

ORIGINAL RESEARCH

The role of gender dysphoria and mother's parenting style on predicting comorbid mental disorders

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Abstract

Aim: The aim of the current study is to examine the role of parenting style and mental health disorders on individuals with gender dysphoria.

Material and Methods: In this study applied research method correlation and research strategies were utilized for data analysis. A total number of 123 patients with gender dysphoria waiting for sex reassignment surgery were recruited from Navidbakhsh clinic in Isfahan and Emergency Social Welfare in Shiraz. The study population was patients with gender dysphoria in Iran (19 males-to-females and 104 female-to-male) were accompanied by their mothers that gender dysphoria them diagnosed by Legal Medicine Organization and they were waiting for sex reassignment surgery from January 2016 to October 2016 have referred to these centers.

Results: The data obtained using multiple regressions to standard methods (simultaneous) using SPSS 19 software. Findings from the study showed that between authoritarian parenting style and mental disorders and permissive parenting style and mental disorders there is a negative relationship and between authoritative parenting style and mental disorders there is positive relationship.

Conclusions: Each, parenting styles have different relationship with mental disorders, which according to results the best and worst parenting style, authoritarian and authoritative styles are in order.

Keywords: Gender dysphoria, Mental disorders, Parenting styles

Introduction

Gender identity refers to the individual's sense of identification with either male or female and gender role is a pattern of behaviors, roles and attitudes defined by individual's cultural norms and society (1). A conflict between individual's biological sex and the gender with which he/she identifies refers to gender dysphoria. Individuals with gender dysphoria may feel very uncomfortable with the gender they were assigned. They may feel that their gender does not match their biology and thus, cannot accept their gender roles. (2). People with gender dysphoria may experience great psychological distresses such as anxiety and depression. Psychological distresses associated with gender dysphoria may affect the individuals' social and vocational functioning (3). In addition, individuals with gender dysphoria are more prone to alcohol and substance abuse (4). Comorbid mental disorders such as, anxiety, depression, self-injurious behaviors, suicidal ideation and commitment are evident among individuals with gender dysphoria comparing with individuals without gender dysphoria (5).

Results of one study done by Hepp et al. (2005) indicated 39% of people with gender dysphoria (at the time of the study) were at critical state, and 71% at now or from lifetime diagnose one of mental disorders (6). Research showed more comorbid disorders respectively paranoid thoughts, panic, somatization, and sensitiveness in interpersonal relationship (7). In a research with personality characteristic in conversion of sex, their result indicated that people with gender dysphoria compared with people without gender dysphoria were scored higher on hysteria, schizophrenia, depression, anxiety scale, which involved health and discomfort in social relations in MMPI-2 test (8). Heylens et al. (2013) also showed that 38% have been diagnosed with mental disorders, especially mood disorders and anxiety disorders once in their lifetime (9). Consistent with previous findings, in research psychiatric Axis I comorbidities among patients with gender dysphoria, indicated that the most prevalent disorders in people with gender dysphoria respectively is major depression (33.7%), specific phobia (20.5%) and adjustment disorders (15.7%) (10).

Gender dysphoria affects the individuals' personality, behavior, and their social relationships. One of the major difficulties that

they may face in their social relationship is the conflict between affected individuals and their families due to the lack of support and acceptance from their family. The conflicts will remain unresolved not only because of this lack from families, but also from lack of support and acceptance from society (11).

Sigmund Freud believed that anything that disrupts the love child of the parent of the opposite sex and imitation with the same-sex parent can cause of disorder in normal gender identity. Ever since Freud, psychoanalysis believed that the quality of mother-child relationship, in the first years of life is crucial in establishing gender identity. Psychoanalysis suggests that hostile relationship between mother and child can lead to gender identity problems (5). Parental preference and desire for a specific sexual orientation of the child can also play a role on developing gender identity problems. For example, some researcher have found that if parents preferred to have girl, but their child is boy, this preference may cause the boy to suffer from gender dysphoria later in his life. Although some studies confirmed that this notion does no longer exist, inconsistency between parent's sex-specific preferences and the child's actual sexual orientation may negatively affect the child and parent's relationship. (18).

