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Early Separation Anxiety as a Prognostic Factor for the Development of Adjustment Disorder in Male Conscripts

Abstract The purpose of this study was to investigate the early separation anxiety experiences in young male soldiers with adjustment disorder. Fifty four conscripts suffering from adjustment disorder, completed the questionnaires Symptom Checklist-90-Revised (SCL-90-R) and Separation Anxiety Symptoms Inventory (SASI). Seventy eight conscripts, matched for age and education, were used as a control sample. It was found that, in relation to controls, patients had significantly increased scores in the scales SCL-90-R ($P < 0.001$) and SASI ($P < 0.03$). Furthermore, the levels of early separation anxiety symptoms (SASI score) were significantly correlated with the severity of the present disorder (SCL-90-R score) ($P < 0.01$), as well as with SCL-90-R subscales anxiety and phobic anxiety ($P < 0.01$). These results are in agreement with previous findings in patients with panic disorder and depression.

Key words

Conscription,
separation anxiety,
adjustment disorder.

Introduction

A main early socialization experience is the security of attachments or the separation anxiety. According to Bowlby's early analysis,¹ 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.² It has been suggested 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.^{3,4}

In 1993, Silove et al⁵ reported the development of the Separation Anxiety Symptom Inventory (SASI), to record adult's memories of such experiences over

the first 18 years of life. A linear trend was found^{6,7} for panic disorder patients who have higher SASI scores than generalized anxiety disorder patients. It was concluded that early separation anxiety may exert a graduated risk, with moderate levels predisposing subjects to generalized anxiety and with higher levels increasing the risk for panic disorder. Furthermore, Lipsitz et al⁸ 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 non-specific temperamental vulnerability to affective disorders in adulthood.⁹

In 1996, Rosen and Martin,¹⁰ examined the impact of a history of childhood abuse and neglect on soldier's adaptation to army life, using the Childhood

Trauma Questionnaire. They found that emotional neglect during childhood may have a negative impact on soldier's ability to access social support within their units. It was also found that there is close relationship between adjustment dysfunction and early separation anxiety in adolescents who lived in campus during the summer.¹¹

The purpose of this study was to investigate the hypothesis that early socialization experiences, and especially the levels of separation anxiety during childhood, is a pathogenetic variable in the development of adjustment disorder.

Material and methods

Fifty four patients suffering from Adjustment Disorder, according to DSM-III-R, without co-morbidity with other psychiatric disorders, participated in this study. All patients were men, soldiers, during the initial period of military service. It is known that difficulties like the sudden change of habituation in sleeping, feeding, and working, as well as, the inhibition of previous support system –family and friends–, may compose the stressor that led 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, and were hospitalized for at least one day. All participants signed standard consent forms. Patients were administered the Structured Clinical Interview for the DSM-III-R, patients edition (SCID-P), and the Structured Clinical Interview for the DSM-III-R Axis II Disorder (SCID-II),¹² and were diagnosed as having adjustment disorder without co-morbidity in Axis I and II. It should be noted that there are not significant differences between DSM-III-R and DSM-IV for the diagnosis of this disorder. According to both DSM-III-R and DSM-IV,¹³ adjustment disorder includes emotional or behavioral symptoms, as well as significant impairment in social or occupational functioning, in response to an identifiable stressor within three months of the onset of the stressor. As a control sample 78 soldiers, were used matched for age and education. Both patients and controls were Greeks, they had about the same social and cultural background, and they were living during the same period in the same campus, having generally the same living conditions. It should be noted that from 18–22 months (depending on the military branch) of military service is compulsory for all males

in Greece and it usually begins in the age range of 18–22 years. 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:

- A questionnaire with the general demographic data.
- The self-reported scale Symptom Checklist-90-Revised (SCL-90-R)¹⁴ 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: (0=not existed, 1=light, 2=moderate, 3=heavy, 4=extremely heavy).
- The Separation Anxiety Symptom Inventory (SASI),² a 15-item self-report measure developed to record adults' memories of such experiences over the first 18 years of life. 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.²

Statistical analysis was performed by the use of SPSS for MS Windows Release 8.0,¹⁵ and the procedure included chi-square, independent samples t-tests, Pearson correlation analysis, and finally multiple regression analysis with forward and backward stepwise inclusion.

Results

There were non significant differences between patients and controls in most of the demographic areas (table 1). Both samples had about the same age, educational, and cultural profile. Patients were more frequently reported to experience had financial situation and bad parental relationships. According to the predominant symptoms of adjustment disorder, 21 (38.8%) patients were classified as having the subtype of adjustment disorder with depressed mood, 6 (11.1%) with anxiety mood, 19 (35.1%) with mixed anxiety and depressed mood, 1 (1.8%) with disturbance of conduct, and 7 (12.9%) with mixed disturbance of emotions and conduct.

Table 2 shows that the SCL-90-R-total score, as well as all of the SCL-90-R- subscales scores, excluding psychoticism, were significantly elevated in the

Table 1. General demographic data.

