

Studying Psychological Issues Related to the First Childbirth and Its Relationship with Favorite of the Kind of Next Childbirths in Women Referring Ghamar-e Bani Hashem Hospital, Khoy, Iran

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Abstract

Background

The internal position of health control is related to positive awareness and attitude, cognition status, hygienic behaviors, and health. We aimed to investigate psychological issues related to the first childbirth and its relationship with favorite of the kind of next childbirths in women referring Ghamar-e Bani Hashem Hospital, Khoy, Iran.

Materials and Methods: The present study was a descriptive-analytical cross-sectional study. The study participants were postpartum women admitted to the postpartum ward of Qamar Bani Hashem Khoi Hospital in 2014-2015. Data collection tools included a questionnaire of preference for the next type of delivery and its causes, individual-social questionnaires, Edinburgh Postnatal Depression Scale (EPDS), Spielberger state-trait anxiety inventory, Wake-Forest, Multi-Scale Health Control Scale. Finally, the data were analyzed using SPSS software (version 13.0).

Results: The sample size of this study was 380 pregnant mothers. There was no significant statistical relationship between psychological variables and preference for delivery ($P>0.05$). The variables that were obtained statistically significant in the analysis of one variable with a preference for the type of delivery were entered into the regression test. Between these data, age, spouse's education, and income as a determinant of postpartum depression, anxiety and internal health scores, were among the predictors of preference for delivery ($P<0.05$).

Conclusion

Based on the results, there was no relationship between depression, anxiety, and post-partum health beliefs, with women preferring the next type of delivery. There was a relationship between individual and social factors and preference for the next type of women's delivery.

Key Words: Childbirth, Delivery preferences, Psychological factors, Women.

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1- INTRODUCTION

The amount of caesarean section has been increasing despite the lack of relationship with increasing the death and pathogenicity of perinatal period (1), and is associated with complications such as mothers' death, damage to the urinary tract and hysterectomy (2-4). More than 6.2 million of unnecessary caesarean sections in the world (1), and 40% are done in Iran, every year (5). In this, caesarean section by the mother's request has been estimated about 4-18 percent of total childbirths (6). Mother's satisfaction of childbirth experience is greatly effective in her decision about the kind of next childbirths (7-9). In addition to physiological aspects of pregnancy and birth, unique mental, mental-gender and mental-social aspects in pregnant women life experiences should be taken into consideration in choosing the kind of women's childbirth (10). Nowadays, the ideas related to health are known as an effective variable in development and progress of hygienic behaviors and treatment capacity and explaining the hygienic problems (6, 9).

The ideas related to health or the position of health control refers to this point that to what extent the individual's health is controlled by the internal factors (self) or external factors (effective and influential people). The internal position of health control is related to positive awareness and attitude, cognition status, hygienic behaviors and health (6). Based on some studies, understanding the individual's control through the process of childbirth (10, 11); pregnancy anxiety related to the fear of childbirth (12); women's negative experiences of childbirth with serious mental problems like appearing the signs of depression after childbirth (13, 14); painful experiences (10, 15, 16); and nest disorders and stress-making damages (17) is effective in the feeling of satisfaction of childbirth and choosing the kind of next childbirth. In contrast, other studies didn't

find any relationship between anxiety, depression (18), experience of high pain (19, 20), previous childbirth (21, 22), and choosing the next childbirth. Regarding the contrary findings in the studies, our social and cultural differences with other countries and lack of similar study in Iran, we aimed to investigate the mental factors related to the first childbirth and its relationship to the preferences of next childbirths.

2- MATERIALS AND METHODS

2-1. Study design and population

In order to determine the sample size, 380 people were calculated based on Bramadat et al.'s study (10), using a ratio estimation formula with a confidence level of 95% ($P = 71.6$, $q = 28.4$, and $d = 0.05$) which shown below. Sampling method in this study was random. The questionnaire on individual-social information was completed by the researcher of the women who had the criteria to get into the study (the age of 18-35, the ability to fill the questionnaire or do the interview, having satisfaction to get into the study). In addition, the phone number and the health center where the participants had referred to were taken in this stage, and they were invited to fill the next questionnaires in the place of health center through phone calls in 6-8 weeks after childbirth.

