

## ORIGINAL ARTICLE

## Determinants of Health-Related Quality of Life among Post-Partum Women Residing in a Resettlement Colony of East Delhi.

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### Abstract

**Abstract:** The postpartum period marks a transition phase in the life of the mother as well as the whole family. Health Related Quality of Life (HRQoL) is an important aspect for not only mother's physical and psychological health. The study was conducted in a resettlement colony, Kalyanpuri located in Delhi, India with a sample size of 330 post-partum women and the data was collected in the 6th week of post-partum period using the MOS SF-36 (Medical Outcomes Study Short Form 36 Health Survey) for health related quality of life. Among the study subjects, 34.2% had the birth order two and they showed the best mean HRQoL score. The mean score was low for the study subjects with complications in the antepartum, intrapartum and postpartum period ( $52.9 \pm 18.4$ ) as well as in foetal complications where the intrapartum period complications had the worst mean HRQoL score. Healthcare workers of the study area visited 91.5% of the subjects during the post-partum period and had better HRQoL mean score. Also, 22.4% subjects had history of mistreatment and abuse with decline in the mean HRQoL scores. Across the study subjects, 54.4% had financial hardships faced by their family members which had poor HRQoL mean scores. This study uncovered various horizons of health related quality of life for assessment of women in the post-partum period which emphasised the modifications and considerations to include quality as one of the determinant and indicator of health.

### Keywords

Quality of Life; Postpartum Women; Women Health; Quality of Healthcare

### Introduction

The postpartum period is defined as six weeks after childbirth and it marks a transition phase in the life of the mother as well as the whole family at physical, mental, social and emotional levels. The World Health Organization described the postnatal period as the most critical and yet the most neglected phase in the lives of mothers and babies as most maternal and new-born deaths occur during the postnatal period. (1) Improving the quality of care and patient safety is therefore critical to ending preventable maternal and new-born deaths, and achieving the SDGs by 2030. (2) In a country like India where prevalence of malnutrition, poverty, illiteracy and

poor healthcare services are common, providing post-partum support to the mother is of utmost importance. According to, National Family Health Survey (NFHS-4), 62.4% mothers received postnatal care from a doctor/nurse/LHV/ANM/midwife/other health personnel within 2 days of delivery. (3)

Health Related Quality of Life (HRQoL) is an important indicator of the quality of healthcare. (4) The World Health Organization defined Quality of Life as an individual's 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. It is a broad concept, affected in a complex ways. (5) It is important for public health policy, research, evaluation,

and clinical decision-making. Numerous variables have been studied as predictors in HRQOL in post-partum women such as age, marital status, maternity leave, gender of baby, breastfeeding, time since birth and type of delivery etc. (6) Along with this various post-partum related morbidities like constipation, sleeping disorders, fatigue, incontinence, pain in various parts of body etc. affect not only mother’s physical and psychological health but also affects their infant’s wellbeing. (5) The UN Sustainable Development Goals (SDGs) have set ambitious health-related targets for mothers, new-borns and children, which countries have committed to achieve by 2030. Working towards these goals will eventually progress towards the Universal Health Coverage (UHC) as well as improving the quality of healthcare for women which will dignify the status of women in the society. (7)

**Aims & Objectives**

To analyse the association of the maternal, child and socio-demographic factors with the Health-Related Quality of Life (HRQoL) among the postpartum women at 6 weeks.

**Material & Methods**

A community based cross sectional study was conducted in a resettlement colony located in Delhi, India. The area is divided into 11 blocks with a total population of 25,754 with 4596 eligible couples in 4302 households. The census of 2011 is taken as the official base year for the total population of the study area. The decadal growth rate of the population in Delhi is taken as 21% as per 2011 census, the estimated total population was approximately 31000. Based on the birth rate of Delhi (17.8 per 1000 population per year). 552 children were likely to be born in the Kalyanpuri area in the year 2019 corresponding to the number of post-partum females in the study area. The study was carried out from November 2018 to March 2020 and comprised of the post-partum women in the age group 15-49 years who delivered in the year 2019. The study subjects were asked questions and the data was collected in the 6th week of post-partum period. The study area was visited before planning the study and it was observed that the blocks of the area had multifarious distribution of population according to social class, religion, economic standards, health perceptions and health seeking behaviours.

