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Parenting Received in Childhood and Early Separation Anxiety in Male Conscripts with Adjustment Disorder

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The purpose of this study was to investigate parenting received in childhood and early separation anxiety experiences in young male soldiers with adjustment disorder. Fifty-four conscripts suffering from adjustment disorder completed the following questionnaires: the Symptom Checklist-90-Revised (SCL-90-R), the Measurement of Parental Style (MOPS), and the Separation Anxiety Symptom Inventory (SASI). Seventy-eight conscripts, matched for age and education, were used as a control sample. The research showed that compared with the controls, patients had significantly increased scores on the SCL-90-R ($p < 0.001$), the SASI ($p < 0.03$), and the father's and mother's MOPS Abuse subscale ($p < 0.001$). The father's MOPS Abuse score, the mother's MOPS Overcontrol score, and the SASI score were also significantly correlated with the SCL-90-R score ($p < 0.01$). Finally, a patient's separation anxiety can be predicted from the mother's overcontrol behavior, and the severity of the disorder can be predicted from the father's abuse behavior. These findings are in agreement with previous findings in patients with depression and anxiety disorders.

Introduction

The view that early socialization experiences in the family shape the structure and function of adult interpersonal relationships underlies psychoanalytic, object relations, and attachment theories. Bowlby[1] theorized that the relationship between infant and parent affects the child's ability to form affection bonds in later life. He concluded that "attachment behavior is held to characterize human beings from the cradle to the grave." Main et al.[2] found that parents who were rated as secure in their own childhoods were reported to have secure attachments with their own infants. Several studies have been undertaken in the last decade to examine evidence of such continuity, and their findings support the concept that dysfunctional parent-child attachment is likely to be a potent pathogenic variable.[3]

The Parental Bonding Instrument (PBI) is a validated assessment tool for determining the quality of family relationships; it describes the perceptions an individual forms regarding his or her relationship with parents. With this tool, the influence of early childhood bonding experiences with parents can be classified into two dimensions: level of care or affection and level of control or protection (low vs. high).[4] From these two dimensions, four classifications of parental bonding styles have been identified: optimal bonding, weak bonding, affectionate constraint, and affectionless control. The affectionless control style of bonding indicates high overprotective behavior with low care by the parent and has been found to be characteristic of adults with depression,[5-7] delinquency,[8] and adolescent drug abuse.[9] Affectionate constraint (high care, high protection) appears to have some specificity to panic disorder.[10] In contrast to less optimal bonding styles, optimal bonding (care plus support of independence) is typically associated with what is considered successful social adaptation and positive psychosocial outcomes.[11,12] Parker[13] found a close relationship between all PBI scales for both monozygotic and dizygotic twins. The similarity of the monozygotic and dizygotic correlation suggested that little of the variation on the PBI scales could be attributed to genetic sources. In 1997, Parker et al.[14] described the development of the Measure of Parenting Style (MOPS), which comprised refined PBI scales assessing parental indifference and overcontrol as well as a scale assessing parental abuse. The authors found a correspondence between the relevant scales of the MOPS and the PBI, and also that the MOPS Abuse scale could remain integral to the MOPS or complement the standard PBI. They failed to establish a higher parenting abuse score for anxiety disorders, but they did, in relation to mothers only, link higher abuse scores with a clinical diagnosis of nonmelancholic depression. This new scale was used recently, in parallel with the PBI, in patients with personality disorders.[15]

