Quality of Life of Pregnant Women Attending Antenatal Clinic in a Teaching Hospital, Pokhara

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ABSTRACT

Introduction: Although changes occur in various dimensions in quality of life and it plays a significant role in the health of pregnant women, there are limited data on the quality of life of pregnant women. The objective of the study was to identify the quality of life of pregnant women.

Methods: We conducted a descriptive cross-sectional study in Gandaki Medical College Teaching Hospital and Research Centre, Pokhara in 167 pregnant women attending an antenatal clinic over one month period, selected by nonprobability purposive sampling technique. Data collection was done using the RAND SF-36 questionnaire. Descriptive statistics were used to describe the quality of life. Inferential statistics were used to compare two independent groups and three or more independent groups respectively.

Results: The Mean±SD score for the quality of life of pregnant women was 73.08±14.95 with 62.80±19.14 in the physical component and 83.35±10.76 in the mental component. The score was highest in role limitation due to emotional health and lowest in role limitation due to physical health domain. Women who had planned pregnancies had better scores in the general health domain (p=0.005) and emotional wellbeing domain (p=0.011) compared to those who had an unplanned pregnancies.

Conclusion: Since the quality of life scores are lower in physical health domains than in mental health domains, special attention should be given to the physical health of pregnant women.

Keywords: *Maternal Health; Pregnant Women; Quality of Life*

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INTRODUCTION

Numerous mental and physical changes occur in women during pregnancy. These changes are likely to be associated with reduced qual-

ity of Life (QoL). Enhancement of the QoL of pregnant women can be done by paying attention to factors negatively affecting the dimensions of QoL during pregnancy and planning to reduce their impact.[1] To adopt the right strategies for promoting maternal health, conducting studies on factors that affect the QoL in pregnant women is important. The data available on the physical, psychological and social changes experienced by pregnant women are limited and it indicates the need for a greater focus on the QoL of pregnant women. [2] Since people's understanding of QoL is influenced by their beliefs and culture, we did this study to assess the QoL of pregnant women in the hope that its results will be useful to increase the QoL of women during pregnancy.

METHODS
A descriptive cross-sectional study was carried out in Gandaki Medical College Teaching Hospital and Research Centre, Pokhara in 167 pregnant women attending antenatal clinic from 25th October 2019 to 22nd November 2019, selected by nonprobability purposive sampling technique after obtaining the approval of the research proposal from Research Committee of Pokhara Nursing Campus, Tribhuvan University (TU), Institute of Medicine (IOM), Ramghat, Pokhara and ethical clearance from Institutional Review Committee (IRC) of TU, IOM. The formal permission was taken from Gandaki Medical College Hospital and Research Centre through a written request letter from Pokhara Nursing Campus TU, IOM. 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.[3] Using Cochran's formula for the calculation of sample size, a sample size of 167 was calculated. Only stable pregnant women in the second and third trimester of pregnancy of age group 15-49 years with singleton fetuses attending the antenatal clinic in Gandaki Medical College Hospital and Research Centre who could communicate without any dif-

ficulty and were willing to participate in the study were included. Written permission was taken from patients for the interview. Data was collected by the researcher face-to-face on a first come first basis by using a structured interview schedule at a time convenient for the patient. RAND 36-Item Short Form Survey (SF-36): a set of generic, coherent, and easily administered quality-of-life measures, a validated standard tool, as translated into the Nepali language in a previous study, was used to collect data.[4]

