The Role of Personality Disorder and Parental Lifestyle on Mood Disorders in Children and Adolescents

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Abstract

Introduction: This study investigates the prediction of mood disorders in children and adolescents by parental personality disorder and parenting lifestyle.

Method: The present study was a cross-sectional study and, the sampling method was a multistage cluster. The statistical population was children and adolescents aged 6-18 years in Yazd province. Our sample included 1035 children and adolescents who were selected from all three age groups (6-9 years, 10-14 years, and 15-18 years) and their parents. Kiddie-SADS-Present and Lifetime Version, demographic data (gender, age, education, parent education, and economic situation), information on lifestyle (LSQ), and parents' personality disorders (MCMI-III) questionnaires were used to obtain data. Logistic regression and cross-tab tests were used to analyze the data in SPSS16.

Results: According to the obtained results, Drug avoidance (β=-0.086, p= 0.016), can predict mood disorders, Post-Traumatic Stress Disorder (PTSD) (β= 0.101, p= 0.014) in mothers and dependent personality disorder (β= 0.081, p= 0.023) in fathers can predict mood disorders in children and adolescents.

Conclusion: Lifestyle is associated with physical and mental health, in children and adolescents, which can affect their mood. In addition, the mental health of parents is a major factor in the mental health of children and adolescents that predicts their mood.

Keywords: Adolescents, Child, Lifestyle, Mood Disorders, Personality Disorder

Introduction

It has been shown in a number of studies that children and adolescents suffer from psychiatric disorders in their childhood because early interventions are often, late, or not done at all [1,2]. From the last 10 years until now psychiatric disorders have increased in children and adolescents [3,4]. It has been proven that psychiatric disorders are inherited in families. When assessing children with psychiatric disorders, find that their fathers and mothers also had psychiatric disorders. Children whose parents have psychiatric problems are more at risk for suffering from depressive or avoidant personality, and Attention Deficit Hyperactivity Disorder (ADHD) than others in the general population [5]. In this regard, parental status is also closely related to the mood disorder (depressive spectrum) of

offspring. In a study on the prevalence of mood disorders among children and adolescents with parents with psychiatric disorders, it was shown that there is a relationship between mother's mental disorders with mood disorders in children and adolescents [6].

The comorbidity of mood disorders has also been measured with other disorders. The most common comorbid diagnoses were ADHD, specific phobia, social anxiety disorder, separation anxiety, Generalized Anxiety Disorder (GAD), panic attacks, Pervasive Developmental Disorder (PDD), and tic disorders [6]. In this regard, other factors such as family function and family lifestyle and living environment of children and adolescents were also examined and the results showed its association with psychiatric disorders [7]. Children with depressed mothers or parents with mental disorders are more likely to be involved in depression and schizophrenia [8]. For people with mood disorders such as depression, although psychological medications and techniques can help them, lifestyle modification is also one of the effective ways to help them heal and recover more effectively [9]. Physical activity and quality of life are ways to manage mood disorders and improve health [10,11].

Studies have shown that individuals' lifestyles are effective in causing mental disorders. A study was conducted to determine the effect of lifestyle in depressed adolescents. Actually, male adolescents who had not a healthy diet and proper physical activity were more exposed in depression [12]. Also, several studies support the hypothesis that diet plays an important role in mental health, especially depression. The healthier the diet, the better mental health and lower depression [13–15]. Regular physical activity in children and adolescents reduces the symptoms of depression [16]. Physical activity can actually have a positive effect on the mental health of children and adolescents, but other factors such as the mental conditions of children and their social interactions are also important [17]. Approximately one in every five adolescents will experience a diagnosable depressive episode by the age of 18, given the significance of this period in the life span for physical, social, emotional, educational, and vocational development, the onset of mood disorder during adolescence can serve to disrupt healthy developmental trajectories. This disruption can result in persistent, adverse consequences for the adolescent across these domains. Treatment alone is unlikely to be sufficient to turn the tide of depression, due to high incidence rates and the limited effectiveness of treatments in bringing about full recovery in affected individuals. There is thus a strong imperative for prevention to reduce the burden of these disorders [18].

According to evidence, children's problems start with the family. Since the children are associated with their parents from the beginning of birth, and parents have an influence on their thoughts and feelings in all areas of children, it is clear that if the parents have physical and psychological problems, they cannot be a good model for their children, and will as a result cause many problems in their natural growth. In addition to environmental conditions, lifestyle is another factor that affects mental health. For better understanding and identifying the effect of some factors that cause the creation of some disorders especially mood disorders between children and adolescents, more research is required about predictors, comorbidity, and the prevalence of mood disorder among children and adolescents. So, this study provides the prediction of mood disorders in children and adolescents by parental personality disorder and their lifestyle.