Another study showed that different variables such as parental behavior in childhood, emotional support of family members, communication style within the family member, the experience of sexual abuse may predict the development of gender dysphoria later in life). The results of one study were as follows: family function in people with gender dysphoria components such as communication, affective involvement, role-playing and problem solving than non-infected individuals are in the lower level (21). Studies have shown that families of patients with gender dysphoria many of them have strict and dismissive parents (22). Studies indicate that between gender dysphoria and emotional neglect of parents (23-24), and parental rejection in male subjects is significant (25). Stoller (1968), in particular, family factors contributing to cause gender dysphoric girls and boys to be described. For boys, the relationship is too close to the mother and from the father points out and about girls, is depressed mothers during the first few months

of life were absent and father who are not mothers Supportive points out (26). Bleiberg et al (1986), the incidence of gender dysphoric children's inability to cope with the loss of a parent or the importance of their dependence on age related child knows (27). Marants and Coats (1991), the primary role and importance of mother's and disorders related adjustment and styles of attachment between mother and child are emphasized and that unsafe attachment styles can affect the growth of children and mothers people with gender dysphoria "female to male" encouraging symbiosis and denounce independence children (28).

Studies that have examined the relationship between parenting styles and mental disorders they have attention each aspect of it; Research showed that depression, obsessive-compulsive, interpersonal sensitivity, anxiety, psychosis and somatization, students who have demonstrated a higher degree of disorder, have parents were careless and despotic. The scales of anxiety, hostility and paranoid thought there was no difference in the four parenting style (29).

Research as examine the relationship between parenting styles and mental health in adolescents in Islamshahr, indicated a negative correlation between democratic parenting style and mental health (somatic symptoms, anxiety and insomnia, social dysfunction and depression) and as well as positive correlation, authoritarian and permissive parenting style and mental health (somatic symptoms, anxiety and insomnia, social dysfunction and depression) teens city of Islamshahr. In order to the results indicated that democratic parenting style increased mental health and authoritarian and permissive parenting styles decreased mental health. Multiple regression analysis also showed that 53% of the variance components somatic symptom by authoritarian and permissive parenting styles justified and 67/2%, 57%, 66/2% of the variance components anxiety and sleep disorder, social dysfunction and depression can be explained by three parenting style (30).

In another study findings showed that having at least one parent authoritarian or parents are both permissive, leads to a better outcome for adolescents. In contrast, disregard both parents weakest type of outcomes for young people.

And consists of a kind of disregard parents, mother disregard the results is more badly. And it concluded that lower depression and anxiety resulting acts of acceptance and good control of both parents or at least one of the parents of the teenager or parallelism parents in parenting styles and more undesirable consequences resulting, at least in control, accepting or apparent conflict of parents (31). The results of Tozandehjani et al. (2011) showed that parenting styles had a significant influence on self-efficacy and in this regard, authoritarian parenting style to permissive and authoritarian styles has a significant efficacy. Also the parenting styles had a significant effect on mental health; and the impact of parenting styles on mental health have been different, the authoritative parenting style to authoritarian style and permissive style than authoritarian style had a significant effect on mental health (32).

Another study showed that there was no relation between democratic style and aggression. There was a relationship between physical aggression and democratic style. There was relation between hostility and democratic style. There was relation between anger and Democratic style. There was relation between verbal aggression and Democratic style. There was no relationship between permissive style and aggression. There was no relationship between permissive style and physical aggression. There was no relationship between permissive style and hostility. There was no relationship between permissive style and anger. There was no relationship between permissive style and verbal aggression. There was no relationship between the authoritarian style and aggression. There was no relationship between the authoritarian style and physical aggression. There was no relationship between the authoritarian style and hostility. There was no relationship between the authoritarian style and anger. There was no relationship between the authoritarian style and verbal aggression and so concluded that the best way to reduce aggression and its components is democratic parenting style (33).

Research analysis as the role of parenting styles in predicting anxiety thoughts and obsessive compulsive symptoms in adolescents, results indicated that obsessive-

compulsive symptoms and anxious thoughts statistically significant positive correlation with authoritarian and permissive parenting styles and has significant negative relationship with authoritative parenting style. Parenting styles could predict the level of obsessive-compulsive symptoms and anxious thoughts adolescent. Their conclusion was in this way that parents with authoritative parenting style have the children with obsessive compulsive symptoms and anxious thoughts are low (34). Gorji and Mahmoudi (2013), in research as compare parenting style and general health in parents of deaf children and mental retardation, showed that between general health and parenting styles between the two groups of parents, there is no difference; also parenting style can't predict general health (35).