The questionnaire was divided into two parts: Part I included questions related to socio-demographic characteristics and maternal characteristics and Part II consisted of the 36-Item Short Form Survey (SF-36), a 36-item questionnaire composed of a set of generic, coherent, and easily administered quality-of-life measures that rely upon patient self-reporting. It included eight health concepts: physical functioning, bodily pain, role limitations due to physical health problems, role limitations due to personal or emotional problems, emotional well-being, social functioning, energy/fatigue, and general health perceptions. It also included a single item that indicated a perceived change in health. The response of each item in every domain was noted. The mean score of the items within each domain was used to calculate the raw score. Raw scores were then transformed to a 0-100 scale using a RAND 36 score calculator.[5] Data analysis was done using Statistical Package for Social Sciences (SPSS 16 version). Demographic (age, educational level, occupational status) and maternal (gravida, trimester of pregnancy) factors were considered potential independent variables. Descriptive statistics were used for all the variables. Results of the descriptive analysis were presented as frequency, percentage and Mean±SD. The suitability of the measurements to normal distribution was determined using the Kolmogorov-Smirnov test. Analysis of non-normally distributed data was conducted with parametric tests. In the comparison of two independent groups, the unpaired t-test test as a parametric test was used.

In the comparison of three or more independent groups, the One way ANOVA was used as a parametric test. A p-value of <0.05 was considered statistically significant.

RESULTS

The mean score for QoL was 73.08±14.95 with 62.80±19.14 in the physical component and 83.35±10.76 in the mental component. The highest scores of QoL were in Role limitation due to emotional health and pain domain with scores of 99.8±2.554 and 92.78± 8.78 respectively. The lowest scores were in role limitation due to physical health and general health domains with scores of 25.60±17.92 and 59.76±13.40 respectively. (Table 1)

There was a significant difference in QoL of pregnant women in physical functioning and energy/ fatigue domain concerning economic status. Using the Scheffe post hoc test in those domains where there was a significant difference in the One Way ANOVA test, it was found that respondents who had income that had extra saving had better QoL in physical functioning domain and energy/ fatigue domain than those whose income was just enough for one year. (p=0.048 and 0.010 respectively). (Table 2)

Although the score of QoL in all domains was higher in women residing in rural areas compared to those residing in urban areas, the difference was statistically insignificant. There was no significant difference in QoL of preg-

nant women concerning gestational age except for the role limitation due to the physical health domain (p=0.002). (Table 3)

Table 1: Quality of Life of Pregnant Women

Subscales	Mean	Std. Deviation	Alpha value
Physical Quality of Life			
Physical functioning	73.08	16.43	0.40
Physical Role limitations	25.60	17.92	0.51
Pain	92.78	8.782	0.58
General Health	59.76	13.40	0.35
Total Physical Quality of Life	62.80	19.14	0.46
Mental Quality of Life			
Emotional Role limitations	99.80	2.55	0.49
Energy/Fatigue	63.62	17.30	0.49
Emotional well being	80.81	8.93	0.49
Social Functioning	89.19	14.26	0.47
Total Mental Quality of Life	83.35	10.76	0.48
Total Quality of Life	73.08	14.95	0.47
Health Change	38.47	13.65	0.50

n=167

Table 2: Association between Quality of Life of Pregnant Women and Economic Status

Subscale	Enough for one year (n=44)		Not enough for one year (n=43)		Extra Saving (n=80)		p-value
	Mean	**SD**	**Mean**	**SD**	**Mean**	**SD**	
Physical functioning	69.20	16.17	70.23	17.99	76.75	15.06	0.020
Physical Role limitations	24.43	18.69	19.77	12.53	29.38	10.13	0.399
Emotional Role limitations	99.25	4.98	100.00	0.00	100.00	0.00	0.248
Energy/Fatigue	58.30	16.98	60.81	18.32	68.06	15.94	0.005
Emotional well being	78.55	10.32	80.74	9.57	82.10	7.53	0.105
Social Functioning	88.77	14.57	86.49	15.47	90.88	13.34	0.261
Pain	92.11	9.14	92.02	10.35	93.55	7.65	0.555
General Health	56.82	10.90	58.95	14.70	61.81	13.74	0.126
Health Change	36.36	12.59	40.12	13.52	38.75	14.29	0.429

One way ANOVA

Table 3:Association between Quality of Life of Pregnant Women and Gestational Age

