Quality of life of pregnant women in Bandar Abbas

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Original Article

Abstract

Introduction: Many biological, chemical, physiological, and anatomical changes occur during pregnancy in women's body. These changes make them vulnerable both physically and mentally. The present study examined the quality of life of pregnant women and factors associated with it.

Methods: A descriptive cross-sectional study was performed on 400 pregnant women referred to health centers and clinics of Obstetricians and Gynecologists in 2012 in the city of Bandar Abbas. The Short Form Health Survey (SF-36) was used to collect the data, which were analyzed with SPSS 16.

Results: The mean score for quality of life in pregnant women was 58.2±14.89. Based on the results, among the 8 dimensions of quality of life, mental health and social functioning had the highest mean scores of 71.11 and 69.28 and physical problems and psychological problems had the lowest scores of 32.49 and 48.78, respectively. There was significant differences in terms of mean score of quality of life between different age groups (P=0.032), different degrees of satisfaction with the economic situation (P<0.0001), as well as varying degrees of satisfaction with the cooperation and participation of spouse in household chores (P=0.002), while no statistical significance was observed in other cases.

Conclusion: Our data suggest that the quality of life of pregnant women is low due to the influence of certain factors on the dimensions of quality of life. Therefore, quality of life during pregnancy can be promoted by considering these variables and planning to reduce their impact.

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Introduction:

Given the currently increased index of life expectancy, human is faced with the important issue of how to spend life or in other words, the quality of life, and this has been addressed by scholars and researchers (1). Quality of life is a basic indicator and is of great importance given that various aspects such as physiological aspects involve individual performance (2). According to the World Health Organization, quality of life refers to the individuals' perception of their position in life,

which is developed based on the culture and value system in which they live as well as their goals, expectations, standards, and interests (3).

Many biochemical, physiological, and anatomical changes occur during pregnancy in women's body. These changes are beyond their control and are the first ones that make them vulnerable both physically and mentally (4). Even in normal pregnancy, these changes can alter the ability of any woman to perform their usual roles. The changes during pregnancy occur in physical, spiritual, and social dimensions and overall in quality of life of pregnant women in different gestational ages (5). However, less attention has been paid to health of mothers compared to newborns (6). Some have criticized that women's health has been important only to the extent that it affects infants' health (7).

According to studies on the main causes of death, 53% of deaths are related to lifestyle and unhealthy behaviors (8). Studies have shown that the body physical function, as an aspect of quality of life, decreases during pregnancy (9). Women with a lower quality of life report more severe health problems and pregnancy complications that require treatment which *per se* increases their stress (10).

In a cohort study on white women with normal pregnancy, Hueston *et al*. found greater body pain, weaker physical function, and functional limitations due to physical problems during pregnancy; but the evaluated mental aspects of quality of life were not changed. This study used SF-36 scale and showed that the socio-demographic factors, such as employment, income, and support of spouse or parent have little impact on quality of life, and that physical health status is inversely related to gestational age (11). Another study showed that pregnancy and the postpartum period are associated with significant changes in both mental health and physical health, and social functioning and vitality are lower in normal pregnant women than other members of society (12).

Young et al. showed that stress during pregnancy is related to demographic, economic, social, and variables of quality of life. Pregnancy stress intensifies in women with physical and mental deficiency. These psychophysical characteristics include poor performance, fatigue, loss of energy, depression, anxiety, and limited activity so that women affected by these conditions ask for help from others, and this uncomfortable feeling of help request of women leads to increased stress during this period (10). Therefore, many changes occur in physical, psychological, and social dimensions and overall in quality of life of pregnant women during pregnancy. Quality of life can be measured in pregnancy. This measurement is of importance in planning of maternal and child care as well as for policymakers of the state and health care communities to understand the necessity of these cares (12). Although the quality of life plays a significant role in the health of pregnant women, few studies has been carried out in Iran regarding the quality of life in pregnancy. Given that the perception of quality of life is influenced by the beliefs and culture, it seems necessary to research in this area.

The current study was conducted to assess the quality of life of pregnant women attending at urban health centers and private clinics in Bandar Abbas City in 2012.

