Investigating Individual Factors and Mental Health with Preference of Delivery Type in Women Referred to Qamar-E-Bani-Hashem Hospital in Khoy in 2014

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Abstract

Background The consent of the mother on the experience of giving birth has to a large extent with the decision she made about the type of her next delivery. Health-related beliefs or Health Locus of Control (HLC), are referring to the point that to what extent a person's health is under control of internal factors (self) or external factors (effective or influential individuals). Method 380 patients admitted to the Khoy hospital, gave birth to their children, were selected randomly in this descriptive study. The participants in this study were asked about their next preferred method of delivery, Social demographic questionnaire were made, and trust in doctors and health-related beliefs questionnaires were completed by the participants. Descriptive statistics (mean, standard deviation) and analytical (Spearman correlation coefficient test and regression) were used for data analysis. Research findings Mean age of women was in the range of 10/5 ± 24/24. The results showed psychosocial factors in the area of trust between doctor and health-related beliefs, there was no statistically significant relationship with the preferred method of delivery. Also, individual variables such as age, spouse's education, and income prognostic factors were the preferred method of delivery. Conclusion There was no significant relationship between the preferred type of labor and the psychological factors in women. However, with the increase in women's education and their spouses, as well as the type of job and income preferences about method of delivery also changed. By adopting the results of this research can develop strategies to reduce caesarean sections and its complications.

Keywords: Method of delivery, Cesarean, Psychological factors.

Introduction

Pregnancy and childbirth are natural physiological processes, and exciting and important events in the lives of every woman and her family [1]. Childbirth has been one of the divine blessings on the planet for the generation of mankind, and it has always been so far, ever since the birth of man. But with the advances in science and technology, in recent decades, humans have achieved some of the ways in which they could help
with surgery, in cases where the mother's or fetus's life was in danger. Caesarean Section (CS) has been introduced in clinical practice as a lifesaving method for mother and fetus. The practice of cesarean section should, as a rule, be limited to cases where delivery through a natural canal is not possible or with serious risks to the fetus or mother. Therefore, the use of caesarean section is limited and specific and not necessarily the preferred method for delivery, because, like any other surgery, it has many complications and risks for the mother and the baby [3].

Reports indicate that there are more than 6.2 million unnecessary cesareans annually in the world [3]. Also, the results of studies show that the prevalence of cesarean section is estimated at 49% in Iran [4].

In the past few years, cesarean section has become a hot clinical topic in midwifery at the request of the mother, and the cesarean, at the request of the mother, has been defined as a delivery of primary cesarean section in accordance with the mother's request, in the absence of medical and midwifery indications. [5-6] Cesarean delivery, with the mother's request, is about 4 to 18 percent of total cesarean section; however, there is little certainty about the validity of this estimate [7].

The rate of cesarean section is increasing, despite the lack of relevance to the increased mortality rate of the perinatal period. However, it can increase the risk of complications, such as maternal mortality, urinary tract damage, and hysterectomy [8-9].

This is despite the fact that the length of hospitalization and the ability to return to normal everyday life is more than cesarean section, and the lost blood volume is less than cesarean section, there are no dangers of anesthesia, the rate of using Antibiotics is less, feelings of satisfaction and power of the mother and the pleasure of being a mother, reducing the respiratory problems of the baby following the contraction of the baby's chest and quicker intercourse between mother and baby are other benefits of natural childbirth [10].

Throughout the process of labor, women gain important experiences, which always remain in their mind throughout their lives [11-12]. Mothers' satisfaction from the experience of childbirth, as much as before, largely depends on her decision on the type of next childbirth [13]. The experience of women's delivery, especially the type of delivery, is very important in determining the preference of women for the type of delivery in later pregnancies [14-15]. To access to a standard assessment method, our understanding of the role of women's preferences is limited.

A study by Doering et al shows that in addition to the physiological aspects of pregnancy and birth, there are unique psychosocial, psychosexual and psychosocial aspects in the life experiences of pregnant women, which must be considered in selecting the type Women's delivery [16]. The most powerful predictor of childbearing satisfaction is shown by the individual control [17].

Health beliefs, or the place of health inhibition in the belief of a person is that his health is under the control of internal (external) or external factors (influential or affluent). The internal status of health inhibition has a relationship with the knowledge and positive attitude, psychological status, health behaviors and health [7]. Currently, health beliefs have been identified as an effective variable in the development of health behaviors and therapeutic capacity and the explanation of health problems [7-13].

