

Original Article

Comparative Analysis of Life Quality in Mothers after Cesarean Section and Normal Vaginal Delivery

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Abstract

BACKGROUND: Statistics indicate that the rate of cesarean section increased in recent years. As complications of hospitalizations and surgery would affect the life quality, the current study was carried out to evaluate the life quality of mothers after normal vaginal delivery (NVD) and cesarean.

METHODS: This is an antegrade analytic study of cohort type. To fulfill the study, a specialized questionnaire was designed, and its validity and reliability was approved. The designed questionnaire accompanied with Edinburgh Postnatal Depression Scale (EPDS) and Short-Form-36 (SF-36) was filled by 50 women underwent NVD and 50 underwent cesarean, 6 to 8 and 12 to 14 weeks, postpartum.

Finally, the data was analyzed using chi square, independent t, paired t, Wilcoxon and Mann-Whitney tests.

RESULTS: Comparing the scores of the two groups 6-8 and 12-14 weeks postpartum indicated that both groups got higher marks in all fields in second step of the study. Anyhow, the improvement of NVD group was higher which was significant in some areas. Comparing the EPDS scores of the groups showed that the cesarean group was more prone to depressive disorders. The difference was significant 6-8 weeks postpartum. Also, the results of SF-36 questionnaire indicate that quality of life in NVD group was better in some aspects and similar with the cesarean group in other aspects.

CONCLUSIONS: Findings demonstrated that women undergoing NVD experience better quality of life post partum, comparing those undergoing cesarean. So, to terminate the pregnancy, the NVD is better to be considered as the first choice.

KEY WORDS: Quality of life, postpartum, normal vaginal delivery, cesarean

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Quality of life consists of a wide range of concepts; that covers all aspects of life including wellbeing. It is used in different sciences such as politics, social sciences and economics, as well as medicine. It has different aspects in medicine, such as physical, psychological, social and moral aspects ⁽¹⁾. So, quality of life is a powerful force to guide, maintain and improve wellbeing in different cultures and societies ⁽²⁾.

Evaluation of life quality has an important role in assessment of health systems. It would

cause a better relationship between the patient and his/her physician and other health care providers. This would improve the awareness of the patient of his/her health status, get acquainted with advantages and side effects of different treatment strategies, and strengthen the role of the patient in selection of care strategies ⁽³⁾. Maternal problems such as anemia, urinary incontinence, infections, hemorrhage, and thrombosis are evaluated as postpartum problems, regularly. However, some problems such as fatigue, low back pain, irri-

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tation of caesarian scar, perineal pain, and hemorrhoid have been given less attention and mothers have to adjust themselves to the problems. And this is while; these problems significantly affect physical and psychological wellbeing, breast feeding, social and family relations, and baby care and housekeeping (4).

In 1970s and 80s, owing to forensic medicine forces on obstetricians to contraindicate the natural vaginal delivery (NVD) in breech presentation, and also prevalence of instrumental delivery, and an increase in maternal age, the rate of caesarian section increased (5). American statistics indicate that caesarian section increased from five percents of deliveries in 1965 to twenty five percents in 1990, although no evidences for improvement of maternal and baby health was observed, comparing the NVD (6). According to World Health Organization (WHO) in 1985, the lowest perinatal mortality rate was observed in countries with caesarian section rates of less than 10 percents, and no demographic or geographical indications would justify caesarian rates higher than 10-15 percents (6). In spite of this, according to statistics from Ministry of Health and Medical Education in 1379, 35 percents of deliveries involved caesarian section and it amounts to 70 percents in some private centers (7).

One of the objectives of "Health for all in 21st century" is life quality promotion. It is not possible to judge about the effect of a therapeutic method on quality of life just by concerning its advantages and complications (8). Regarding this, the current study was carried out to assess the life quality of mothers un-

derwent caesarian section electively or to prevent the labor pain. Also, it would be compared with the quality of life of mothers experienced NVD.

Methods

It is a prospective cohort study, in which a special life quality questionnaire consisting of 30 items was used. The items covered eight areas related to delivery and child birth, attitude of mother towards herself, her baby, her husband and others, sexual intercourse, physical wellbeing, the relation between labor and economic status, satisfaction with the delivery method and willingness to choose the same method for future pregnancies on Likert scale.

