
Health Literacy Level and Quality of Life among Post-partum Mothers

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ABSTRACT

Pregnancy and childbirth are natural physiological processes that involve tremendous changes in the mother's physiology, anatomy, and psychology. Apart from that, pregnancy and birth can disrupt physical and mental health, so it has a significant impact on the quality of life of post-partum mothers. Poor quality of life in post-partum mothers becomes, which affects the health of the mother and baby. This study aims to analyze the relationship between health literacy and the quality of life of post-partum mothers in the Bandung Health Center, Tegal City. The research method uses quantitative with a cross-sectional approach. The population of this study was all post-partum mothers who gave birth in June – July 2023 in the Bandung Community Health Center area, Tegal City. The total sample was 59 post-partum mothers. Data collection using the HLS-EU-Q16 and Post-partum Quality of Life (PQOL) questionnaires. In the adequate health literacy category, 43 respondents (72.9%), followed by the problematic health literacy category 15 respondents (25.4%) and low literacy level 1 respondent (1.7%). In addition, of the respondents with a good quality of life, 57 respondents (96.6%) had a good quality of life, and 2 respondents (3.4%) had a low quality of life. Based on the chi-square test, there is a relationship between health literacy and the quality of life of post-partum mothers, which shows a significant relationship with a significance level of $p=0.05$. This research concludes that good health literacy gives post-partum mothers a good quality of life so they can care for their newborn babies.

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INTRODUCTION

The post-partum period is an essential period for maternal health. During the post-partum period, extra care is needed for the mother and baby. Inappropriate perceptions and behavior during the post-partum period can cause complications and endanger the mother's health and safety (Jalal, 2016). Childbirth complications often occur in the first week of the post-partum period. Fatal complications that generally occur, such as bleeding, sepsis, and eclampsia, can cause maternal death during the post-partum period (Shah & Pariyar, 2016). Not only are the physical aspects experiencing changes, but the psychological aspects are also experiencing many changes that require adaptation. Several factors play a role in postnatal psychological adaptation: family and social support. Lack of support can cause mothers to experience post-partum blues. Many mothers feel stressed during childbirth and require adaptations that must be endured. This can have an impact on mother and baby care patterns (Febriati & Zakiyah, 2022)

One of the things that mothers must have during the post-partum period to adapt optimally is good health literacy skills. Health Literacy is defined as an individual's knowledge, motivation, and ability to access, understand, assess, and apply health information to make judgments and decisions about health care, disease prevention, and health promotion to improve lifelong health. This is crucial for women's reproductive health because it will have an impact on the mother and baby as a result of pregnancy. Some of the knowledge and skills that pregnant and giving birth mothers must have include good nutrition, a healthy lifestyle, risk factors, and making the right decisions during pregnancy and childbirth (Fatmawati et al., 2022)

The impact of inadequate health literacy results in the inability to make health decisions regarding gestational age and determine the location, frequency, and time for visiting Ante Natal Care (ANC), which can hurt the health of the mother and baby. Health workers can improve health literacy during pregnancy to achieve good pregnancy outcomes. Previous research shows that

there is a relationship between psychological disorders and non-optimal breastfeeding patterns. Mothers who breastfeed may experience various problems because they do not know how to breastfeed correctly. For example, how to place the breast when breastfeeding, the baby's sucking, which causes the nipple to feel sore, and many more, such as the occurrence of insufficient breast milk syndrome and the baby refusing to breastfeed, especially in the first week after birth (Tanuwijaya et al., 2020; Fatmawati et al., (2022).

In the post-partum period, the woman's body returns to its pre-pregnancy physiological and anatomical state. This process is associated with many different psychosocial changes and new roles, which may pose challenges for women when adjusting and determining priorities in these new roles. Physiological changes during the post-partum period or post-partum period include sleep disturbances, which may affect the mother's quality of life after giving birth. If the mother cannot adjust to the new role during the post-partum period, it can cause post-partum complications and reduce the quality of life of the post-partum mother (Mokhtaryan-Gilani et al., 2022).

