SciencePG
Science Publishing Group

Socio-demographic Factors Associated with Quality of Life of Pregnant Women in Sarajevo Canton, Bosnia and Herzegovina

Amira Kurspahic Mujcic[1, *], Amra Mujcic[2]

[1]Department of Social Medicine, Faculty of Medicine, University of Sarajevo, Sarajevo, Bosnia and Herzegovina

[2]Secondary Medical School, Sarajevo, Bosnia and Herzegovina

Email address:
amira.kurspahic@mf.unsa.ba (A. K. Mujcic), amra_mujcic@yahoo.co.uk (A. Mujcic)
[*]Corresponding author

To cite this article:
Amira Kurspahic Mujcic, Amra Mujcic. Socio-demographic Factors Associated with Quality of Life of Pregnant Women in Sarajevo Canton, Bosnia and Herzegovina. *Journal of Family Medicine and Health Care*. Vol. 6, No. 4, 2020, pp. 113-117. doi: 10.11648/j.jfmhc.20200604.12

Abstract: The pregnancy is a special time in a woman's life with important physical and emotional changes. These normal changes and their interactions with socio-demographic factors may affect women's health. This consequently affects the quality of a pregnant woman's life. The aim of the present study was to investigate the quality of life of pregnant women and its relationship with socio-demographic factors. This cross-sectional study was carried out at the Centre for Women's Health of Canton Sarajevo, Bosnia and Herzegovina. The study included 150 pregnant women. The respondents were supposed to fill out a questionnaire that included questions about their socio-demographic characteristics (age, marital status, number of family members, formal education level, self-perceived financial status and number of pregnancies). The SF-36 questionnaire was used to measure the self-reported quality of life in the areas of physical and mental health. Logistic regression analysis was used to estimate the association between socio-demographic factors and self-reported physical and mental health. The pregnant women had moderate total mean scores on SF-36 scale (61.8±17.8). The pregnant women rated their mental health (MCS) better than their physical health (PCS). The mean values for the physical component summary (PCS) was 59.9±17.2 and for the mental component summary (MCS) 63.6±21.7. Younger maternal age (p=0.026), being married (p=0.000), better financial status than average (p=0.003), first pregnancy (p=0.044) were positively associated with better quality of physical health (PCS). Older maternal age (p=0.022), being married (p=0.000), better financial status than average (p=0.026), first pregnancy (p=0.025) were positively associated with a better quality of mental health (MCS). Thus, individualized assistance for the pregnant woman focusing on the sociodemographic factors provides the basis for the planning and implementation of actions aimed at improving quality of life.

Keywords: Quality of Life, Physical Health, Mental Health, Pregnancy, Parity, Social Class

1. Introduction

Pregnancy is a special time in a woman's life. During pregnancy, a number of anatomical, physiological and biochemical changes occur throughout a woman's body, primarily to support the foetus during different stages of development [1]. These changes affect bodily functions and often the overall well-being of pregnant women [2]. It results in changes to a pregnant woman's quality of life (QOL) [3]. Additionally, low QOL in pregnancy contributes to low QOL in the postnatal period and higher gestational weight gain [4]. On the other hand, poor QOL in pregnancy can affect foetuses, and infants' health as well as childbirth outcomes [5]. Poor QOL, particularly in the area of physical health, is associated with increased rate of low-birth-weight of neonates and preterm birth [6]. Low birth weight and preterm birth are relevant indicators for new-born mortality and morbidity [7]. Health impairments due to these adverse birth outcomes may last until adulthood [8].

According to the World Health Organization [9], quality of life (QOL) is defined as "individuals perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns". Women's QOL is acknowledged as a critical concept in the childbearing period. It provides a

broad view of women's experience during pregnancy [10].

The importance of QOL of pregnant women has not got sufficient attention. The majority of previously published studies, however, have focused on specific maternal and/or foetal health issues or complications in pregnancy [11, 12]. Few studies have investigated either overall maternal QOL, including its physical, mental, and social health dimensions, throughout pregnancy [13]. Socio-demographic factors have yet to be sufficiently examined in relation to QOL in this population. Researchers have found that the following socio-demographic factors were strongly associated with a better quality of life: mean maternal age, primiparity, early gestational age, absence of economic problems [14, 15]. No studies examined socio-demographic factors associated with quality of life of pregnant women in Bosnia and Herzegovina.

