



An Overview of The Quality of Life of Puerperal Mothers: A Comparative Study of Normal Childbirth and Sectio Caesarea Childbirth

Airul Berkah Asisah and Faizah Betty Rahayuningsih(✉)

School of Nursing, Faculty of Health Science, Universitas Muhammadiyah Surakarta, Surakarta, Indonesia

fbr200@ums.ac.id

Abstract. This study aimed to determine the quality of life of postpartum mothers with the method of normal childbirth and sectio caesaria childbirth. The research applied a descriptive quantitative cross-sectional approach with purposive sampling techniques on 54 respondents of postpartum mothers in the Puskesmas Kartasura area. The research instrument was a postpartum quality of life questionnaire assessing four health subsystems: child care, physical function, psychological function, and social support. The results of this study on the quality of life of puerperal mothers with 54 respondents of puerperal mothers with a balanced number of respondents with normal childbirth and sectio caesarea childbirth by focusing on several sociodemographic and clinical characteristics of puerperal mothers can affect their quality of life and evaluated from the differences of both groups. The quality of life of postpartum mothers with normal childbirth and sectio caesarea childbirth did not have a significant difference. However, in terms of four subsystems of child care, physical function, psychological function, and social support, there was a significant difference with ($p = 0.041$) in the social support subsystem for sectio caesarea children. In addition, social support was more required for postpartum mothers with normal childbirth.

Keywords: Quality of Life · Puerperal Mothers · Normal Childbirth · Sectio Caesarea Childbirth (SC)

1 Introduction

In mothers' life, puerperium is a crucial phase after childbirth and for newborns. The puerperal period begins after the childbirth process and lasts for six weeks. During the puerperal phase, The mothers' body, which underwent physiological and anatomical changes during pregnancy, returns to its previous condition. Furthermore, the postpartum period provides new adaptation situations, mood swings, and transitional changes to new responsibilities that cause mothers to struggle to live with them. However, it also provides satisfaction to the family and strengthens existing family relationships. In Indonesia, maternal mortality rates (MMR), especially in Central Java, are still relatively high. MMR in 2020 was 98.6 per 100,000 live births from causes of death related to pregnancy,

childbirth, and puerperium problems, 0–42 days after delivery [1]. In the puerperium, the person's quality of life is reflected in the health and satisfaction of the puerperal mother.

Quality of life (QoL) is a multidimensional concept that involves several physical, mental and social dimensions, with implications of evaluating positive and negative subjective. Quality of life can also be interpreted as the ability to conduct daily activities following the position in the environment [2]. The quality of life of puerperal mothers is related to daily activities, in which the age group is a factor of the qualities of life, including the childbirth method, parenting function, physical function, psychological and social function. Good quality of life is essential for mothers who have recently given birth. Thus, they can fulfil their responsibility as new parents with that quality of life [3].

Puerperal mothers frequently complain about pain after childbirth, smooth breastfeeding, and urinating difficulty. These issues are frequently considered insignificant and trivial in society but can trigger discomfort in puerperal mothers and affect their quality of life [4]. Pain in puerperal mothers is associated with the employed childbirth methods. Childbirth methods can be a determining factor for the quality of life of postpartum mothers. It was evaluated from several studies that support this factor such as research conducted by previous researchers. The previous research revealed that the quality of life of puerperal mothers between sectio caesarea childbirth and normal childbirth is different while normal childbirth had higher quality of life than that of sectio caesarea childbirth[5]. In addition, another study on puerperal mothers in Spain, including 2,990 respondents, had decreased quality of life after giving birth for up to three years. Triggering risk factors are found in the tear of perineal and cesarean surgery, which negatively affect the quality of life of postpartum mothers [6].

Numerous literature studies from abroad and the national scope discuss the quality of life of puerperal mothers based on their childbirth methods. However, certain differences in results have generated a debate. Therefore, the authors are interested in researching the quality of life of puerperal mothers through normal childbirth and sectio caesarea childbirth using a comparative study with an identical quantity of respondents.

2 Literatur Review

2.1 Puerperium

The puerperium is frequently referred to as the fourth trimester of childbirth. It begins after childbirth which lasts 6–8 weeks [7]. The mothers are currently attempting to adapt physiologically and psychologically. The puerperium is also well known as the transition period, in which most women neglect women's healthcare aspects [8].

2.2 Quality of Life

Quality of Life (QOL) is a multidimensional assessment that applies physical, psychological, and social aspects influenced by positive subjective and negative evaluations [9]. Quality of life is the perception of the individual position in the environment followed by

the realm of cultural contexts, the value systems in which they live, and their relationship to life goals, expectations, standards, and others [10].