Research as parenting style and mental health in Iranian adolescents, results indicated that there is a significant negative relationship between authoritarian parenting style and mental health; also between authoritative parenting style and mental health and permissive parenting style and mental health there is a significant positive relationship (36). Nikoogoftar and Seghatoleslam (2015), study showed that father's authoritarian style is associated with depression, emotional and behavioral problems. While, the mother's authoritarian style is associate with related with anxiety and behavioral problems of children. Also, permissiveness style may be associated with the development of conduct disorders among children. (37).

Another studies showed that there is a significant negative relationship between authoritarian parenting style and mental disorders in people addicted to drugs and psychotropic substances; also there is a significant relationship between permissive parenting style and mental disorders in people addicted to drugs and psychotropic substances; In addition, a positive and significant relationship between authoritative parenting style and mental disorders were evident in people addicted to drugs and psychotropic substances. Finally, there are differences in parenting style between drug users and drug addict's psychedelic (38).

According to the existing findings, it is quite clear that people with gender dysphoria of mental health and family functioning are less than people without it. In addition to diagnosis

and treatment of mental disorders, comprehensive and updated information is needed. This study is an important part of facing self prospects to evaluate the predictive power of comorbid mental disorders in people with gender dysphoria due to their mothers' parenting styles.

Materials and Methods

In this study, correlational research methods were utilized for data analysis.. Total of 123 patients (19 males-to-females and 104 female-to-male) with gender dysphoria, waiting for sex reassignment surgery in Isfahan (admitted to the Navidbakhsh clinic in Isfahan city) and Shiraz (admitted to the Emergency Social Welfare in Shiraz city) were recruited to participate in this study.

For the purpose of date collection parenting styles and SCL-90-R questioners were utilized.

A) **Parenting style questionnaire:** Diana Baumrind the University of California (1973), a series of studies carried out in which the patterns of parenting styles were identified. This questionnaire is an adaptation of the theory of parental authority that is based on the Baumrind theory of three models permissive, authoritative and authoritarian parents, to investigate the intrusion patterns and parenting styles.. The questionnaire contains 30 questions with 10 questions for each subscale. The questionnaire were answered by parents on a five-point Likert scale from strongly disagree to completely agree. Scores of 0 to 4 is assigned to each question, the more scores on each subscale showed that parenting style is higher. This questionnaire examined by Isfandiari (1996) and Binem (2001), and test-retest reliability of the questionnaire for permissive 0/69, 0/77 authoritative and authoritarian 0/73 reported. Tonekaboni and Bandchy (2001), for validating questionnaire used Cronbach's alpha and validity of the questionnaire was 0/72, in this study, the internal consistency of items was approved (40).

B) **Symptom Check List-90-Revised (SCL-90-R):** This test consists of 90 questions to evaluate mental symptoms and reported by the client that evaluates the psychological and physical aspects

of client. . Using this test can distinguish healthy individuals from patients. This test was introduced by Derogatis et al. (1973) and is based on clinical experiences and psychometric analysis.. Each test question from a range of five degrees of discomfort, from zero "no" to four "strongly" is made. Scores obtained from the SCL-90-R represents 9 of the symptoms (somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, aggression 'hostility', phobic anxiety, paranoid thoughts, psychotism) and three general index Global severity index, Positive symptom distress index, Positive symptom total). Validity obtained for test of SCL-90-R using Cronbach's alpha for somatization (0.83), obsessive-compulsive (0.76),

interpersonal sensitivity (0.76), depression (0.84), anxiety (0.81), aggression 'hostility' (0.77), phobic anxiety (0.72), paranoid thoughts (0.65), psychotism (0.70) obtained. Holi (2003) within week test-retest reliability (0.78) up to (0.90) and ten weeks (0.64) up to (0.80) has reported. The validity of this test was (0.91) by using Cronbach's alpha (41-42). Parenting styles questionnaire by mothers and (SCL-90-R) by children were completed.

