

POSTPARTUM HEALTH-RELATED QUALITY OF LIFE AMONG MOTHERS: AN ANALYTICAL CROSS-SECTIONAL STUDY IN A TERTIARY CARE HOSPITAL OF RAWALPINDI

Nadia Ramzan, Samreen Misbah, Shehla Baqai*, Syed Fawad Mashhadi, Imtenan Sharif, Mommana Ali

Army Medical College/National University of Medical Sciences (NUMS) Rawalpindi Pakistan, *Combined Military Hospital Lahore/National University of Medical Sciences (NUMS) Pakistan

ABSTRACT

Objective: The study was conducted to assess the maternal health related quality of life and its affecting factors in postpartum period.

Study Design: Analytical cross-sectional study.

Place and Duration of Study: The study was done in a tertiary care hospital, Rawalpindi, from Mar to Jun 2019.

Methodology: By using non-probability purposive sampling technique, sample of 268 women in post-partum period were interviewed. A validated short form-36 (SF-36) Questionnaire was administered to women aged 15-49 years, who had spontaneous vaginal delivery or cesarean section, and were within six weeks up to six months of postpartum period. Data was analyzed by using SPSS-22. A *p*-value of ≤ 0.05 was taken as significant.

Results: Highest median scores were reported in physical functioning 75 (55, 90) and social functioning 75 (75, 62). Lowest median scores were reported in energy fatigue 37 (31, 50) body pain 45 (22, 62) and general health 45 (30, 60). Health-related quality of life scores showed significant difference (*p*-value < 0.05) among subgroups of time since delivery, mode of delivery, education of women, husband's education and antenatal visits.

Conclusion: The study showed that health related quality of life score of postpartum women was moderately affected; where in physical and social functioning domains strongly contributes in better quality of life. Energy/fatigue, body pain and general health are the weakest domains adversely affecting quality of life. Women in subacute postpartum phase, with cesarean section, lower educational status and less than 04 antenatal visits are associated with poorer HRQOL.

Keywords: Mode of delivery, Postpartum, Quality of life, SF-36.

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INTRODUCTION

Postpartum period is defined as the six-week period following childbirth during which the woman's body returns almost to its pre-pregnancy state. Postpartum is the fourth stage of labor and begins after giving birth and may extend to 6 months. This period consists of three stages namely; the acute phase or initial phase (6-12 hours after delivery); the subacute phase (2-6 weeks after delivery) and the delayed phase can last up to 6 months¹. Post-partum is the critical stage in the lives of both mother and infant². In acute phase, 50% of maternal deaths occur due to hemorrhage, sepsis, eclampsia and abortion. Majority of maternal and infant deaths occur in the first four weeks of delivery, while 50% of postnatal maternal deaths occur within first 24 hours of delivery³. Safe motherhood programs suggest that all mothers should receive a healthy checkup within 2 days of delivery⁴. Postpartum health care content and significance are criticized as inadequate to meet the health needs of mothers. Health care providers has more focused on vaginal examination in routine 06 weeks postpartum follow up

rather than mother's psychological and physical health⁵. Physical, social and emotional impacts of postpartum stage have significant effects on quality of life of mothers.

Quality of life (QOL) is defined as an individuals' perceptions 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 concerns⁶. In the field of health, QOL focuses on development of comfort and wellbeing as well as the effects of illness, dysfunctions and QOL related health interventions. In order to fulfil these demands, the concept of QOL is further divided in health-related quality of life (HRQOL). HRQOL represents a person's own perception of health status, functioning and wellbeing in physical, psychological and social domains and in their role performance⁷. QOL can be assess in all stages of life which includes prenatal and postpartum phases of a woman's life, as prenatal and postpartum affects the health status of a woman diversely⁸. It is emphasized that changes which are occurring during pregnancy affect the woman's quality of life. So that, effective health action is sufficiently implemented by preparing women with knowledge and skills essentially to address the puerperal process⁹. Inadequate postpartum

Correspondence: Dr Nadia Ramzan, Department of Community Medicine, Army Medical College Rawalpindi Pakistan

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surveillance could adversely affect both the quality of life of mothers and babies. Despite intrapartum care programs have been introduced in Pakistan, postpartum care is a neglected aspect of maternity care. In Pakistan, data on maternal health is inconsistent/concise and very limited information is available on postpartum care; This study will assess postpartum quality of life of women after giving birth by both spontaneous vaginal delivery and cesarean section. The study will help in identification of gaps in postnatal care during postpartum phase and will determine factors affecting quality of life among women who are receiving health care from tertiary care hospital so as to promote maternal and infant health.