Quality of life refers to an individual's perception of life based on cultural conditions, values, attitudes, goals, and standards. According to WHO, quality of life has six main components: physical health, psycho-emotional status, level of independence, social relationships, spiritual beliefs, and the environment (Chinweuba et al., 2018). Post-partum quality of life refers to the mother's ability to enjoy daily activities. Studies report that the post-partum period has a significant effect on the physical and mental health of mothers with various problems such as fatigue, headaches, back and waist pain, poor breast milk production, anxiety, stress, insomnia, constipation, bleeding, urinary incontinence, anorexia, post-partum blues, and post-partum depression (Lara-Cinisomo et al., 2018).

Research by Fenwick et al. (2015) found that during the post-partum period, postnatal women who received psychoeducation reported that decision assistance from health professionals helped reduce fear and increase satisfaction during the post-partum period in facing their new activities and roles as mothers (53% vs. 37%, $p=0.02$). Post-partum care for mothers is more than just a physical health check. A more important goal is to assess the mental and psychological readiness of the mother to care for her baby (Van den Bosch et al., 2018).

Health education and health promotion regarding post-partum care are needed, especially for mothers with low education and poor socio-economic conditions. Research in Pakistan shows that post-partum visits to health services are very low. Most mothers need help understanding the importance of post-partum care and, therefore, need the awareness to seek information about post-partum care. Information literacy is a person's efforts to search for, collect, analyze, and use information. Information literacy is the central pillar of knowledge management in human life and is closely related to a person's education. Someone who does not have information literacy abilities and skills will have difficulty finding the information needed, determining the validity (credibility and accuracy) obtained, and learning how to access the correct information (Mokhtaryan-Gilani et al., 2022). Therefore, information literacy is an important issue that must continue improving, including maternal and child health (KIA).

Health literacy emerged in connection with health education in the 1970s in the United States, and engagement with this topic has grown rapidly since the 1990s (Sørensen et al., 2013). Health literacy plays an essential role in improving the quality of life of Human Resources (HR). Every human has a personality and life that will make someone's lifestyle different; some live a healthy lifestyle, and some lead an unhealthy lifestyle; with this, health literacy is critical for someone. To increase insight into improving the quality of life. Health literacy can be a benchmark for determining the quality of someone's life. If someone has a good level of literacy, then their quality of life will also be good. Likewise, if someone has a low level of health literacy, their quality of life will also be low (Milufa & Wahjuni, 2020).

Research linking health literacy with the quality of life of post-partum mothers still needs to be completed. Health problems in post-partum mothers should be resolved by further increasing health literacy, which will improve the quality of life of post-partum mothers and make their health status more optimal. Researchers are interested in researching post-partum health literacy and its relationship with the quality of life of post-partum mothers at the Community Health Center, Bandung, Tegal City.

METHOD

The research was conducted on post-partum mothers in the Bandung Community Health

Center area, Tegal City, Central Java. The population of this study was all post-partum mothers who gave birth in June - July 2023. A total sampling method was used, and 59 respondents were obtained using a cross-sectional design. The independent variable in this research is health literacy, while the dependent variable is quality of life. The characteristics of respondents identified in this study were age, education, occupation, and method of baby delivery.