Validation and test reliability of the questionnaire was approved using content and face validity and test-retest method ($P=0.85$). The questionnaire was used in companion with demographic records, Edinburgh Postnatal Depression Scale (EPDS) and Short Form-36 (SF-36) questionnaires. Target population included mothers living in Isfahan, admitted for delivery in Isfahan health centers and undergoing delivery. Inclusion criteria were being in the age range of 20- 40 at the time of delivery, having one or two children, experience of just one type of delivery method, breast feeding of the baby, having a maximum of one abortion in the medical history and receiving prenatal care.

Exclusion criteria were having history of dystocia or instrumental delivery, still birth, having diseased or handicapped child, giving birth to a child with a weight of less than 2500

Table 1. comparison of mean and standard deviation scores of life quality of mothers 6- 8 weeks postpartum, in NVD and cesarean group

	NVD group		Cesarean group		P value
	Mean	SD	Mean	SD	
Mother's feeling toward herself	23.38	3.37	21.66	2.59	0.005
Mother's feeling toward her child	13.78	1.41	13.94	1.20	0.54
Mother's feeling toward her husband and others	30.28	4.88	31.90	4.87	0.10
Sexual intercourse	8.8	2.65	8.6	2.35	0.69
Physical wellbeing	29.98	5.58	29.02	3.40	0.30
	Mean order in NVD		Mean order in cesarean		
Relationship of pregnancy with economic status	4.56		4.54		0.73
Mother's satisfaction toward pregnancy	4.20		4.02		0.46
Choose of the delivery method for future pregnancies	4.10		4.02		0.83

Table 2. Comparison of mean and standard deviation scores of life quality of mothers 12- 14 weeks postpartum, in NVD and cesarean group

	NVD group		Cesarean group		P value
	Mean	SD	Mean	SD	
Mother's feeling toward herself	22.02	2.72	22.36	2.44	0.51
Mother's feeling toward her child	14.14	1.90	14.02	1.25	0.71
Mother's feeling toward her husband and others	29.32	4.17	30.76	4.57	0.10
Sexual intercourse	9.20	2.24	8.82	2.67	0.44
Physical wellbeing	31.50	2.67	29.90	3.32	0.009
	Mean order in NVD		Mean order in cesarean		
Relationship of pregnancy with economic status	4.78		4.32		0.01
Mother's satisfaction toward pregnancy	4.24		3.86		0.05
Choose of the delivery method for future pregnancies	4.26		3.84		0.05

grams, history of general medical conditions, disabilities, depression, drug intake, major psychological problems, having stress - inducing experiences such as lose of a family member, divorce, or family problems. Also, those with medical conditions such as low back pain, chronic constipation, urination problems, and breast problems before pregnancy were excluded from the study.

Samples were selected from eligible cases that were admitted in one of the five medical centers of Isfahan University six to eight weeks after delivery to receive maternal or neonatal care. Sampling method was simple random sampling. Cases were categorized as caesarian section group (70 cases) and NVD group (60 cases) and questionnaires were filled by interview. Then, the cases were followed 12 to 14 weeks postpartum and the questionnaires were filled again. The groups were matched according to age, occupation, education level, economic status, number of children, the child being wanted or unwanted, gender of the neonate, number and the family relation of those living with the mother after delivery and body mass index (BMI). Finally each group was consisted of 50 cases. Design and preparation of questionnaires, case selection and following the cases took about nine months. Data was analyzed by SPSS software using chi square, independent t- test, paired t- test, and Wilcoxon and Mann-Whitney tests.

Results

Comparison of EPDS questionnaire scores between the two groups, using chi square test, demonstrated that 6-8 week postpartum,

number of participants susceptible to depression are significantly higher in cesarean group ($P=0.03$). Also, 12 -14 weeks postpartum, number of susceptible cases to depression were higher in cesarean group, but the difference was not statistically significant. In the specialized life quality questionnaire, the first five items were of continuous, quantitative type which were analyzed using independent t-test and paired t-test. The next three following items were of ordinal type and were analyzed using Wilcoxon and Mann-Whitney tests.

