Women's Quality of Life during Pregnancy

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Abstract

Quality of life is an individual's perceptions of their position in life in the context of the culture and value system in which they live in and in relation to their goals, expectations, standards and concerns. Sleep patterns, ability to perform tasks of daily living, and quality of life within the pregnant women are stricken by systematic variations caused by hormonal, emotional, mental, and physical factors. This study was a cross sectional study carried out on pregnant women from 1st January to 31st December, 2017 in family planning corner of Dhaka medical College Hospital. Among 248 respondents majority of the respondents were first or second gravida (62.9%) and most of their gestational age were in third trimester (49.2%). Majority of them had nausea (53.6%) but didn't have vomiting (64.5%). About half of them had abdominal pain (50.0%) and about 60.2% of them had problem in their previous pregnancy. %). Mean score of general quality of life 3.19±.66, general health 2.82±.75, physical health 19.66±8.12, psychological health 26.85±6.28, social relationship 84.97±12.21 and environment domain 12.58±4.72. One-Way Anova test reveals that the difference of mean score in relation to age group and occupation of respondent is not significant. The significant difference of mean scores in relation to educational qualification and monthly family income is found in quality of life. Awareness should be build up among parents about higher education for female as well as enhancing women employment to improve social relationship as well as quality of life.

Keywords: Quality of life, pregnant women

Introduction

According to the World Health Organization (WHO) health and welfare means to be free from physically, mentally and socially caused disease and disability. However antepartum care in developing countries exceeded from traditional aid to prevention, diagnosis, management of problems that affects maternal and child health; additionally it provides in depth help so as to support and encourage families to deal with the psychological aspects of birth and social awareness within the field of birth. This expanded support is that the reflection of the improved quality of life that refers to the great assessment of health care[1]. There's a distinct variation side of quality of life in health, physical, emotional and social comfort that is vital for policy makers and health care community in designing for the care of mothers and babies. Some factors improving quality of sleep need to be thought of like necessities of

behavioural characteristics of individuals, daily activities beside environmental, physical and psychological health factors. Studies have shown that decrease in vitality causes decrease in quality of life throughout a standard gestation. Quality of life is influenced by beliefs and cultures[2]. Few analysis have examined the quality of life in pregnant women suffering from sleep disorders and further analysis is required in this area. Thus, the analysis was determined to conduct in order to extend the knowledge concerning well-being of mental and physical health in women throughout pregnancy. This might be a step towards the realization of the catchword "Healthy mother and healthy child".

Basically quality of life is an individual's perceptions of their position in life in the context of the culture and value system in which they live in and in relation to their goals, expectations, standards and concerns[3].

Pregnancy could be a common event for girls of reproductive age and is mostly viewed as a

joyful occasion. It's the foremost sensitive and most pleasant part of a woman's life[4]. Sleep patterns, ability to perform tasks of daily living, and quality of life within the pregnant women are stricken by systematic variations caused by hormonal, emotional, mental, and physical factors[5].

Materials and Methods

Study design

This study was a cross sectional study carried out on pregnant women.

Study Period

This study was conducted over a period of one year starting from 1st January to 31st December, 2017. Extensive literature was reviewed from the beginning of the study till report writing.

Study place

Dhaka Medical College and Hospital was selected for data collection. It was a government hospital situated near central Saheed Minar, Dhaka. Pregnant women came for antenatal check-up in family planning corner of Dhaka medical College Hospital. In this site, antenatal care, post natal check –up, family planning information and different types of health care are given.

Study population

The participant of this study was pregnant women in all trimester.

Selection criteria

Inclusion Criteria

Pregnant women above 18 years.

Exclusion Criteria

- Having any chronic disease (e.g. heart disease, diabetes mellitus, asthma etc.)
- Severely ill
- Mental disorder

Sampling technique

After considering inclusion and exclusion criteria respondents were selected conveniently among pregnant women who came for antenatal check-up at Dhaka medical college and Hospital.

Sampling unit

Each pregnant woman was sampling unit.

Sample size

Calculated sample size was 248.

Research Instrument

WHO Quality of Life Questionnaire-BREF

WHO Quality of Life questionnaire was used in this study to assess the quality of life of pregnant women. The WHO Quality of Life assessment was developed by the WHOQOL Group. The WHOQOL-100 gives a conceptual background to the WHOQOL definition of quality of life and multi-dimensional nature of quality of life is reflected in the WHOQOL-100 structure and WHOQOL-BREF is an abbreviated version of the WHOQOL-100. It is a recognized tool to assess quality of life. The WHOQOL-BREF contains a total of 26 questions. It is based on four domain structure containing 24 questions and 2 questions of overall quality of life and general health. Four domain are physical health, psychological health, social relationship and environment. The domain physical health incorporate activities of daily living, dependence on medical substances and medical aids, energy and fatigue, mobility, pain and discomfort, sleep and rest and work capacity. Domain psychological health incorporate bodily image and appearance, negative feelings, positive feelings, self-esteem, spirituality, thinking, learning, memory and concentration. The domain social relationships incorporate personal relationships, social support and sexual activity. Domain environment incorporate financial resources, freedom, physical safety and security, health and social care: accessibility and quality, home environment, opportunities for acquiring new information and skills, participation in and opportunities for recreation, physical environment and transport.

