

QUALITY OF LIFE IN PREGNANT WOMEN RESULTS OF A STUDY FROM KASHAN, IRAN

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ABSTRACT

Objective: Pregnancy is associated with numerous mental and physical changes in women. These changes are likely to be associated with reduced quality of life. The purpose of this study was to assess the quality of life in pregnant women in Kashan, central Iran.

Methodology: We conducted a descriptive- analytical cross -sectional study on 600 pregnant women. The participants completed the Short Form Health Survey to report quality of life during antenatal visit.

Results: The lowest life quality score was obtained in "functional limitations due to physical health problems" and "vitality". Some dimensions of health in SF-36 was correlated with age, gestational age, gravid, education, income. (P< 0/05).

Conclusion: Paying attention to factors negatively affecting dimensions of quality of life during pregnancy and planning to reduce their impact can result in enhancing the quality of life among pregnant women.

KEY WORDS: Quality of life, Pregnancy, SF-36.

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INTRODUCTION

While pregnancy is a common event for reproductive-age women, surprisingly little has been published about the physical and emotional changes that typically occur during pregnancy.¹⁻³

During the pregnancy period, dozens of biochemical, physiological, and anatomical changes occurs in women's body.⁴ Such changes are beyond their control and are regarded as first changes that leave a woman vulnerable physically and mentally.⁵ Even in a normal pregnancy, women's ability to perform usual roles of life could be affected by these changes.⁶ In other words, during this period, not only do so many changes occur in social, physical and mental health dimensions, the quality of life for pregnant women will be influenced as well. Life quality includes various dimensions of physical, social, and mental well-being that are measurable during pregnancy.⁷

Several small studies have revealed that functional status of reproductive-age women is lower during normal pregnancy.^{1-3,8} Hueston and colleagues(1998) reported more body pain, weaker physical functioning, and functional

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limitations due to physical problems; however, in mental aspect of life quality as assessed by SF-36 no change was observed.¹ Another study revealed that pregnancy and post-partum period were accompanied by noticeable changes in both mental and physical health status.²

Although life quality plays a prominent role in pregnant women's health, minimal research that has examined quality of life during pregnancy is available throughout the world or quality of life assessment in pregnancy has been reported for specific disease.^{9,10} To the best of our knowledge no such study has been done in Iran as of yet. Given that people's understanding of life quality is under the influence of their beliefs and cultures, the present study seems to be essential in an Iranian context. Thus the authors decided to assess the life quality of pregnant women in this context in the hope that its results will be used to increase the support of women during pregnancy and this can be a step forward in "For a baby to be healthy, it needs a mother who's healthy".

METHODOLOGY

This was a cross-sectional study conducted on 600 pregnant women receiving prenatal care in the Health Medical Centers of Kashan University of Medical Sciences, Kashan, central Iran. Pregnant women were eligible to participate in the study if they were Iranian (there are quite a good number of Afghan women in Kashan), were able to read and write, and had no important medical or obstetric problem resulting in a high-risk pregnancy. This study was approved by the ethics committee at Kashan University of Medical Sciences and written informed consent was obtained from all participants before entering the study.

The sampling method used was cluster sampling. All pregnant women who took part in the survey received prenatal care in the Health Medical Centers from September to December 2006. Data were collected using a self-administered questionnaire. The questionnaire had two main sections: demographic characteristics, and Short Form Health Survey.

The 36-item Short Form (SF-36) Health Survey is a general measure of patients' health that can adequately assess the quality of life.¹¹⁻¹³ SF-36 consists of 36 items in eight dimensions including "physical functioning", "functional limitations due to physical health problems", "bodily pain", "general health", "vitality", "mental health", "functional limitations due to emotional problems and "Social functioning". For each of the eight health concepts, scores range from 0 to 100, where a higher score indicates a better health state.¹⁴

Short Form Health Survey, is a standard survey whose reliability and validity of Persian version have been already confirmed in a similar research project. Internal consistency measures (test reliability) showed that all eight SF-36 scales met the Minimum reliability standard, Cronbach coefficients ranging from 0.77 to 0.90 validity checks using correlation showed satisfactory results (all correlations were above 0.40 ranging from 0.58 to 0.95).¹⁵

Statistical analysis of the data was performed using SPSS version 11.5. Quality of life in each of the eight domains assessed by the SF-36. Descriptives were used to explore frequencies, means and standard deviations were used to summarize data. The independent t- tests and analyses of variance (ANOVA) at 95% confidence intervals were used in statistical testing of the research hypotheses.