Another main early socialization experience is the security of attachments or the separation anxiety. According to Bowlby's early analysis,[16] anxiety about the security of attachments is a normal and adaptive evolutionary phenomenon, with pathological manifestations emerging only if the growing child is exposed to abnormalities in early bonding experiences. The "separation anxiety hypothesis of panic disorder" has received repeated endorsement by clinicians.[17] Tentative indications emerged that persons with heightened separation anxiety were more liable to early onset of panic disorder with agoraphobia and a more disabling course of the adult disorder.[18,19] In 1993, Silove et al.[20] developed the Separation Anxiety Symptom Inventory (SASI) to record adults' memories of such experiences during the first 18 years of life. Panic disorder patients were found to have higher SASI scores than generalized anxiety disorder patients.[21,22] It was concluded that early separation anxiety may produce a graduated risk, with moderate levels predisposing subjects to generalized anxiety and higher levels increasing the risk for panic disorder. Furthermore, Lipsitz et al.[23] suggested that early separation anxiety may be a harbinger of severe and multiple anxiety disorders in adulthood rather than a risk for panic disorder alone. It is possible that early separation anxiety is only one aspect of a nonspecific temperamental vulnerability to affective disorders in adulthood.[24]

In 1996, Rosen and Martin[25] examined the impact of a history of childhood abuse and neglect on soldiers' adaptation to military life using the Childhood Trauma Questionnaire. They found that emotional neglect during childhood may have a negative

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effect on soldiers' ability to access social support within their units. Other researchers found a close relationship between adjustment dysfunction and parenting received in childhood in incarcerated young offenders[26] and in high school students who participated in an international exchange program.[27] Finally, a close relationship was found between adjustment dysfunction and early separation anxiety in adolescents who lived on campus during the summer.[28]

The purpose of this study was to investigate the links between the perception of parenting received in childhood and the levels of early separation anxiety in patients with adjustment disorder. Additionally, we wanted to test the hypothesis that early socialization experiences are a pathogenetic variable in the development of adjustment disorder. To our knowledge, this is the first study that investigates both the relationship between perceptions of parenting received in childhood and early separation anxiety in patients with adjustment disorder.

Materials and Methods

Fifty four patients suffering from adjustment disorder, according to the Diagnostic and Statistical Manual of Mental Disorders, Third Edition, Revised (DSM-III-R), without comorbidity with other psychiatric disorders participated in this study. All patients were male soldiers during their initial period of military service. It is known that difficulties such as sudden changes of sleeping, feeding, and working habits, as well as the lack of a previous support system (e.g., family and friends), may constitute the stressor that leads to the diagnosis of adjustment disorder. Patients were referred because of symptoms of mild depression, anxiety, and impairment in occupational function. The sample included conscripts attending the Psychiatric Department of the General Army Hospital of Tripolis (Greece) during the first half of 2000 who were hospitalized for at least 1 day. All participants signed standard consent forms.

Patients were administered the Structured Clinical Interview for the DSM-III-R, Patient Edition (SCID-P) and the Structured Clinical Interview for the DSM-III-R Axis II Disorder (SCID-II)[29] and were diagnosed as having adjustment disorder without comorbidity in axis I and II. It should be noted that there are no significant differences between DSM-III-R and DSM-IV for the diagnosis of this disorder. According both DSM-III-R and DSM-IV,[30] adjustment disorder includes emotional or behavioral symptoms as well as significant impairment in social or occupational functioning in response to an identifiable stressor within 3 months of the onset of the stressor. As a control sample, 78 soldiers, matched for age and education, were used.

Both patients and controls were Greeks who had approximately the same social and cultural background, and they were living during the same period on the same campus with more or less the same living conditions. It should be noted that 18 to 22 months (depending on the military branch) of military service is compulsory for all males in Greece, and this service usually begins at 18 to 22 years of age. Conscripted personnel are allocated to the army, navy, and air force according to uniform selection criteria. Individuals suffering from serious physical or mental disorders are exempted. Both patients and controls were administered the following questionnaires:

1. A questionnaire with general demographic data.
2. The self-reported Symptom Checklist-90-Revised (SCL-90-R),[31] which consists of 90 items concerning psychological, behavioral, and somatic complaints during the last month. It includes nine subscales: Somatization, Obsession-Compulsion, Interpersonal Sensitivity, Depression, Anxiety, Hostility, Phobic Anxiety, Paranoid Ideation, and Psychoticism. The rating options were as follows: 0, not existed; 1, light; 2, moderate; 3, heavy; and 4, extremely heavy.
3. The self-reported MOPS,[14] which consists of 15 items concerning the father and 15 items concerning the mother. It estimates the perception of parenting received in childhood during the first 16 years of life. It creates three subscales for each of the parents: (a) Indifference (e.g., my father/mother behaved toward me in an uncaring, rejecting etc. way); (b) Overcontrol (e.g., my father/mother was overcontrolling, sought to make me feel guilty, etc.); and (c) Abuse (e.g., my father/mother was verbally abusive, physically violent or abusive, unpredictable, etc. toward me). The rating options were "not true at all," "slightly true," "moderately true," and "extremely true," generating scores of 1, 2, 3, and 4.
4. The SASI,[17] which is a 15-item self-report measure developed to record adults' memories of such experiences during the first 18 years of life. Examples include "I did not want to be left alone at home," "I was afraid to go to sleep alone," and "I was afraid of getting lost when I was in strange places." The rating options were "not true at all," "slightly true," "moderately true," "very true," and "extremely true," generating scores of 1, 2, 3, 4, and 5. Square root transformation of the SASI scores was made according to the instructions of Silove et al.[17]

Statistical analysis were performed with the use of SPSS for Windows Release 8.0.0.[32] and the procedure included χ^2 and independent samples t tests. Pearson correlation analysis, and multiple regression analysis with forward and backward stepwise inclusion.

Results

No significant differences were found between patients and controls in most of the demographic areas (Table I). Both samples had about the same age, educational, and cultural profiles. Patients reported bad financial and bad parental relationships significantly more frequently. According to the predominant symptoms of adjustment disorder, 21 patients (38.8%) were classified as having the subtype of adjustment disorder with depressed mood, 6 (11.1%) were classified with anxiety mood, 19 (35.1%) were classified with mixed anxiety and depressed mood, 1 (1.8%) was classified with disturbance of conduct, and 7 (12.9%) were classified with mixed disturbance of emotions and conduct.

Table II shows that the SCL-90-R total score, and all of the SCL-90-R subscales scores, excluding psychoticism, were increased significantly in the patient group compared with the control group ($p < 0.01$ to $p < 0.000$). It should be noted that the controls' SCL-90-R scores in this study were decreased slightly in relation to the controls' scores used for the standardization study of this scale in a Greek population,[33] which supports the healthy profile of the present controls. In addition, the patients' SCL-90-R scores in this study were decreased significantly in

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TABLE I

GENERAL DEMOGRAPHIC DATA

	Patients (n = 54)		Controls (n = 78)		
	Mean	SD	Mean	SD	p
Age	20.48	2.28	20.56	1.87	0.820
Days in the army	34	17	30	0	0.048[a]
Years of education	11.7	2.52	12.51	3.03	0.109
Age of father	50.52	8.56	50.62	5.96	0.938
Age of mother	47.49	7.03	45.25	5.89	0.558
Siblings	1.56	0.96	1.76	1.37	0.354
	n	%	n	%	p
Live in urban area	37	68.52	58	76.32	0.323
Physical	51	94.44	76	98.7	0.163
Parents' low financial[b]	12	22.22	6	7.69	0.016[a]
Unmarried	54	100	75	96.15	0.144
Bad relations between parents[b]	12	22.22	6	7.79	0.018[a]
Parents' separation or divorce	11	20.75	10	12.99	0.237
Drug use (not addiction)	8	14.81	13	16.88	0.750

[a] $p < 0.01$.

[b] Patients answered about their financial and relations between parents according to the options "low," "moderate," and "high" and "bad," "moderate," and "good," respectively.