The WHOQOL-BREF produces a quality of life profile. One question about over all perception of quality of life and one question about general health and four domain scores denote an individual's perception of quality of life. The mean score of items within each domain are multiplied by 4 and then the score was taken into transformed score that is comparable with the WHOQOL-100. Domain scores were scaled in a positive direction from

0-100. Higher scores denote higher quality of life.

Data collection Technique

After taking permission from Director of Dhaka Medical College and Hospital. Data were collected from the respondents by face to face interview with semi-structured questionnaire. The interview was conducted by maintaining privacy and confidentiality as far as possible. Before data collection, the details of the study were explained to each respondent and informed consent was taken from the respondents.

Results

Majority of the respondents were first or second gravida (62.9%), followed by third or fourth gravida (31.0%) and rest of them were fifth or sixth gravida (6.0%). Most of their gestational age were in third trimester (49.2%) followed by second trimester (31.5%) and first trimester (19.4%). Majority of them had nausea (53.6%) and the rest of them didn't have nausea (46.4%). Majority of the respondents didn't have vomiting (64.5%) and rest of them had vomiting (35.5%). About half of them had abdominal pain (50.0%), followed by chest pain (12.5%), increased blood pressure (6.2%), APH (5.2%), GDM (5.2%), Placenta previa (4.2%), PROM (3.1%) and others (13.5%) which include decrease fetal movement, excessive sweating and urinary infection. Majority of them had problem in their previous pregnancy (60.2%) and rest of them had no problem in previous pregnancy (39.8%). Mean score of general quality of life $3.19\pm.66$, general health $2.82\pm.75$, physical health 19.66 ± 8.12, psychological health 26.85 ± 6.28, social relationship 84.97 ± 12.21 and environment domain 12.58 ± 4.72 **(Table 1)**. The mean score of general quality of life (3.25 ± 0.71), general health (2.86 ± 0.76), physical health (19.99 ± 8.34) psychological health (27.47 ± 6.44), social relationship (85.29 ± 12.57) and environment (12.97 ± 4.94) is more in the age group 18-25 years. One-Way Anova test reveals that the difference of mean score in relation to age group is not significant.

Mean of general quality of life (mean=3.63, SD$\pm$.51), general health (mean=3.25, SD$\pm$.70), physical health (mean=27.50, SD$\pm$9.88), psychological health (mean=31.13, SD$\pm$9.88), social relationship (mean=90.63, SD$\pm$13.33) and environment (mean=16.75, SD$\pm$3.10) of

respondents who are employed is more than who are housewife. An independent sample t-test was done where significant result is found in general quality of life (t=-1.90 and p=0.05), in physical health (t=-2.81 and p=0.00), in psychological health (t=-1.96 and p=0.05) and environment (t=-2.56 and p=0.01).The test is not significant in general health (t=-1.66 and p=0.09) and in social relationship (t=-1.33 and p=0.18). The mean score of general quality of life (3.44 ± 0.610), general health (3.06 ± 0.71) and physical health (22.25 ± 8.30) is more in graduation and above. The significant difference of mean scores in relation to educational qualification is found in general quality of life (F=6.45, p= 0.00). Games-howell test reveals that there is significant difference between illiterate and can sign only and, up to H.S.C, graduation and above (p<0.05) in general quality of life. The mean score of psychological health (30.41 ± 5.68), social-relationship (94.28 ± 9.38) and environment (15.41 ± 3.76) is more in graduation and above. The significant difference of mean score in relation to educational qualification is found in psychological health (F=8.60, p=0.00), in social relationship (F=8.60, p=0.00) and in the domain environment (F=12.06, p=0.00). Hoch-berg test reveals that there is significant difference between illiterate and can sign only and up to H.S.C, graduation and above (p<0.05) in the domain psychological health. Hochberg test reveals that there is significant difference between illiterate and can sign only and up to H.S.C, graduation and above (p<0.05) in the domain social relationship and Games-howell test reveals that there is significant difference between illiterate and can sign only and up to P.S.C, up to S.S.C, up to H.S.C, graduation and above (p<0.05) in the domain environment. The mean score of general quality of life (3.55 ± 0.61) and general health (3.02 ± 0.70) is more in graduation and above. The mean score of physical health (21.26 ± 7.91) is more in illiterate and can sign only. The significant difference is found in general quality of life (F=5.01, p=0.00). Hochberg test reveals that there is significant difference between illiterate and can sign only and graduation and above, up to P.S.C and graduation and above, Up to S.S.C and graduation and above, Up to H.S.C and graduation and above (p<0.05) in general quality of life. The mean score of psychological health (31.47 ± 5.30), social