RESULTS

A total of 600 pregnant women with the average age of 25.40 ± 4.52 years and the mean gestational age of 25.6 ± 49.13 weeks were studied. The majority of pregnant women (58.5%) were first time pregnant, had elementary and high school education (48.8%), and experienced wanted pregnancy (86.1%).

The obtained means for each of the dimensions of life quality are represented in Table-I.

The relationship between age, gestational age, and gravid and the reported means for each of the life quality dimensions were examined through t-test. Age was found to affect the average dimensions of "general health", "physical functioning", "Social functioning" and

Table-I: Dimensions of quality of life in pregnant women

Dimensions of quality of life	<50		>50		Mean	Standard deviation
	No.	Percentage	No.	Percentage		
General health	128	21.3	472	78.7	62.24	14.94
Physical functioning	207	34.5	393	65.5	62.13	21.77
Functional limitations due to physical health problems	283	47.2	313	52.2	56.23	18.77
Functional limitations due to emotional problems	224	37.3	377	62.7	63.27	21.91
Social functioning	175	29.1	425	70.9	64.26	22.51
Bodily pain	240	40	360	60	58.66	24.89
Mental health	100	16.7	500	83.3	66.75	17.93
Vitality	257	42.8	343	57.2	56.40	18.07

“mental health” and the highest changes were detected in the average dimension of “physical functioning” (Table-II).

In analyzing the association between gestational age and the average dimensions of life quality, significant association was observed in the dimensions of “physical functioning” and “bodily pain” (Table-III). Regarding the association between gravid and the average dimensions of life quality, a statistically significant difference was observed in most dimensions (Table-IV).

Significant association was also found between levels of education and dimensions of

“physical functioning” and “mental health”. As far as the effect of wanted or unwanted pregnancy on quality of life is concerned, a significant association was observed only in dimensions of “functional limitation due to emotional problems” and “mental health”. According to our findings, individuals with unwanted pregnancy had 2.5 times lower qualities of life and the difference was reported statistically significant. Significant association was observed between life quality dimensions and life satisfaction in terms of “Social functioning” and “mental health” so that individuals who were not satisfied with their life had 2.15 times poorer

Table-II: The association between dimensions quality of life in pregnant women and age

Dimensions OF quality of life	≤25 year N=340		>25 year N=257		P value
	Mean	Standard deviation	Mean	Standard deviation	
General health	63.68	14.58	60.44	15.24	P=0.009
Physical functioning	64.71	22.33	58.60	20.60	P=0.010
Functional limitations due to physical health problems	56.23	18.48	54.84	19.17	NS
Functional limitations due to emotional problems	64.12	21.31	62.23	22.76	NS
Social functioning	66.37	21.93	61.47	23.08	P=0.009
Bodily pain	58.94	25.21	58.48	24.56	NS
Mental health	68.33	17.29	64.81	18.63	P=0.018
Vitality	57.24	18.10	55.41	18.06	NS

Table-III: The association between dimensions of quality of life in pregnant women and gestational age

<i>Dimensions of quality of life</i>	<i>=<20 week N=187</i>		<i>>20 week N=401</i>		<i>P value</i>
	<i>Mean</i>	<i>Standard deviation</i>	<i>Mean</i>	<i>Standard deviation</i>	
General health	63.14	13.20	61.72	15.51	NS
Physical functioning	65.51	21.31	60.72	21.99	P=0.013
Functional limitations due to physical health problems	56.49	18.77	56.04	18.70	NS
Functional limitations due to emotional problems	64.02	22.58	62.74	21.49	NS
Social functioning	65.15	22.68	63.74	22.47	NS
Bodily pain	62.30	25.50	57.22	24.60	P=0.022
Mental health	68.93	16.94	66.03	18.01	NS
Vitality	56.89	17.89	56.08	17.88	NS

quality of life. This mean difference in the population was 1.14 and 4.02 and statistically significant.