TABLE II

MOPS, SCL-90-R, AND SASI SCORES IN PATIENTS WITH ADJUSTMENT DISORDER AND CONTROLS

	Patients		Controls			
	Mean	SD	Mean	SD	t test	p
MOPS father indifference	8.91	4.21	8.09	3.03	1.2236	0.1970
MOPS father overcontrol	7.39	4.21	6.96	2.36	1.0909	0.2873
MOPS father abuse	8.44	3.60	6.76	2.48	2.9881	0.0018[a]
MOPS mother indifference	6.83	1.24	6.86	2.08	−0.0885	0.9297
MOPS mother overcontrol	7.59	1.85	7.35	2.72	0.6204	0.5629
MOPS mother abuse	5.76	2.54	5.76	1.71	3.2810	0.0006[a]
SCL-90-R somatization	11.24	8.70	6.85	7.72	2.9862	0.0028[a]
SCL-90-R obsessive compulsive	13.69	8.75	8.10	6.20	4.0390	0.0000[a]
SCL-90-R interpersonal sensitivity	10.22	6.92	5.29	4.39	4.6242	0.0000[a]
SCL-90-R depression	17.46	11.06	8.71	7.12	5.1319	0.0000[a]
SCL-90-R anxiety	12.91	10.10	4.10	5.87	5.7689	0.0000[a]
SCL-90-R hostility	6.74	6.70	3.44	4.53	3.1568	0.0010[a]
SCL-90-R phobic anxiety	4.24	4.86	1.69	2.46	3.5544	0.0001[a]
SCL-90-R paranoid ideation	7.26	5.37	5.10	4.20	2.4728	0.0109[b]
SCL-90-R psychoticism	7.22	7.02	5.24	4.84	1.7969	0.0573
SCL-90-R total	99.06	62.31	53.14	42.45	4.7109	0.0000[a]
SASI	5.29	0.94	4.93	0.86	2.2393	0.0247[a]

[a] $p < 0.01$.

[b] $p < 0.1$.

relation to the patients' SCL-90-R scores used for the SCL-90-R standardization in a Greek population, which contained different psychiatric diagnoses. This outcome further supports the nonexistence of comorbidity in our patient sample.

The father's MOPS Abuse score and the mother's MOPS Abuse score were increased significantly in the patient group ($p < 0.0018$ and $p < 0.0006$, respectively) compared with the control group. It was also interesting that the SASI score was increased significantly in the patient group ($p < 0.03$) (Table II).

Using the Pearson correlation method (Table III), it was found that the father's MOPS Abuse score had a significant correlation to the SCL-90-R total score ($p < 0.01$) and to most of the SCL-90-R subscale scores ($p < 0.01$). The mother's MOPS Overcontrol score showed significant correlation with the SCL-90-R total score and with the scores for the SCL-90-R subscales Obsessive-Compulsive, Depression, and Paranoid Ideation ($p < 0.01$). The mother's MOPS Overcontrol subscale also showed significant correlation with the SASI score ($p < 0.01$). Finally, the SASI score showed significant correlation with the SCL-90-R total score and with its subscales Anxiety and Phobic Anxiety ($p < 0.01$).

Finally, multiple regression analysis showed that patients' separation anxiety can be predicted from the levels of their mothers' overprotective behavior. The research also showed that the severity of patients' symptoms can be predicted from their fathers' abusive behavior ($p < 0.05$) (Table IV).

