PUBLIC HEALTH RESEARCH

Assessment of Mental Health and Related Factors in Pregnant Women Referred to Health Centers in Estahban, Iran

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ABSTRACT

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Introduction Pregnancy is the most sensitive period in women's life which makes many mental changes. Unfortunately, physiological rather than mental aspects of these periods are considered more. This study aims to investigate mental health and related factors in pregnant women.

Methods This descriptive-analytic study has been done on 182 pregnant women referred to health centers of Estahban, Iran in 2015 by Convenience sampling method. Research tools used in this study were General Health Questionnaire 28 (GHQ-28). Data were analyzed using Regression testing and the $P<0.05$ was considered significance.

Results Research findings showed that 53.8% of women were psychologically healthy and About 46.2% of them suspected of mental disorders. Also, factors such as "Economic situation", "Smoking", "The age of first pregnancy", "Unwanted pregnancy", "Physical illness" and "Others satisfaction with pregnancy", a significant relationship was observed with the mental health of pregnant women($p<0.05$).

Conclusion Considering the present findings, informing the women and their family about prevalence of mental illness, the effect of underlying factors and confronting ways with these problems are essential; Also, it is important for therapists to know about these issues in order to help pregnant women.

Keywords Mental health - Pregnant Women - Related factors.

INTRODUCTION

Psychological changes during pregnancy occur naturally, but they are sometimes symptomatic and should seriously be considered so that about half of mental disorders during pregnancy or postpartum are related to depression; 25 percent are manic and 20 percent are psychoneurotic.[1] In a study of 267 pregnant women in Shahrkord, Iran, the prevalence of mental disorders was reported 29.7% in the first trimester, 28.6% in the second trimester and 39.6% in the third trimester.[2] The prevalence of common mental health disorders during pregnancy has been estimated at between 8% and 13% in the United States.[3] In a study conducted by Robbin (2003) among pregnant women in England study, it was found that prenatal stress and anxiety were considered as a factor in outbreak of depression and previous history of depression, marital problems, recent stressful life events, losing job and death of the loved ones were associated with mental problems.[4]

Common mental health disorders have been associated with disadvantaged social position, as shown by indicators such as low educational level, low income, or absence of social support.[5] These disorders are risk factors for poor pregnancy outcome such as preterm birth or low birthweight.[6-8] Women's mental condition during pregnancy has a huge impact on the health of fetus; lack of attention to mental condition can cause serious consequences. According to researches, severe depression in pregnant women increases the risk of stillbirth, low-weight birth and suicide.

Although the reasons for these disorders are not clear, studies show that genetic, biochemical, endocrine, psychological, and social factors are involved.[9] They may also have negative postpartum consequences on maternal psychological health and children's behavior and neurodevelopment.[10,11] Sometimes mother's mental disorders avoided appropriate care of baby or herself and consequences were poignant.[12] According to the importance of pregnancy and impact of mother's health on child, family, society and economy, We decided to study the mental health of pregnant women in another community and the role of factors which can underlie mental disorders in these women.

METHODS

This descriptive-analytic study has been done on 182 pregnant women referred to the three health center of Estahban, Iran, during a 4-months period from May to August 2015. Research sample was obtained by Convenience sampling method. Pregnant women in all three health centers in the city were studied. In each center, 56, 64, 62, questionnaires were collected. Women of all age groups were surveyed. In order to observe ethical considerations, after obtaining their consent to participate in the study, questionnaires without names were completed by pregnant women. The right was considered to research population to quit at any stage of the investigation, if there is no willingness to cooperate. Research tools included two questionnaires. Using the first questionnaire we could collect demographic data such as ((Age, Education, Education of Spouse, Job, Job of Spouse, Age of Marriage, Economic situation, Location Status, Smoking, Smoking by wife)) and the information of pregnant women such as ((The age of first pregnancy, Stages of pregnancy (first, second and third trimester), Gestational age, Wanted pregnancy, Abortion, Satisfaction of others, Physical illness)).

The second tool was General Health Questionnaire 28 (GHQ-28) which was presented by Goldberg in 1979. It is a validated instrument measuring psychological disorder in which numbers of different questions are designed. Disorders are measured at four dimensions including "somatic symptoms", "anxiety / insomnia", "social dysfunction", and "severe depression"; each dimension is measured by 7 questions. Score 0 was devoted to "At all", score 1 to "Usual", score 2 to "More than Usual", and score 3 was devoted to "Much More than Usual" in Likert scale. Score more than 6 in each subscale and more than 22 in total indicates pathological symptoms. people whose total score was at or more than 23 were considered as suspected cases of mental disorders. Validity of this questionnaire has been proven by various studies.[13,14] The validity in Janbozorgi's study in Iran on 223 students was 0.94 and alpha coefficient was obtained 0.81.14 Descriptive and inferential statistic (Multivariate Regression Test) in SPSS 22 software were used to analyze data.

RESULTS

In this study, 182 pregnant women of all age groups were surveyed and the mean age of them was 28.6±6.8 years; 53.8% of the women were mentally healthy and about 46.2% were suspected to any of the mental disorders. The highest incidence of disorders 82.1% in pregnant women was related to anxiety and insomnia, and social dysfunction, somatic symptoms and depression symptoms were 79.8%, 75% and 26.2% respectively (Table 1). The multivariate regression model in Table 2 shows that among all demographic information, "economic situation" and "the age at first pregnancy" have significant negative correlations in predicting score of mental health. Given that low scores in mental health questionnaire is indicative of mental health in people, so in this sample the results show that the more the economic situation is improving and higher age at first pregnancy is, the women have more mental health. And also results show that

"physical illness", "smoking", "unintended pregnancy" and "dissatisfaction of others with the women pregnancy" significantly predicted mental health, and all of them explained 23% of the variances.

