

THE QUALITY OF LIFE ON MODE OF DELIVERY : A LITERATURE REVIEW

Safira Cantika Desra¹, Dwi Izzati Budiono²

¹Departement of Midwifery Education, Faculty of Medicine University Airlangga 60132, Surabaya, East Java, Indonesia ²Departement Public Health, Faculty of Medicine University Airlangga 60132, Surabaya, East Java, Indonesia

Corresponding Author: safira.cantika.desra-2018@fk.unair.ac.id

Abstract

Cesarean rates in recent decades have been increasing and several studies have shown that cesarean increases maternal morbidities. The purpose of the study was to compare the quality of life in women after spontaneous vaginal delivery and after caesarean section and to prove that women after spontaneous vaginal delivery have a better quality of life than women after caesarean section. This study uses a literature review method which includes looking for articles in a research journal database. Article search uses PUBMED/NCBI and Science Direct from the time of frame 2016 until 2021. The keywords used inside the search were Quality of Life, Vaginal Birth, Caesarean. There had been 992 articles obtained, and six articles have been analyzed thru the purpose, suitability of the subject, sample size, research protocol, and the results of every article. The results of this study are vaginal births have a higher quality of life and a more positive experience compared to cesarean sections starting from pregnancy, childbirth after childbirth which are influenced by several physical, mental, environmental, and social aspects.

Keywords: Quality of Life; Vaginal Birth; Caesarean Section; Pregnancy

1. Introduction

Quality of life is complex at all stages of life, including health and work, socio-economic, emotional, psychological, and familial. It can be also be measured in pregnancy, childbirth, and after childbirth [1], [2]. The World Health Organization (WHO) defines the quality of life as the perception of individuals of their lives and value systems and cultural context in which they live and about their goals, expectations, relationships, needs, and attitudes [3]. The experience of childbirth is an important life event for most women. The birth of a child may impact a woman's physical, psychological, and social health [4]. In past decades, the focus of maternity care in developed countries has expanded from the traditional goal of reducing mortality and morbidity to broader aims, such as improving health-related quality of life (HRQoL) [4]. HRQoL is a multidimensional concept that incorporates physical, psychological, and social domains of health [5], which is by the definition of health by the World Health Organization as 'not merely the absence of disease or infirmity but a state of complete physical, mental and social well-being [6].

Cesarean sections are potentially life-saving procedures [7]. However, Cesarean rates in recent decades have been increasing and several studies have shown that cesarean increases [8]. According to World Health Organization (WHO) recommendations, the reasonable rate for cesarean is 5-15% of all deliveries performed [9]. Rates of more than 15% are considered inappropriate and unnecessary and do not produce better health outcomes [10]. In most countries, and developing countries, in particular, it has been continuously rising and has gone well beyond the WHO recommendations, without being accompanied by any decline in maternal mortality or morbidity rates [11].

The previous studies have demonstrated that women delivering by cesarean delivery, either elective or emergency, are at increased risk of hysterectomy, blood transfusion, admission to intensive care, and postpartum infection compared with women undergoing vaginal delivery [12]. Over the longer term, there is some evidence to suggest a higher risk of exhaustion, lack of sleep, and bowel problems after cesarean delivery in comparison to spontaneous vaginal delivery [13]. Furthermore, evidence from eco-nomic analyses suggests that delivery by cesarean delivery (either elective or emergency) is more costly than vaginal delivery (either spontaneous or instrumented) in low-risk or unselected populations [14].

The increasing medicalization of the competitive process tends to make women powerless and has a negative impact on their birth experience [14]. In addition, medical intervention examinations also make women's choices according to their wishes. Women who desire to have positive experiences that fulfill their beliefs and expectations [16]. This includes delivering a healthy baby in a clinically and psychologically safe environment with ongoing practical and emotional support from the provider [17]. And also most women want a natural physiological and medical labor and birth without unnecessary intervention [15]. Therefore, this literature review study is to try to live in women after spontaneous vaginal delivery and after cesarean section to prove that women after spontaneous vaginal delivery have a better quality of life than women after cesarean section.