In personality psychology, health beliefs point to individual beliefs about controlling events that affect health [18]. The degree of the individual's belief in the fact that his internal factors and behaviors are responsible for his illness and his health, the degree of the individual's belief in the fact that his health by others, and the degree of the individual's belief in the fact that his or her health is affiliated to chance, fortune, luck and destiny [19-20].

Several studies have shown that the perception of individual control during birth is essential for the satisfaction of delivery [16-21-26].
Although pain management is the best short-term solution to help women to adapt to delivery, but individual control provides long-term benefits [24]. If women actively participate in pain management, they will be empowered and experienced in their individual control [27]. Today, women's mental health is considered to be as important as their physical health [28].

Psychological factors are considered to be effective factors in promoting mental health. Mental health, according to the definition of the World Health Organization, is "a state of complete physical, mental and social well-being, and not just a lack of disease," which is associated with promoting health, preventing mental disorders, and treating and rehabilitating people with mental disorders. Mental health is a condition of health in which every individual realizes his potentials, can cope with natural stresses, work useful and fruitful, and help himself or his community [29].

In addition, researchers and doctors have considered the role of pregnancy anxiety in relation to fear of childbirth very important as a subgroup for this anxiety [30]. Women's fears and their attitude toward giving birth may be influenced by the benefits of receiving prenatal care and birth outcomes [28].

The negative experiences of women with childbirth depend on severe psychological problems, such as the occurrence of postpartum depression symptoms [31-32], post-mortem disorders and injuries [33], as well as relationships between mother and infant. [34] A Negative experience is even possible to reduce the number of births or a longer interval in the next birth [35-36].

On the other hand, interpersonal trust is one of the key attributes of the physician-patient relationship. Lack of confidence in the physician makes a completely negative sense of the patient and is likely to affect the patient's behavior [37]. Interpersonal communication between patients and physicians has a key importance in delivering high quality care. This relationship is also influenced by the patient satisfaction of the treatment and outcome of health care [38-41].

Therefore, considering the importance of this issue and not finding a study on the psychological factors related to the preference of delivery type in Iranian women, based on the studies conducted by the researcher, this study aimed at investigating the psychological and individual factors Effective on the choice of delivery method in women living in Khoy city.

Materials and Methods

The present study is a descriptive correlational study with an analytical approach. This study was performed on 380 women admitted in a postpartum section of Qamar-e-bani-Hashem Hospital at Khoy city affiliated to Urmia University of Medical Sciences.

The study samples were randomly selected based on the eligible visitor statistics of 3 months ago in postpartum section, and the calculated sample size. After explaining the goals of the study and obtaining written consent, eligible people completed the questionnaire entry. Also, 8 weeks after childbirth, participants also referred to health centers for further care.

In this research, variables such as age of husband and wife, age of marriage, education level and type of job for men and women, the adequacy of monthly income for living expenses, etc. were investigated by a socio-demographic questionnaire.

Multidimensional Health Locus Control has been used to measure health beliefs. This questionnaire consists of Form A and B, and all of the items in this questionnaire have six options, which they are scored from 1 to 6; consequently, an individual score will be variable from 6-36 for each component, and they are not added together and estimated independently.

This questionnaire was completed within 8 weeks after delivery, by the participants. The Wake-forest questionnaire was also used to measure the trust of the physician, which consists of eleven questions with five Likert and it is composed of 1 (totally disagree) up to 5 (totally agree). This questionnaire assesses the patient's trust in the doctor [42].
This questionnaire includes three dimensions: the physician's confidence and trust, self-confidence in physician knowledge and skills, confidentiality and reliability of information received from the physician. When scoring, items 1, 4, 7, and 11 are weighted in reverse [43].

The score for this questionnaire is collected individually for each physician, and is expressed as a percentage between zero Up to 100% and average scores for each scale, and scores are compared with each other, and higher scores show more trust [43-44]. The questionnaire was completed by participants during 6 to 8 weeks after delivery. Finally, the collected data were entered into SPSS software version 21 and analyzed using descriptive and analytical statistics, including Spearman correlation and regression coefficient.

Research Findings

The purpose of this study was to "investigate the psychological and individual factors associated with the preference of delivery in women referred to the Qamar-e-Bani-Hashem Hospital in Khoy City in 2014".