TABLE III

CORRELATION BETWEEN SUBSCALES OF MOPS, SUBSCALES OF SCL-90-R, AND SASI IN PATIENTS WITH ADJUSTMENT DISORDER

	SASI	SCL-90-R Somatization	SCL-90-R Obsessive-Compulsive	SCL-90-R Interpersonal Sensitivity	SCL-90-R Depression	SCL-90-R Anxiety	SCL-90-R Hostility	SCL-90-R Phobic Anxiety	SCL-90-R Paranoid Ideation	SCL-90-R Psycoticism	SCL-90-R Total
MOPS father indifference	0.128	0.062	0.255	0.179	0.200	0.155	0.218	0.175	0.213	0.144	0.210
MOPS father overcontrol	0.263	0.176	0.207	0.263	0.334	0.180	0.300	0.238	0.320	0.166	0.290
MOPS father abuse	0.268	0.283	0.401[a]	0.417[a]	0.420[a]	0.410[a]	0.503[a]	0.363[a]	0.453[a]	0.342	0.484[a]
MOPS mother indifference	0.288	0.025	0.343	0.198	0.226	0.190	0.160	0.223	0.293	0.215	0.247
MOPS mother overcontrol	0.431[a]	0.254	0.362[a]	0.276	0.370[a]	0.256	0.293	0.242	0.361[a]	0.332	0.370[a]
MOPS mother abuse	0.263	0.152	0.168	0.284	0.110	0.093	0.086	0.132	0.287	0.228	0.199
SASI	1.000	0.282	0.245	0.248	0.308	0.390[a]	0.218	0.408[a]	0.154	0.307	0.351[a]

[a] $p < 0.01$ (Pearson correlation coefficient).

TABLE IV

MULTIPLE REGRESSION ANALYSIS OF SASI, SCL-90-R TOTAL, AND MOPS SUBSCALE SCORES IN PATIENTS WITH ADJUSTMENT DISORDER AND CONTROLS

	SASI				SCL-90-R Total			
	Patients		Controls		Patients		Controls	
	ΔR^2 0.266		ΔR^2 0.121		ΔR^2 0.351		ΔR^2 0.657	
	df 53		*df* 77		*df* 53		*df* 77	
	t	*p*	*t*	*p*	*t*	*p*	*t*	*p*
MOPS father indifference	−0.688	0.495	0.807	0.422	−1.301	0.200	0.740	0.462
MOPS father overcontrol	0.536	0.595	−0.562	0.576	0.015	0.988	0.738	0.463
MOPS father abuse	0.946	0.349	1.354	0.180	2.983	0.005[a]	1.916	0.059
MOPS mother indifference	0.824	0.414	−0.224	0.823	0.342	0.734	1.176	0.244
MOPS mother overcontrol	2.037	0.047[a]	0.880	0.382	1.391	0.171	1.627	0.108
MOPS mother abuse	0.626	0.535	0.538	0.592	−0.127	0.900	−0.994	0.324
SASI					0.987	0.329	8.706	0.000[a]

[a] $p < 0.01$.

Discussion

The present study showed that abusive and overprotective parenting received in childhood, as well as early separation anxiety, are important factors for the development of adjustment disorder in soldiers. Military service is compulsory for all Greek male citizens who have passed the age of 18 years with the exception of those suffering from severe physical and mental disorders. The first 50 days constitute what is regarded as basic training, taking place in camps with a capacity of approximately 1,000 people. This training includes both theory and practice of military behavior and weapons handling as well as combat simulation. Despite the fact that Greece is geographically part of the Balkans, an area that has developed severe political instability during the last decade, one could not compare the military service conditions with those of a period of possible direct military threat. Nevertheless, part of the Greek army is involved in peacekeeping operations within the broader area, which does bring the dimension of military readiness into the period of basic training. There is little reference in the Greek military literature to attrition during recruit training or psychological breakdown during combat,[34] but it is hoped that the recent peacekeeping operations will produce more information on these topics.

It is known that conscription entails many adaptation difficulties for young soldiers. During basic training, youths are expected to abide by an inflexible time schedule and to follow orders unconditionally and precisely in a period of life when the drive for individuality and independence is intense. Furthermore, conscription is a stressful psychosocial factor because of the sudden suspension of all previous social activities and the lack of the previous support system, such as family and friends.[25,35] This stressful condition seems to share many similarities with separation anxiety conditions that underlie psychoanalytic and attachment theories. Concepts underlying the construct of separation anxiety have changed over time. Traditional psychodynamic theory regarded separation anxiety as an intrapsychic vulnerability. Recent studies of attachment theory suggest that "internal representations" of attachment figures, rather than the actual absence or presence of such figures, determines the individual's attachment style and emotional response to separations.[36] Many studies during the last decade have emphasized the existence of increased levels of early separation anxiety in patients with anxiety disorders, especially panic disorder.[22,37,38]