2-3. Measuring tools

2-3-1. Questionnaire of individual and social factors: This questionnaire made by the researcher included individual and social information like mother's name and last name, age and job of both herself and the spouse, educational level, the amount of monthly income, housing status, behaviors of smoking cigarettes or hubble-bubble or drugs by the spouse, the role of the family and spouse in choosing the kind of childbirth, etc. The participants filled this questionnaire 24 hour after the childbirth.

2-3-2. The Edinburgh Postnatal Depression Scale (EPDS): This questionnaire is used to measure the depression of pregnancy period and after that. It was made by Kooks et al. in 1978 and was reviewed in 1994 (23). This scale has 10 questions that focus on mental aspects of depression especially inability to enjoy (24). The items of this questionnaire discuss the different symptoms of clinical depression like feeling of guilt, sleeping disorder, reduction of energy, lack of enjoyment and thoughts of suicide (25). The questionnaire consists of ten questions, four options, and the range of scores obtained is from zero to 30. Also, a score of more than 13 indicates postpartum depression, a score of 12-10 indicates extreme depression, and a score of 0-9 lacks depression. The validity of this questionnaire has been confirmed in the study of Montazeri et al. In Iran reliability by internal stability measurement method (alpha Cronbach) was 0.77 (8 weeks after delivery), 0.86 (14-12 weeks after delivery). In addition, reliability was determined by test-rest method and the correlation coefficient within the cluster was observed to be 0.80 (24).

2-3-3. Spielberger state- trait anxiety inventory: This questionnaire contains two parts of hidden and clear anxiety. Clear anxiety can be considered as a part of an individual's life or in other words, it is positional and is related to tense positions, arguments, losing social positions, threat to the human's health and security. But hidden anxiety is related to the individual's differences in responding to the tense positions with different amounts of clear anxiety (26). This questionnaire was made in 1983 as a self-measurement tool in two separate forms and includes 40 items that gives the respondents the opportunity to classify their feelings with score of 1 for the absence of anxiety and score of 4 for high

anxiety. During recent years, this scale has been used as the most popular test for evaluating anxiety in different researches in and out of the country (24). The phrases that show absence of anxiety and are weighed in a reverse order are as follows: 1-2-5-8-10-11-15-16-19-20 in the scale of clear anxiety and 21-23-26-27-30-33-34-36-39 in the scale of hidden anxiety (27). In order to determine the reliability of Spiel Berger, Mahram et al. (1994), in the evaluation of Spiel Berger's anxiety test in Mashhad, which conducted a study on 600 people, the reliability of the test was determined by Cronbach's alpha formula on the anxiety scale, 0.91 and the whole scale, reported 0.94. To investigate the validity of the simultaneous criterion method was used, based on which significant differences were reported in both the anxiety scale and the anxiety trait scale at the level of 0.01 and 0.05 (28).

▪**Scoring the clear anxiety (27):** Low anxiety, 20-31; average to low anxiety 43-53; average to high anxiety 54-64, relatively strong anxiety 54-64; strong 65-5 and very strong is higher than 76.

▪**Scoring the hidden anxiety:** Low anxiety 20-31; average to low anxiety 32-42; average to high anxiety 43-52; relatively strong anxiety 53-62, strong anxiety 63-72, very strong anxiety is 73 (28).