2. Methods

At the beginning of the look for information via titles and abstracts, 992 articles had been acquired. With information; Pubmed/NCBI database received 25 articles, Science Direct database totaled 967 articles. Then the studies turned into screened by using identify, abstract, full-textual content review, and year of publication (2016 - 2021). Furthermore, the remaining articles were excluded as many as 986 articles, the remaining 6 articles were analyzed in full. As a consequence, the very last result of the literature selection changed into received by 6 articles. This is finished so that all the articles obtained are applicable and by the topics raised. Moreover, the articles acquired in full text are downloaded and saved, and then analyzed once more to find out the contents of every article.

3. Result

The main focus of this literature is a mode of delivery; vaginal birth and caesarean. . Researchers have created table 1 below to explain the process of finding from various articles obtained.

Table 1 Review of Research Result

Author	Sample Characteristic	Study Design	Protocol	Result
(Zaheri, Farzaneh, et al, 2017) [1]	210 Pregnant women from 10 healthcare centers in Iran	Cross-sectional	Quality of life, Vaginal Child- birth, Cesarean, Pregnancy	Women with vaginal childbirth had slightly higher best-of-life scores than cesarean during 6 weeks after birth and later. For this reason, presenting extra information to pregnant women to inspire them to use vaginal birth is usually recommended.
(Kohler, Stefan, 2018) [18]	46 women with cesarean section and 178 with vaginal birth from 17 public and private health facilities in India	Pilot Study	India, Quality of life, Postpartum period, Vaginal delivery, Episiot- omy, Caesarean Section, Pilot Study	Vaginal birth, even with episiotomy, had been related to a higher postpartum QOL than caesarean births in some of the Indian women in the pilot study. Finding those expected results indicates that the EQ-5Q-5L

				questionnaire is a suitable tool to assess post- partum QOL in Indian Women.
(Parvanehvar, Simin, et al, 2020) [19]	45 women with elective cesarean delivery and 45 women with vaginal delivery from a public hospital in Iran	Cohort Study	Omentin-1, Vaginal delivery, Caesarean Section, Quality of life, Marital satisfaction	Women with Vaginal delivery had a higher omentin-1 level than women with a caesarean. No considerable distinction was determined in quality of life and marital satisfaction among vaginal delivery and caesarean and omentin-1 level. A high level of omentin-1 in vaginal delivery may additionally act as a protecting issue for the mother in opposition to metabolic disorders.
(Fobelets, Maaike, et al, 2019) [20]	862 Women with complete antenatal and postpartum data.	Prospective longitudinal survey	Quality of life, pregnancy, vagi- nal birth after ce- sarean, perinatal care, midwifery	Women with one previous caesarean section on preference for Vaginal birth but who gave birth by elective repeat caesarean section (mismatch VBAC-ERCS) had a lower postnatal HRQoL compared to women with a preference for Vaginal Birth who had a birth vaginally (match VBAC-VBAC)
(Petrou, Stavros, 2016) [21]	2161 pregnant women in the East Midlands of England	Prospective population- based study	EQ-5D, Mode of delivery, Quality of life, Utilities	Among mothers of term-born infants, caesarean delivery without maternal or fetal compromise is related to poorer long-term health-related quality of life in comparison to spontaneous vaginal delivery.
(Dabeski, Ana,2020) [22]	200 women who had a vaginal birth and caesaren birth in the Republic of North Macedonia	A prospective, cross-sectional study	Quality of life, vaginal delivery, caesarean sec- tion, short from- 36	Women after spontane- ous vaginal delivery have a better quality of life than women after caesarean section as di- mension on physical, mental, emotional, envi- ronmental, and social aspects

4. Discussion

The Quality of Life can be measured in all aspects of human life. One of them is when women are pregnant, Childbirth and after giving birth. The process of pregnancy to childbirth greatly affects the quality of life of women such as the quality of physical, psychological, social, and environmental health [4]. During pregnancy, there are changes in the body's metabolism to meet the needs created by the increase in breast and genital tissue itself and the growth of the fetus and after birth [23]. The results of the cohort study showed that women who gave vaginal birth had higher omentin-1 levels than women who underwent caesarean section [19]. Omentin-1 is an adipokine produced mainly in adipose tissue, has anti-inflammatory, anti-bone loss, and insulin-sensitizing effects [24]–[26].