From the viewpoint of developmental psychopathology, different models have also been discussed. Early separation anxiety is possibly only one aspect of a nonspecific temperamental vulnerability to affective disorders in adulthood.[22] Soldiers with adjustment disorder in the present study showed significantly

increased levels of early separation anxiety (SASI score) compared with controls. It was also found that disordered soldiers' early separation anxiety was highly correlated with the severity of the disorder and especially with the clinical manifestations of anxiety and phobia. Furthermore, multiple regression analysis showed that patients' separation anxiety can be predicted from their mothers' overcontrol behavior. It should be noted that a reliability investigation of the SASI showed that it generates scores that are not influenced by changes in state anxiety or depression[17] and that our reliability investigation showed a satisfactory internal consistency (Cronbach's $\alpha = 0.90$).

These clinical findings are in agreement with psychoendocrinological findings in animals.[39] When separated from groups, squirrel monkeys respond with significant increases in plasma cortisol and adrenocorticotropic hormone. Although cortisol remains higher than preseparation levels, significant reductions occur in adrenocorticotropic hormone, which suggest that that reduction is mediated by corticosteroid feedback. Similar findings in humans have been reported in clinical studies of hypercortisolism and major depression.

Another interesting finding of this study was the significant correlation of the mother's MOPS Overprotection score with most of the SCL-90-R subscale scores, which suggests a significant correlation between maternal overprotection and the severity of the symptoms. In addition, the mother's MOPS Overprotection subscale score showed significant correlation with the SASI score. Furthermore, it was found that patients' levels of early separation anxiety can be predicted from the levels of maternal overprotection. These findings are in agreement with those of Parker et al.[14], who notes that both panic disorder and social phobia patients reported higher maternal PBI protection scores and higher parental MOPS overcontrol scores. Parental overcontrol has also been reported in patients suffering from panic disorder[10] and social phobia.[7] Recently, Bennet and Stirling[41] found a relationship between trait anxiety and parental overprotection in a sample with anxiety disorders. Generally, the results of the present study are also in agreement with studies indicating that depressed people are more likely to report their parents as uncaring and overprotective, as was measured by the PBI.[42]

Dysfunctional parent-child attachment is likely to be a potent pathogenic variable.[2-15,43,44] Favaretto and Torresani[45] analyzed studies that used the PBI and that were published between 1979 and 1995 and found that perceived parental style can be considered a good predictor of the presence of psychiatric disorders. They also found that, with the exception of bipolar affective disorder and avoidant personality disorder, the prevalent correlated parental style was for all diagnostic groups the one of affectionless control. Similarly, the results of the present study on soldiers with adjustment disorder showed that the parenting style was described as abusive. Particularly, patients' scores for the father's and mother's MOPS Abuse subscale were increased significantly compared with those of controls. We also found a significant correlation of the father's abusive behavior with the severity of symptoms. Furthermore, multiple regression analysis showed that the SCL-90-R score can be predicted from the father's MOPS Abuse subscale score, which suggests that the severity of the disorder can be predicted from the father's abusive behavior. Using MOPS, Parker et al.[14] also found higher abuse score in patients with nonmelancholic depression. Similarly, Rosen and Martin[25] found that emotional neglect during childhood may have a negative effect on a soldier's ability to access social support within his or her unit. Another study among U.S. Air Force basic trainees found that childhood sexual abuse predicted failure to complete basic training.[46] In addition, childhood abuse appears to increase the risk of combat-related post-traumatic stress disorder.[47,48] We suggest that childhood abuse is a pathogenetic factor increasing the vulnerability to different types of adjustment difficulties in the military and inducing psychological breakdown in combat.[49]

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