2-3-4. Questionnaire of doctor's reliability: This questionnaire was stable and reliable by Mahdi Sereshti et al. in 2010 and includes ten 5-likert questions that is consisted of 1 meaning completely disagree to 5 completely agree. This questionnaire evaluates the patient's trust to the doctor. This questionnaire was designed using a questionnaire designed in the study of Negahban et al. In order to determine the validity, this questionnaire was given to 10 experts to judge the questions and phrases. The validity coefficient of the questions was between 0.8 and 1. The internal stability method

was used to determine the reliability of the questionnaire so that Cronbach's alpha coefficient was calculated to be 0.6 (29). This questionnaire includes three aspects of reliability and trust to the doctor, self-esteem in medicine knowledge and skills, secretive and reliability of the received information by the doctor. The items 1, 4, 7 and 11 are weighed in a reverse order while scoring (30); and the higher scores show the higher reliability (30, 31).

2-3-5. Multidimensional Health Locus Control (MHLC): This scale was designed by Wallstone et al. in 1992 and predicts the hygienic behavior based on individuals' beliefs (32). MHLC scale includes three factors with 6-likert scale and the contraction of words: 1- Internal HLC (IHLC): including the degree of individual's belief to the fact that the internal factors and his/her behavior are responsible for his/her health. 2- Powerful others HLC (PHLC): including the degree of individual's belief to this point that his/her health is identified with other people. 3- Chance HLC (CHLC): including the degree of individual's belief to this point that his/her health depends on chance, fate and destiny. In forms 'a' and 'b' all the items of this questionnaire have 6 alternatives and scored from 1 to 6; therefore, the individual's score will be varied from 6-36 for each component that are not added to each other and are estimated independently (31). Except for the questionnaire of preference for the next type of delivery and the questionnaire of individual social characteristics; the other tools of this research are standard and have been used in Iran as well (24, 28, 33). Therefore, these two questionnaires were provided to ten faculty members to determine the validity of the content, and after collecting their comments, the necessary corrections were made based on the feedback received. In the present study, by performing pre-test and post-test on 30 people, the reliability of the two

dimensions of reproducibility and internal coherence was determined. With a 95% confidence interval, Cronbach's alpha coefficient for the apparent anxiety dimension was $\alpha=0.89$, for the hidden anxiety was $\alpha=0.87$, for the depression dimension was $\alpha=0.77$, and for the physician's confidence was 0.71 α and in terms of internal health and chance, which were equal to $\alpha=0.85$, $\alpha=0.86$ were calculated, respectively.

2-4. Ethical consideration

The Ethics Committee of Tabriz University of Medical Sciences, Iran approved the study (ID-number: IR.TBZMED.RED.1393.239.240).

2-5. Data Analyses

In order to achieve the results of the research, first, the questions of the questionnaire were coded and then they were entered into the computer by SPSS software version 13.0 and analyzed using the same software using descriptive and inferential statistics. Descriptive statistics including mean (standard deviation), and frequency (percentage) for quantitative and qualitative variables were used to describe the socio-individual characteristics, Edinberg's depression, Spielberger's anxiety, physician's trust, and the multifaceted scale of the Health. The normality of quantitative data was examined using skewness and kurtosis tests, where all variables were normal. Two-variable tests, including t-test and one-way analysis of variance, were used to analyze the association of individual-social characteristics with Edinberg's depression, Spielberger's anxiety, physician confidence, and multicenter health control scale. To analyze the relationship between delivery type and demographic characteristics, one and multi-variable logistic analysis was used and in multivariate analysis, the effect of disruptive variables was modified. Also, to analyze the relationship between childbirth

and postpartum complications, with a preference for the next type of delivery, one and more logistic variables were analyzed. P-value less than 0.05 were statistically significant.

3- RESULTS

The study sample in this study was 380 postpartum women admitted to the postpartum ward of Qamar Bani Hashem Hospital, Khoy, who had the criteria to enter the study and had given written consent to participate in this study. In the

present study, the average age of women was 24.24 ± 5.10 . 89% of them were housewives and 38.4% of the participants had the education of guidance school. About half of the people (48.4%, n=184) declared that their monthly income is enough. Most of them (64.2%, n=244) stated their selecting childbirth was natural. Almost half of the women stated that their husbands had free jobs (57.1%, n=217), and 31.3% of their husbands' education level was high school education (n=119) (Table.1).