Enrolment of study subjects was started with registration during antenatal period during third trimester, from the registers of ASHA/Anganwadi workers. The sample size was calculated within 95% confidence limit where, N is the required sample size, σ is standard deviation (SD), d is the precision. Based on SD of Health-Related Quality of Life =22 (7), Precision (d) = 2.5 at 95% confidence interval and power of 80%, Calculated sample size is 298. Assuming the non-response rate of 10%. The calculated minimum sample size is 328. The total number of 330 study subjects were included in the study.

$$N = \frac{Z^2_{1-\alpha/2} \sigma^2}{d^2}$$

A pre designed, pre tested and a semi structured interview schedule consisting of three parts was used in the form of a questionnaire in the study. The questionnaire consisted of three parts. Part I included general information of the subjects. Part II consisted of maternal and child health factors in antepartum, intra partum and post-partum period. Part III included a standardised questionnaire, namely MOS SF-36 (Medical Outcomes Study Short Form 36 Health Survey) was used in this study for information related to health related quality of life followed by general physical examination of the study subject. The scoring of SF-36 was done according to the SF-36 Health Survey Manual and Interpretation Guide. (8)

**Inclusion criteria for subjects:** All post-partum women, residing in the study area in Kalyanpuri resettlement colony of Delhi.

**Exclusion criteria for subjects:** There was no exclusion criteria set as all the females who delivered between 1st January 2019 to 15th December 2019 were included in the study.

Scoring of Medical Outcome Studies Short Form-36 version 2, or ‘MOS SF-36v2’ (8)

The scoring of SF-36 was done according to the SF-36 Health Survey Manual and Interpretation Guide and following steps were followed to obtain the final score for each study subject and assess their HRQoL.

The reverse coding was done for 10 items in SF-36 questionnaire. These include question number 7 and 8 (component of bodily pain), question number 1, 11b and 11d (component of general health), question number 9a and 9e (component of vitality), question number 6 (component of social functioning) and, question number 9d and 9h (component of mental health). (Figure 1)

**Computing raw scale scores**

Domain	Question No./Item	Type of coding	Scores and range in each domain
Physical Functioning	Q no. 3a, 3b, 3c, 3d, 3e, 3f, 3g, 3h, 3i, 3j	Normal coding	Lowest raw score: 10 Highest raw score: 30 Range: 20
Role-Physical	Q no. 4a, 4b, 4c, 4d	Normal coding	Lowest raw score: 4 Highest raw score: 8 Range: 4
Bodily Pain	Q no. 7, 8	Reverse coding	Lowest raw score: 2 Highest raw score: 12 Range: 10
1. General Health	Q no. 1, 11a, 11b, 11c, 11d	Reverse coding for Q no. 1, 11b and 11d	Lowest raw score: 5 Highest raw score: 25 Range: 20

2. Vitality	Q no. 9a, 9e, 9g, 9i	Reverse coding for Q no. 9a and 9e	Lowest raw score: 4 Highest raw score: 24 Range: 20
3. Social Functioning	Q no. 6, 10	Reverse coding for Q no. 6	Lowest raw score: 2 Highest raw score: 10 Range: 8
4. Role-Emotional	Q no. 5a, 5b, 5c	Normal coding	Lowest raw score: 3 Highest raw score: 6 Range: 3
5. Mental Health	Q no. 9b, 9c, 9d, 9f, 9h	Reverse coding for Q no. 9d and 9h	Lowest raw score: 5 Highest raw score: 30 Range: 25

After item coding and reverse coding of 10 items, raw score was computed for each domain. This raw score is the simple algebraic sum of responses for all items in each domain.