The criteria used in sampling this research were post-partum mothers who gave birth in June to July at the Bandung Community Health Center, Tegal City, and the baby's condition was normal (weight, physical, and motor). The questionnaire is the short version of the HLS-EU-Q16 consisting of 16 question items. Each question uses a Likert scale of 1-5, where 1=very difficult, 2=quite difficult, 3=quite easy, 4=very easy, and 5=don't know. In this study, the measuring tool used was The European Health Literacy Survey short form 16 (HLS-EU-Q16), which can measure the dimensions of health literacy (functional health literacy, interactive health literacy, and critical health literacy) which are in three domains consisting of health services, disease prevention, and health promotion. HLS-EU-Q16 has been used in several countries, including Belgium, the Netherlands, and Germany. HLS-EU-Q16 was chosen because it is relatively easy to administer, both in clinical settings and at the population level. The following questionnaire is the Post-partum Quality of Life (PQOL) Questionnaire, totaling 40 items from Zhou et al. (2009). The answer choices for each item use an interval Likert scale of 1 to 5 with intensity response categories: (1) not at all, (2) somewhat, (3) moderately (4) very (5) very much, frequency (1) never (2) rarely (3) sometimes (4) often (5) very often, evaluation or satisfaction (1) very dissatisfied (2) dissatisfied (3) so-so (4) Satisfied (5) very satisfied. The PQOL domain is assessed as a ranking domain where if the final score is ≥ 110 , then the quality of life is categorized as good, and if the final score is ≤ 110 , then the quality of life is categorized as low. Once collected, the data was analyzed using univariate and bivariate methods. Univariate analysis was used to test the data on respondent characteristics. Meanwhile, the Spearman Rank test was used to determine the relationship between health literacy and the quality of life of post-partum mothers. An alpha level of <0.05 or less was used to determine statistical significance.

Ethical approval for this research was obtained from the Health Research Ethics Committee of the Poltekkes Kemenkes Semarang with number 0620/EA/KEPK/2023. All

respondents to this study have been provided with information regarding research procedures and have signed an informed consent.

RESULTS

Table 1 shows that the majority of respondents were aged 20-35 years (78.2%), normal type of delivery 39 (66.1%), most mothers did not work (79.7%, high education 50.84%, family income below the minimum wage for Tegal City (91.5%) and the source of information mainly comes from parents (37.2%).

Table 1. Respondent characteristics

Variable	n	%
Age		
<20 years old	0	0
20-35 years old	42	78.2
>35 years old	1	21.8
Type of Childbirth		
Normal	39	66.1
Sectio Caesarea	20	33.9
Type of work		
Employed	12	20.3
Un-employed	47	79.7
Mothers Education		
Low	29	49.16
High	30	50.84
Family Income		
Under the minimum wage	54	91.5
Above minimum wage	5	8.5
Family Form		
Small family	54	91.5
Big family	5	8.5
Resources		
Parents	22	37.2
Family	10	16.9
Health workers	17	28.8
Electronic media	13	23.6

Table 2 shows that respondents who had an inadequate level of health literacy and a poor quality of life were 1 respondent, an inadequate level of health literacy and a good quality of life were 5 respondents, a problematic literacy level and a poor quality of life were 0 respondents, a problematic literacy level and a good quality of life were 8 respondents. , adequate literacy level and poor quality of life amounted to 0 respondents, and adequate literacy level and good quality of life amounted to 45 respondents. The chi-square test results used were p-value 0.011, where the p-value is smaller than 0.05 ($0.000 < 0.05$), which means there is a relationship between health literacy and quality of life in post-partum mothers.

Table 2. Health literacy and quality of life

Health Literacy	Quality of Life				Asymptotic		significance (2-sided)
	low	%	good	%	Total	%	
inadequate	1	1.7	5	8.5	6	10.2	0.011
problematic	0	0	8	13.5	8	13.5	
adequate	0	0	45	76.3	45	76.3	
Total	1	1.7	58	98.3	59	100	

DISCUSSION

In the 21st century, people have many choices in accessing information and health services, especially in the health sector. People are increasingly encouraged and motivated to create a lifestyle and manage the health system, but many still need to be ready and supported in terms of literacy. Health literacy is a person's ability to read, write, and carry out information-based literacy tasks needed to make decisions—health, whether at home, in the community, or in health clinics (Nutbeam et al., 2018).