Table-1: Socio-demographic characteristics of participants.

Variables	Frequency (%)
Level of education	
Guidance school	146 (38.4)
High school	134 (35.3)
University degree	100 (26.3)
Job	
housewife	339 (89.2)
Student	25 (6.6)
Employee	16 (4.2)
Spouse 's job	
manual worker	87 (22.9)
Employee	56 (14.7)
Free	217 (57.1)
Student	6 (1.6)
Others	14 (3.7)
Type of residence	
Rent	117 (30.8)
Personal	261 (68.7)
Other cases	2 (0.5)
Satisfaction with housing situation	
Completely satisfied	110 (28.9)
Relatively satisfied	184 (48.4)
Indifferent	16 (4.2)
Relatively dissatisfied	42 (11.1)
Completely unhappy	28 (7.4)
Spouse 's education level	
illiterate	16 (4.2)
Elementary	76 (20)
Guidance school	81 (21.3)
High school	119 (31.3)
University degree	88 (23.2)
Having habits such as smoking in your spouse	
Yes	82 (21.6)
No	298 (78.4)
Choice of delivery	
Natural	244 (64.2)
Caesarean section	136 (35.8)

In addition, there was no meaningful relationship between depression and anxiety and the kind of childbirth. Moreover, there was no significant

statistical relationship between psychological variables and preference for delivery ($P > 0.05$) (**Table.2**).

Table-2: The relationship between psychological variables and preference for the type of delivery of participating women.

Variables	Preference for the type of delivery	
	β (CI 95%) *	P-value
Depression	1.23 (1.87-0.81)	0.31
Anxiety	0.21 (1.87-0.81)	0.31
Trust the doctor	0.14 (1.67-0.80)	0.42
Internal health	-0.02 (1.19-0.79)	0.81
Area of chance	-0.07 (1.14-0.75)	0.47
Effectiveness	-0.041 (1.15-0.78)	0.61

*Descriptive statistics (mean standard deviation), and analytical statistics (Spearman correlation coefficient test) were used to analyze the data.

Participating women with a mean score of 30.94 had high levels of depression. The mean score of anxiety in these people was 77.30 and the average score of internal health and trust in physicians was 139.43

and 21.96, respectively, which showed that individuals had moderate to high internal health and moderate confidence in physicians (**Table.3**).

Table-3: Mean and standard deviation of questionnaire scores in depression, anxiety, physician trust, internal health.

Variables	Score range	Mean (SD)
Anxiety*	4-40	30.94 (5.02)
Depression*	4-160	77.30 (18.16)
Trust the doctor*	5-180	139.43 (29.85)
Internal health*	5-50	21.96 (5.76)

*. A lower score indicates a better situation. SD: Standard deviation.

After estimating the linear regression coefficient of the underlying factors in the scores of depression, anxiety, trust the doctor and internal health, there was a statistically significant relationship

between the education of the spouse, age, and occupation of the spouse between these scores in the participating women ($P < 0.05$) (**Tables 4-7**).

Table-4: Estimation of linear regression coefficient of predictive depression score, preference for delivery type.

Variables	Regression coefficient	95% confidence interval		The possibility of significant	
		Minimum	Maximum		
Age	0.94	0.90	0.98	0.01	
Spouse's education	Illiterate	5.14	1.54	17.18	0.008
	Primary	7.01	3.33	14.77	0.00
	Junior school	4.22	2.14	8.31	0.00
	High school	3.03	1.68	5.48	0.00
	Higher	Reference			
Income	Less than the limit	1.01	0.04	21.41	0.61
	Limit	2.15	0.10	44.28	0.72
	More than the limit	Reference			

Table-5: Estimation of linear regression coefficient of predictive anxiety score, preference for delivery type.