METHODOLOGY

This analytical cross-sectional study was conducted at a tertiary care hospital, Rawalpindi, from March to June. Study population were the mothers between 15-49 years of age, who had cesarean delivery or spontaneous vaginal delivery and were between six weeks to six months postpartum period. Women who had serious obstetric/neonatal complication related to current birth, women who had mental constraints, chronic illness, or delivered baby with congenital abnormalities, or mothers who had intra uterine death or still birth were excluded from study. Sample size was estimated by using RAOSOFT calculator. Keeping margin of error 5% with 95% confidence interval, 268 sample size was calculated. After having ethical permission from review committee of National university of medical sciences, project was started. Participants were interviewed after taking written consent. A validated questionnaire, short form 36 (SF-36) was used to collect data. This multidimensional questionnaire is used for quantitatively assessment of functional health and well-being in eight domains: physical functioning (PF), Role limitation due to physical health problem (RP), Role limitation due to emotional problem (RE), Energy / fatigue (E/F), Emotional well-being (EWB), Social functioning (SF), Body pain (P) and general health perception (GH). Before administration, English version of SF-36 was translated into Urdu and re-translated into English with the help of linguistic expert. The SF-36 consists of 36 question. Each of these helps to scoring of one of the 8 domain scales. The score on each Likert scale ranges from 0-100 where higher scores represent better QOL¹⁰. A mean score of each domain and then a total score was calculated at the end of each questionnaire. Following items of different domains which included 1, 2, 20-23, 26, 27, 30, 34, 36 had reverse scoring

from 100-0 meaning by 1=excellent, 2=very good, 3=good, 4=fair 5=poor (1=100, 2=75, 3=50, 4=25 and 5=0). While, following items including 3-12, 13-19, 24, 25, 28, 31, 32, 33, 35 had forward scoring. Each question target individual's perception of health status and participants responded in coded form on questionnaire as 1,2,3,4,5 wherein forward scoring meant as; 1=poor, 2=fair, 3=Good, 4=very good, 5=excellent (1=0, 2=25, 3=50, 4=75 and 5=100). The normality of the distribution of data was checked by Shapiro Wilk test and by visualizing the histogram with normal curves. Based on normality test non-parametric tests, including Mann Whitney U-test for two categories and Kruskal Wallis for three categories were used to identify the difference among independent variable. Descriptive statistics mean, median and standard deviation were calculated for all domains then mean score of all domains were added to get global score. Descriptive statistics like frequency and proportions were used for categorical variables. Mean, median, standard deviation and interquartile ranges were calculated for continuous variables. The *p*-value <0.05 was considered statistically significant.

RESULTS

In this study mean age of participants was 27 ± 4.2 years. The proportion of women belonging to Punjabi, Kashmiri, Pathan and Sindhi ethnicity were 181 (67.5%), 26 (9.7%), 44 (16.4%), 17 (6.3%), respectively. Most of women 217 (81%) were living with husband and only 51 (19%) were living separately. Regarding the education of participants, the proportion of women 31 (11.6%), got 1-5 years education, while who did matric were 56 (20.9%). The women who had done graduation were 87 (32.5%), and 44 (16.4%) had completed postgraduation. The proportions of illiterate women and 8 years of education were similar 25 (9.3%). Most of women were housewife 243 (90.7%). Husbands having 10-12 years of education were 140 (50.2%). Most of the husbands 202 (75.4%) were skilled person. Husband whose income ranged from 12,250 - 36,699 RS/- 188 (70.1%). Of the total participants, 233 (86.9%) women were belonging to lower middle class. The time elapsed since birth of baby was classified in two groups, less than 06 weeks and more than 6 weeks up to 06 month after childbirth. The women who were interviewed at the time of less than 6 weeks and more than 06 weeks up to 6 months were 103 (38.4%), 165 and (61.6%), respectively. Out of 268 women, 114 (42.5%) women had cesarean delivery and 154 (57.5%) of women had spontaneous vaginal