In this research, health literacy was assessed by looking at a person's ability to search for health information through health workers and the media. Next, how a person can understand this information, whether obtained directly from a doctor or health worker or obtained from the media, is also seen in how a person assesses the health information they have in everyday life. Many factors influence individual health literacy, including age, gender, education, culture, language, access to services, and health information (Sabil et al., 2018). Literacy is one of the essential elements in a mother's ability to engage in health promotion activities to protect the health of herself and her baby (Charoghchian Khorasani et al., 2017)

A mother can be said to be the main focus in increasing public health literacy because her health and knowledge directly affect children and family members before and during pregnancy as well as during and after giving birth⁷. Health literacy is influenced by several aspects, including the individual's ability to search for, understand, evaluate, and apply the information provided^{18,19}.

In this study, it was found that for those aged 20-35 years (78.2%), the normal type of delivery was 39 (66.1%), most of the mothers did not work (79.7%, 50.84% had a high education, family income was below the UMR of Tegal City (91.5%), and the source of information mainly comes from parents (37.2%). These characteristics indirectly influence the health literacy of post-partum mothers.

Looking at the age aspect, the older a person is, the more mature and more accessible it will be to digest the information received. Age affects the quality of life. Based on the healthy reproductive age range, the process of giving birth during this age period is a minimum condition for risk to occur. At this age, the reproductive organs mature, followed by the maturity of emotional and social conditions. Reproductive age increases physical and mental readiness in caring for children, affecting the quality of life (Lara-Cinisomo et al., 2018). As a person gets older, their ability to think and sensory function will decrease; this situation can affect the ability to think, it can affect the ability to read, and capture information it can affect the level of health literacy (Mokhtaryan-Gilani et al., 2022).

From the educational aspect, the higher the level of education one has, the easier it will be to access sources of information and have a high level of awareness in the application of actions related to one's health. Mothers with higher education have better knowledge and self-confidence than mothers with lower education. Education also provides knowledge about women's health (Nisak & Betty Rahayuningsih, 2018). The level of education also influences health literacy. People with a high level of education usually have a lot of health knowledge; with this knowledge, people will be aware of maintaining their health (Arimbi et al., 2020).

From the employment aspect, this will be related to the income earned, influencing a person's access to information and health services. One of the research results shows that mothers with good health literacy will have a significant difference in terms of early care initiation, including frequency of pregnancy checks, monitoring fetal weight, weight during pregnancy, consumption of iron and folic acid, mode of delivery, and breastfeeding patterns of the baby after birth (Charoghchian Khorasani et al., 2017). The research data shows that most respondents are housewives, and half of the respondents work as private employees. Work can influence economic capabilities, which

determines a person's access to health services and sources of health information.

Childbirth methods can be a determining factor for the quality of life of post-partum 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 a higher quality of life than that of *sectio caesarea*.

The birthing process affects the quality of life post-partum. Delivery by cesarean section is a medical intervention that may cause unexpected emotional reactions. Meanwhile, research comparing the quality of life in women after giving birth via vaginal and cesarean delivery shows that cesarean delivery has an impact on reducing the quality of life for mothers who give birth (Nisak & Betty Rahayuningsih, 2018).

The success of a self-care program cannot be separated from an individual's ability to access, understand, and use health information and services to make decisions about their health care, known as health literacy (Berkman et al., 2010). The results of this study show that health literacy is related to self-care abilities.

This study's results show a significant relationship between literacy and the quality of life of post-partum mothers ($p < 0.05$). The better the literacy level of post-partum mothers, the better their quality of life. It seems that the health literacy of post-partum mothers plays an essential role in achieving quality services and preventing unwanted complications during pregnancy and post-partum. Determining the level of health literacy and identifying factors associated with health literacy among pregnant women can help design interventions that lead to increased health literacy and better pregnancy outcomes. Post-partum mothers with health literacy will have a better quality of life than those who do not have health literacy. The level of health literacy can be increased during the prenatal period by health workers and the role of close family members in providing information that is appropriate and needed by pregnant women.