**Transforming raw scale scores to 0-100 scale:** The next step involved transforming each raw scale score to a 0 to 100 scale. Scores between these values represent the percentage of the total possible score achieved in each domain by the study subject known as domain score which is required for further comparisons in the study.

**It was calculated using the formula shown below:**

Transformed score =

$$\frac{[\text{Actual raw score} - \text{Lowest possible raw score of that domain}]}{\text{Range of raw score in that domain}} \times 100$$

Final score of SF-36 is obtained by calculating the mean of all the domain scores of each study subject.

**Key Outcome Variables and Indicators**

Association of mean score of Quality of Life (QoL) with socio-demographic, maternal and child health factors among post-partum women.

**DATA ANALYSIS AND INTERPRETATION:** A sample size of 330 study subjects was included in the study. Data collected in the proforma was coded, entered and analysed using Statistical Package for Social Sciences (SPSS) version 25. All quantitative observations were analysed using Chi-square test, Unpaired ‘t’ test and ANOVA and p value less than 0.05 was considered to be statistically significant.

**ETHICAL CONSIDERATIONS:** The study protocol was approved by the institutional ethical committee, Lady Hardinge Medical College, New Delhi. (Ethical committee approval number- LHMC/ECHR/2018/17T)A written consent was taken from the study subjects in the language that they understand prior to the administration of the study. The privacy and confidentiality of the study subjects was maintained.

**STANDARD WORKING DEFINITIONS:**

- **Quality of life:** It is an individual's 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. It is a broad ranging concept affected in a complex way by the person's physical health, psychological state, personal beliefs, social relationships and their relationship to salient features of their environment. (5)
- **Mistreatment and abuse:** The term “mistreatment” includes physical abuse and neglect, psychologic abuse, financial exploitation and violation of rights. (9) It also includes physical abuse, non-consented clinical care, non-confidential care, non-dignified care (including verbal abuse), discrimination based on specific patient attributes, abandonment or denial of care, and detention in facilities. (10)

**Results**

The total number of 330 study subjects were included in the study.

Majority of the study subjects and their husband in our study were in the age of 21-35 years. The mean age for study subjects was  $25.33 \pm 4.0$  years and  $28.5 \pm 4.8$  years for their husbands. Best HRQoL mean score was found in age group 21-35 years as 77% of the study subjects in the age group had HRQoL >50 with mean score of  $65.2 \pm 19.6$ . The mean HRQoL score was found to be worse in the age group 36-40 years ( $48.5 \pm 22.7$ ). The mean score of eight (8) domains of Health Related Quality of Life (HRQoL) using SF-36 for postpartum women at six weeks was found to be  $64.4 \pm 19.4$  (Mean  $\pm$  SD). Among the various domains of SF-36 scores at six weeks postpartum, the most affected domain was Role Physical ( $46.9 \pm 42.0$ ). Least affected domains in the post-partum women were General Health ( $75.45 \pm 22.76$ ), Role Emotional ( $73.84 \pm 41.40$ ) and Mental Health ( $72.60 \pm 14.50$ ). (Table 1)

**SOCIO-ECONOMIC STATUS**

Study subjects of families belonging to upper middle socio-economic status showed best HRQoL mean scores ( $67.6 \pm 18.0$ ) as 82.3% of the subjects had HRQoL score > 50. 24.2% study subjects with HRQoL < 50 belonged to lower socio-economic status with mean score of  $63.8 \pm 20.3$ . The subjects belonging to upper middle socio-economic status had the best median score of HRQoL of 72.4.

Study subjects with professional occupation of their husbands showed better mean HRQoL scores ( $76.5 \pm 18.3$ ) whereas the women showed lower Quality of Life score whose husbands were unemployed ( $46.4 \pm 20.2$ ). Mean HRQoL improved as the occupation of their husbands improved.

