

Original Article**Quality Of Life among Pregnant Women in a Tertiary Care Hospital**Mamta K.C¹, Nyamika K.C¹, Pratikshya Tripathi¹, Kumari Katuwal¹, Pratiksha Karki², Bishika Pokhrel³¹Department of Nursing, Nobel Medical College and Teaching Hospital, Biratnagar, Nepal²Department of Nursing, Civil Service Hospital Nursing Campus, Kathmandu, Nepal³Register Nurse, Nobel Medical College and Teaching Hospital, Biratnagar, NepalArticle Received: 12th March, 2025; Accepted: 17th May, 2025; Published: 31st July, 2025DOI: <https://doi.org/10.3126/jonmc.v14i1.83246>**Abstract****Background**

Pregnancy brings hormonal, metabolic, and emotional changes that can significantly influence a woman's quality of life. This study aimed to assess Quality of life among pregnant women.

Materials and Methods

A descriptive cross-sectional study was conducted at the ANC OPD of Nobel Medical College Teaching Hospital, Biratnagar, from November 2024 to March 2025. A total of 184 pregnant women were selected through convenience sampling. Data were collected via face-to-face interviews using the RAND SF-36 questionnaire. Descriptive statistics (frequency, percentage, median, interquartile range) and inferential statistics (Mann-Whitney U test) were used for analysis.


Results

The median QoL score was 67 (IQR: 62–74), with scores of 60 (51–67) for the physical component and 75 (70–82) for the mental component. The highest domain score was in emotional role limitation 100 (66.7–100), while the lowest was in physical role limitation 25 (0–50). Significant differences were noted in the Emotional Role Limitation domain based on the age group ($p=0.006$) and educational status ($p=0.043$). Similarly, general Health domain demonstrated a significant difference in terms of religious groups ($p=0.024$). Likewise, significant differences were observed between occupation in the domain of Energy/Fatigue ($p=0.015$), Emotional Wellbeing ($p=0.002$), and General Health ($p=0.003$). Also, significant difference in pain domain was found between nulliparous and parous women.

Conclusion

Based on the findings of the study, it can be concluded that mental health component scored higher than the physical health component. Among all domains, the highest score was observed in emotional role limitation while the lowest was in physical role limitation.

Keywords: Maternal Health, Pregnant Women, Quality of Life

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Introduction

Quality of life (QOL) assessment has emerged as an important research subject in health care because it helps both researchers and practitioners advance health promotion and disease prevention. The World Health Organization described QOL as the “individual's perception of physical health status alongside psychological state and independence level and relationships with social connections alongside personal beliefs and surroundings” [1]. Healthcare professionals use QOL measurement to detect client needs and forecast potential health difficulties during pregnancy [2].

The process of pregnancy brings many transformative changes throughout a woman's life at both a physical and biochemical level that are outside of her control [3]. Discomforts during pregnancy such as nausea, fatigue, and back pain along with emotional difficulties like anxiety and stress, significantly influence the overall experience and perception of quality of life [4]. The modifications in QoL for pregnant women lead to consequential outcomes for pregnancy results and postpartum development and fetal growth [5]. Scientific studies explore the connections between QOL and pregnancy factors which include demographic elements and clinical attributes as well as received social help support and stress levels [2]. Enhancing pregnant women's QoL requires medical practitioners to identify the aspects that reduce QoL dimensions during pregnancy followed by strategies to minimize their effects [6].

Healthcare providers gain essential information for designing effective interventions by conducting assessments of QoL among pregnant women because pregnancy often leads to QOL changes [7]. Accordingly, limited study has been done in Nepal in this regard, this study aimed to find out QoL in pregnant women which would subsequently help to design appropriate interventions to improve the QoL during pregnancy.

Materials and Methods

A descriptive cross-sectional study was conducted in the antenatal out-patient department of Nobel Medical College Teaching Hospital (NMCTH), Biratnagar from November 2024 to March 2025 following ethical approval from the institutional review committee (IRC) of NMCTH. Verbal and written informed consent were obtained from all the respondents before data collection. The study included women of age group 15-49 years with singleton of second and third trimester and those who understand Nepali language. Pregnant women who were unwilling

to participate, diagnosed with mental illness and who cannot speak or hear were excluded. For the calculation of sample size, the study considered a 95% confidence interval with the allowable error of ± 2 at 5% risk. From a previous study, it was seen that the mean score of quality of life of pregnant women was 61.8 with a standard deviation of 13.21 [6]. Using Cochran's formula for the calculation of sample size, a sample size of 167 was calculated and adding a 10% non-response rate, the required sample size was determined to be 184. Respondents were selected using simple convenience sampling method. Data were collected using RAND SF-36 version 1.0 tool through face-to-face interviews in a separate room. Data were analyzed using SPSS version 20, for descriptive statistics, frequency, percentage, median and interquartile range were calculated and for inferential statistics, Man Whitney U test was used to compare differences in quality of life domains among pregnant women based on selected variables; p value <0.05 was considered as significant.