Method

This research was a cross-sectional study and was part of a national study. The statistical population included children and adolescents aged 6-18 years in Yazd province. The sampling method in this study was multi-cluster sampling. A total of 1174 people were selected. First, through the post office, 167 clusters were randomly assigned. Then we collected six samples in each cluster (three were boys and three girls), in three age groups (6 to 9, 10 to 14, 15 to 18 years) and their parents. For this purpose, 1035 children and adolescents and their parents were randomly selected from rural and urban districts in Yazd Greater Area which are located in central Iran. To compare urban and rural groups, 10% of our sample were rural and 90% of our sample were from the urban section. Inclusion criteria for this study were that the participants were Iranian and lived in Yazd province at least for one year and the age of children and adolescents should have been 6 to 18 years. The exclusion criteria were that the participants did not have severe physical and mental illnesses.

To investigate and analyze the data, SPSS 16 was used. Pearson correlation and simultaneous regression were used to analyze the study.

The tools used in this study were as follows:

Kiddie-SADS-Present and Lifetime Version (K-SADS-PL): Pioneering work in the assessment of child and adolescent psychiatric disorders by direct interview with the child was performed by Rutter and Graham and Herjanic and co-workers (1968). It was later developed by Charmbers in 1985. The Schedule for Affective Disorders and Schizophrenia for School-Age Children-Present and Lifetime version (K-SADS-PL) was adapted from the Present Episode version of the K-SADS (K-SADS-P) [19]. KSADS- PL is a semi-structured clinical interview to examine and assess the past and present events of children and adolescents according to DSM-IV criteria as the framework. K-SADS-PL included five scales. Mood disorders, psychotic disorders, anxiety disorders, behavioral disorders, substance abuse,

and other disorders [20,21]. The majority of the items in the K-SADS-PL are scored using a 0-3 point rating scale. Scores of 0 indicate no information is available; scores of 1 suggest the symptom is not present; scores of 2 indicate subthreshold levels of symptomatology, and scores of 3 represent threshold criteria. The remaining items are rated on a 0-2 point rating scale on which 0 implies no information; 1 implies the symptom is not present; and 2 implies the symptom is present. [22]. Ghanizadeh et al. Gained the reliability and validity of this scale in their research. Based on their study, test-retest reliabilities of ADHD, ODD, and tic disorder were 0.81, 0.67, and 0.56; respectively. Inter-rater reliabilities of ADHD and ODD were 0.69 and 0.69 [23].

Lifestyle Questionnaire (LSQ): Lifestyle assessment questionnaire consists of 70 items, in the study by Lalie et al. (2003). The results of factor analysis showed that the lifestyle questionnaire was multidimensional and includes the following sub-scales: physical health, exercise and health, weight control and nutrition, illness prevention, psychological health, spiritual health, social health, drug and alcohol avoidance, accident prevention, and environmental health [24]. To assess the reliability of the questionnaire, two methods of internal consistency and re-test were used. The reliability of lifestyle components using Cronbach's alpha was 0.89 to 0.76. The reliability coefficients by the test-retest method were 0.84 to 0.94 (24). The questionnaire was based on the Likert spectrum in the range from 0 (= never) to 3 (= always). A higher score represents a better and healthier lifestyle [21].

Millon Clinical Multiaxial Inventory - Third Edition (MCMI-III): The MCMI is a psychological assessment tool that was designed to clinically evaluate, diagnose and treat individuals experiencing emotional and interpersonal difficulties by Millon (1994). This new version of the questionnaire shared structural characteristics with the diagnostic and statistical manual of mental disorders, fifth edition (DSM–5). It is intended for adults (18 and over) [25]. MCMI–III scale demonstrates appropriate convergent and divergent validity with other self-report measures and is reliable (r= 0.89). The MCMI–III anxiety scale also showed adequate reliability (r = .78). MCMI–III measures of anxiety and avoidance are consistent with other measures of these constructs and may provide valuable clinical information in this regard [26]. The current version (MCMI-III) contains 175 items and has 28 separate scales, based on classes that including: 1) variability indicators, 2) clinical personality patterns, 3) severe personality pathology, 4) clinical syndrome, and 5) severe clinical syndrome which is in line with the Millone's theory.

Results

Among the 1035 participants in this study, 44.1% were boys and 55.9% were girls and 38.8% were between 6 and 9 years, 31.3% were between 10 and 14 years, and 29.9% were between 15 and 18 years old. Among these, 2.7% of boys and 3.3% of girls had a mood disorder.

The descriptive statistics of variables such as the values of mean and standard deviation of variables are demonstrated in Table 1. Table 1 also depicts the Pearson correlation coefficients among the research variables.