Methods:

This cross-sectional, analytical-descriptive study was performed on 400 pregnant women referred to health centers and clinics of Obstetricians and Gynecologists of Bandar Abbas in 2012. Sampling was performed through the cluster method. Health centers were clusters and according to their distribution in the city, 8 centers were selected, so that the 8 centers included all parts of the city. Twenty five samples were taken randomly from each center (a total of 200 samples). In addition, 8 offices of Obstetricians and Gynecologists were randomly selected, and 25 subjects were randomly selected from each clinic (a total of 200 samples). A questionnaire was used for data collection. After obtaining informed consent and readiness of eligible women, the questionnaires were completed by trained experts for every 400 people through interviewing. According to the objectives, the questionnaire was designed in two main parts: the first part included the demographic characteristics and the second part was the Short Form Survey (SF-36). The scale is a general health measuring tool that can measure the quality of life, and

contains 36 items in eight dimensions of physical functioning, physical problems, bodily pain, general health, vitality, mental health, psychological problems, and social functioning. The total score of eight dimensions of health was zero to one hundred, and the higher scores show a better health status. SF-36 is a standard scale and the validity and reliability of the Persian version has been confirmed (13).

The collected data were analyzed with SPSS 16 using descriptive statistics and independent t-test, Chi-Square, and ANOVA.

Results:

In this study, the quality of life was evaluated in 400 pregnant women in the city of Bandar Abbas. The mean age of the subjects was 26.02±5.33, with 17.8% under 20 years and 5.7% over 35 years.

The majority of women was primigravida (53.8%) and housewife (84.2%), and had wanted pregnancies (85.8%). In terms of education, most people had diploma (49.2%) and 20% had a degree higher than diploma. The mean score for quality of life in pregnant women was 58.2±14.89. Based on the results, among the 8 dimensions of quality of life, mental health and social functioning had the highest mean scores of 71.11 and 69.28 and physical problems and psychological problems had the lowest scores of 32.49 and 48.78, respectively (Table 1).

Table 1. Mean the standard deviation of the dimensions of quality of life in pregnant women

Dimonshions of quality of life	Mean	Standard deviation
Physical functioning	58.33	24.11
Physical problems	32.49	32.64
Bodily pain	65.25	25.10
General health	65.4	17.42
Vitality	54.84	18.44
Social functioning	69.28	22.96
Psychological problems	48.78	43.83
Mental health	71.11	18.26

The results of comparison of the quality of life of the pregnant women based on age, gestational age, education, economic satisfaction, satisfaction with the cooperation and participation of the spouse in household chores, and the time between two pregnancies are presented in Table 2.

Based on the results, there was a significant difference between age groups, economic satisfaction, satisfaction with the cooperation and participation of the spouse in household chores, and the time between two pregnancies in terms of mean quality of life, while no significant difference was observed in other cases. The results of t-test also showed that the mean quality of life based on occupation (housewives and working women (P=0.088) and pregnancy type (wanted or unwanted (p=0.088) was not significant.

The age groups of 16-20 years and above 35 years had the highest quality of life among different age groups. LSD test results also showed a significant difference between these two groups and the age groups of 26-30 and 31-35 years.

In terms of satisfaction with the cooperation and participation of the spouse in household chores, the highest quality of life belonged to the group with complete satisfaction, and LSD test results showed that a significant difference existed between this group with the other three groups (totally dissatisfied, dissatisfied, and satisfied).

Regarding the economic satisfaction, increased satisfaction was associated with increased quality of life, and there were significant differences between satisfied and totally dissatisfied groups and between dissatisfied and totally dissatisfied groups based on LSD test results.

In terms of the time between two pregnancies, the highest quality of life was observed in pregnancies interval of 2 and 4 years, and LSD test results showed that the mean quality of life belonged to the time between two pregnancies of 2 to 4 years, and had a significant difference between the other two groups.

Comparison of various dimensions of quality of life by age showed a significant difference between social functioning, bodily pain, vitality, and physical problems among different age groups. But no significant difference was observed in physical functioning, psychological problems, general health, and mental health dimensions among different age groups (Table 3).