Table 1 Psychic disorders in pregnancy women

Dimension of Mental health	No symptoms of mental problem No.(%)	Has symptoms of mental problem No.(%)	Mean±SD
Anxiety and Insomnia	15(17.9)	69(82.1)	6.65±3.68
Social dysfunction	17(20.2)	67(79.8)	7.38±2.29
Somatic symptoms	21(25.0)	63(75.0)	6.19±3.32
Depression symptoms	62(73.8)	22(26.2)	2.23±3.27
Total	98(53.8)	84(46.2)	22.42±9.58

Table2. Regression analysis for demographic and mental health

Variables	Unstandardized Coefficients		Standardized Coefficients	T	P value
	B	Std.Error	Beta		
Economic situation	-3.14	1.38	-0.16	-2.27	0.02
The age of first pregnancy	-2.45	1.0	-0.22	-2.46	0.01
Wanted pregnancy	4.35	1.85	0.18	2.35	0.02
Satisfaction of others	6.53	2.60	0.18	2.51	0.01
Physical illness	5.25	1.36	0.26	3.85	<0.01
Smoking	11.72	4.44	0.18	2.64	<0.01
R^2	23%				

* $P < 0.05$.

DISCUSSION

Several studies have been conducted in the field of mental health; but studying mental health in pregnant women has high importance and priority, considering their social and cultural differences in different parts of the world. According to the results of this study, the prevalence of mental disorders among pregnant women of Estahban is 46.2% which is consistent with the figure reported for the mental disorders in Kashan with prevalence of 40%.[15] And also it is less than the reported figure of the study conducted in Mashhad on pregnant women 6-8 weeks after delivery with prevalence of 57.6%.[16] Robbins' study in England revealed that more than 70% of pregnant women have some depression symptoms. In his study prenatal stress and anxiety were considered as a factor in outbreak of depression and previous history of depression, marital problems, recent stressful life events, losing job and death of the loved ones were associated with mental problems. This author also refers to the most prevalent pregnancy disorders and interference of these disorders with the person's abilities to care of herself, deficiencies in nutrition, sleep disorders and anxiety and worry symptoms.[4] In a study on pregnant women in English, 25% of women reported a high level of fear and 20.6% reported low sleep; also there was positive relationship between fear of childbirth, fatigue, sleep deprivation, and anxiety.[17]

According to the factors affecting mental health in pregnancy, the findings in this study show that there is significant relationship between mental disorder and mothers' economic situation. Research by Smith et al (2004) and Glazier et al (2004) show that poverty and deprivation are important predictors for poor mental health in pregnancy.[18,19] Which can be due to the inability of the women in the use of effective strategies to deal with the problems of life.

Also in this study a significant relationship was observed between mental health and the age at which women experience their first pregnancy that is consistent with another study achieved in this regard.[20] the results show that higher age at first pregnancy is, the women have more mental health and Mature women for better encounter with this important event Can justify the issue. However, in Zarepour's study, there was no connection between these two variables.[21]

And a relationship was observed between unintended pregnancy and prevalence of disorders in the sample under study. Also Zarei Pour et al (2012) conclude that mental disorders was twice more in the women with unintended pregnancy than the women who were pregnant with planning.[21] So Women with unwanted pregnancy face emotional and psychological problems. Health

care providers need to support couples to combat this critical period.[22]

Another related factor which can be mentioned is other's agreement and support of others with current pregnancy which is a protection factor for mental disorders; that are consistent with the findings of Sheng et al (2010) which showed that social support from husband and others causes improving mental health.[23]

Also a significant relationship was observed between physical illness and mental health; in another study conducted on a group of pregnant women, the results show that there is significant relationship between mental health and physical illness during pregnancy,[2] which can be due to the engaging women in sickness and inability of them in the use of effective strategies to deal with the problems of life.

In this study was observed a significant relationship between smoking during pregnancy and risk of mental disorders. The assessments about the effect of drug abuse in pregnant women focused on physical symptoms and few studies was done about mental health and smoking in pregnant women but in other samples was observed a significant relationship between these two variables. For example, the results of a study showed that smoking among psychiatric patients is more than the people without mental disorders and it is less likely that these people leave smoking.[24] However due to hormonal changes in mother's body and vulnerability of women in this period; we can predict a correlation between smoking and mental illnesses. Also, in addition to the physical effect of drug abuse during pregnancy on mother and fetus it will be an important mental impact on both of them. In one study it was found that smoking during pregnancy can affect fetus's mental development. Hyperactivity, short attention span, cognitive and behavioral abnormalities are the disorders that can be seen in children of mothers who smokes.[25] It should be noted that the limitations of this study was cross-sectional. In cross-sectional studies can only be discovered the association between variables, without any causal relationship to be surveyed. Another limitation of this study was that a history of psychiatric disorders in the target group was not assessed. It is suggested that in future studies, more detailed questionnaire to be used to identify mental disorders.

CONCLUSION

In different studies, various results were achieved about prevalence of mental disorders and there is a large variety of risk factors in these disorders. These differences can be due to the study tools or time and geographic differences and cultural conditions of different people. But what is indicator of the importance of this issue is that the majority of studies around the world are consistent; the studies show that high number of pregnant women suffers from a variety of mental problems and the risk factors of mothers' mental health are emphasized which is mentioned in this study. Given that mental problems are prevalent in pregnancy and can underlie many problems before, during and after delivery; ignoring these disorders in women can have important consequences for general health of the individual that not only the mother is suffering also have important effects on fetus/newborn also the women's family. Considering the present findings, in one hand informing the women and their family about existence of these disorders and the effect of underlying or booster factors and their familiarity with confronting ways and solving these problems are essential; on the other hand it is important for therapists and caregivers to know about these issues in order to help pregnant women.

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