Table 1 illustrates the correlation between sports and wellness (p=0.032), weight control and nutrition (p=0.005), drugs avoidance (p=0.039) and mood disorder. This correlation was weak and negative. Table 2 shows that there is a significant relationship between mood disorders and personality disorder in mothers (borderline, somatoform, PTSD). Table 3 reveals that there is a significant relationship between mood disorders and personality disorder in fathers (antisocial, dependent).

Simultaneous multiple regression was used to examine the prediction of personality disorder in mothers and fathers based on mood disorders analyses. According to Table 4, since the F value was acquired highly significant (p<0.01), it is indicated that a personality disorder in mother including PTSD, a personality disorder in father including dependent variables and lifestyle including drugs avoidance could explain a considerable amount of the variance in mood disorder in children and adolescents.

The contribution of each variable in predicting mood disorder has been presented in Table 5. Accordingly, the p-value of the t-test for each predictor were significant (p<0.01). In addition, it seems necessary to point out that PTSD (ß = 0.101) had the highest beta coefficient which indicated that PTSD had the greatest contribution in predicting mood disorder.

Table 1. Descriptive Index and Pearson Correlation Matrix of Research Variables for Lifestyle

Mood Disorder	Physical Health	Sports and Wellness	Weight Control and Nutrition	Prevention Diseases	Psychological Health	Spiritual Health	Socioal Health	Drugs Avoidance	Prevention of Accidents	Enviromental Health	Lifestyle_total
Pearson	-0.03	-0.07	-0.09	-0.04	-0.04	-0.01	-	-0.07	0.01	-0.04	-0.02
P	0.345	0.032	0.005	0.172	0.184	0.705	-	0.039	0.619	0.19	0.426
Mean	16.49	12.38	13.71	16.49	15.16	13.62	15.89	15.23	19.52	17.02	155.54
SD	4.90	5.74	4.48	3.14	4.52	4.21	4.09	3.60	4.33	3.54	27.56

Table 2. The Descriptive Index and Pearson Correlation Matrix of Research Variables for Maternal Personality Disorders

Mood Disorder	Schizoid	Avoidant	Depressive	Dependent	Histrionic	Narcissistic	Antisocial	Aggressive	Compulsive	Negativistic	Self-Defeating	Schizotypal
Pearson	-0.02	0.03	0.04	0.03	0.02	-0.005	-	0.03	-0.04	0.06	0.008	0.06
P	0.505	0.399	0.188	0.277	0.545	0.893	-	0.342	0.245	0.073	0.808	0.084
Mean	0.02	0.02	0.19	0.06	0.30	0.05	-	0.02	0.38	0.07	0.03	0.01
SD	0.17	0.15	0.52	0.29	0.62	0.22	–	0.13	0.74	0.26	0.20	0.09
Mood Disorder	**Borderline**	**Paranoid**	**Anxiety**	**Somatoform**	**Bipolar**	**Dysthymia**	**Alchohol Dependence**	**Drug Dependence**	**Post-Traumat sress Disorder**	**Thought Disorder**	**Major Depression**	**Delusional Disorder**
Pearson	0.11	-0.01	0.06	0.08	-0.006	0.01	-0.006	-0.006	0.13	0.04	-0.01	-0.01
P	0.001	0.684	0.075	0.012	0.862	0.727	0.862	0.862	0.001	0.225	0.697	0.776
Mean	0.02	0.01	0.04	0.03	0	0.06	0	0	0.01	0.01	0.01	0
SD	0.15	0.10	0.23	0.19	0.03	0.31	0.03	0.03	0.14	0.12	0.07	0.08

Table 3. The Descriptive Index and Pearson Correlation Matrix of Research Variables for Father's Personality Disorders

Mood Disorder	Schizoid	Avoidant	Depressive	Dependent	Histrionic	Narcissistic	Antisocial	Aggressive	Compulsive	Negativistic	Self-Defeating	Schizotypal
Pearson	0.06	-0.02	0.04	0.09	0.04	-0.001	0.07	0.06	-0.003	0.01	-0.02	-0.02
P	0.074	0.544	0.255	0.008	0.216	0.979	0.033	0.058	0.939	0.729	0.483	0.562
Mean	0.01	0.01	0.08	0.01	0.53	0.04	0	0.02	0.47	0.03	0.02	0.01
SD	0.09	0.12	0.35	0.13	0.71	0.22	0.08	0.15	0.67	0.17	0.13	0.11
Mood Disorder	**Borderline**	**Paranoid**	**Anxiety**	**Somatoform**	**Bipolar**	**Dysthymia**	**Alchohol Dependence**	**Drug Dependence**	**Post-Traumat sress**	**Thought Disorder**	**Major Depression**	**Delusional Disorder**
Pearson	-0.02	-0.01	-0.02	0.02	0.01	0.001	-0.009	-0.01	-0.01	0.02	-0.006	-0.006
P	0.492	0.728	0.456	0.480	0.596	0.980	0.806	0.621	0.636	0.429	0.862	0.862
Mean	0.02	0	0.04	0.02	0.02	0.04	0	0.01	0.01	0.02	0	0
SD	0.17	0.07	0.24	0.15	0.18	0.25	0.04	0.14	0.11	0.13	0.07	0.07