The results of the Spearman correlation test showed that the average score of trust in the doctor (5.76) was 21.96 from the achievable score of 50-5. The statistical test showed that there is no statistically significant relationship between the preference of delivery type and the confidence rating of the physician. Also, the results showed that the average score of internal health (29.85) was 139.43 from the achievable score of 5-180. The statistical test showed that there was no statistically significant relationship between the preference of delivery type and internal health score. Table (2)

Concerning the determination of the relationship between individual social factors and the preference of delivery, the results showed that there is a statistically significant relationship between age, level of education, occupation, spouse's education, spouse's occupation, type of housing with the preferred type of delivery. Among these data, age, spouse's education, income were the predictors of the preference for delivery type. Table 3.

Table 1: Individual social characteristic of participants

<table>
<thead>
<tr>
<th>Individual social characteristic</th>
<th>Number (percent)</th>
<th>Individual social characteristic</th>
<th>Number (percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education</td>
<td></td>
<td>Occupation</td>
<td></td>
</tr>
<tr>
<td>The Junior School</td>
<td>146(38.4)</td>
<td>housewife</td>
<td>339(89.2)</td>
</tr>
<tr>
<td>The high School</td>
<td>134(35.3)</td>
<td>Student</td>
<td>23(6.1)</td>
</tr>
<tr>
<td>Higher</td>
<td>100(26.4)</td>
<td>Employed</td>
<td>16(4.2)</td>
</tr>
<tr>
<td>Earnings</td>
<td></td>
<td>Are you satisfied with your housing situation?</td>
<td></td>
</tr>
<tr>
<td>Less than the limit</td>
<td>117(30.8)</td>
<td>Totally satisfied</td>
<td>110(28.9)</td>
</tr>
<tr>
<td>Limit</td>
<td>261(68.7)</td>
<td>Fairly satisfied</td>
<td>184(48.4)</td>
</tr>
<tr>
<td>More than the limit</td>
<td>2(0.5)</td>
<td>Indifferent</td>
<td>16(4.2)</td>
</tr>
<tr>
<td>Spouse's Occupation</td>
<td></td>
<td>Fairly dissatisfied</td>
<td>42(11.1)</td>
</tr>
<tr>
<td>Worker</td>
<td>87(22.9)</td>
<td>Absolutely dissatisfied</td>
<td>28(7.4)</td>
</tr>
<tr>
<td>Employed</td>
<td>56(14.7)</td>
<td>Spouse's education</td>
<td></td>
</tr>
<tr>
<td>Free</td>
<td>217(57.1)</td>
<td>Illiterate</td>
<td>16(4.2)</td>
</tr>
<tr>
<td>Student</td>
<td>6(1.6)</td>
<td>Primary</td>
<td>76(20)</td>
</tr>
<tr>
<td>Other</td>
<td>14(3.7)</td>
<td>Junior school</td>
<td>81(21.3)</td>
</tr>
<tr>
<td>Type of residence</td>
<td></td>
<td>High school</td>
<td>119(31.3)</td>
</tr>
<tr>
<td>Rented</td>
<td>117(30.8)</td>
<td>Age</td>
<td>88(23.2)</td>
</tr>
<tr>
<td>Personal</td>
<td>261(68.7)</td>
<td>Mean (SD)</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>2(0.5)</td>
<td>24.24(5.10)</td>
<td></td>
</tr>
</tbody>
</table>
Table 2: Relationship between psychological variables, with the preferred method of delivery for women participating

<table>
<thead>
<tr>
<th>Variable</th>
<th>Preference for delivery type</th>
<th>β (CI 95%)</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trust the doctor</td>
<td>21.96(5.76)</td>
<td>0.14(1.67-0.80)</td>
<td>0.42</td>
</tr>
<tr>
<td>Inner health</td>
<td>139.43(29.85)</td>
<td>-0.02(1.19-0.79)</td>
<td>0.81</td>
</tr>
</tbody>
</table>

Table 3: Estimation of linear regression coefficient for predictive factors underlying Preference for delivery type