Variables		Regression coefficient	95% confidence interval		The possibility of significant
			Minimum	Maximum	
Age		0.94	0.90	0.98	0.01
Spouse's education	Illiterate	5.54	1.61	19.01	0.00
	Primary	7.32	3.46	15.47	0.00
	Junior school	4.40	2.23	8.69 ⁹	0.00
	High school	3.15	1.74	5.70	0.00
	Higher	Reference			
Income	Less than the limit	1.09	0.05	21.73	0.95
	Limit	2.26	0.11	43.87	0.58
	More than the limit	Reference			

Table-6: Estimation of the linear regression coefficient of the internal health score of the predictor of the preference for the type of delivery.

Variables		Regression coefficient	95% confidence interval		The possibility of significant
			Minimum	Maximum	
Age		0.94	0.90	0.98	0.02
Spouse's education	Illiterate	4.13	1.17	14.48	0.02
	Primary	5.50	2.45	12.35	0.00
	Junior school	3.35	1.60	6.99	0.00
	High school	2.67	1.43	4.98	0.00
	Higher	Reference			
Spouse's job	manual worker	0.20	0.02	1.74	0.14
	Employee	0.09	0.01	0.8	0.03
	Free	0.13	0.01	1.09	0.06
	Student	0.15	0.01	2.36	0.18
Income	Less than the limit	-	0.03	20.81	0.89
	Limit	-	0.08	51.60	0.66
	More than the limit	Reference			

Table-7: Estimation of the linear regression coefficient of the trust the doctor score of the predictor of the preference for the type of delivery.

Variables		Regression coefficient	95% confidence interval		The possibility of significant
			Minimum	Maximum	
Age		0.94	0.90	0.98	0.02
Spouse's education	Illiterate	5.15	1.17	14.48	0.00
	Primary	6.53	2.45	12.35	0.00
	Junior school	4.32	1.60	6.99	0.00
	High school	3.26	1.43	4.98	0.00
	Higher	Reference			
Income	Less than the limit	0.90	0.03	20.81	0.90
	Limit	0.60	0.08	51.60	0.60
	More than the limit	Reference			

At the present study, there was a meaningful statistical relationship between the mental factors related to the first childbirth and its relationship to preferring the kind of next childbirths among the

women who referred to Ghamare Bani Hashem Hospital in Khoy city with some demographic characteristics ($P < 0.05$) (age, education, job, spouse's age, housing status, and husband's education) (**Table.8**).

Table-8: Estimating the linear regression coefficient of the underlying factors of the score of the effectiveness of the predictor of the preference of the type of delivery.

Variables		Regression coefficient	95% confidence interval		The possibility of significant
			Minimum	Maximum	
Age		0.94	0.90	0.98	0.01
Spouse's education	Illiterate	5.23	1.58	17.66	0.00
	Primary	7.20	3.41	15.22	0.00
	Junior school	4.21	2.14	8.29	0.00
	High school	3.13	1.72	5.67	0.00
	Higher	Reference			
Income	Less than the limit	0.9	0.04	19.83	0.94
	Limit	1.92	0.08	41.37	0.67
	More than the limit	Reference			

4- DISCUSSION

The present study aimed to investigate the relationship between the psychological factors related to first childbirth and its relationship with selecting the next childbirths in women who referred to Ghamare Bani Hashem Hospital in Khoy city, Iran. The results of the study showed that there was no meaningful statistical relationship between the psychological factors (depression, anxiety, trusting the doctor, chance, internal health and effectiveness) with selecting the kind of childbirth. Also, there was a statistical meaningful relationship between some other demographic features (age, level of education, job, spouse's education, spouse's job, type of housing) of the women with preferring the kind of next childbirths. The choice of the next type of delivery for women can be affected by increasing the level of complications during childbirth and after childbirth. As the results of studies by Mancuso et al. that were done with the purpose of identifying the individual and social childbirth factors of the women about natural childbirth and cesarean, demographic information,