Among the study subjects, 34.2% had the birth order two and they showed the best mean HRQoL score ( $67.7 \pm 17.1$ ). Birth order of more than three children had the worst mean HRQoL score (difference was statistically significant; ANOVA; p value < 0.05) The HRQoL mean score was low for the study subjects with complications in the

ante-partum ( $58.5 \pm 19.7$ ), in-partum ( $49.8 \pm 17.1$ ) and post-partum period ( $52.9 \pm 18.4$ ) where the in-partum period complications had the worst mean HRQoL score. Also, the subjects who had abortion or stillbirth in previous pregnancy were found to have worst mean HRQoL score which was statistically significant. Healthcare workers of the study area visited 91.5% of the subjects during the post-partum period and had better HRQoL mean score.

Among the study subjects, 22.4% subjects had history of mistreatment and abuse by husband and 13.3% subjects had history of mistreatment by their family members during pregnancy and post-partum period. There was an evident decline in the mean HRQoL score who faced mistreatment and abuse by their husband ( $54.5 \pm 21.6$ ) and family members ( $52.5 \pm 19.9$ ). Unsupportive behaviour was reported by 20.3% subjects where mean HRQoL score decreased ( $56.4 \pm 20.0$ ) in such subjects. Across the study subjects, 54.4% had financial hardships faced by their family members due to out of pocket expenditure during pregnancy and post-partum period which had poor HRQoL mean of  $54.5 \pm 21.4$  as nearly one third 103 (31.2%) of the study subjects reported out of pocket expenditure which led to decreased mean HRQoL score (differences were statistically significant; Unpaired t test; p value < 0.05). (Table 2)

**PLACE OF DELIVERY:** Majority of the study subjects, 74.8% delivered in Government hospitals and 14.2 % subjects delivered at home. Study subjects with HRQoL > 50 had 76.1% of women who gave birth and availed services at the Govt. hospitals with mean HRQoL score of  $64.8 \pm 19.5$  Subjects with HRQoL < 50 had 38.9% women who gave birth in private hospitals had HRQoL > 50 with worst median HRQoL score of 54.9. Among the subjects 87.2% subjects delivered at home with HRQoL < 50. In the study, mean HRQoL score was found to be better in home delivery followed by delivery in a Govt. hospital. The difference was statistically significant. ( $\chi^2 = 7.641$ ; p value < 0.05; df = 2).

Among the study subjects, 36 (10.9%) pregnancies were with foetal complications which led to worst HRQoL score of  $53.1 \pm 15.4$  where 41.7% women presented with HRQoL scores < 50. In the absence of foetal complications, the study subjects had good HRQoL score where 78.2% subjects had HRQoL score > 50. The best median HRQoL score of 70.3 was found in the absence of any foetal complication in the present pregnancy and the difference was found to be statistically significant. ( $\chi^2 = 6.974$ ; p value < 0.05; df = 1).

Among the study subjects, 110 subjects had addiction to substance in the family. The HRQoL score was found to be better ( $66.8 \pm 18.4$ ) among those having no history of addiction in the family where 80% of them had HRQoL > 50. (Table 3)

**BREASTFEEDING:** The mean score of HRQoL domains of General Health ( $76.2 \pm 21.4$ ), Role Emotional ( $76.5 \pm 39.3$ )

and Mental Health ( $73.5 \pm 13.7$ ) were better among women who exclusively breastfed. The HRQoL score of domain Role Physical ( $39.2 \pm 42.4$ ) was found to be significantly poor in women who did not exclusively breastfed in the post-partum period. Babies in our study were often top fed with over diluted cow's milk, formula milk, honey and water.