At the time of postpartum, most women go through changes in several psychological phase changes taking in, taking hold, and letting go [27]. This phase change is influenced by several factors such as age, education, biology, environment, social, and experience. According to Stefan, 2018 using the EQ-5D questionnaire until 30 days after delivery to assess women regarding mobility, self-care, usual activities, pain or discomfort, anxiety, or depression the results of these studies are women who gave vaginal birth even with an episiotomy have a higher quality of life compared to caesarean section [18] and in a prospective population study with the same measurements at 12 months postpartum, women with a caesarean section related to long-term health have a poorer quality of life than vaginal delivery [21]. According to previous studies, caesarean section has a worse prognosis of pain at 1-2 weeks postpartum compared to vaginal birth [28]. This difference may be due to some unnecessary medical interventions during labor [29].

The Quality of life was also seen in women who had a history of caesarean section. Caesarean section cases in the world are increasing day by day [30]. The higher the number of cesarean sections, the higher the potential for morbidity, thus creating a new challenge to face mothers with a history of previous caesarean sections [31]. Dabeski, Ana, 2020 research on 200 women with a history of previous cesarean delivery who had a spontaneous vaginal birth had a better quality of life compared to a caesarean section in terms of physical, mental, emotional, environmental and social dimensions [22]. Another study showed that women who had a history of one-time caesarean section preferred vaginal delivery over caesarean section had a higher postnatal quality of life compared to re-elective caesarean section [20]. Because according to his research many women who do not achieve the mode of delivery they want have an impact on women's psychosocial. This shows the importance of women's involvement in decision making and allows them to contribute to the competition [20]

In this literature review, the researcher found that most women with vaginal delivery had a better quality of life compared to caesarean section. These results are because women feel empowered from pregnancy to child-birth and get positive experiences from the journey of pregnancy to the postpartum period [32]. Women who have a better quality of life feel stronger and less anxious in their lives, for example, when a baby is born, a mother who gives birth vaginally has more opportunities to breastfeed her child directly compared to a caesarean section [29]. In addition, in the caesarean section, the recovery period is longer than vaginal delivery, which makes the mother have a poor quality of life and a negative experience [14].

5. Conclusion

The results of this study are vaginal births have a higher quality of life and a more positive experience compared to cesarean sections starting from pregnancy, childbirth after childbirth which are influenced by several physical, mental, environmental, and social aspects.

6. Acknowledge

The author would like to thank Allah SWT and to all people who helped in writing this literature.

References

[1] F. Zaheri, L. Hashemi Nasab, F. Ranaei, and R. Shahoei, "The relationship between quality of life after childbirth and the childbirth method in nulliparous women referred to healthcare centers in Sanandaj, Iran," Electron. physician, vol. 9, no. 12, pp. 5985–5990, Dec. 2017, doi: 10.19082/5985.