Results

The present study hypothesized that if there is a relationship between parenting styles and mental disorders, Pearson correlation coefficient has been calculated.

1. Test correlation coefficient was calculated between parenting styles and mental disorders

Criterion Variable	Predictor Variables	Correlation Coefficient (r)	1. Statistical Significance (P)
Somatization	Permissive	-0.680	0.001
	Authoritative	0.871	0.001
	Authoritarian	-0.709	0.001
Obsessive-Compulsive	Permissive	-0.717	0.001
	Authoritative	0.861	0.001
	Authoritarian	-0.648	0.001
Interpersonal sensitivity	Permissive	-0.334	0.001
	Authoritative	0.637	0.001
	Authoritarian	-0.741	0.001
Depression	Permissive	-0.374	0.001
	Authoritative	0.660	0.001
	Authoritarian	-0.723	0.001
Anxiety	Permissive	-0.411	0.001
	Authoritative	0.690	0.001
	Authoritarian	-0.706	0.001
Hostility	Permissive	-0.192	0.001
	Authoritative	0.463	0.001
	Authoritarian	-0.599	0.001
Phobic Anxiety	Permissive	-0.544	0.001
	Authoritative	0.768	0.001
	Authoritarian	-0.691	0.001
Paranoid	Permissive	-0.645	0.001
	Authoritative	0.747	0.001
	Authoritarian	-0.526	0.001

Psychotism	Permissive	-0.419	0.001
	Authoritative	0.475	0.001
	Authoritarian	-0.360	0.001

According to table 1, between permissive and authoritarian parenting style with elements of mental disorders there is a negative

relationship. While there is positive relationship between authoritative parenting style with elements of mental disorders.

2. Analysis of variance and Adjusted R square

Criterion Variable	Predictor Variables	df	F	P	Adjusted R Square
Somatization	Permissive	3	147.999	0.001	0.783
	Authoritative	119			
	Authoritarian				
Obsessive-Compulsive	Permissive	3	125.432	0.001	0.754
	Authoritative	119			
	Authoritarian				
Interpersonal sensitivity	Permissive	3	56.137	0.001	0.576
	Authoritative	119			
	Authoritarian				
Depression	Permissive	3	54.633	0.001	0.569
	Authoritative	119			
	Authoritarian				
Anxiety	Permissive	3	56.751	0.001	0.578
	Authoritative	119			
	Authoritarian				
Hostility	Permissive	3	23.512	0.001	0.356
	Authoritative	119			
	Authoritarian				
Phobic Anxiety	Permissive	3	71.884	0.001	0.635
	Authoritative	119			
	Authoritarian				
Paranoid	Permissive	3	51.920	0.001	0.556
	Authoritative	119			
	Authoritarian				
Psychotism	Permissive	3	12.943	0.001	0.227
	Authoritative	119			
	Authoritarian				

According to table 2, analysis of variance to evaluate the significance of the whole model, the entire model is significant ($P < 0.05$). Also, the results of adjusted R square in the table above are as follows, which includes parenting styles permissive, authoritative and authoritarian. (78.3%) somatization, (75.4%) obsessive-compulsive, (57.6%) interpersonal

sensitivity, (56.9%) depression, (57.8%) anxiety, (35.6%) aggression, (63.5%) phobic anxiety, (55.6%) paranoid thoughts, (22.7%) psychotism.

To evaluate the predictive power of mental disorders, through variable predictor of parenting styles, multiple regression standard method (simultaneous) were used.