Subscale	Second Trimester (n=48)		Third Trimester(n=119)		p-value
	Mean	**SD**	**Mean**	**SD**	
Physical functioning	72.71	16.08	73.24	16.64	0.852
Physical Role limitations	39.58	14.91	19.96	13.28	0.002
Emotional Role limitations	100.00	0.00	99.72	3.03	0.527
Energy/Fatigue	63.65	17.28	63.61	17.39	0.991
Emotional well being	80.33	9.44	81.01	8.76	0.660
Social Functioning	87.88	15.00	89.72	13.99	0.450
Pain	92.92	9.02	92.72	8.72	0.898
General Health	59.48	12.26	59.87	13.89	0.864
Health Change	38.54	12.59	38.45	14.11	0.967

Unpaired t-test test

Respondents who had planned pregnancy had better QoL in the general health domain (p=0.005) and emotional wellbeing domain (p=0.011) compared to those who had unplanned pregnancies (Table 4).

Table 4: Association between Quality of Life of Pregnant Women and Planning of Pregnancy

n=167

Subscale	Planned(n=149)		Unplanned(n=18)		P value
	Mean	**SD**	**Mean**	**SD**	
Physical functioning	73.26	16.51	71.67	16.18	0.700
Physical Role limitations	23.83	16.45	40.28	17.08	0.082
Emotional Role limitations	99.78	2.70	100.00	0.00	0.729
Energy/Fatigue	64.13	17.48	59.44	15.61	0.280
Emotional well being	81.42	8.44	75.78	11.44	0.011
Social Functioning	89.71	14.06	84.89	15.63	0.176
Pain	92.46	8.99	95.44	6.47	0.173
General Health	60.64	13.66	52.50	8.27	0.005
Health Change	38.93	13.75	34.72	12.54	0.218

Unpaired t-test test

Respondents who were employed had better QoL in the emotional role limitations domain (p=0.001) and energy/fatigue domain (p=0.005) compared to those who were unemployed (Table 5). There was no significant difference in QoL of pregnant women to age group, education level, parity and problem sharing with the spouse.

DISCUSSION

The mean±SD score for QoL was 73.08±14.95 in this study. It was slightly more than the results of the study done in Iran where the scores were 58.2±14.58. [6] The highest scores of QoL were in Role limitation due to emotional health and pain domain with scores of 99.8 ± 2.55 and 92.78 ± 8.78 respectively. The lowest scores were in role limitation due to physical health and general health domains with scores of 25.60 ±17.92 and 59.76 ± 13.40 respectively. In a study done in Bandar Abbas, Iran, among the eight dimensions of QoL, the highest scores were in emotional well-being and social functioning domains with mean scores of 71.11 and 69.22 respectively. Physical

Table 5: Association between Quality of Life of Pregnant Women and Employment Status

Subscale	Unemployed (n=109)		Employed(n=58)		p-value
	Mean	**SD**	**Mean**	**SD**	
Physical functioning	71.97	16.55	75.17	16.14	0.052
Physical Role limitations	24.54	16.95	27.59	19.92	0.169
Emotional Role limitations	99.70	3.16	100.00	2.00	0.001
Energy/Fatigue	64.13	16.70	62.67	18.50	0.005
Emotional well being	80.66	8.4	81.10	9.7	0.314
Social Functioning	88.88	14.58	89.78	13.75	0.291
Pain	93.48	7.94	91.47	10.11	0.271
General Health	59.31	11.63	60.60	16.30	0.926
Health Change	39.45	12.86	36.64	14.96	0.438

