value, namely positive or negative. Based on the research hypothesis test

results, it can be determined that the direction of the relationship between coping mechanisms and positive stress levels. A positive sign on the correlation coefficient's price indicates a direct relationship, meaning that the relationship between the two variables is directly proportional so that it can be concluded that maladaptive coping mechanisms, the higher the level of stress experienced by women of childbearing age with infertility at PKU Muhammadiyah Yogyakarta Hospital and if adaptive, the lighter the stress level. In line with Patel's (2016) research, high scores of low-stress levels are more likely to have constructive coping mechanisms, while scores of stress levels tend to be high have destructive coping mechanisms [21]. The heavier the level of stress experienced, the more destructive coping mechanisms used, so it can be concluded that differences in stress levels can lead to differences in coping strategies. Correlation coefficients on this research test results are in the range of moderate correlation strength, which is between 0.40 - 0.5999. In this study, it can be concluded that the adaptive coping mechanism that can reduce stress levels is an adaptive coping mechanism that uses coping in both problems focused coping and emotion-focused coping. So if only one of the coping mechanisms used will make adaptive coping but cannot reduce the stress.

CONCLUSIONS

This study indicates a relationship between coping mechanisms and stress levels in women of childbearing age with infertility at PKU Muhammadiyah Yogyakarta Hospital with a p-value = 0.002 <0.05, where the degree of closeness is moderate. The Correlation Coefficient is 0.156. The research results on the majority coping mechanism variables have adaptive coping: as many as 30 people (78.9%) and divided into two parts equal to the respondents had a moderate and severe stress level of 19 people (50%).

Suggestions: For research respondents, it was suggested that they try strategies that put more emphasis on religious coping mechanisms by worshiping/meditating to calm down, be patient, not despair, then slowly try to overcome problems that burden the mind associated with medical expenses, fear during the examination by increasing activity every day such as doing housework, recreation and socializing with the surrounding environment to divert stress due to infertility. For research sites, it is recommended that counseling, information, and education be provided for women of childbearing age with infertility by using media such as leaflets and flipcharts on every patient who experiences infertility regarding his psychological response specifically to coping mechanisms with stress levels so that all can be delivered in order to improve the quality of life for women infertility in the future. For Researchers, it is further recommended to examine the factors related to stress infertility with the addition of many samples.

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