Low health literacy combined with health disparities can impair women's ability to receive appropriate care and make informed decisions regarding their health and health status during the post-partum period. Therefore, women may not

know or understand the signs and symptoms of post-partum complications that need medical attention (Suplee et al., 2017).

This shows that improving post-partum education through delivered communication makes it possible for those with low levels of health literacy to understand and act on information and can improve health conditions for post-partum mothers.

The quality of life of post-partum mothers is fulfilled by meeting the mother's physical and psychological needs. Therefore, the skills of a nurse are needed to provide education to increase health literacy in post-partum mothers, not only about physical problems but also about the psychology of post-partum mothers, and can be given since prenatal and antenatal care.

CONCLUSION

There is a significant relationship between health literacy and the quality of life of post-partum mothers in the Bandung Community Health Center area of Tegal City. The better the health literacy is, the better the quality of life of post-partum mothers, so efforts are needed to improve mothers' health literacy because it indirectly influences care patterns for children and family members before and during pregnancy and during and after birth. Increasing post-partum health literacy can be achieved through nursing education about the health of pregnant women and giving birth during antenatal care activities in health facilities. Nurses can also use various media, such as Instagram, Facebook, etc. Intervention in health literacy can be started early, both before and during pregnancy, so that later, the mother is better prepared to apply the information and knowledge that has been obtained. Apart from that, the role of health workers during antenatal care visits in providing information related to preparing for a good breastfeeding pattern also needs to be further improved. Future research could determine ways to organize and combine health literacy information during the prenatal and post-partum to improve the overall understanding of pregnant women. Additional research could assess changes in health outcomes after providing women with more health information post-partum, as well as ways to diagnose better, treat, and coordinate care related to post-partum depression.