The aim of the present study was to investigate the quality of life of pregnant women and its relationship with socio-demographic factors.

2. Methods

2.1. Design and Sample

This cross-sectional study was carried out at the Centre for Women's Health of Canton Sarajevo, Bosnia and Herzegovina (B&H) in the period January–July 2019.

Respondents were pregnant women who used health care services of the Centre for Women's Health of Canton Sarajevo during the study period. The study included 150 respondents. The inclusion criteria were pregnant women of 18–44 years of age who had a medical record at the Centre for Women's Health of Canton Sarajevo, pregnant women of any gestational age with a single foetus. Women with chronic diseases and those with pregnancy-related complications (any sign or symptoms of gestational hypertension, pre-eclampsia, hyperemesis gravidarum or threatened abortion) at the time of the study were excluded.

The Ethics Committee of the Faculty of Medicine, University of Sarajevo, approved the study. For this investigation, a written consent of the General Director of the Centre for Women's Health of Canton Sarajevo was obtained. An informed consent for participation in the study was taken from all respondents.

2.2. Data Collection

The respondents were supposed to fill out a questionnaire that included questions about their socio-demographic characteristics and the SF-36 questionnaire. The respondents answered the questionnaire while waiting for antenatal care.

Socio-demographic characteristics were included: age, marital status, number of family members, formal education level, self-perceived financial status and number of pregnancies. Marital status was categorized as married, single and divorced. Education was measured by the highest self-reported level of completed education. Education level was categorized as incomplete elementary school, completed elementary school, completed secondary school, high school/college completed and university completed. Self-perceived financial status was categorized as worse than average, average and better than average. The respondents were supposed to respond with "yes" or "no" to the question whether she is pregnant for the first time.

The SF-36 questionnaire was used to measure the self-reported QOL in the areas of physical and mental health [16]. The SF-36 includes eight subscales: physical functioning (10 items), role limitations due to physical health problems (four items), bodily pain (two items), general health (five items), vitality (four items), social functioning (two items), role limitations due to emotional problems (three items) and general mental health (five items). Items and scales were constructed using the Likert method of summated ratings. Answers to each question were scored (some items need to be recoded). These scores were summed to produce raw scale scores for each health concept. Scoring algorithms were then applied to produce the two summary scores: physical and mental component summary. The physical component summary score (PCS) was derived from four health concepts: physical functioning, role limitations due to physical health problems, bodily pain and general health. Mental component summary score (MCS) was derived from four health concepts: vitality, social functioning, role limitations due to emotional problems and general mental health [17]. The scores range from 0 to 100, with 0 representing the worst state of health and 100 indicating the best state of health. The scores were classified as low (0–33), moderate (33.4–66.6), or high (66.7–100).

2.3. Data Analysis

Statistical analyses were performed using the Statistical Package for Social Sciences software (IBM, version 25.0). Logistic regression analysis was used to estimate the association between socio-demographic factors (age, marital status, number of family members, formal education level, self-perceived financial status and number of pregnancies) and self-reported physical and mental health. The level of significance was set at $p < 0.05$, and the confidence level of 95%.

3. Results

3.1. Socio-demographic Characteristics of the Pregnant Women

A total of 150 pregnant women were included in the study.

The mean age of the pregnant women was 29.5±4.2 years, and 72.7% of the pregnant women were in the 25 - 35 age group.

The vast majority of the pregnant women (97.3%) were married. The average numbers of family members in the sample was 2.4±0.8.

The sample was well educated, with almost 65.3% of pregnant women (n=98) having completed high school /university.

About 19.3% of pregnant women evaluated their financial status as better than average.

Out of 150 women, 106 (70.7%) were in their first pregnancy (Table 1).

Table 1. *Socio-demographic characteristics of the pregnant women (N=150).*

Variables	Values *
Women' age (years), mean (SD)	29.5±4.2
Age group (years), number (%)	
18-25	30 (20.0)
25 - 35	109 (72.7)
>35	11 (7.3)
Marital status, number (%)	
Married	146 (97.3)
Single	0 (0.0)
Divorced	4 (2.7)
Number of family members, mean (SD)	2.4±0.8
Formal education level, number (%)	
Incomplete/completed elementary school	0 (0.0)
Completed secondary school	52 (34.7)
Completed high school /university	98 (65.3)
Self-perceived financial status, number (%)	
Worse than average	0 (0.0)
Average	121 (80.7)
Better than average	29 (19.3)
First pregnancy, number (%)	
Yes	106 (70.7)
No	44 (29.3)

* Values in this table are means, standard deviations (SD), numbers, and percentages.