Comparing the scores of the groups on specialized postpartum life quality questionnaire, demonstrated that the NVD group got higher marks in all areas but "mother's feeling toward herself" and "mother's feeling toward her husband and others". The difference was statistically significant in "mother's feeling toward her child" ($P= 0.0001$) and "the relationship between delivery and economic status" ($P= 0.03$). Analyzing the scores of the cesarean group in 6-8 weeks and 12-14 weeks postpartum, using Wilcoxon and paired t- test, demonstrated that the scores were improved in all areas but "mother's feeling toward her husband and others" and "the relationship between delivery and economic status". The changes were significant in "mother's feeling toward herself" ($p= 0.04$), "mother's feeling toward her child" ($P= 0.0001$) and "mother's feeling toward her husband and others" ($p= 0.01$). Comparing the scores of two groups on the specialized life quality questionnaire 6-8 weeks postpartum; indicate that the cesarean group scored higher in "mother's feeling toward herself", "mother's

feeling toward her child" and "mother's feeling toward her husband and others". The NVD group got higher marks in other fields that the difference was significant in "mother's feeling toward herself" (Table 1) ($p=0.005$).

Analyzing the scores of the specific questionnaire in case and control group 12 to 14 weeks after child birth using independent t-test demonstrated that the NVD group marked higher in all items except attitude of mother toward herself, her husband and others. The difference was significant in areas of physical wellbeing, relationship between labor and economic status and satisfaction with delivery (Table 2).

Comparing the scores of SF-36 questionnaire in NVD group between the 6-8 weeks and 12-14 weeks postpartum using paired t-test demonstrated that scores in all items but satisfaction increased. The changes were significant in the following areas: physical performance, limited performance due to physical problems and physical pain. In caesarian group, comparing the scores of the 6-8 weeks and the 12-14 weeks postpartum using paired t-test showed that scores of all items increased 12-14 weeks postpartum.

Comparison of NVD and caesarian group showed that NVD group got higher marks in all items except "satisfaction toward delivery". The difference was significant in satisfaction feeling and mental well being. Analyzing the scores of two groups 12-14 weeks postpartum using independent t-test showed that scores of NVD group was higher in all items but satisfaction and social performance which was significant in physical performance.

Discussion

In general, all aspects of life such as physical wellbeing, mental and emotional status, social and daily activities and family relationship are all affected by labor. As it was showed in current study, frequency and severity of depression was higher in caesarian group. Also, evaluating the items of SF-36 and the specialized questionnaires indicated better life quality in NVD group, which is significant in some

areas. It should be mentioned that the study was carried out on mothers who underwent NVD and those who underwent caesarian without bearing labor pain and in some cases it was done electively. Generally, it could be concluded that caesarian delivery did not improve the life quality of mothers.

In a meta-analysis study, Clement stated that self-esteem of mother undergoing NVD is higher than those undergoing caesarian. Another meta-analysis study indicates that there were no differences in mother-child relationship between vaginal and caesarian delivery. In contrast, another meta-analysis study based on two studies claimed that mothers underwent caesarian section, have better relationship with their children. Based on 19 studies, another meta-analysis concluded that in average mothers undergoing caesarian are less satisfied with delivery than those experienced NVD ⁽⁹⁾. Dimatteo in a meta-analysis based on 43 studies assessed emotional consequences of delivery declare mothers experienced caesarian express lower satisfaction from delivery than NVD group ⁽¹⁰⁾. In conclusion, even if mothers' quality of life was the same in NVD and caesarian group, regarding the risk of surgery and anesthesia and subsequent medical care, it is advisable to restrict the caesarian cases to instances that are medically indicated. In addition, elective caesarians impose an economic burden on families and health system. If these costs are saved, they can be used on improving the health services and raising the awareness of mothers to promote the family health.

Families are not aware of different delivery methods and their advantages and disadvantages and there is no system to consult them on the matter. Regarding this, tendency toward caesarian to prevent labor pain and to save the genital system is increasing. Although regarding the family planning programs in our country, physical complications of NVD such as pelvic floor muscles loosening and dissatisfaction of sexual intercourse would reduce. It is ideal to reduce the rate of caesarian sections according to WHO

standards, and limit it to the cases medically indicated.

It is recommended to:

1- carrying out practical workshops on advantages and disadvantages of different delivery methods for obstetricians, midwives, general physicians, nurses and other medical staff, 2- present educational courses in medical centers

or mothers on postpartum life quality improvement, 3- encourage families to select NVD in premarital educational courses, 4- improve the awareness of men on advantages and disadvantages of NVD and caesarian, 5- development of methods to reduce labor pain, and 6- more importantly, to support positive attitude toward NVD in girls and women.

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