	Patients (n=54)		Controls (n=78)		P
	Mean	SD	Mean	SD	
Age	20.5	2.2	20.5	1.8	0.8
Days in the army	34	17	30	0	0.05
Years of education	11.7	2.5	12.5	3.0	0.1
Age of mother	47.5	7.0	45.2	5.9	0.5
Age of father	50.5	8.5	50.6	5.9	0.9
Siblings	1.5	0.9	1.7	1.3	0.3
	n	%	n	%	
Live in urban	37	68.5	58	76.3	0.32
Physical parents	51	94.4	76	98.7	0.16
Low financial	12	22.2	6	7.7	0.01
Unmarried	54	100	75	96.1	0.14
Drug use	8	14.8	13	16.9	0.75

patients' group in relation to the control group ($P < 0.01$ to $P < 0.000$). It should be noted that the control's SCL-90-R scores of the present study were found slightly decreased in relation to the controls scores used for the standardization study of this scale in greek population,¹⁶ which furthermore supports the healthy profile of the present controls. In addition, the patients' SCL-90-R scores of the present study were significantly decreased in relation to the patients' SCL-90-R scores used for the SCL-90-R standardization in greek population, which contained different psychiatric diagnoses. This outcome furthermore supports the non-existence of co-morbidity of our patients' sample.

The SASI score was significantly elevated in the patients' group ($P < 0.03$) (table 2). Using the Pearson correlation method (table 3), it was found

Table 2. The scales SCL-90-R and SASI in patients and controls.

	Patients		Controls		t-test	P
	Mean	SD	Mean	SD		
SCL-90-R Somatization	11.24	8.70	6.85	7.72	2.9862	0.0028
SCL-90-R Obsessive- compulsive	13.69	8.75	8.10	6.20	4.0390	0.0000
SCL-90-R Interpersonal sensitivity	10.22	6.92	5.29	4.39	4.6242	0.0000
SCL-90-R Depression	17.46	11.06	8.71	7.12	5.1319	0.0000
SCL-90-R Anxiety	12.91	10.10	4.10	5.87	5.7689	0.0000
SCL-90-R Hostility	6.74	6.70	3.44	4.53	3.1568	0.0010
SCL-90-R Phobic anxiety	4.24	4.86	1.69	2.46	3.5544	0.0001
SCL-90-R Paranoid ideation	7.26	5.37	5.10	4.20	2.4728	0.0109
SCL-90-R Psychotism	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
SASI	5.29	0.94	4.93	0.86	2.2393	0.0247

Table 3. Correlation between subscales of SCL-90-R and SASI in patients with adjustment disorder.

SASI	SCL-Somatization	SCL-Obsessive	SCL-Interpersonal	SCL-Depression	SCL-Anxiety	SCL-Hostility	SCL-Phobic	SCL-Paranoid	SCL-Psychotism	SCL-Total
1.000	0.282	0.245	0.248	0.308	0.390*	0.218	0.408*	0.154	0.307	0.351*

Pearson correlation coefficient (r), * = $P < 0.01$

that the SASI score showed significant correlation with the SCL-90-R-total score, as well as with its subscales anxiety and phobic anxiety ($P < 0.01$).

Discussion

This study shows that separation anxiety during childhood is an important factor for the development of soldier's adjustment disorder. It is known that conscription entails many adaptation difficulties for the young soldiers. During basic training period the youths are demanded to abide by an inflexible time schedule and to follow orders unconditionally, precisely at the period of life when the drive for individuality and independence is greatest. Furthermore, conscription is a stressful psychosocial factor because of the sudden inhibition of all previous functions and the lack of previous support system, family and friends.¹⁷ This stressful condition seems to share many similarities with separation anxiety conditions which underlies 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.¹⁸ Recent studies on 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.¹⁹ Many studies during the last decade have emphasized the existence of increased levels of early separation anxiety in patients with anxiety disorders, especially those with panic disorder.^{20,21}

From the viewpoint of developmental psychopathology different models have been suggested. Early separation anxiety is possibly only one aspect of a non-specific temperamental vulnerability to affective disorders in adulthood.⁷

Soldiers with adjustment disorder in the present study showed significantly increased levels of separation anxiety during childhood (SASI score) in comparison with controls. It was also found that disordered soldier's early separation anxiety was highly correlated with the severity of the disorder and especially with the clinical manifestations of anxiety and phobic anxiety. It should be noted that reliability investigation of SASI showed that it generates scores that are not influenced by changes in the state of anxiety or depression,² 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.²² When separated from groups, squirrel monkeys responded with significant increases in plasma cortisol and adrenocorticotropic hormone (ACTH). While cortisol remained elevated above pre-separation levels, significant reductions occurred in ACTH, which suggests that reduction is mediated by corticosteroid feedback. Similar findings in humans have been reported in clinical studies of hypercortisolism and major depression.

Future research focusing in the mechanisms that underlie the process from the early socialization experiences to adult life can contribute to identify causal relationships and to develop specific psychotherapeutic interventions.

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