- [2] B. Barcaccia, G. Esposito, M. Matarese, M. Bertolaso, M. Elvira, and M. G. De Marinis, "Defining Quality of Life: A Wild-Goose Chase?," Eur. J. Psychol., vol. 9, no. 1, pp. 185–203, Feb. 2013, doi: 10.5964/ejop.v9i1.484.
- [3] Y. Nakane, M. Tazaki, and E. Miyaoka, "Whoqol," Iryo To Shakai, vol. 9, no. 1, pp. 123–131, 1999, doi: 10.4091/iken1991.9.1_123.
- [4] G. Bai, I. J. Korfage, E. Mautner, and H. Raat, "Determinants of maternal health-related quality of life after childbirth: The generation R study," Int. J. Environ. Res. Public Health, vol. 16, no. 18, pp. 30–40, 2019, doi: 10.3390/ijerph16183231.
- [5] H. S.-Q. of life assessment in clinical trials and undefined 1990, "Definitions and conceptual issues," ci.nii.ac.jp, Accessed: Dec. 30, 2021. [Online]. Available: https://ci.nii.ac.jp/naid/10010862438/.
- [6] F. G.-B. of the W. H. Organization and undefined 2002, "The preamble of the constitution of the World Health Organization," SciELO Public Heal., Accessed: Dec. 30, 2021. [Online]. Available: https://www.scielosp.org/article/bwho/2002.v80n12/981-981/
- [7] P. Thirukumar, D. Coates, and A. Henry, "Women's experiences of intrapartum care and recovery in relation to planned caesarean sections: An interview study," Women and Birth, no. 2019, pp. 1–7, 2020, doi: 10.1016/j.wombi.2020.05.001.
- [8] A. P. Betran, J. Ye, A. B. Moller, J. P. Souza, and J. Zhang, "Trends and projections of caesarean section rates: global and regional estimates," BMJ Glob. Heal., vol. 6, no. 6, p. e005671, Jun. 2021, doi: 10.1136/BMJGH-2021-005671.
- [9] Lancet, "APPROPRIATE TECHNOLOGY FOR BIRTH," Lancet, vol. 326, no. 8452, pp. 436–437, Aug. 1985, doi: 10.1016/S0140-6736(85)92750-3.
- [10] A. Betran, M. Torloni, J. Zhang, and A. Gülmezoglu, "WHO Statement on Caesarean Section Rates," BJOG An Int. J. Obstet. Gynaecol., vol. 123, no. 5, pp. 667–670, Apr. 2016, doi: 10.1111/1471-0528.13526.
- [11] S. Abbas Mousavi, F. Mortazavi, R. Chaman, and A. Khosravi, "Quality of life after cesarean and vaginal delivery," Oman Med. J., vol. 28, no. 4, pp. 245–251, 2013, doi: 10.5001/omj.2013.70.
- [12] A. Sfakianakis et al., "VBAC vs C-section, a reflection of practice," Eur. J. Obstet. Gynecol. Reprod. Biol., vol. 234, no. 2019, p. e64, 2019, doi: 10.1016/j.ejogrb.2018.08.297.
- [13] D. Davis, C. S Homer, D. Clack, S. Turkmani, and M. Foureur, "Choosing vaginal birth after caesarean section: Motivating factors," Midwifery, vol. 88, 2020, doi: 10.1016/j.midw.2020.102766.
- [14] C. EJ et al., "Reducing caesarean delivery: An economic evaluation of routine induction of labour at 39 weeks in low-risk nulliparous women," Paediatr. Perinat. Epidemiol., vol. 34, no. 1, pp. 3–11, Jan. 2020, doi: 10.1111/PPE.12621.
- [15] WHO, Intrapartum care for a positive childbirth experience. 2018.
- [16] J. Frost, A. Shaw, A. Ontgomery, and D. Murphy, "Women's views on the use of decision aids for decision making about the method of delivery following a previous caesarean section: Qualitative interview study," BJOG An Int. J. Obstet. Gynaecol., vol. 116, no. 7, pp. 896–905, 2009, doi: 10.1111/J.1471-0528.2009.02120.X.
- [17] J. Sandall, H. Soltani, S. Gates, A. Shennan, and D. Devane, "Midwife-led continuity models versus other models of care for childbearing women," Cochrane Database Syst. Rev., vol. 2015, no. 9, Sep. 2015, doi: 10.1002/14651858.CD004667.pub4.
- [18] S. Kohler et al., "Postpartum quality of life in Indian women after vaginal birth and cesarean section: A pilot study using the EQ-5D-5L descriptive system," BMC Pregnancy Childbirth, vol. 18, no. 1, pp. 1–13, Oct. 2018, doi: 10.1186/S12884-018-2038-0/TABLES/4.
- [19] S. Parvanehvar, N. Tehranian, A. Kazemnejad, and H. Mozdarani, "Maternal omentin-1 level, quality of life and marital satisfaction in relation to mode of delivery: A prospective cohort study," BMC Pregnancy Childbirth, vol. 20, no. 1, Mar. 2020, doi: 10.1186/s12884-020-2825-2.
- [20] M. Fobelets et al., "Preference of birth mode and postnatal health related quality of life after one previous caesarean section in three European countries," Midwifery, vol. 79, Dec. 2019, doi: 10.1016/J.MIDW.2019.102536.
- [21] S. Petrou and S. W. Kim, "Mode of Delivery and Long-Term Health- Related Quality-of-Life Outcomes: A Prospective Population-Based Study," pp. 1–10, 2016.
- [22] У. Г. Делчев and Р. С. Македонија, "QUALITY OF LIFE AFTER NORMAL VAGINAL DELIVERY AND CAESAREAN SECTION Ana Dabeski Gordana Panova Goce Delcev University, Faculty of Medical Sciences in Stip, Republic of North Macedonia, ЦАРСКИ РЕЗ Универзитетска клиника за гинекологија и акушерство во С," vol. 42, pp. 649–655, 2020.
- [23] J. W. Huffman, "pregnancy Metabolic changes | Britannica." https://www.britannica.com/science/pregnancy/Metabolic-changes (accessed Jan. 06, 2022).
- [24] H. Yamawaki, J. Kuramoto, S. Kameshima, ... T. U.-B. and, and undefined 2011, "Omentin, a novel adipocytokine inhibits TNF-induced vascular inflammation in human endothelial cells," Elsevier, Accessed: Dec. 30, 2021. [Online]. Available: https://www.sciencedirect.com/science/article/pii/S0006291X11006139.
- [25] H. Xie et al., "Omentin-1 attenuates arterial calcification and bone loss in osteoprotegerin-deficient mice by inhibition of RANKL expression," Cardiovasc. Res., vol. 92, no. 2, pp. 296–306, Nov. 2011, doi: 10.1093/CVR/CVR200.
- [26] C. Jaikanth, P. Gurumurthy, K. M. Cherian, and T. Indhumathi, "Emergence of omentin as a pleiotropic adipocytokine," Exp.