The quality of life of puerperal mothers can be interpreted as women's satisfaction with the role in their life as parents of a newborn baby based on cultural status, expectations, values, attitudes, goals, and standards [11]. In addition, the quality of life of the puerperal mothers become a degree of success and satisfaction related to the psychological, physical, social, and spiritual aspects of parenthood after giving birth.

Aspects of postpartum mothers' quality of life, according to WHOQOL, are divided into six elements, including:

- a. Aspects of physical health related to pain or agony, discomfort, rest, and energy or fatigue.
- b. Psychological aspects related to positive and negative feelings, self-esteem, way of thinking, memory, concentration, bodily image, and appearance.
- c. Aspects of the level of independence related to daily activities include the ability to keep and maintain oneself, mobility, the nature of medicine dependence, and functional ability.
- d. Aspects of social relationships include self-or personal relationships, social support, and sexual activity.
- e. Environmental aspects are related to freedom, security, living environment, financial resources, opportunities to obtain information, opportunities for expression, participating in various leisure activities, the physical environment (pollution, noise, traffic), and transportation.
- f. The spiritual aspect is about religion and personal beliefs [12].

2.3 Types of Childbirth

According to the method, there are two types of childbirth: per vagina and normal childbirth. Furthermore, it is a spontaneous birth that lasts 18 to 24 h without issues for either the mother or the baby [13]. Sectio caesarea childbirth is the birth of a baby surgically on the abdominal and uterine walls [14].

3 Method

3.1 Respondent

This study was conducted on postpartum mothers aged 20–41 years old in the Puskesmas Kartasura area who gave birth from August 2022 to October 2022, with inclusion criteria of being willing to be respondents and cooperative. The respondents for this study were 54 puerperal mothers. The purpose of this study is to describe the quality of life of postpartum mothers who had normal childbirth or caesarean section. The purpose of this study was explained to respondents for their approval.

3.2 Method

In this study, the type of research was descriptive quantitative, with data collection using a cross-sectional approach. Samples were obtained with purposive sampling techniques.

The instrument employed to measure the quality of life of postpartum mothers is the *Maternal Postpartum Quality Of Life Questionnaire (MAPP-QOL)* from Hill, which consists of 54 questions translated using Indonesian and modified to find the difference between the two types of childbirths. The questionnaire was tested for reliability and validity and found seven invalid questions, then removed and deprecated [15]. This questionnaire includes four subsystems: child care, physical function, psychological function, and social support, with 47 valid questions. Each question has six points of satisfaction (1 = very dissatisfied, 2 = dissatisfied, 3 = dissatisfied enough, 4 = satisfied, 5 = satisfied enough, 6 = very satisfied).

3.3 Ethical Considerations

This research was conducted after approval from Dr. Moewardi Hospital. Guaranteed anonymity and confidentiality of respondents are maintained. The demographic sheet in the questionnaire does not include personal information, and it is voluntary without any harm to the written consent sheet in the assessment. Every participant has the option to discontinue this study at any time.

3.4 Data Analysis

Following data collection, the data is input into an Excel spreadsheet and exported to a computer program. It analyzes the data obtained by reporting the mean, standard deviation, and percentage. Normality and homogeneity test are conducted as prerequisite tests before conducting the independent sample T-test to ensure that the data is normal and homogeneous. Afterwards, an independent sample T-test is conducted as a data comparison to determine whether there is a difference by examining the significance set, namely the p-value of < 0.05 .

4 Result and Discussion

4.1 Result

The results of the study conducted on 54 respondents were as follows:

Table 1 illustrates the distribution of the characteristics of respondents, such as most postpartum mothers aged 21–30 years old, as much as 64%; having the highest level of education in high school, with 55.6%; having 90.7% living with their husbands. The average respondent was unemployed with a presentation of 57.4%, followed by 42.6% for those who were employed. Most postpartum mothers did not undergo pregnancy complications, proved by a percentage of 88.9%, and the average birth weight s 79.6% with a body weight of 2500–3500 g. For infant nutrition, 74.1% of mothers provided exclusive breastfeeding.

Table 1. The frequency distribution of puerperal mothers examined according to respondents' characteristics

| Characteristics | Frequency (N = 54) | Percent (%) |
|-----------------------------------|--------------------|-------------|
| Age | 34 | 64,8 |
| a. 21–30 years old | 18 | 33,3 |
| b. 31–40 years old | 1 | 1,9 |
| c. > 40 years old | | |
| Mothers' education | 5 | 9,3 |
| a. Junior high school | 30 | 55,6 |
| b. High School | 19 | 35,2 |
| c. University | | |
| Living with: | 49 | 90,7 |
| a. Living with husband | 5 | 9,3 |
| b. Living with family and husband | | |
| Type of work: | 31 | 57,4 |
| a. Unemployed | 23 | 42,6 |
| b. Employed | | |
| Pregnancy complications | 6 | 11,1 |
| a. Yes | 48 | 88,9 |
| b. No | | |
| Newborn weight | 3 | 5,6 |
| a. < 2500 g | 43 | 79,6 |
| b. 2500 – 3500 g | 8 | 14,8 |
| c. > 3500 g | | |
| Baby nutrition | 40 | 74,1 |
| a. Breast milk | 12 | 22,2 |
| b. Breast milk and formula milk | 2 | 3,7 |
| c. Formula milk | | |