3. Standard multiple regression results and related coefficients

Criterion Variable	Predictor Variables	B	SE	Beta	T	P
Somatization	Permissive	-0.180	0.127	-0.181	-1.416	0.160
	Authoritative	0.352	0.119	0.498	2.965	0.004
	Authoritarian	-0.475	0.137	-0.328	-3.477	0.001
Obsessive-Compulsive	Permissive	-0.229	0.102	-0.307	-2.256	0.026
	Authoritative	0.211	0.095	0.399	2.228	0.028
	Authoritarian	-0.328	0.109	-0.302	-3.011	0.003
Interpersonal sensitivity	Permissive	0.094	0.101	0.167	0.934	0.352
	Authoritative	0.183	0.094	0.458	1.948	0.054
	Authoritarian	-0.387	0.108	-0.473	-3.586	0.001
Depression	Permissive	0.148	0.170	0.157	0.871	0.386
	Authoritative	0.341	0.159	0.510	2.152	0.033
	Authoritarian	-0.573	0.182	-0.418	-3.141	0.002
Anxiety	Permissive	0.224	0.158	0.252	1.412	0.160
	Authoritative	0.443	0.148	0.703	3.001	0.003
	Authoritarian	-0.379	0.170	-0.294	-2.234	0.027
Hostility	Permissive	0.122	0.104	0.258	1.171	0.224
	Authoritative	0.143	0.097	0.426	1.472	0.144
	Authoritarian	-0.258	0.112	-0.375	-2.310	0.023
Phobic Anxiety	Permissive	-0.004	0.075	-0.008	-0.048	0.962
	Authoritative	0.174	0.070	0.544	2.497	0.014
	Authoritarian	-0.212	0.080	-0.322	-2.635	0.010
Paranoid	Permissive	-0.095	0.062	-0.283	-1.547	0.125
	Authoritative	0.089	0.057	0.370	1.541	0.126
	Authoritarian	-0.101	0.066	-0.206	-1.524	0.130
Psychotism	Permissive	-0.115	0.069	-0.405	-1.679	0.096
	Authoritative	-0.015	0.064	-0.075	-0.238	0.812
	Authoritarian	-0.128	0.074	-0.311	-1.747	0.083

Discussion

According to the results of Pearson correlation and the intensity of the relationship between permissive parenting style and obsessive-compulsive (-0.717), somatization (-0.680), paranoid (-0.645), phobic anxiety (-0.544), psychotism (-0.419), anxiety (-0.411), depression (-0.374), interpersonal sensitivity (-0.334) and aggression "hostility" (-0.192), there is a negative relationship, which means that whenever the higher the mother's permissive parenting style to score his children, the mental disorders will be lower. This results is consistent with the results of research by Seifi Gandomani et al. (2009), Tozandehjani et al. (2011), Kordestani & Siavoshi (2015) and is antithetic with results of research by Rahmati et al. (2008), Khanjani

et al. (2011), Zare et al. (2014) and Nikoogofar & Seghatoleslam (2015). Also according to the results of Pearson correlation and the intensity of the relationship between authoritative parenting style and somatization (0.871), obsessive-compulsive (0.861), phobic anxiety (0.768), paranoid (0.747), anxiety (0.690), depression (0.660), interpersonal sensitivity (0.627) psychotism (0.475) and aggression "hostility" (0.463), there is a positive relationship, which means that whenever the higher the mother's authoritative parenting style to score his children, the mental disorders will be higher. This results is consistent with results of research by Rahmati et al. (2008), Zahrakar (2008), Seifi Gandomani et al. (2009), Tozandehjani et al. (2011), Khanjani et al. (2011), Zare et al.

(2014), Nikoogoftar & Seghatoleslam (2015), Kordestani & Siavoshi (2015) and Zhong et al. (2016) and is antithetic with Ahangareanzabi (2012). Also, according to the results of Pearson correlation and the intensity of the relationship between authoritarian parenting style and interpersonal sensitivity (-0.741), depression (-0.723), somatization (-0.709), anxiety (-0.706), phobic anxiety (-0.691), obsessive-compulsive (-0.648), aggression "hostility" (-0.599), paranoid (-0.526) and psychotic (-0.360), there is a negative relationship, this means that whenever the higher the mother's authoritarian parenting style to score his children the mental disorders will be lower. This results is consistent with results of research by Zahrakar (2008), Seifi Gandomani et al. (2009), Tozandehjani et al. (2011), Khanjani et al. (2011), Ahangareanzabi et al. (2012), Zare et al. (2014), Kordestani & Siavoshi (2015) and Zhong et al. (2016).