## Discussion

Most postpartum researches have focused on physical complications and Health related quality of life has been relatively neglected in research. This study gives a reliable and a diverse attempt at exploring predictors affecting the quality of life of postpartum women. In the study, HRQoL score ranged highest from  $75.45 \pm 22.76$  in General Health domain to lowest in Role Physical domain ( $46.9 \pm 42.0$ ). The most affected domain was Role Physical which represents the physical health problems in the post-partum period and affecting the various daily activities of the mother after pregnancy. Further analysis showed that a comparatively lower score in the domains of Bodily Pain and Vitality represents the pain, tiredness and loss of energy in the post-partum period which also affected the daily household activities and thereby decreasing the HRQoL of women in the postpartum period. The best HRQoL mean score was found in age group 21-35 years as 77% of the study subjects in the age group had HRQoL >50 as majority of the subjects lied in this age group and the mean HRQoL score was found to be worse in both the extremities of age group. Both the groups contemplate to early age of pregnancy as well as teenage pregnancy and women in advanced maternal age impose multitude complications as well as deteriorate general health of the post-partum women. In the same way, Hitimana R, et al (11) in 2014 in Rwanda observed that the women older than 40 years had significantly lower HRQoL scores than did the women in the younger age groups. In our study, the better score was found in the age group of 21-35 years as it corresponds to the marriageable age group in India which largely corresponds to the good reproductive health. Also, HRQoL is a multivariate indicator which is impacted by socio economic conditions, nutrition and health of young individuals as well as healthcare availability and utilisation. In the present study, the study subjects, whose husbands were unemployed showed lower HRQoL score which could be explained due to availability of resources, increased awareness leading to greater perception of health and utilisation of health services by the study subjects and their husband. People in higher socioeconomic status had better quality of life as they comprised of people who were more literate and had high family income but, they also had better utilisation and affordability of the health services available to them as well as better perception of health and health seeking behaviour.

Parity was another predictor analysed in the current study. Mean HRQoL scores decreased as the number of children of the study subjects increased. Large family size often imposed various health concerns, affordability to various resources due to financial constraints and also causing deterioration of health of the women due to multiple pregnancies leading to poor HRQoL scores. In our study various complications were assessed like anaemia, gestational diabetes, previous caesarean delivery, heart diseases in pregnancy, fever, infections, malpresentation, meconium stained liquor, pain and bleeding per vaginum. HRQoL mean score was significantly low for the study subjects with complications in the antepartum, intrapartum and postpartum period as compared to the study subjects who had no complications. Subjects who had abortion or stillbirth in previous pregnancy were also found to have worst mean HRQoL scores. In our study, the findings did not match any previous study as only 39% subjects attended postnatal clinics. The reason might be due to lack of awareness and not perceiving a need to visit healthcare centres in absence of any complications. In a finding, healthcare workers of the study area visited 91.5% of the subjects during the post-partum period and had better HRQoL mean score which explains that availability and utilisation of health services impacted the health Related Quality of Life. Many forms of disrespect and abuse during childbirth are normalized and not considered a problem and therefore women have low expectations of care and social support being provide by the husband and the family members which equally impacted the HRQoL and health outcomes in pregnancy and postpartum period. Richard Kalisa et al. (12) in Africa in 2015 observed that social support in the form of involvement of husband in pregnancy care can improve maternal and new born outcomes. Also, behaviour of the healthcare workers in the intrapartum period with the husband and the family members had an effect on the quality of life. It involved verbal abuse, inappropriate way of taking consent, irrational demands during the intrapartum period which often led to abuse and non-satisfaction with the services. In the study, mean HRQoL score decreased in the subjects where healthcare worker was unsupportive during the intrapartum period in the present pregnancy. During pregnancy and postpartum period, better the satisfaction, better was the quality of life. Verbal and physical abuse, lack of privacy, unhygienic hospital premises and practices during delivery were among the many other reasons of non-satisfaction with the healthcare services which was found to be a predictor of poor HRQoL of postpartum women. Increased cost of living and out of pocket expenditure often led to financial hardships and stress in the family during pregnancy and the postpartum period. This resulted in impacting mental health of the subjects as well. In our study, 54.4% subjects faced financial hardships, which had resulted in significantly poor HRQoL score. These conditions often