Table 2. Frequency distribution of postpartum mothers according to the type of childbirth

| Type of Childbirth | Frequency (N = 54) | Percent (%) |
|----------------------------|--------------------|-------------|
| Normal childbirth | 27 | 50 |
| Sectio Caesarea childbirth | 27 | 50 |

Table 2 describes the type of childbirth in which the respondents examined were balanced. Namely, 50% (27 respondents) gave birth normally, and 50% (27 respondents) gave birth with sectio caesarea.

Table 3 explains, based on the analysis, the results of 27 respondents of mothers who gave birth normally with a minimum score of 180 points, and the maximum score achieved by mothers who gave birth normally was 276. The total score of mothers who

Tabel 3 Tendencies in quality of life scores

| Type of childbirth | Minimal statistic | Maksimal statistic | N Statistic | Mean | Standard Deviation |
|----------------------------|-------------------|--------------------|-------------|--------|--------------------|
| Normal Childbirth | 180 | 276 | 27 | 225,07 | 26,781 |
| Sectio Caesarea Childbirth | 152 | 275 | 27 | 234.51 | 29,359 |

Table 4. Comparison of quality of life values per subsystem

| Quality of life subsystem | Normal childbirth | | | Sectio caesarea childbirth | | | P Value |
|---------------------------|-------------------|--------------------|----------------|----------------------------|--------------------|----------------|---------|
| | Mean | Standard deviation | Standard Error | Mean | Standard deviation | Standard Error | |
| Child care | 44,925 | 5,896 | 1,134 | 45,666 | 6,089 | 1,171 | 0,652 |
| Physical function | 39,000 | 4,984 | 0,959 | 40,740 | 6,942 | 1,336 | 0,295 |
| Psychological function | 51,555 | 7,045 | 1,355 | 53,814 | 7,002 | 1,347 | 0,243 |
| Sosial support | 89,592 | 11,946 | 1,521 | 94,296 | 11,914 | 2,287 | 0,041 |

gave birth normally on all concrete questions was 1157, with an average of 225.07. Additionally, out of the 27 respondents included mothers who gave birth by sectio caesarea with a minimum score of 152 points, and the maximum score obtained by mothers who gave birth to sectio caesarea was 275, with an average of 234.51.

Table 4 reveals the comparative results of the quality of life of normal childbirth and cesarean section childbirth using the T-test with subsystems including child care, physical function, psychological function, and social support by displaying the mean, standard deviation, standard error followed by calculation results. Therefore, there was no significant difference ($p\text{-value} < 0.05$) between the quality of life of postpartum mothers with normal childbirth and sectio caesarea childbirth. In the childcare subsystem, physical and psychological functions were observed from the emerging value of its significance > 0.05 . However, in the social support subsystem, there was a significant difference between the quality of life of postpartum mothers and normal childbirth and cesarean section childbirth, specifically, $0.041 < 0.05$.

4.2 Discussion

Based on the resulting quality of life, it is a primary goal for individuals and communities, with positive consequences for the population's health [16]. Quality of life can be interpreted as an individual's perception based on psychological, physical, spiritual, environmental, and socioeconomic aspects. According to Mokhtarian-Gilani, the quality of life of puerperal mothers can be interpreted as women's satisfaction with their roles in their lives as parents of a newborn baby based on cultural status, expectations, values,

attitudes, goals, and standards [11]. One factor that affects the mothers' quality of life is the type of childbirth [17]. According to Arief in his research, the quality of life of puerperal mothers was evaluated from the childbirth model by examining the differences [3]. The type of childbirth researched this time is normal childbirth with sectio caesarea childbirth.

The average age of puerperal mothers in the current study is between 21 and 30 years old, with a percentage of 64.8%. At this age, it was a productive age in which the childbirth process was in a healthy condition. It minimizes the risks to the reproductive organs and emotional and social readiness [9]. Of the 54 respondents of postpartum mothers with normal childbirth and sectio caesarea childbirth, the quality of life results was good for both groups, evaluated from pregnancy problems that most did not have complications. Complications can affect the mothers' childbirth. Anemia is typically caused by a lack of nutritional fulfilment and the presence of helminthiasis [18]. However, in this study, most of them did not experience it. It was influenced by the level of education in which 30 respondents graduated from high school, followed by 19 respondents who graduated from universities. The remaining five respondents graduated from junior high school. Thus, the level of education can affect the knowledge of postpartum mothers to improve their ability to care for themselves, care for babies, and control the situation. Similar to the results of research conducted previously by Ribeiro regarding the experience of puerperal mothers who can assist in improving health development for the quality of life of postpartum mothers in Brazil [19].