delivery. Participants of this study who had visited antenatal clinics for more than 6 times were 83%. At the time of filling the questionnaire, 185 (69%) of participants were attending their 1st postpartum session for the removal of stitches of cesarean section. Women 75 (28%), attended post-partum clinic for examination of vaginal infection caused by episiotomy during labor. Only 3 (8%) of women came to post-natal clinic as attendant to their pregnant relative. Women who were breast feeding their babies were 239 (89.2%). Only, 10.8% women were giving formula milk to their babies as well. In this study, Musculoskeletal problems including backache, fatigue, joint pain were reported by half 137 (51.1%). Results of this study also showed that 197 (73.5%) of women were having abdominal pain, pelvic pain. It was evident from the median score 53 ± 15 calculated from the SF-36 questionnaire that HRQOL of mothers in postpartum period was moderately affected by social and maternal factors. Women in postpartum period had highest median score within physical functioning and social functioning and lowest median scores in energy/fatigue as shown in table-I.

Sub group analysis of maternal factors with HRQOL global score was also carried out as shown in table-II;

Sub group analysis of maternal factors mode of delivery, time since delivery, women's education with HRQOL domains was carried out by using Mann Whitney U-test. While, Kruskal Wallis test was used

for subgroup analysis of antenatal visits and husband's education with HRQOL domains as shown in table-III;

Table-I: Scores of postpartum women in SF-36 domains.

SF-36 Domains	Median (IQR)
Physical functioning	75 (90-55)
Role limitation due to physical problem	50 (68-25)
Role limitation due to emotional problems	50 (75-25)
Energy/fatigue	37 (50-31)
Emotional well being	55 (75-35)
Social functioning	75 (75-62)
Body pain	45 (62-22)
General health	45 (60-30)
Global score	52 (65-42)

Table-II: Sub group analysis of maternal characteristics and global score.

Socio-Maternal Characteristics	n	Global score (median, IQR)	p-value
Mode of Delivery			
SVD	114	56(70- 45)	0.001
CS	154	49(59-39)	
Time Since Delivery			
<6 weeks	103	46 (55-36)	0.001
>6 weeks	165	56(69-49)	
Ante Natal Visits			
< 4 visits	21	42 (67-34)	0.007
Visits	24	54 (69-38)	
>6 visits	223	53 (64-43)	
Husband's Education			
>Graduate	78	57 (70-43)	0.001
10-12 th	140	52 (64-45)	
<Middle	50	43 (54-34)	

Table-III: Sub group analysis of maternal characteristics with HRQOL domains.

Charac-teristics	n	PF	RLPH	RLEH	E/F	EWB	SF	BP	GH
Education									
<Matric	137	75 (90-25)	43 (62-25)	50 (75-25)	37 (50-25)	47 (65-35)	75 (75-62)	43 (57-22)	40 (55-30)
>Matric	131	80 (90-60)	50 (75-25)	50 (91-25)	43 (56-31)	65 (80-45)	75 (75-62)	45 (65-22)	45 (65-35)
p-value		0.395	0.446	0.544	0.001	0.001	0.469	0.69	0.056
Mode of Delivery									
SVD	114	85 (95-68)	50 (75-35)	58 (93-39)	37 (56-31)	55 (76-40)	75 (87-62)	45 (67-32)	45 (65-35)
CS	154	70 (85-50)	37 (56-25)	50 (75-25)	37 (50-28)	55 (70-35)	75 (75-62)	38 (57-22)	40 (55-30)
p-value		0.001	0.001	0.001	0.21	0.08	0.50	0.001	0.001
Time Since Delivery									
<6 weeks	103	55 (80-43)	31 (50-25)	50 (75-25)	37 (50-25)	47 (75-30)	75 (78-50)	32 (48-12)	42 (60-30)
>6 weeks	165	80 (90-70)	50 (75-37)	50 (100-25)	43 (56-31)	55 (75-40)	75 (75-62)	45 (67-32)	45 (60-32)
p-value		0.001	0.001	0.001	0.001	0.03	0.65	0.001	0.52
Antenatal Visits									
< 4 visits	21	80 (90-45)	31 (81-18)	25 (100-25)	31 (46-25)	40 (55-25)	75 (93-50)	32 (72-22)	30 (42-25)
4-6 visits	24	87 (98-56)	50 (67-31)	50 (81-25)	37 (56-26)	52 (70-41)	62 (75-50)	57 (77-25)	45 (60-35)
>6 visits	223	75 (90-55)	43 (64-25)	50 (75-25)	37 (51-31)	57 (75-40)	75 (75-62)	45 (57-22)	45 (60-35)
p-value		0.132	0.792	0.22	0.29	0.01	0.23	0.262	0.03
Husband's Education									
>Graduate	78	80 (91-53)	50 (75-29)	58 (100-25)	50 (62-31)	65 (80-45)	75 (75-62)	45 (67-22)	55 (70-40)
10-12 th	140	75 (90-60)	50 (68-36)	50 (83-25)	37 (50-31)	55 (75-40)	75 (75-62)	45 (65-25)	45 (60-30)
<Middle	50	70 (85-50)	37 (50-25)	50 (60-25)	31 (43-18)	35 (55-23)	75 (87-50)	32 (48-20)	35 (46-30)
p-value		0.089	0.015	0.015	0.001	0.001	0.88	0.02	0.001