resulted due to out of pocket expenditure for various healthcare and nutritional needs whereas treatment and delivery in private hospitals was also one of the major cause of their financial instability. Data from NFHS-4 (2015-2016) reveal that out of 78.9% total institutional births in India 52.1% take place in public facilities. Study subjects with HRQoL > 50 had majority (76.1%) of women who gave birth and availed services at the Govt. hospitals had better mean HRQoL score than private hospital. Affordability of health services at public facilities and increased out of pocket expenditure at private hospitals was responsible for poor HRQoL score of subjects attending private hospitals. The subjects had worst median HRQoL score who gave birth at the private hospitals. Surprisingly, 14.2% study subjects with home delivery by both skilled and untrained dais showed exceptionally good HRQoL median score due to absence of any complications in the present pregnancy, less expenditure as well as presence of social support by family atmosphere and immediate look after of mother and the new born by the family members and poor practices of encouragement of home delivery by the elder members of the family to avoid visiting hospitals and facing the menace of high spending and myths regarding irrational caesarean sections. Similarly, various foetal complications were also studied wherein 10.9% pregnancies were accompanied by foetal complications like foetal distress, jaundice, and low birth weight which led to worst HRQoL score. The best median HRQoL score was found in the absence of any foetal complication. The findings were similar in a study conducted by Martínez-Galiano, et al. (13) in 2017, which concluded that caesarean section, third/fourth degree perineal tears while giving birth, involved episiotomy, having a premature new-born, the mother being admitted to an ICU, hospital readmission or the new-born being hospitalized were factors associated with women obtaining a lower postpartum QoL score.

Socio cultural factors were also found to be responsible for impacting HRQoL of mothers in the postpartum period. Practice of exclusive breastfeeding for 6 months and avoiding top feed at that time is still not practiced solely in the Indian families. Babies in our study were often top fed with over diluted cow's milk, formula milk, honey and water as only 66.6% of the study subjects followed the practice of exclusive breast feeding in the present pregnancy and had significantly better mean HRQoL score as compared to the mothers involved in giving pre-lacteal feeds and top feeds to the baby. The mean score of HRQoL domains of General Health, Role Emotional and Mental Health were better among women who exclusively breastfed in the post-partum period as it helped to build emotional bonding of the mother with her baby and release of oxytocin reduces anxiety and stress, thus improving the HRQoL in the postpartum period. Addiction to substance in the family often led to the feelings of

abandonment, anxiety, fear, anger, embarrassment for the abuser as well as the pregnant female. In our study, 33.3% subjects had addiction to substance in the family and the mean score was found to be significantly better among those having no history of addiction in the family which eventually improved all the domains of quality of life, as well as emotional and mental wellbeing of the mother. Mistreatment by the partner and the family members was also associated with alcohol addiction which often resulted in domestic violence. Financial stress in the family was pronounced in such cases and it interrupted various treatments and investigations to be done during pregnancy thus, affecting the quality of care and HRQoL. Awareness against mistreatment and abuse and promoting quality of care during childbirth is important in promoting respectful maternity care along with reproductive rights of women. Ensuring universal access to safe, acceptable, affordable, good quality sexual and reproductive health care can reduce the global burden of maternal morbidity and mortality. Providing safe environment with social support during pregnancy and postpartum period was found to be an important indicator of HRQoL. In our study, 22.4% subjects faced mistreatment and abuse by husband and 13.3% by family members during pregnancy and the post-partum period. There was an evident and a significant decline in the mean HRQoL score who faced mistreatment and abuse by their husband and family members. M.F. Silveira, et al (14) in Brazil in 2015 observed increased odds of having postpartum depression among women who were exposed to verbal or physical abuse during childbirth. Women's disrespect in the form of non-dignified care, physical and verbal abuse affected the social and emotional support as well as mental health and vitality of the women.