DISCUSSION

The study showed that the lowest score belonged to the dimensions of "functional limitations due to physical problems" and "vitality" as well as "pain" dimension like the study done by Otchet et al (1999), this work revealed that pregnant women had a lower health related functions in dimensions of "bodily pain", "vitality", and "functional limitations due to physical health problems".²

Pregnancy causes some changes, discomfort and problems such as nausea and vomiting, fatigue, back and leg pain, and legs cramp¹⁶ that can lead to a devastating effect on the daily chores of pregnant women and affect their abilities for performing usual roles of life.¹⁷

The researchers also analyzed the impact of age and gestational age, gravid, education, wanted and unwanted pregnancy. In analyzing the impact of age, the "physical functioning" and "Social functioning" showed the highest difference in the mean scores and pregnant women above 25-years old had a lower score. Studies have shown the effect of age on

Table-IV: The association between dimensions quality of life in pregnant women and gravida

<i>Dimensions of quality of life</i>	<i>Gravid = 1 N=523</i>		<i>Gravid >2 N=76</i>		<i>P value</i>
	<i>Mean</i>	<i>Standard deviation</i>	<i>Mean</i>	<i>Standard deviation</i>	
General health	63.23	14.79	55.42	14.37	P=0.000
Physical functioning	62.93	21.75	56.16	20.87	P=0.011
Functional limitations due to physical health problems	56.86	18.99	52.09	16.79	P=0.038
Functional limitations due to emotional problems	63.46	21.79	62.16	23.10	NS
Social functioning	65.35	22.33	56.52	22.54	P=0.002
Bodily pain	59.27	24.85	53.84	25.04	NS
Mental health	67.73	17.23	60.09	21.18	P=0.000
Vitality	56.97	17.76	52.56	19.93	P=0.048

“physical functioning” during non-pregnancy.¹⁸ Similarly, in expectant women there is an inverse negative correlation between age and physical and “Social functioning”.

Regarding the effect of gestational age, pregnant women above 20 week gestational age had a lower average score in “physical functioning” and “body pain” dimensions and a significant statistical association was found between the two groups (G.Age = <20 week and G.Age > 20 week) in terms of these dimensions. Support for this conclusion comes from the study by Hueston and colleagues in which repeated assessments using the Short Form -36 were made in women throughout their pregnancies. They found that as pregnancy progresses, “physical functioning” and limitations due to physical problems and “bodily pain” decreased ($P < 0/001$).¹ Moreover, the study carried out by Otchet et al showed that normal pregnant women in the third trimester had a poorer health-related functional level. These women acquired lower scores in the following dimensions: “bodily pain” (21.86 versus 79.61), “physical functioning”(62.91 versus 89.12), and “functional limitations due to physical health problems”(45 versus 86.73).²

Concerning gravidity, the average scores of all dimensions except “bodily pain” and functional limitations due to emotional problems in women who were experiencing their first pregnancy were higher than women on their second or subsequent pregnancies.

Significant statistical correlation was found between different levels of education and dimensions of “physical functioning” and “mental health”. Mainly pregnant women with high school diploma or higher educational level acquired higher average scores than those with lower educational level. In different studies, the influence of education on life quality during non pregnancy period has been proved and even it has been shown to be more effective than age according to these studies.¹⁸ These findings show that education had a positive impact on enjoying a healthy life during pregnancy and this may result in an improved feeling of health and satisfaction during pregnancy.

As far as the effect of wanted or unwanted pregnancy on quality of life is concerned, a significant association was observed only in dimensions of functional limitation due to emotional problems and “mental health”. According to our findings, unwanted pregnancy causes lower quality of life. Previous studies suggest that mothers with an unwanted pregnancy developed mental disorders more frequently¹⁹ and this could be associated with decreased quality of life in terms of “mental health” and “functional limitation due to emotional problems”.

CONCLUSION

The findings of this study show the influence of age, gestational age, gravidity, education, wanted and unwanted pregnancy on decreasing life quality dimensions throughout pregnancy. Considering these factors and planning to reduce their impact may result in increased quality of life during pregnancy period.

No research has been carried out into the influence of reduced quality of life, health-related functional status and feeling of well-being by pregnant women on infant health and pregnancy. Thus further studies are needed to examine the impact of pregnancy-associated reduced life quality dimensions on infant health status and pregnancy course and outcome.

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