REFERENCES

- Arimbi, D. S. D., Lita, L., & Indra, R. L. (2020). Pengaruh Pendidikan Kesehatan Terhadap Motivasi Mengontrol Kadar Gula Darah Pada Pasien DM Tipe II. *Jurnal Keperawatan Abdurrab*, 4(1), 66–76. <https://doi.org/10.36341/jka.v4i1.1244>
- Berkman, N. D., Davis, T. C., & McCormack, L. (2010). Health literacy: What is it? *Journal of Health Communication*, 15(SUPPL. 2), 9–19. <https://doi.org/10.1080/10810730.2010.499985>
- Charoghchian Khorasani, E., Peyman, N., & Esmaily, H. (2017). Relations between breastfeeding self-efficacy and maternal health literacy among pregnant women. *Evidence-Based Care*, 6(4), 18–25. <https://doi.org/10.22038/ebcj.2016.7986>
- Chinweuba, A. U., Okoronkwo, I. L., Anarado, A. N., Agbapuonwu, N. E., Ogbonnaya, N. P., & Ihudiebube-Splendor, C. N. (2018). Differentials in health-related quality of life of employed and unemployed women with normal vaginal delivery. *BMC Women's Health*, 18(1), 1–10. <https://doi.org/10.1186/s12905-017-0481-0>
- Fatmawati, A., Suhartanti, I., & Rahmawati, D. E. (2022). Health Literacy tentang Pola Menyusui pada Ibu Nifas di Rumah Sakit Lavalette Malang: Studi Deskriptif. *Jurnal Ilmiah Ners Indonesia*, 3(2), 48–53.
- Febriati, L. D., & Zakiyah, Z. (2022). Hubungan Dukungan Keluarga Dengan Adaptasi Perubahan Psikologi Pada Ibu Hamil. *Jurnal Kebidanan Indonesia*, 13(1).
- Fenwick, J., Toohill, J., Gamble, J., Creedy, D. K., Buist, A., Turkstra, E., Sneddon, A., Scuffham, P. A., & Ryding, E. L. (2015). Effects of a midwife psychoeducation intervention to reduce childbirth fear on women's birth outcomes and post-partum psychological wellbeing. *BMC Pregnancy and Childbirth*, 15(1), 1–8. <https://doi.org/10.1186/s12884-015-0721-y>
- Jalal, S. M. (2016). Knowledge and Practice of Postnatal Mothers on Newborn Care at Hospital Setting. *ARC Journal of Nursing and Healthcare*, 2(1). <https://doi.org/10.20431/2455-4324.0201003>
- Lara-Cinisomo, S., Zhu, K., Fei, K., Bu, Y., Weston, A. P., & Ravat, U. (2018). Traumatic events: exploring associations with maternal depression, infant bonding, and oxytocin in Latina mothers. *BMC Women's Health*, 18(1), 1–9. <https://doi.org/10.1186/s12905-018-0520-5>
- Milufa, S., & Wahjuni, E. S. (2020). Hubungan Literasi Kesehatan Dan Kualitas Hidup Mahasiswa Fakultas Ilmu Olahraga Universitas Negeri Surabaya. *Jurnal Pendidikan Olahraga Dan Kesehatan*, 8(3), 37–42.
- Mokhtaryan-Gilani, T., Kariman, N., Nia, H. S., Doulabi, M. A., & Nasiri, M. (2022). The Maternal Post-partum Quality of Life Instrument (MPQOL-I): development and psychometric evaluation in an exploratory sequential mixed-method study. *BMC Pregnancy and Childbirth*, 22(1), 576.
- Nisak, K., & Betty Rahayuningsih, F. (2018). Perbedaan Kualitas Hidup Postpartum Berdasarkan Jenis Persalinan Di Rsud Dr. Soeratno Gemolong. *Prosiding Seminar Nasional Seri 8 : Mewujudkan Masyarakat Madani Dan Lestari. Universitas Islam Indonesia*.
- Nutbeam, D., McGill, B., & Premkumar, P. (2018). Improving health literacy in community populations: a review of progress. *Health Promotion International*, 33(5), 901–911.
- Sabil, F. A., Kadar, K. S., & Lilianty, E. (2018). Hubungan Health Literacy dan Self Efficacy Terhadap Self Care Management Penderita Diabetes Mellitus Tipe 2 Di Puskesmas Kota Makassar. [Thesis]. *Makassar: Universitas Hasanudin*.
- Shah, T., & Pariyar, S. (2016). Knowledge and practice regarding postnatal care among mothers residing in selected slum area of Dharan, Nepal. *International Journal of Health and Medicine*, 1(1), 15–18. <https://www.zelusinternational.com/index.php/IJHM/article/view/177>
- Sørensen, K., Van den Broucke, S., Pelikan, J. M., Fullam, J., Doyle, G., Slonska, Z., Kondilis, B., Stoffels, V., Osborne, R. H., & Brand, H. (2013). Measuring health literacy in populations: illuminating the design and development process of the European Health Literacy Survey Questionnaire (HLS-EU-Q). *BMC Public Health*, 13, 1–10.
- Suplee, P. D., D. Bingham, and L. Kleppel. (2017). Nurses' Knowledge and Teaching of Possible Post-partum Complications. *The American Journal of Maternal/Child Nursing*, 42 (6):338–344. <https://doi.org/10.1097/NMC.0000000000000371>

Tanuwijaya, R. R., Djati, W., & Manggabarani, S. (2020). Hubungan Pengetahuan Pemberian Makanan Bayi dan Anak (Pmba) Ibu Terhadap Status Gizi pada Balita. *Jurnal Dunia Gizi*, 3(2), 74–79.

Van den Bosch, A. A. S., Goossens, M., Bonouvrié, K., Winkens, B., Nijhuis, J. G.,

Roumen, F., & Wassen, M. (2018). Maternal quality of life in routine labor epidural analgesia versus labor analgesia on request: results of a randomized trial. *Quality of Life Research*, 27, 2027–2033. <https://doi.org/10.1007/s11136-018-1838-z>