### Conclusion

This study of HRQoL in post-partum women focuses on the neglected facet of women healthcare and the aspects affecting the quality of care and HRQoL in mothers during pregnancy as well as in the postpartum period in Indian scenarios. Improving the quality of care is critical in ending preventable maternal and new-born deaths, and achieving the SDGs by 2030. Among the various aspects of HRQoL, the most affected domain was role physical followed by bodily pain and vitality. The association of socio-demographic factors with the HRQoL of the study subjects clearly demonstrates like other studies that increased age leads to decreased quality of life in the postpartum period. Similarly higher socioeconomic status of the family as well as unemployed male partner affected the HRQoL of the mother during and after pregnancy. Subsequent pregnancies and increasing births led to decreased HRQoL in women. Factors like complications during pregnancy and postpartum period and mental health issues like postpartum depression also witnessed significant reduction in the quality of life and restricted

the activities of daily living of the study subjects. The study focussed on the aspects of inadequate utilisation and availability of health services which also improved the Health-Related Quality of Life of the study subjects. Receiving ANC check-ups, appropriate information, timely referral of complicated cases and regular visits by healthcare workers led to increase in the quality of life as well as improved quality of care.

This study also focused on new factors which affected the quality of care and HRQoL during pregnancy and postpartum period. Failure to meet the professional standards of patient care and mistreatment and abuse by healthcare providers and abuse was reported in many forms as in verbal, physical, discrimination due to poor financial status, explanations and answering queries about medications and most importantly listening to the complaints of their family members. Mistreatment and abuse by the family members and husbands of the study subjects also deteriorated the HRQoL which usually went unreported by the women. Along with all the factors, various addictions in the family members decreased the HRQoL where alcohol and smoking were commonly seen. Facing hardships and various out of pocket expenditures which increased in cases of study subjects receiving private healthcare services were also responsible for reduced quality of life. This study uncovered various unexplored horizons of health-related quality of life for assessment of women in the post-partum period.

### Recommendation

HRQoL for assessment of women's health needs special consideration. Developing HRQoL as health system key performance indicator and present an impression of the health status of a population to conduct comparisons between population segments and countries. In this sense, it would also help further to assess and formulate effective health promotion strategies that promotes awareness. Strengthening of quality improvement and sustainable quality assurance mechanisms are major problem solving steps in improving access to healthcare and achieving "Health for All" agenda and is absolutely critical for India to achieve its SDG targets. In India, giving patients a voice and making sure that the providers listen will become all the more important in the coming years.

### Limitation of the study

Paucity of literature and dearth of community-based research in the aspects of Quality of Life among post-partum women in the study area and largely in India was also one of the major limitations of this study. This was a cross sectional study, carried out in a small number of the study subjects where one time data was collected and therefore does not take into account any improvement or worsening of quality of life.

### Relevance of the study

Exploring predictors affecting the quality of life of postpartum women which will eventually improve the perceptions of their quality of life which is an essential measure of the quality and effectiveness of maternal and child health interventions. This in turn will lead to better provision of healthcare and improvement in their Quality of Life. Under privileged communities suffer from various health conditions due to poverty, illiteracy, malnutrition and lack of sanitation. Quality healthcare has always been a major challenge for such communities which finally deteriorate their Health-Related Quality of Life (HRQoL).