- Clin. Endocrinol. Diabetes, vol. 121, no. 7, pp. 377-383, 2013, doi: 10.1055/S-0033-1345123.
- [27] B. Attrill, "The assumption of the maternal role: a developmental process," Aust. J. Midwifery, vol. 15, no. 1, pp. 21–25, 2002, doi: 10.1016/S1445-4386(02)80019-2.
- [28] L. Baghirzada, K. Downey, A. M.-I. journal of obstetric, and undefined 2013, "Assessment of quality of life indicators in the postpartum period," Elsevier, Accessed: Dec. 30, 2021. [Online]. Available: https://www.sciencedirect.com/science/article/pii/S0959289X13000393.
- [29] J. A. Lothian, "Why Natural Childbirth?," vol. 9, no. 4, pp. 44–46, 2000.
- [30] J. A. Martin, B. E. Hamilton, M. J. K. Osterman, and A. K. Driscoll, "Births: Final data for 2018," Natl. Vital Stat. Reports, vol. 68, no. 13, pp. 1980–2018, 2019.
- [31] K. R. Rosenberg and W. R. Trevathan, "Evolutionary perspectives on cesarean section," Evol. Med. Public Heal., vol. 2018, no. 1, pp. 67–81, Jan. 2018, doi: 10.1093/EMPH/EOY006.
- [32] A. Dencker et al., "Causes and outcomes in studies of fear of childbirth: A systematic review," Women and Birth, vol. 32, no. 2, pp. 99–111, Apr. 2019, doi: 10.1016/J.WOMBI.2018.07.004.