Of the three parenting styles, permissive style (0.160) can't predict somatization, but authoritative (0.004) and authoritarian (0.001) parenting style can predict somatization that according to the obtained beta authoritative (0.498) than authoritarian (-0.0328) have the largest single contribution, even though both were statistically significant; as well as according to adjusted R square (78.3%) somatization by parenting practices explained that is relatively large and well result. This results in having the capability of anticipating somatization by parenting styles is consistent with the results Zahrakar (2008), but the new finding of this study is that authoritative and authoritarian parenting styles can predict somatization but permissive can predict somatization while in Zahrakar's research (2008) only authoritative and permissive parenting styles can predict somatization.

Of the three parenting styles, permissive (0.026), authoritative (0.028) and authoritarian (0.003) parenting styles all three can predict obsessive-compulsive that according to obtained beta authoritative (0.399) compared to two other styles and permissive (-0.307) than authoritarian (-0.302) have the largest single contribution; as well as according to adjusted R square (75/4%) obsessive-compulsive by parenting practices explained that is relatively large and well result. This result is consistent with results of research by Khanjani et al. (2011).

Of the three parenting styles, authoritative (0.054) and permissive (0.352) parenting styles can't predict interpersonal sensitivity, but authoritarian parenting style (0.001) can predict interpersonal sensitivity that according to the obtained beta single contribution this style is (-0.473). Also, according to adjusted R square (57.6%) interpersonal sensitivity by parenting practices explained. This result is consistent with results of research by Zahrakar (2008) but the new finding of this study is that only authoritarian parenting style had predictably, not all three parenting styles.

Of the three parenting styles, permissive parenting style (0.386) can't predict depression but authoritative (0.033) and authoritarian (0.002) can predict depression that according to the obtained beta authoritative (0.510) than authoritarian (-0.418) have the largest single contribution, even though both were statistically significant. Also, according to adjusted R square (56.9%) depression by parenting practices explained. This result is consistent with results of research by Zahrakar (2008). New finding in this study is that authoritative and authoritarian parenting styles had predictably, not all three parenting styles.

Of the three parenting styles, permissive parenting style (0.160) can't predict anxiety but authoritative (0.003) and authoritarian (0.027) can predict anxiety that according to the obtained beta authoritative (0.703) than authoritarian (-0.294) have the largest single contribution, even though both were statistically significant. Also, according to adjusted R square (57.8%) anxiety by parenting practices explained. This result is consistent with results of research by Zahrakar (2008) and Khanjani (2011) but new finding in this study is that authoritative and authoritarian parenting styles had predictably, not all three parenting styles.

Of the three parenting styles, permissive (0.244) and authoritative (0.144) parenting styles can't predict hostility but authoritarian parenting style (0.023) can predict hostility that according to the obtained beta single contribution this style is (-0.0375); as well as according to adjusted R square (35.6%) hostility by parenting practices explained that result is a relatively small. This result is new finding in this study.

Of the three parenting styles, permissive parenting style (0.962) can't predict phobic anxiety but authoritative (0.014) and

authoritarian (0.010) parenting styles can predict phobic anxiety that according to the obtained beta authoritative (0.544) than authoritarian (-0.322) have the largest single contribution, even though both were statistically significant. Also, according to adjusted R square (63.5%) phobic anxiety by parenting practices explained. This result is new finding in this study.

Parenting styles can't predict paranoid and psychotism that is new finding this study. With a summary, it can be concluded that mothers' parenting styles with gender dysphoria is related with comorbid mental disorders in children. The cause is not clear, gender dysphoric alone caused damage and comorbidity of mental disorders, or wrong parenting styles of mothers cause mental disorders in children or gender dysphoric children in the family cause adopt stricter styles by mothers and comorbid mental disorders in children. This study makes clear that the best parenting style is authoritarian parenting style also permissive parenting style has a negative relationship with mental

disorders although it was weaker than authoritarian parenting style. Authoritative parenting style has positive relationship with mental disorders and this is the worst parenting styles. According to this description educational programs maybe designed for families, especially mothers to form group classes either family therapy, the pressures on families with gender dysphoric children reduced so that they are compatible with this issue and the correct parenting styles are taught that this is an important step in the treatment of patients with gender dysphoria. The results obtained in this study can be used by clinical psychologists and psychiatrists in the evaluation of symptoms patients with gender dysphoria, also it can in the investigation and help their families to provide decent information to the family therapists and social workers.

Conflict of interests

Authors declare no conflict of interests.

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