Table 2. The mean and standard deviation of total score of quality of life if pregnant women in terms of some characteristics

Women's charachteristics	Qulaity of life	Mean	Standard deviation	P-value
Age	16<20	60.77	14.28	0.032
	21.25	58.48	14.78	
	26-30	55.96	13.87	
	31-35	55.72	15.05	
	>35	64.26	18.37	
Gestational age	First trimester	58.26	16.37	0.964
	Second trimester	58.40	14.60	
	Third trimester	59.96	14.41	
Education	Below diploma	59.8	16.22	0.126
	Diploma	56.79	13.52	
	University	59.90	15.96	
Economic satisfaction	Totally dissatisfied	47.65	5.38	0.0001
	Dissatisfied	53.80	13.23	
	Satisfied	59.08	14.46	
	Totally satisfied	62.65	16.66	
Satisfaction with the cooperation and paricipation of the spouse in household choresa	Totally dissatisfied	55.31	12.39	0.002
	Dissatisfied	53.31	12.39	
	Satisfied	57.21	13.10	
	Totally satisfied	61.81	16.59	
Time between two pregnancies	<2 years	57.21	13.06	0.036
	2-4 years	62.39	17.57	
	>4 years	56.17	16.00	

Table 3. Coparison of the mean of quality of life dimensions by age groups

Age	16-20 (n=71)		21-25 (n=141)		26-30 (n=99)		31-35 (n=63)		>35 (n=26)		P-value
Quality of life	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	
Physical functioning	61.90	19.47	58.92	23.78	56.29	26.23	55.47	23.17	60.00	30.78	0.502
Physical problems	33.09	31.84	37.68	35.89	25.0	28.57	30.15	30.17	37.50	33.35	0.046
Bodily pain	68.59	24.86	65.00	24.21	63.63	25.23	59.00	26.66	78.84	21.32	0.01
General health	62.18	18.77	65.46	18.00	64.34	14.97	67.93	18.50	71.73	14.82	0.109
Vitality	60.75	19.68	52.34	18.00	53.18	15.91	51.74	17.82	66.15	21.08	0.0001
Social functioning	74.11	23.93	65.51	23.52	68.05	22.31	67.85	22.19	84.61	11.88	0.001
Psychological problems	52.58	45.31	51.93	42.05	45.11	43.98	41.79	45.97	52.56	43.38	0.445
Mental health	73.97	16.68	69.02	19.59	71.34	16.62	69.96	20.34	76.57	14.12	0.186

Test results showed that the mean of bodily pain, general health, vitality, social functioning, psychological problems, and mental health had significant differences among different levels of satisfaction with the economic situation, but the means of physical functioning and physical problems had no significant difference among different levels of satisfaction with the economic situation.

Comparison of different age groups in terms of satisfaction with the economic situation showed a statistically significant difference between different

age groups (p=0.0001), so that age groups of 16-20 years and over 35 years had the highest satisfaction with the economic situation.

Conclusion:

In the present study, the mean score of quality of life in pregnant women was 58.2±14.98, while the score of quality of life was 61.1±13.2 in the study of Abbas-Zadeh et al. (5) and 62.8±12.4 in another study carried out on pregnant women in Kashan. The findings of the present study indicate that the lowest score of quality of life was related to the dimensions of physical problems and psychological problems. According to the results of Haas, physical functioning and signs of depression had the highest changes during pregnancy, so that physical functioning was reduced from 95.2 before pregnancy to 58.1 during pregnancy, and the prevalence of depression signs was increased from 11.7% before pregnancy to 25.2 in the third trimester of pregnancy (14). Makki showed that vitality and physical functioning had the lowest perceived average scores of quality of life. Some of the participants had depression. Depressed people compared with those non-depressed had lower scores in all dimensions of quality of life (15). In a study by Hara and Marcus, it was shown that 8-20% of pregnant women experienced depression during pregnancy (16,17). Therefore, in order to prevent depression and poor quality of life in pregnant women, some techniques, such as relaxation, should be trained to pregnant women, and their family should be educated regarding the psychological support of pregnant women. Many studies have shown that physical functioning reduces during pregnancy (11,14-18). A study conducted by Otchet et al. showed that pregnant women were less healthy than normal population in terms of bodily pain, vitality, and limitation of roles due to physical problems (9). In a study entitled changes in health status during pregnancy, Hueston et al. found a higher bodily pain, lower physical functioning, and higher functional limitations due to physical problems during pregnancy (11).

Among the eight dimensions of quality of life in the present study, the highest score was related to mental health and social functioning, similar to that of Abbas Zadeh et al. However, the higher score of quality of life in the dimensions of mental health and social functioning in this study was more than that of the study of Abbas Zadeh et al.