Values are expressed as median and IQR

DISCUSSION

Postpartum period is physically and mentally challenging period for mothers. It has a detrimental impact on the health of mothers, infants and their families¹¹. Results of this study showed statistically significant association of mode of delivery, time since delivery, antenatal visits, women's education and husband's education with HRQOL. However, women's age, occupation, parity, living with husband or separate, socioeconomic class, postnatal sessions, postnatal delivery complaints did not show any significant association with HRQOL.

The result of study reported that postpartum women after SVD scored better in PF domain as compared to CS. Such findings are consistent with another research in Iran which reported that mothers after giving birth by SVD scored higher in PF domain of HRQOL as compared to women who had CS¹². Women who had undergone SVD were worst in energy fatigue, pain in body, while role limitation due to physical problem in women who had CS was much worst. Limitation in performing the activities might be due to CS which led to sluggish recovery in postpartum period. Study based on hundred women among whom fifty delivered by SVD and fifty by CS and their HRQOL was measured at two points. It was found that SVD women were having better QOL in all subscales of SF-36 but significantly for E/F, EWB and PF at both point times¹³. Women in less than 06 weeks had lowest score in PF and SF which appeared to be improved in women who were in another (opposite) group i.e. more than 06 weeks up to 06 months. It might be due to reason that most of the time after childbirth women are more focused on newborn which made them less social. Women who had higher education were showing statistically significant difference as compared to women who did not have higher education in subscales of E/F and EWB. Result of study coincides with another study concluding that having a higher education level was identified as a factor that facilitated women obtaining higher postpartum HRQOL score¹⁴. A statistical significant difference was found in domains of EWB and GH among women who had done four to six antenatal visits. This result showed congruency with a study conducted by Hitimana *et al*, concluding that women who had at least 4 ante natal visits had better HRQOL after delivery¹⁵. Women whose husbands were educated had better HRQOL in domains of RLPH, RLEH and GH in postpartum period. Chinese study demonstrated the same results

reporting that mother had poor postpartum HRQOL whose husbands were not educated¹⁶. Analysis of women's age groups with HRQOL did not show any significant association. The result of present study is consistent with the Brazilian study which resulted in no difference between QOL scores of postpartum women in different age groups¹⁷. The result of this study is not in line with the study done in twin cities which showed that elder women had worst mean scores in MH and PF¹⁸. Although women reporting to study center belonged to different socio economic and educational status. However, this is not representative sample of women belonging to other settings. So, the results cannot be generalized to population.

CONCLUSION

The study showed that health related quality of life score of postpartum women was moderately affected; wherein PF and SF domains strongly contributes in better QOL. E/F, BP and GH are the weakest domains adversely affecting HRQOL. Women in subacute postpartum phase, with CS, lower educational status and less than 4 antenatal visits are associated with poorer HRQOL.

CONFLICT OF INTEREST

This study has no conflict of interest to be declared by any author.

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