Results

Table 1: Socio-demographic Characteristics of the Respondents n=184

Variables	Frequency (N)	Percentage (%)
Age group in years		
≤ 25 years	101	54.9
> 25 years	83	45.1
Mean age \pm SD	1.45 \pm 0.499	
Religion		
Hindu	143	77.7
Others ^a	41	22.2
Educational status		
Can read and write	131	71.2
Cannot read and write	53	28.8
Occupation		
Homemaker	127	69
Others ^b	57	31
Monthly Income		
≤20,000	43	23.4
21,000-40,000	99	53.8
>40,000	42	22.8
Parity		
Nulliparous	95	51.6
Parous	89	48.4
Trimester		
Second	98	53.3
Third	86	46.7
High Risk Pregnancy		
Yes	33	17.9
No	151	82.1
Type of Pregnancy		
Planned	131	71.2
Unplanned	53	28.2



^a = hindu, islam, Christian, Buddhist, ^b =farmer, government services, private services, business Table 1 reveals that among 184 respondents more than half (54.9%) of them were of age less than or equal to 25 years with mean \pm SD of 1.45 ± 0.499 . Regarding religion, majority (77.7%) of the respondents were Hindu. Concerning educational status, more than two third (71.2%) could read and write. With regards to occupation, majority (69%) of them can read and write. In relation to monthly income of the family, more than half (53.8%) of the respondents' income was 21,00 to 40,000 per month. Similarly, more than half (51.6%) of the respondents were nulliparous. With regards to trimester, (53.3%) of the respondents were in the second trimester of pregnancy. Likewise, majority (82.1%) had no high-risk pregnancy and more than two third (71.2%) of them had planned pregnancy.

Table 2: Quality of Life among Pregnant women in different domains n=184

Domain/Subscales	Median score (Q1, Q3)
Physical Quality of Life	
Physical Functioning	55(50,65)
Physical role limitation	25(0,50)
Pain	55(55,100)
General Health	55(50,65)
Total Physical Quality of Life	60(51,67)
Mental Quality of life	
Emotional role limitation	100(66.7,100)
Energy/Fatigue	65(60,70)
Emotional well being	72(64,76)
Social Functioning	75(62,100)
Total Mental Quality of Life	75(70,82)
Total Quality of Life	67(62,74)

Table 2 shows the overall median score and inter-quartile range of quality of life among pregnant women was 67(62,74) with 60(51,67) in physical component and 75(70,82) in mental component. The highest score of quality of life was in emotional role limitation domain with score of 100(66.7, 100) and lowest score was in physical role limitation with score of 25(0, 50).

Table 3: Comparison of Quality of Life Domains Based on Age and Religion n= 184

Domain/Subscale	Mean Rank		p-value	Mean Rank		p-value
	≤ 25 years	>25 years		Hindu	Others ^a	
Physical Functioning	92.54	92.45	0.991	90.94	97.94	0.454
Physical Role Limitation	96.56	87.55	0.233	92.51	92.48	0.233
Emotional Role Limitation	100.61	82.63	0.006*	93.21	90.02	0.685
Energy/Fatigue	93.74	90.99	0.724	91.99	94.29	0.805
Emotional Wellbeing	88.92	96.86	0.311	92.42	92.78	0.969
Social Functioning	86.28	100.07	0.071	93.30	89.72	0.695
Pain	87.74	97.24	0.212	90.11	98.55	0.353
General Health	90.69	94.70	0.607	87.81	108.87	0.024*

^a = hindu, islam, Christian, Buddhist

Table 3 shows there was a significant difference in emotional role limitation domain in terms of age ($p=0.006$). Similarly, significant difference was found between religion in General Health domain with the p value 0.024.

Table 4: Comparison of Quality of Life Domains Based on Educational Status and Occupation n= 184

Domain/Subscale	Mean Rank			Mean Rank		p-value
	Cannot read and write	Can read and write	p-value	Home maker	Others ^b	
Physical Functioning	84.43	95.76	0.187	88.76	100.84	0.151
Physical Role Limitation	92.81	92.37	0.958	94.22	88.66	0.493
Emotional Role Limitation	82.08	96.71	0.043*	94.00	89.15	0.493
Energy/Fatigue	81.52	96.94	0.072	86.19	106.55	0.015*
Emotional Wellbeing	85.74	95.24	0.270	84.52	110.27	0.002*
Social Functioning	94.28	91.78	0.765	92.89	91.63	0.878
Pain	96.08	90.33	0.491	92.57	90.74	0.822
General Health	91.60	92.86	0.883	84.77	109.72	0.003*

^b =farmer, government services, private services, business

Table 4 shows a significant difference in the Emotional Role Limitation domain based on educational status, with a p-value of 0.043. Similarly, significant differences were observed between occupation in the Energy/Fatigue ($p=0.015$), emotional wellbeing ($p=0.002$) and general health ($p=0.003$).