Some mothers were unemployed and lived with their husbands. In this characteristic, it is described that the husband's existence has a good impact on the quality of the postpartum mother of normal childbirth and sectio caesarea childbirth. It is in line with the study that the couple's social support can improve the quality of life of the puerperal mother [20]. The average body weight of babies born in this study at normal weight was above 2500 g at 94.4%, and nutrition was 74% with breast milk.

In this study, the most score obtained from 47 questions about the quality of life of puerperal mothers was 276. It was followed by a difference of one point achieved by puerperal mothers with normal childbirth compared to sectio caesarea childbirth. The total score was 275, corresponding to research conducted by Nisa K and Rahayuningsih about differences in postpartum quality of life based on the type of childbirth at Dr. Soeratno Gemolong Hospital. Furthermore, the highest and average scores obtained by puerperal mothers with normal childbirth were higher than that of puerperal mothers with sectio caesarea childbirth [5]. However, in this study, there was not a substantial difference between normal childbirth scores and SC childbirth scores because the total of respondents examined was balanced, specifically, 27 respondents of postpartum mothers with normal childbirth and 27 respondents with sectio caesarea childbirth.

This study showed the quality of life between postpartum mothers with normal childbirth and sectio caesarea childbirth based on four subsystems. According to the findings for child care, there was no significant difference for the first subsystem between the puerperal mother group with normal childbirth and the puerperal mother group with cesarean section childbirth. It was revealed with a significant value (p-value) of the T-test of 0.652, which is $0.652 > 0.05$. It means there is no difference between both groups. Corresponding to the research conducted by Arief entitled Postpartum Quality

of Life among Women after Vaginal Birth and Cesarean Section states that no women considered that the daycare segment was terrible. Because giving birth is supposed to be a pleasant and satisfying experience [3]. Ples also revealed the same findings that the puerperal mothers examined could care for newborns 24 h after childbirth, and the childbirth method did not affect babysitting [21].

For the physical function subsystem, the findings in this study between normal childbirth and cesarean section childbirth did not find a significant difference either, evaluated from the significance value (p-value) of the T-test of $0.295 > 0.05$, which means that there is no difference between both groups. The research described by Petrou and Kim in a study conducted on women in Spain considered different results in 546 puerperal mothers with healthy primiparous. Postpartum was assessed regarding sociodemographic and clinical characteristics. This finding compares HRQoL to the childbirth method, in which there was no difference in HRQoL from the childbirth method between normal childbirth and caesarean childbirth [22]. Thus, these findings support the results of this study. However, this physical function contradicts the results of a survey from Arief, who stated that there were apparent differences in physical function in his research. It is revealed that the quality of life in the physical domain is significantly minor in puerperal mothers with caesarean section childbirth compared to puerperal mothers with normal childbirth in all periods [3].

In the psychological function subsystem, this finding did not have a significant difference in terms of the results of the T-test significant value (p-value). A result of $0.243 > 0.05$ was obtained, in which there was no difference between normal childbirth and sectio caesarea childbirth. The results of a study conducted by Arief showed that the psychological domain did not affect the quality of life of postpartum mothers with the type of childbirth [3].

However, in the social support subsystem, the significance value is significantly different in the T-test, $0.041 < 0.05$. Differences between these subsystems were also reported in previous studies. In addition, social support was indispensable for postpartum mothers with sectio caesaria childbirth who had physical weakness, discomfort, and low self-esteem caused by fatigue factors triggered by the pressure of the new responsibility in which mothers were supposed to rest. As a result, the family relationship is less significant than that of the mother, who gives birth normally [23]. From the results of current research, it is identified that the quality of life of puerperal mothers with normal childbirth and sectio caesarea childbirth indicates satisfactory results. It is obtained from the four assessed subsystems: child care, physical function, psychological function, and social support. However, it describes the findings regarding the comparison of quality of life according to the type of childbirth.

5 Conclusion

This study can describe the quality of life of puerperal mothers with a balanced number of respondents in normal childbirth and sectio caesarea childbirth. Some sociodemographic and clinical characteristics in puerperal mothers can affect their quality of life. In four subsystems of quality of life: child care, physical function, and psychological function, puerperal mothers undergo no significant difference in the type of childbirth. However,

there is a considerable difference between puerperal mothers with normal childbirth and sectio caesarea childbirth in social support.

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