**Authors Contribution**

PS: Data collection, compiling, analysis and manuscript drafting; SKR: Methodology, finalization of manuscript

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**Tables**

**TABLE 1 AGE WISE DISTRIBUTION OF HRQOL OF STUDY SUBJECTS.**

HRQoL score	Age of study subject (In completed years)			Total (N = 330)
	18-20 (n = 38)	21-35 (n = 287)	36-40 (n = 5)	
<50	10 (26.3)	66 (23)	3 (60)	79
>50	28 (73.6)	221 (77)	2 (40)	251
<b>Mean Score</b>	62.7 ± 22.6	65.2 ± 19.6	48.5 ± 22.7	64.4 ± 19.4

**TABLE 2 DISTRIBUTION OF MEAN HRQOL SCORE OF THE STUDY SUBJECTS ACCORDING TO VARIOUS FACTORS IN THE CURRENT PREGNANCY**

		Frequency (%)	HRQoL Mean ± SD	p value
Birth Order	One	152 (46.1)	62.2 ± 20.0	< 0.05
	Two	113(34.2)	67.7 ± 17.1	
	Three	49(14.8)	65.5 ± 22.1	
	More than 3	16(4.8)	58.1 ± 18.3	
Complications	Antepartum			< 0.05
	Yes	105(31.8)	58.5 ± 19.7	
	No	225(68.2)	67.1 ± 18.7	
	Intrapartum			
	Yes	41(12.4)	49.8 ± 17.1	
	No	289(87.6)	66.4 ± 18.9	
Abortion/ Stillbirth/ Death	Postpartum			< 0.05
	Yes	120(36.4)	52.9 ± 18.4	
	No	210(63.6)	70.9 ± 16.8	
	Yes	52(15.8)	58.0 ± 21.7	< 0.05

	No	273(82.7)	65.7 ± 18.8	
	Death of previous child	5(1.5)	59.0 ± 19.4	
Home visits by healthcare workers	Yes	302(91.5)	64.9 ± 19.0	< 0.05
	No	28(8.5)	59.0 ± 22.8	
Mistreatment and abuse by husband	Yes	74(22.4)	54.5 ± 21.6	< 0.05
	No	256(77.6)	67.2 ± 17.8	
Mistreatment and abuse by family members	Yes	44(13.3)	52.5 ± 19.9	< 0.05
	No	286(86.7)	66.2 ± 18.7	
Behaviour of healthcare worker during intrapartum period (n=284)	Supportive	217(76.4)	66.0 ± 19.4	< 0.05
	Un supportive	67(20.3)	56.4 ± 20.0	
Financial hardships in the family (n=103)	Present	56(54.4)	54.5 ± 21.4	< 0.05
	Absent	47(45.6)	70.8 ± 14.0	

**TABLE 3 DISTRIBUTION OF HRQOL SCORE OF THE STUDY SUBJECTS ACCORDING TO THE PLACE OF DELIVERY, FOETAL COMPLICATIONS AND PRESENCE OF ADDICTION TO SUBSTANCE IN THE FAMILY.**

HRQoL score	Place of Delivery			Total (N = 330)
	Govt. Hospital (n = 247)	Private Hospital (n = 36)	Home (n = 47)	
<50	59 (23.9)	14 (38.9)	6 (12.8)	79
>50	188 (76.1)	22 (61.1)	41 (87.2)	251
<b>Mean Score</b>	64.8 ± 19.5	55.8 ± 21.3	68.7 ± 15.6	64.4 ± 19.4
<b>Median Score</b>	67.3	54.9	70.3	66.9
HRQoL score	Foetal complications		Total (N = 330)	
	Yes (n = 36)	No (n = 294)		
<50	15 (41.7)	64 (21.8)	79	
>50	21 (58.3)	230 (78.2)	251	
<b>Mean Score</b>	53.1 ± 15.4	65.8 ± 19.4	64.4 ± 19.4	
<b>Median Score</b>	55.3	70.3	66.9	
HRQoL score	Addiction to substance in the family		Total (N = 330)	
	Present (n = 110)	Absent (n = 220)		
<50	35 (31.8)	44 (20)	79	
>50	75 (68.2)	176 (80)	251	
<b>Mean Score</b>	59.4 ± 20.5	66.8 ± 18.4	64.4 ± 19.4	

**Figures**

**FIGURE 1 REVERSE CODING OF 10 ITEMS**