<table>
<thead>
<tr>
<th>Variable</th>
<th>Regression coefficient</th>
<th>95% confidence interval</th>
<th>The possibility of significant</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Minimum</td>
<td>Maximum</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td>0.95</td>
<td>0.90</td>
</tr>
<tr>
<td>Spouse's education</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Illiterate</td>
<td></td>
<td>3.91</td>
<td>1.13</td>
</tr>
<tr>
<td>Primary</td>
<td></td>
<td>5.53</td>
<td>2.46</td>
</tr>
<tr>
<td>Junior school</td>
<td></td>
<td>3.34</td>
<td>1.60</td>
</tr>
<tr>
<td>High school</td>
<td></td>
<td>2.66</td>
<td>1.43</td>
</tr>
<tr>
<td>Earnings</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than the limit</td>
<td></td>
<td>0.86</td>
<td>0.03</td>
</tr>
<tr>
<td>Limit</td>
<td></td>
<td>0.64</td>
<td>0.08</td>
</tr>
<tr>
<td>More than the limit</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In this study, the variables that were statistically significant in the analysis of one variable with the preference Type of delivery were entered into the regression test. Among these data, age, spouse's education, Earnings were the component of the predictive factors of preference Type of delivery.

Discussion and Conclusion

In the present study, the psychological and individual factors related to the first birth and its relationship with the preference of the next type of delivery were studied in the women referred to Qamar-e-bani-Hashem Hospital in Khoy, in 2014.

The findings of the study showed that there was no statistically significant relationship between the preference of delivery type and the confidence rating of the physician. In reviewing the literature review, the researcher did not find a study that examined the level of trust in the doctor for women, who gave birth, but it seems that cultural differences in women living in other geographic regions can have different results with the present study.

The findings of the study by Mollison et al. indicated that there was no correlation between cesarean section and subsequent delivery. It was mentioned in the study that the negative relationship between cesarean deliveries and subsequent pregnancy requires more research [45]. Also, in the study of Kjerulff et al. 2013, no significant relationship was found between the present delivery and the type of later delivery [46].

The results of this study also showed that there was no statistically significant relationship between the preference of delivery type and internal health score.

Wiklund et al., in their study, showed a statistically significant relationship between health and type of delivery, which was not consistent with the present study [7]. The reason for the lack of consistency is that the present study was done on mothers who have stated the reason to choose the type of delivery in their health and also probably because of the difference in the place of the study. A study by Chen et al. (2006) also found that midwifery interventions and pregnancy problems in the first delivery were associated with an increase in surgery in the second pregnancy [47-49].

In a study by Pang et al., in 2008, the results showed that one quarter of the participants had a tendency to change their delivery type.
after the birth of their first child. Also, the findings of this study showed that there is a significant relationship between cesarean deliveries and maternal anxiety [50]. In a study by Chalmers et al., in 2010, the results showed that women undergoing cesarean section received more interventions and the results were preferred by parents [51].

The findings related to individual social factors, with the preferred type of delivery showed that there was a statistically significant relationship between age, education level, occupation, spouse’s education, spouse’s job, type of housing with the preferred type of the next delivery. That is by increasing the age, the level of education, the level of education of the spouse, the type of housing and spouse’s employment, the demand for delivery of cesarean section also increases.

The findings of Mancuso et al., which aimed to determine the labor, individual and social factors of women compared with a normal delivery and cesarean section, showed that there was a significant relationship between age and education level with the preferred method of next delivery and it is in agreement with the present study [26].

The study of Shahbazzadegan et al also showed that there was a significant relationship between education level and the type of future delivery, which is in agreement with the present study [52]. The results of Dadashi et al showed that individual factors such as earnings 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 [53].

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 (16, 23, 54, and 55). In this study, there was no significant relationship between the preferences of delivery in women with psychological factors, but with the increase in the level of education in women and their spouses, as well as their type of occupation and earnings, the preferences of the type of delivery were changed. The health authorities of the country can use the results of this research, and reduce the incidence of cesarean section and its complications.

**Study Limitations**

This study, like other studies, included some limitations:

- Because this research has been done on women in Khoy city, therefore, its results may not be generalized to the whole society.
- Another limitation of this study is its cross-sectional nature that the relationships shown between psychological factors, the type of delivery and the individual-social characteristics are not necessarily indicative of a causal relationship.
- Considering that in this study, sampling was conducted in an Azeri Language City; therefore, due to the cultural differences of society, the result of this study may not be generalized to mothers of other cities.
- Due to the high prevalence of cesarean section in Iran and the results of this study, it seems that the lack of a private hospital in the city, and the concurrence of research implementation with the health promotion plan and barriers created in conducting cesarean section, according to the levels of individuals' earning have influenced the mothers' decision making. Therefore, it is suggested that this study be carried out with the same title in other cities of the country and its results should be compared with the present study, taking into account different cultural and climatic conditions.

**Acknowledgement**

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