3.2. SF-36 Questionnaire General Results

Table 2 shows that the pregnant women had moderate total mean scores on SF-36 scale (61.8±17.8).

The main two domains that are further used in the study are physical component summary score (PCS) and mental component summary score (MCS), with their mean scores 59.9±17.2 and 63.6±21.7 points, respectively. Out of the four subscales of self-rated physical health (PCS) the subscale that is related to general health was assessed as the best (76.0±16.5), and the subscale concerning the role limitations due to physical health problems as the worst (42.8±35.5). Out of the four subscales of self-rated mental health (MCS) the subscale that is related to social functioning was assessed as the best (72.8±21.5), and the subscale concerning the vitality as the worst (69.7±18.6).

The subscale with the lowest mean score was that of role limitations due to physical health problems (42.8±35.5), whereas general health subscale had the highest mean score (76.0±16.5) (Table 2).

Table 2. *SF-36 questionnaire general results.*

Variables	Mean	Standard deviation
Physical functioning	52.8	24.8
Role limitations due to physical health problems	42.8	35.5
Role limitations due to emotional problems	58.7	46.6
Vitality	53.2	16.7
General mental health	69.7	18.6
Social functioning	72.8	21.5
Bodily pain	68.1	21.8
General health	76.0	16.5
Physical component summary	59.9	17.2
Mental component summary	63.6	21.7
Total quality of life	61.8	17.8

3.3. Socio-demographic Factors Associated with Self-Reported Physical and Mental Health

Younger maternal age (p=0.026), being married (p=0.000), better financial status than average (p=0.003), first pregnancy (p=0.044) were all positively associated with a better quality of physical health (PCS). The number of family members (p=0.114) and formal education level (p=0.321) were not statistically significantly associated with quality of physical health (PCS).

Older maternal age (p=0.022), being married (p=0.000), better financial status than average (p=0.026), first pregnancy (p=0.025) were all positively associated with a better quality of mental health (MCS). The number of family members (p=0.254) and formal education level (p=0.742) were not statistically significantly associated with quality of mental health (MCS).

An increase of age was associated with poorer PCS and better MCS (Table 3).

Table 3. *Socio-demographic factors associated with self-reported physical and mental health.*

	OR (95% CI)	P value
Physical Component Summary		
Age	-4.88 (-9.197- -0.580)	0.026
Marital status	-13.92 (-20.919- -6.940)	0.000
Number of family members	-3.58 (-8.053- 0.874)	0.114
Formal education level	-1.22 (-1.213-3.668)	0.321
Self-perceived financial status	7.96 (2.709-13.228)	0.003
First pregnancy	8.32 (0.198-16.443)	0.044
Mental Component Summary		
Age	6.66 (0.977-12.350)	0.022
Marital status	-21.16 (-30.3392—11.940)	0.000
Number of family members	-3.40 (-9.300-2.483)	0.254
Formal education level	0.53 (-2.685-3.758)	0.742
Self-perceived financial status	7.88 (0.938-14.823)	0.026
First pregnancy	12.27 (1.559-23.011)	0.025

OR, Odds Ratio; CI, Confidence Interval.

4. Discussion

In this study, we investigated the quality of life of pregnant women and its relationship with socio-demographic factors.

The pregnant women in this study had moderate total mean scores on SF-36 scale, which is in line with the results of other researchers [18, 19].

The pregnant women in this study scored differently in SF-36 subscale scores compared to other related studies. In this study, the subscale with the lowest mean score was that of role limitations due to physical health problems, in a Canadian survey subscale physical functioning [20] and in a Colombian survey subscale role limitations due to emotional problems [21].

Several recent studies reported that physical health was the most affected domain of the QOL during pregnancy [22]. Similar results were obtained in this study. In contrast, in Taiwan, pregnant women rated their physical health better than their mental health. For the Taiwanese pregnant women, several traditional taboos during pregnancy are intended to

help prevent foetus loss but may cause distress to these women [23]. Researches attribute the observed variations in SF-36 subscale scores between countries to differences in their income or educational level, health care or social support systems, or cultural differences in the conceptualization of some of the SF-36 subscale [24, 25].