relationship (91.85±11.29) and environment (15.64±3.81) is more in graduation and above. The significant difference of mean score in relation to husbands educational qualification is found in psychological health (F=10.71 and p=0.00), in social relationship (F=6.26 and p=0.00) and in the domain environment (F=8.68 and p=0.00). Games-Howell reveals that there is significant difference between illiterate and can sign only, Up to P.S.C, Up to S.S.C, up to H.S.C and graduation above (p<0.05). Hochberg test reveals that there is significant difference between Up to P.S.C, Up to S.S.C and graduation and above (p<0.05) in social relationship and between up to P.S.C, up to S.S.C and graduation and above in environment. The mean score of general quality of life (3.27±0.61) is more in respondents those husband occupation is service and the mean score of general health (3.10±0.73) and physical health (21.90±7.83) is more in respondents those husband occupation is migrant worker. The significant difference of mean score is found in general quality of life (F=2.38 and p=0.05) and in general health (F=3.21 and p=0.01). Hochberg test reveals that there is no significant difference between groups in general quality of life and in general health. The mean score of general quality of life (3.50±0.66), physical health (20.71±10.04), psychological health (30.29±5.81), social relationship (91.15±11.64), environment (16.88±2.91) is more in respondents those monthly family income is above 30000 tk and mean score of general health (3.04±0.66) is more in respondents those monthly family income is 20000-30000 tk . The significant difference of mean score in relation to monthly family income is found in general quality of life (F=9.32, p=0.00), general health (F=2.77, p=0.04), in the domain psychological health (F=11.04, p=0.00), social relationship (F=4.34, p=0.00) and environment (F=25.75, p=0.00). Hocberg test reveals that there is significant difference between up to 10000 and 20000-30000 and above 30000, 10000-20000 and 20000-30000, above 30000(p<.05) in general quality of life. Games-howell test reveals that there is significant difference between 10000-20000 and 20000-30000 (p<0.05) in general health. Games-howell test reveals that there is significant difference between up to 10000 tk and 20000-30000 tk and above 30000 tk, between 10000-20000 tk and

20000-30000 tk and above 30000 tk (p<0.05) in the domain psychological health. Hocberg test reveals that there is significant difference between up to 10000 tk and above 30000 tk, 10000-20000 tk and above 30000 tk (p<0.05) in the domain social relationship. Games-howell test reveals that there is significant difference between up to 10000 tk and 10000-20000 tk, 20000-30000 tk and above 30000 tk (p<0.05) in the domain environment **(Table 2)**. To find out the prediction ability of variables (education of the respondents, occupation of the respondents, and level of insomnia, monthly family income and number of pregnancy) a multiple linear regression was done. The test reveals that the model is statistically significant (p= 0.000) and this model can predict the variation of the general quality of life score up to 22%. Among the variables we found level of insomnia and monthly family income as stronger predictor of general quality of life (p=0.000, CI: -0.280, -0.103) and (p=0.000, CI: 0.091, 2.434) followed by education (p=0.010, CI: 0.026, 0.187) and number of pregnancy (p=0.017, CI: -0.276, -0.027) while controlling the other variables **(Table 3)**.

Discussion

In a study it was found that pregnant women who were 20 years old and over reported that their insomnia increased 2.1 times during pregnancy[6]. The difference of mean score of quality of life in relation to age is not significant. A study showed that higher maternal age was significantly associated with a lower Physical component Summary (p=0.006)[7]. Another study showed that age was not associated with any domain of quality of life (2017) and it is similar to the study findings. The study also showed that education level increases quality of life and there is significant association between education and general quality of life (p=0.00), psychological health (p=0.00) social relationship (p=0.00) and environment domain of quality of life (p=0.00)[8]. Same study showed education is positively correlated with psychological health, social relationship and environment domain of quality of life[8]. In our study the difference of mean score of quality of life in relation to occupation of the respondents is significantly associated with general quality of life (p=0.05), physical health (p=0.00), psychological health (p=0.05) and environment domain (p=0.01).

Employed mother shows better quality of life in our study on the other hand in a study of Lebanon occupation is not significant with any domain of quality of life.