Table 4. Simultaneous Multiple Regression Predicting Mood Disorder Based on Lifestyle

	Variables	Sum of squares	Degree of freedom	Mean squares	R	R²	F	P
Mother	Regression	0.52	3	0.17	0.15	0.02	6.29	0.001
	Residual	22.76	813	0.02				
Father	Regression	0.27	2	0.13	0.10	0.01	4.89	0.008
	Residual	23.01	814	0.02				
Lifestyle	Regression	0.29	3	0.09	0.11	0.01	3.49	0.015
	Residual	22.99	813	0.02				

Table 5. Statistical Features of Psychological Mood Disorder Based on Lifestyle

	Predictor Variables	(unstandardized)β	β	t	P
Mother	Borderline	0.07	0.07	1.76	0.078
	Somatoform	0.009	0.01	0.24	0.806
	Post-Traumat Sress Disorder	0.11	0.10	2.47	0.014
Father	Dependent	0.10	0.08	2.27	0.023
	Antisocial	0.11	0.05	1.62	0.104
Lifestyle	Sports and Wellness	-0.01	-0.48	1.01	0.313
	Weight Control and Nutrition	-0.006	-0.02	0.50	0.613
	Drugs Avoidance	-0.02	-0.08	2.42	0.016

Discussion

There are many factors that affect mood disorders in children and adolescents and can predict these disorders. Among these factors that have been mentioned in various studies are parental personality disorders and their lifestyle [27–33]. So this study was a cross-sectional study to predict mood disorders in children and adolescents with parental personality disorders and their lifestyles.

The findings of this study also indicated that drug avoidance in parents could predict reverse mood disorder among children and adolescents. The findings of the current study are in agreement with the results of previous

studies [28,29]. These studies have demonstrated that mood disorder could be negatively predicted by drug avoidance. Drug avoidance, which is one of the sub-scales of lifestyle, can reverse predict mood disorders. Also, paternal with antisocial and substance-dependent disorder increase behavioral disorders and mood disorders in children. Also, the presence of substance abuse in parents can increase these disorders. Children whose fathers are drug dependent and have an antisocial anxiety disorder are more likely to suffer from psychiatric disorders, especially boys, it seems that children who live with a parent with poor emotional health, are more likely to have mood or anxiety disorder and behavioral disorder [29].

On the other hand, the results showed that fathers with dependent personality disorder predicted mood disorders in children and adolescents. To explain these findings, theoretical models suggest that in these parents, excessive control may not give the child the opportunity to develop autonomy, thereby undermining a sense of self-efficacy that increases vulnerability to anxiety disorder and depression.

Consistent with this analysis is evidence that parental influence, control and, overprotection, and parenting characteristics, are specifically related to depression [30, 31].

In this study, PTSD could predict mood disorder among children and adolescents which was consistent with previous findings [31,32]. Prior studies highlighted that anxiety and depressive symptoms are the potential risk factor for later depression. Research on mental health and parent-child interactions has largely focused on depressive symptoms with less attention given to other forms of mental illness such as PTSD. Maternal PTSD increases parenting problems, child maladjustment, and adolescent-reported negative family relations, independent of maternal depression. Thus, PTSD symptoms may have a distinct impact on parent-child relationships that are not captured in studies of depression [33,34]. Mental health symptoms can be associated with reduced quality and quantity of child-parent interactions as well as children's mental health. The family burden associated with parental mental illness can be a major source of anxiety and reduced quality of life in children and adolescents. Especially when the mother has PTSD symptoms, the quality of her relationship with the family decreases and, she cannot have an emotional relationship with the child and adolescent, and it aggravates the symptoms of mood disorders in them [35].

Conclusion

Personality disorder symptomatology is characterized by interpersonal problems and emotional dysregulation, which may affect offspring of parents with personality disorder symptoms. In this study, several factors of mood disorders among children and adolescents were predicted, including parental personality disorders and their lifestyle. Notably, though, studies are needed to discern whether parental PDs forecast symptoms of psychiatric disorders in offspring during their childhood

years and whether such prospective relations obtain after accounting for common causes. Therefore, a comprehensive approach should be taken to the problems of children and adolescents. Consideration should be given to the environment and psychological characteristics of their parents when diagnosing, treating, and intervening.

This study was conducted in the center of the province. The implementation of this plan in other cities of Yazd province will make a more accurate estimation of the psychiatric disorders in children and adolescents.

Conflict of Interest

The authors have no conflicts of interest.

Ethical Approval

Acknowledgement

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