In this study, younger maternal age was positively associated with a better quality of physical health. Older maternal age was associated with better self-reported mental health, which is consistent with previously reported studies [26]. Nurses' health study of middle-aged women has demonstrated that QOL may improve with age for some women, particularly in the domains of mental well-being and emotional functioning [27].

In this study, being married was associated with better self-reported physical and mental health. Similar to our finding, Ramírez-Vélez found that being married was significantly correlated with all health domains, with the exception of bodily pain [21]. It is noticed that women seek in stable marital relationships such as marriage, the necessary support to overcome the changes imposed by pregnancy [28].

Some studies, as well as this one, found a statistically significant relationship between financial status and self-reported physical and mental health [21, 29], whereas Bai et al.'s study showed a statistically significant relationship only between financial status and self-reported mental health [19].

In this study, not being pregnant for the first time increased the likelihood of lower physical and mental health. These findings are similar to the results reported by Abbaszadeh et al. who found that primigravid women in pregnancy had higher mean score in most dimensions of SF-36 than multigravid [30]. Another study showed that not being pregnant for the first time increased the likelihood of lower mental health [31]. Researchers have posited that primiparas have a positive psychological reaction toward pregnancy in contrast to multiparas who have multiple roles and duties [32].

Therefore, the present study has demonstrated associated socio-demographic factors of quality of life in pregnancy. Future research is needed to provide a more thorough understanding of the effect of these factors on birth outcomes and quality of life of women in postnatal periods.

5. Conclusion

The present study found that pregnant women had a moderate total mean scores on SF-36 scale. The lowest score was demonstrated in the role limitation due to physical health subscale. Socio-demographic factors such as age, marital status, self-perceived financial status and first pregnancy were associated with quality of life of pregnant women.

Quality of life of pregnant women now plays an important role in antenatal care. Medical staff need to pay attention to pregnant women's quality of life and its contributing socio-demographic factors. Thus, individualized assistance for the pregnant woman focusing on the sociodemographic factors provides the basis for the planning and implementation of actions aimed at improving quality of life.

Conflicts of Interest

The authors declare that they have no competing interests.

References

[1] Pradeep B, Swati C. Physiological and anatomical changes of pregnancy: implications for anaesthesia. Indian J Anaesth 2018; 62: 651–67.

[2] Haas JS, Jackson RA, Fuentes-Afflick E, Stewart AL, Dean ML, Brawarsky P, Escobar J. Changes in the health status of women during and after pregnancy. J Gen Intern Med 2005; 20: 45–51.

[3] Vachkova E, Jezek S, Mares J, Moravcova M. The evaluation of the psychometric properties of a specific quality of life questionnaire for physiological pregnancy. Health Qual Life Outcomes 2013; 11: 214.

[4] Mogos M, August E, Salinas-Miranda A, Sultan D, Salihu H. A systematic review of quality of life measures in pregnant and postpartum mothers. Appl Res Qual Life 2013; 8: 219–50.

[5] Lau Y. The effect of maternal stress and health-related quality of life on birth outcomes among Macao Chinese pregnant women. J Perinat Neonatal Nurs 2013; 27: 14–24.

[6] Pinto F, Fernandes E, Virella D, Abrantes A, Neto MT. Born preterm: a public health issue. Port J Public Health 2019; 37: 38–49.

[7] Allen MC, Cristofalo EA, Kim C. Outcomes of preterm infants: morbidity replaces mortality. Clin Perinatol 2011; 38: 441–54.

[8] Rüegger C, Hegglin M, Adams M, Bucher HU; Swiss Neonatal Network. Population based trends in mortality, morbidity and treatment for very preterm-and very low birth weight infants over 12 years. BMC Pediatr 2012; 12: 17.

[9] WHOQoLGroup. Development of the WHOQoL: rational and current status. In J Mental Helath 1994; 23: 24–56.

[10] Symon A, MacKay A, Ruta D. Postnatal quality of life: a pilot study using the mother-generated index. J Adv Nurs 2003; 42: 21–9.

[11] Marchetti D, Carrozzino D, Fraticelli F, Fulcheri M, Vitacolonna E. Quality of life in women with gestational diabetes mellitus: a systematic review. J Diabetes Res 2017: 7058082.