Our study also shows the difference of mean score of quality of life with husbands educational level of the respondents is statistically significantly with general quality of life (p=0.00), psychological health (p=0.00), social relationship (p=0.00) and environment domain (p=0.00). Quality of life increase with husband's educational level of the respondents. Our study shows that the difference of mean score of quality of life in relation to husbands occupation is statistically significantly in general quality of life(p=0.05), general health (p=0.01) and psychological health (p=0.00) of the domain of quality of life.

The study shows that monthly income of family of the respondents is associated with general quality of life (3.50±o.66, p=0.00), general health (2.82±0.83, p=0.04), psychological health (p=0.00), social relationship (p=0.00) and environment domain (p=0.00) of quality of life. Quality of life increases with monthly income of family. The difference of mean score of number of pregnancy is inversely related to quality of life and the difference is significant in general quality of life (p=0.01) and psychological health (p=0.00). In a study of Iran among 100 pregnant women shows that there is significant difference between parity and quality of life (p=0.004) and it is inversely related. There is no significant difference between gestational age of pregnancy and quality of life (p>0.05) except for the domain physical health (p=0.00) and score decrease from first trimester to third trimester. A study showed that health related quality of life reduced during pregnancy in all trimester[2]. Another study showed that trimester is associated with environment domain and score increase from trimester 1 to 3[8]. The study showed that the difference of mean score of quality of life in relation to problem in previous pregnancy is not significant. Same study said in his study that medical problem during previous deliveries was associated with a higher score in psychological domain of quality of life and 7 out of the 10 women with previous medical problems were being followed up by a psychologist in current pregnancy[8].

Conclusion

Among pregnant women those who are well educated they experience better in general quality of life, general health, psychological health, social relationship and environment domain. All domain of quality of life except physical health is associated with income of family and quality of life is better with high income. Husbands educational level, husband's occupation and number of pregnancy is significantly associated with different domain of quality of life. The predictors of general quality of life are education, occupation, number of pregnancy and predictors of psychological health are husband education, monthly family income and number of pregnancy of the respondents. Moreover the determinants of social relationship are education of respondents. Quality of life reduces in general quality of life, general health, physical health and social relationship domain among pregnant women with the increasing level of insomnia except psychological health and environment domain and level of insomnia is a determinant of general quality of life, general health, physical health and social relationship. The result of this study can contribute to improve quality of life of pregnant women by considering factors that affect quality of life.

Recommendations

- Awareness should be build up among parents about higher education for female to improve social relationship as well as quality of life.
- Women employment should be enhanced to improve their quality of life

Women should adopt appropriate family planning method because increased number of pregnancy deteriorate quality of life.

Table 1. Respondents quality of life (n=248)

Domain	Mean	SD	Minimum	Maximum	Range
General quality of life	3.19	±0.66	1	4	3
General health	2.82	±0.75	1	5	4
Physical health	19.66	±8.12	0	38	38
Psychological health	26.85	±6.28	13	44	31
Social relationships	84.97	±12.21	50	100	50
Environment	12.58	±4.72	0	25	25

Table 2. Associations between Respondent's characteristics and Quality of Life

	p Values					
	General Quality of Life	**General Health**	**Physical Health**	**Psychological Health**	**Social Relationship**	**Environment**
Age	0.14	0.42	0.73	0.17	0.87	0.30
Family type	0.38	0.67	0.19	0.66	0.89	0.58
Number of children	0.98	0.52	0.61	0.94	0.16	0.14
Occupation	**0.05**	**0.09**	**0.00**	**0.05**	0.18	**0.01**
Level of education	**0.00**	**0.06**	0.19	**0.00**	**0.00**	**0.00**
Husband's education	**0.00**	**0.06**	0.64	**0.00**	**0.00**	**0.00**
Husband's occupation	**0.05**	**0.01**	0.37	**0.00**	0.33	0.33
Monthly family income	**0.00**	**0.04**	0.67	**0.00**	**0.00**	**0.00**
Number of pregnancy	**0.01**	0.16	0.29	**0.00**	**0.07**	0.12

Table-44. Multivariate analysis of factors associated with general quality of life of pregnant women

Characteristics	Unstandardized Coefficients		Standardized Coefficients	t	Sig	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
Education	0.106	0.041	0.167	2.610	**0.010**	0.026	
Occupation	0.073	0.221	0.020	0.330	0.741	-0.363	.509
Level of insomnia	-0.191	0.045	-0.244	-4.252	**0.000**	-0.280	-0.103
Monthly family income	0.179	0.045	0.247	4.019	**0.000**	0.091	2.434
Number of pregnancy	-0.151	0.063	-0.139	-2.401	**0.017**	-.276	.267

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