n=167

Unpaired t-test test

and emotional health problems domains had the lowest scores with a mean of 32.49 and 48.78 respectively. [6]QoL in role limitations due to emotional health problems domain was much higher (99.8±2.55) in this study compared to studies done in Kashan, South Iran and Northern Jordan.[3,6,7] The score of QoL in the bodily pain domain, emotional wellbeing domain, social functioning domain and physical functioning domain was found to be higher in this study than found in Iran and Jordan. [3,6,7] The QoL score in role limitation due to the physical health domain was low (25.60±17.92) in this study which was similar to the results of studies done in North Jordan and South Iran, but lower than that of a study done in Kashan, Iran. [3,6,7] The result of the general health and energy/fatigue domain of this study was comparable with other studies. [3,6,7] Younger women had higher quality of life scores in various domains in studies in Iran.[1,8] But no statistically significant difference in QoL concerning age was observed in this study. This study did not show any significant difference in QoL across all domains regarding the area of residence. This was in contrast to the study in Islamabad, Iran and Nigeria, where QoL was found to be better in urban pregnant women than in rural women. [8,9,10] No statistically significant difference was observed between the level of education and dimensions of QoL of pregnant women

in the current study. The results were similar to another study done in South Iran. [6, 11] But in a study done in Iran, higher education was linked with better QoL in physical functioning and emotional well-being domains. [3] No statistically significant difference was observed between employment status and dimensions of QoL of pregnant women in any domain except in emotional role limitations and energy/fatigue domain. It was found that respondents who were employed had better QoL in the emotional role limitations domain and energy/fatigue domain compared to those who were unemployed in this study. It was in contrast to the results of a study done in South Iran, where there was no statistically significant difference between employment status and dimensions of QoL of pregnant women in any domain.[6] Women with better economic status had better QoL in physical functioning and energy/fatigue domains. The study results were similar to the study done in Bandar Abbas. [6] Pregnant women in the third trimester had lower scores in role limitation due to physical health domain compared to pregnant women in the second trimester. (19.96±33.28 vs 39.58±44.91). In a study done in Turkey, it was found that pregnant women in the third trimester had consistently lower QoL scores across all domains. [12] Similar were the findings in the study in Kashan and Farokhshahr city. [1, 13] But, in

contrast, there was no significant association between QoL and gestational age in various other studies. In another study done in Japan, subscales that reflect "Physical functioning (p<.001)", "Role-physical (p<.001)" and "Bodily pain (p<.001)" showed significant declines throughout the entire pregnancy. On the other hand, subscales that reflect "Vitality," "General health" and "Mental health" did not change substantially with gestational age. [14] This study did not show a significant difference in QoL scores in any domain about parity. The results were similar to the study done in Izeh. [11] But the results were studies done in Iran, where an inverse relation was found between parity and QoL.[1,6] Similarly, in a study done in Japan, subscales that reflect "Physical functioning," "Role physical," and "General Health" showed no significant differences between primiparous and multiparous women. Although subscales that reflect "Bodily pain," "Vitality," "Social functioning," "Role emotional" and "Mental health" showed significant differences between primiparous and multiparous women.[14] Women with planned pregnancies had better QoL scores in the general health domain and emotional well-being domain in this study. The results were similar to a study done in Salas where they found that women with unwanted pregnancies had significantly lower QoL than women with wanted pregnancies.[15] Similar were the results in a study done in Izeh.[11] Although pregnant women who shared their problems with their spouses always had better scores of QoL than those who shared their problems with their spouses sometimes, this difference was not statistically significant in this study. This result was similar to a study done in Farokhshahr, where no significant relationship was found between spouse support with QoL.[13] But it was in contrast to the results of a study done in Kashan, where a direct relationship was observed between spouse support and QoL.[1] All these differences could be because of differences in setting and sampling.

CONCLUSION

The score for QoL of pregnant women is higher in role limitation due to emotional health and pain domain and lower in role limitation due to physical health and general health domains. There is no significant relationship between age, residence, religion, educational level, type of family, parity and problem-sharing with the spouse. QoL scores are higher in pregnant women with better economic status in physical functioning and energy/fatigue domains. QoL score in role limitation due to physical health is lower in women in the third trimester compared to women in the second trimester. Also, QoL scores in the emotional role limitations domain and energy/fatigue domain are higher in employed women compared to those who were unemployed. QoL scores in the general health domain and emotional well-being domain are higher in women who had planned pregnancies compared to those who had an unplanned pregnancies.

CONFLICT OF INTEREST
None

SOURCES OF FUNDING
None

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