obstetrical history, lifestyle, and physician-patient relationship were examined. Patients who preferred cesarean delivery were asked to report their motivation for choice. A psychiatric evaluation was performed using the Hamilton Anxiety Scale and Montgomery-Isberg Depression Rating Scale (18). However, in our study, the data collection tools included a questionnaire of preference for the next type of delivery and its causes, individual-social questionnaires, Edinburgh Depression Questionnaire, Spielberger's Anxiety, wake-forest questionnaire, and Multidimensional Health Locus Control (MHLC). This study showed that 16.9 % of the women tend to do cesarean that had a meaningful relationship with the age of more than 35, high level of education, history of infertility and smoking. The biggest motivation for this choice was a safer delivery (90.9%) (18). However, in our study, most people were inclined to vaginal delivery, and most people who had a cesarean delivery were willing to do so for fear of the pain of vaginal delivery. In Mancuso et al.'s study, there was no difference in the Hamilton scale score, while the Montgomery Asberg scale

showed a lower average score for the cesarean group. Eventually, there was not a meaningful relationship between the score of anxiety, depression and the women's tendency to cesarean among these women (18) that is in accordance with the present study. In a study in 2006, 3204 women completed the Aberdeen Maternity and Neonatal Databank (AMND) questionnaire, of which 1,675 did not participate in the follow-up (34). This number was much higher compared to the sample size of our study, and in a way, our study was limited in terms of sample size compared to this study. Of these, 488 had a cesarean section, 340 had a spontaneous vaginal delivery (SVD), and 354 had an instrumental vaginal delivery (IVD). In this study, among women who decided to delay or prevent re-pregnancy, the lowest number who reported that the birth experience affected their decision was among women who gave birth by SVD. In this study, previous birth experiences were one of several factors influencing a woman's decisions to prevent future pregnancies (34).

However, in our study, demographic data such as age, spouse's education, and income were among the predictors of preference for delivery, which differed in this survey. Also in our study, there was a statistically significant relationship between postpartum and childbirth complications with a preference for the next type of delivery, which was similar to the study of Bhattacharya et al. (34). Due to Iran's special economic and social conditions, it seems that the factors related to them in the first delivery are more effective on the mothers' decisions for the next delivery. In the study by Pang et al., a quarter of participants preferred to change the kind of childbirth after their first childbirth. Also the findings of this study showed that there is a meaningful relationship between cesarean childbirth and the mother's anxiety (9) that is not in

accordance with the present study. In this study, previous cesarean section and conception by in-vitro fertilization were determinants for women preferring the elective cesarean section (9). In a study by Valizadeh et al. (2009), which was performed on 20 nulliparous women with an average age of 25, most subjects were associated with some degree of fear (35), that differed from our study. In this study, this fear included fear of labor pains and fear of harm to the fetus. The findings of study by Mollison et al., showed that lack of relationship between condition of cesarean and next childbirth. It was stated in this study that the negative relationship between cesarean childbirth and next pregnancy needs more investigation (21) that is in accordance with the present study. Also, the results of Dadashi et al. (2013) showed that individual factors such as income and education, etc., are not related to the choice of delivery by cesarean section, and the reason for choosing a delivery of cesarean section is only due to fear of labor pain naturally, which is not consistent with the results of our study (36). This difference is probably due to the cultural differences between the studied samples. Of course, several studies have shown that painful experiences are effective in reducing the satisfaction of normal delivery (15, 20, 37-39).

5- CONCLUSION

Based on the results, there was no relationship between depression, anxiety, and post-partum health beliefs, with women preferring the next type of delivery. There was a relationship between individual and social factors (age, level of education, job, spouse's education, spouse's job, type of housing), and preference for the next type of women's delivery.

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6- CONFLICT OF INTEREST: None.

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