[12] Stern C, Trapp EM, Mautner E, Deutsch M, Lang U, Cervar-Zivkovic M. The impact of severe preeclampsia on maternal quality of life. Qual Life Res 2014; 23: 1019–26.

[13] Mortazavi F, Mousavi S, Chaman R, Khosravi A. Maternal quality of life during the transition to motherhood. Iran Red Crescent Med J 2014; 16: 5.

[14] Park S, Choi NK. The relationships between timing of first childbirth, parity, and health-related quality of life. Qual. Life Res 2018; 27: 937–43.

[15] Lagadec N, Steinecker M, Kapassi A, Magnier AM, Chastang J, Robert S, Gaouaou N, Ibanez G. Factors influencing the quality of life of pregnant women: a systematic review. BMC Pregnancy Childbirth 2018; 18: 455.

[16] Ware JE, Kosinski M, Keller SD. SF-36 Physical and mental health summary scales: a user manual and interpretation guide. Boston (MA): The Health Institute, New England Medical Center, 1994.

[17] McDowell I. Measuring health. A guide to rating scales and questionnaires. 3rd Edition. New York: Oxford University Press, 2006.

[18] Shishehgar S, Dolatian M, Majd HA, Bakhtiary M. Perceived pregnancy stress and quality of life amongst Iranian women. Glob J Health Sci 2014; 6: 270–7.

[19] Bai G, Raat H, Jaddoe VWV, Mautner E, Korfage IJ. Trajectories and predictors of women's health-related quality of life during pregnancy: a large longitudinal cohort study. PLoS ONE 2018; 13: e0194999.

[20] Da Costa D, Dritsa M, Verreault N, Balaa C, Kudzman J, Khalifé S. Sleep problems and depressed mood negatively impact health-related quality of life during pregnancy. Arch Womens Ment Health 2010; 13: 249–57.

[21] Ramírez-Vélez R. Pregnancy and health-related quality of life: A cross sectional study. Colomb Med 2011; 42: 476-81.

[22] Tendais I, Figueiredo B, Mota J, Conde A. Physical activity, health-related quality of life and depression during pregnancy. Cad Saude Publica 2011; 27: 219–28.

[23] Lau Y. Traditional Chinese pregnancy restrictions, health-related quality of life and perceived stress among pregnant women in Macao, China. Asian Nurs Res 2012; 6: 27-34.

[24] Kurspahić Mujčić A, Mujčić A. Preventive health services utilization in patients treated by family physicians. Med Glas (Zenica) 2019; 16 (2): 344-50.

[25] Kurspahić Mujčić A, Mujčić A. The relationship between education and self-reported mental and physical health. Med Glas (Zenica) 2019; 16 (1): 102-7.

[26] Henderson AS, Jorm AF, Korten AE, Jacomb P, Christensen H, Rodgers B. Symptoms of depression and anxiety during adult life: evidence for a decline in prevalence with age. Psychol Med 1998; 28: 1321-8.

[27] Kroenke CH, Kubzansky LD, Adler N, Kawachi I. Prospective change in health-related quality of life and subsequent mortality among middle-aged and older women. Am J Public Health 2008; 98: 2085-91.

[28] Miller-Lewis LR, Wade TD. Lee C. Risk factors for pregnancy and childbearing in single young women: evidence from the Australian longitudinal study on women's health. Int J Behav Dev 2005; 29: 292-303.

[29] Abbaszadeh F, Baghery A, Mehran N. Quality of life among pregnant women. Hayat 2009; 15: 41-8.

[30] Abbaszadeh F, Bagheri A, Nahid M. Quality of life in pregnant women results of a study from Kashan, Iran. Pak J Med Sci 2010; 26: 692-7.

[31] Chang SR, Chen KH, Lin MI, Lin HH, Huang LH, Lin WA. A repeated measures study of changes in health-related quality of life during pregnancy and the relationship with obstetric factors. J Adv Nurs 2014; 70: 2245-56.

[32] Abujilban S, Abuidhail J, Mrayan L, Hatamleh R. Characteristics of pregnant Jordanian women dissatisfied with life: a comparison between satisfied and dissatisfied women's demographics. Health Care Women Int 2017; 38: 556–70.