Table 5: Comparison of Quality of Life Domains Based on Parity and Gestational Age n=184

Domain/Subscale	Mean Rank			Mean Rank		p-value
	Nulli parous	Parous	p-value	2 nd Trimester	3 rd Trimester	
Physical Functioning	88.49	96.78	0.287	96.24	88.23	0.302
Physical Role Limitation	95.47	89.33	0.414	95.58	88.99	0.381
Emotional Role Limitation	92.14	92.89	0.909	94.40	90.34	0.536
Energy/Fatigue	91.16	93.93	0.721	91.53	93.60	0.790
Emotional Wellbeing	89.84	95.34	0.481	92.80	92.16	0.934
Social Functioning	91.58	93.48	0.803	92.42	92.59	0.983
Pain	84.61	99.81	0.045*	84.92	100.16	0.054
General Health	90.54	94.60	0.601	87.30	98.42	0.153

Table 5 reveals a significant difference in the Pain domain between nulliparous and parous with a p-value of 0.045. There was no significant difference in QoL domains according to the gestational age.

Discussion

The present study shows the overall median score for the QOL was 67 (62,74). It was slightly more than the study done in North Jordan [2]. The score in physical component and mental component was 60 (51,67) and 75 (70,82) respectively. This finding was similar with the study done in



Neyshabur, Iran where the lowest score was in physical component and the highest was in mental component of health [7]. The highest scores of QoL were in emotional role limitation domain and lowest score was in physical role limitation domain which was similar with the study conducted in Pokhara, Nepal with highest score in emotional role limitation and lowest score in physical role limitation [6]. In a study done in Bandar Abbas, Iran and North Jordan, among the eight dimensions of QoL, the highest score was in emotional well-being and general health respectively whereas lowest score was in physical role limitation [8,2].

In this study, a significant difference was seen in the emotional role limitation domain between the age group. This finding was contrast with the study conducted in Pokhara, which found no any significant difference in emotional role limitation based on age [6]. In a study done in Bandar Abbas, South Iran, different aspects of quality of life according to age showed significant differences in social functioning, bodily pain, vitality and health problems. However, there was no significant difference in dimensions of physical functioning, emotional problems, general and mental health among different age groups [8]. There was a significant difference in general health domain between religion which was contrary with the study done in Pokhara where no any significant difference was found in QoL across all domain [6]. Similarly, no significant difference was observed in QoL of pregnant women according to educational status except emotional role limitation. But in a study done in Iran, higher education was linked with better QoL in physical functioning and emotional well-being domains [6].

In a study, significant difference in between occupation was seen in the domain of Energy/Fatigue, Emotional well-being and General Health. It was similar with the study done Pokhara, Nepal which found significant difference between occupation in terms of energy/fatigue [6]. However, it was opposite with the results of the study done in Bandar Abbas, South Iran where there was no significant difference between employment status and dimensions of QoL of pregnant women in any domain [8]. Regarding parity, a domain "Bodily pain" showed significant difference between nulliparous and multiparous women. However, study conducted in Pokhara, Nepal shows no any significant difference in QoL scores in any domain about parity [6]. Similarly, no any significant difference was seen in QoL domains according to the

gestation. This finding was contrast with the study done in Turkey where pregnant women in the third had consistently lower QoL scores across all domains except bodily pain [9]. All these differences could be because of differences in setting and sample.

Limitations

This study has several limitations. First, the use of convenience sampling technique may limit the generalizability of the findings, as the sample may not be fully representative of the broader population. Second, data were collected quantitatively at a single point in time using a cross-sectional design. To overcome this limitation, two further research methodologies is recommended to be employed; qualitative and longitudinal design. A qualitative approach could be implemented to assure the quality of data, and a longitudinal design could reveal the changes in women's perceptions of QOL throughout the pregnancy. Additionally, the study did not account for potential confounding factors that could influence on QOL such as life style factors, obesity, and violence behavior. Finally, the study was carried out in private care settings only, which might limit the generalizability of the study findings.

Conclusion

Based on the findings of the study, it can be concluded that mental health component scored higher than the physical health component. Among all domains, the highest score was observed in emotional role limitation while the lowest was in physical role limitation. Statistically significant differences in quality of life domains were observed across several variables. Emotional role limitation varied significantly in terms of age groups and educational status. A significant difference in general health domain was noted across religious groups. Significant differences were observed across occupations in the domains of energy/fatigue, emotional well-being, and general health. Similarly, significant difference in pain domain was observed between nulliparous and parous women.

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Conflict of interest: None.



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