In this study, satisfaction with economic status, mother's age, and satisfaction with partnership and participation of spouse in household chores had a significant impact on quality of life of pregnant women, while this significant correlation was obtained in the variables of age and satisfaction with economic status in the study of Abbas Zadeh et al. (5).

In the dimension of satisfaction with economic status, the highest score of quality of life belonged to totally satisfied, and decreased satisfaction with economic status was associated with lower quality of life, which indicates the importance of economic status in quality of life of pregnant women. Haas et al. also showed that poor economic conditions to provide food and housing before, during, and after pregnancy have a significant correlation with poor health status of pregnant women (14). The results of Hemingway (19), Makki (15), and Hueston (11) also showed that economic status is associated with health status and quality of life.

In this study, the age groups of 16-20 years and above 35 years had the highest average quality of life among different age groups. Results of other states indicate that pregnancy at higher ages negatively affect the fetus and mother's health, and Kelly's study on teenage pregnant girls (14-18 years) showed that the average scores of all components of quality of life, except vitality, was lower in pregnant teens in comparison with pregnant women in the general population (20); this was consistent with our results. Regarding the satisfaction with economic status in different age groups, it was shown in this study that the economic status in two age groups of 16-20 years and over 35 years was better than other groups, and this difference was statistically significant. As a result, probably the reason for quality of life in these two age groups was their satisfaction with economic situation. This finding suggests that economic factor play a greater role than the age in quality of life of the pregnant women.

The results revealed that the time between two pregnancies had a significant impact on quality of life so that the highest and the lowest quality of life were related to 2-4 years and over 4 years interval between two pregnancies, respectively. Research

has shown that the best interval between pregnancies is 2.5-3 years, in which the health of child and mother would be in the best situation (19).

Comparison of various aspects of quality of life based on age showed a significant difference between social functioning, bodily pain, vitality, and physical problems among different age groups. But no significant difference was observed in the dimensions of physical functioning, psychological problems, general health, and mental health among different age groups.

Regarding the variable of occupation and its effect on quality of life, the mean quality of life in employed women was more than housewives, but there was no significant difference, which was consistent with the findings of Abbas Zadeh (5). Regarding the impact of occupation on different aspects of quality of life, the employed women were significantly better in two dimensions of physical functioning and mental health than other aspects of quality of life, and no significant difference was observed between employed and unemployed women. The results of a study which evaluated the quality of life of women in Mashhad showed that all dimensions of quality of life of employed women were higher than unemployed women, and employed women had a significantly better vitality and mental health (21). Also, Hueston et al. found that the type of occupation has a modest impact on quality of life of pregnant women (11).

The results showed that the mean score of quality of life in women with a wanted pregnancy was higher than women with unwanted pregnancies (58.53 versus 56.23), but the difference was not statistically significant, probably due to the low number of women with unwanted pregnancy (14.2%). The findings of Abbas Zadeh show that people with an unwanted pregnancy have a 2.05 times higher chance to have a low quality of life (5). The incidence of unwanted pregnancies is one of the most important indicators for evaluation of quality of family planning services which affects reproductive health in all physical, psychological, and social dimensions. Therefore, detailed planning of health is essential to reduce the impact of these variables in improving the quality of life during pregnancy.

Although in the present study, no significant correlation was found between the level of education and quality of life, university educated women had higher scores of quality of life than lower educational levels.

In terms of satisfaction with the cooperation and participation of spouse in household chores, the highest quality of life belonged to the totally satisfied group. Results of other studies also showed a significant relationship between spouse's supports and enhancement of quality of life (5,11).

The findings of this study revealed the low quality of life of pregnant women in the city of Bandar Abbas, and this may be due to the effect of some of the variables which reduce the quality of life in pregnancy. Therefore, planning to reduce the impact of these variables on quality of life of pregnant women can be effective in improving child and maternal health. In addition, to improve the dimensions of mental health, physical functioning, bodily pain, and physical problems, timely and appropriate education to pregnant women and their spouses can be an important step in improving the quality of life of pregnant women. Therefore, it is suggested that health planning authorities can improve the quality of prenatal care in community through training courses for health workers, particularly midwives.

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