

A Psychosocial and Psychometric Study of Children with Separation Anxiety Disorder

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Abstract

Twenty children with separation anxiety disorder diagnosed according to DSMIII-R criteria were compared with 20 normal controls matched by age and sex with regard to the following: Psychosocial variables viz; type of milk feeding during infancy, age of weaning, parent child relationship, home atmosphere, family size, economic status of the family, personality of the mother and scores on Wechsler Intelligence Scales Children (WISC). The aim was to find the role of these variables in causing anxiety in children. Using "t test" for independent samples and X² statistics non of these variables had significant effect, also logistic regression analysis was used to assess the global interaction of all these variables together using the backward stepwise method to get the highest predictive model of variables interaction; we found that: breast feeding, high age of weaning and lower score of WISC are the variables that give the highest prediction of anxious (80%) and non-anxious (75%) with overall prediction of (77.5%). These results were discussed. The cause of separation anxiety in children could not be attributed to a single predisposing factor and there is no reason to over estimate the role of early psychosocial factors and this disorder could be largely state (situation) dependent; this conclusion needs confirmation by future studies.

Introduction Childhood anxieties are classified into three main types: (a) separation anxiety, (b) avoidant anxiety, (c) over-anxious disorder (DSMIII-R). In separation anxiety; the essential feature is extreme anxiety, precipitated by separation from parents, home or other familial surroundings. The child's anxiety may approach terror or panic with concomitant mental or psychophysiological symptoms. (Kaplan and Sadock; 1993). Although anxiety is a common disorder in children (Gath et al. 1977) and was a subject of recent community studies (Kashani and Orvaschel, 1990); its pathogenesis is still a matter of controversy, Eisenberg (1958) referred childhood anxieties to be a response to chronically anxious parents. Eysenck (1959) viewed the genesis of neurotic anxiety as a learned behavior and regarded the environmental and cultural factors as the main causing of anxiety. Workman,

(1981) suggested the fear of annihilation, fear of mother loss, fear of disintegration of body parts and superego anxiety as the main causes of separation anxiety. Barker (1984) attributes anxieties in children to disturbed family functions. Heard (1982) discussed the role of care giving in supporting the child in anxiety provoking situations. The aim of this work is to "study the role of psychosocial factors and intelligence" represented by IQ in the pathogenesis of separation anxiety disorder; this will help in the prediction of this disorder in view of such factors and may suggest suitable preventive measures.

Subjects and Method: Subjects of the study were:

a) Twenty children from those who attended outpatient clinic of Tanta university hospital and were diagnosed as separation anxiety disorders according to

DSMIII-R criteria (labeled as 'patients')
b) Twenty neuropsychiatrically free children matched with the patients by age and sex; they were collected from those attending the hospital for reason other than neuropsychiatry (labeled as 'controls').

The two groups were subjected to the following:

1-Clinical neuropsychiatric examination to diagnose the patients and to exclude any clinical neuropsychiatric problem in the controls.

2-Psychosocial investigation for both groups with emphasis on the following:

a) Cultural background.
b) Attitude of parents towards pregnancy of that child "wanted or not".

c) Method of milk feeding during infancy.

d) Age of weaning and method.

e) Birth order of the child.

f) Family size.

g) Parent child relationship.

h) Mother with anxious personalities.

i) Home atmosphere.

j) Economic state of the family.

3-Psychometric study using Wechsler Intelligence Scale for Children. (WISC)

4-Statistical analysis:

Data were fed to the computer and treated statistically using "SPSS UNDER WINDOWS" version 5.2 package.

a) χ^2 (for categorical data) and t test for independence samples for numerical data (e.g. results of WISC family size and age of weaning) were used to compare the psychosocial variables between patients and control group.

b) Logistic regression analysis was used to develop a model of relationship between psychosocial variables and separation anxiety with highest goodness of fit, this type of analysis utilize the maximum likelihood equation in manipulating the variables used then select the best group

of variable that produce the maximum effect when act together and exclude the others with week effect.

Results: Demographic Data:

The mean age of the studied group was 4.6 ± 1.4 years for patients and 4.4 ± 1 years for controls; the difference is not significant ($p > 0.5$). Regarding the sex distribution patients were 9 males and 11 females while controls were 12 males and 8 females, there was no cultural difference i.e. they were 50% rural and 50% urban in both groups.

Early development: (Table 1)

a) Birth order, patients were first in 25%, middle in 55% and last in 20%; while the control cases were first in 20%, middle in 55% and last in 25% of cases.

b) Feeding during infancy, with regard to the patients it was breast feeding in 80% and bottle feeding in 20%; while for the controls it was breast feeding in 60% and bottle feeding in 40%.

c) Age of weaning was 14.35 ± 4.91 months for the patients and 12.6 ± 3.98 for the control cases. ($F = 4.056$; $P = 0.05$) i.e. nearly 5% level of significant. "Table 2"

N.B. In both groups, the parents reported that they were wanted pregnancies and their weaning from milk feeding was gradual.

Family history: (Table 1)

a) Parent-child relationship was a good relation in 65% and bad in 35% of the patients. On the other hand, it was good in 85% and bad in 15% of the control.

b) Personality of the mothers was anxious in 4 of the patients and 3 of the control.

c) Home atmosphere, divorce was reported in 2 families, one among patients and the other among controls. Home troubles e.g. quarrels among family members and other forms of difficult interper-

Table I Psychosocial Variable in 20 children with separation anxiety disorder and 20 control children

Variable	Patients		Control		Statistics	
	No	%	No	%	X ²	P
Sex						
Male	9	45	12	60	0.9	0.34
Female	11	55	8	40		
Culture						
Rural	10	50	10	50		
Urban	10	50	10	50		
Birth order						
First	5	25	4	20	0.22 25	0.89
Middle	11	55	11	55		
Last	4	20	5	25		
Economic State						
Low	10	50	6	30	1.67	0.196
Average	10	50	14	70		
Feeding						
Bottle	4	20	8	40	1.9	0.17
Breast	16	80	12	60		
Parent-child Relationship						
Good	13	65	17	85	2.13	0.14
Bad	7	35	3	15		
Personality of the Mother						
Anxious	4	20	3	15	0.17	0.68
Not anxious	16	80	17	85		
Home Atmosphere						
Divorce	1	10	1	10	1.05	0.6
Home trouble	8	40	5	25		
Quiet	11	55	14	70		

Table 2 Scores on (WISC)

Variable	No of Cases	Mean	SD	SE of Mean	F	P
Verbal IQ:					0.204	0.654
Patients:	20	86.55	11.968	2.675		
Control:	20	98.10	13.416	3.000		
Performance IQ:					0.475	0.495
Patients:	20	75.75	12.026	2.689		
Control:	20	74.45	9.687	2.166		
Total IQ:					0.179	0.675
Patients:	20	84.25	9.307	2.081		
Control: 20	88.60	10.580	2.366			
Family size:					1.244	0.272
Patients:	20	5.65	2.796	0.625		
Control:	20	5.60	2.303	5.515		
Weaning age:					4.056	0.051
Patients:	20	1435	4.913	1.099		
Control:	20	12.6	3.979	0.890		

Table 3a Model Statistics

-2 log Likelihood		35.294	
Goodness		41.914	
	Chi Square	df	Significance
Model Chi Square	18.547	5	0.0023
Improvment	18.547	5	0.0023

Table (3b) Classification table for dependent variables (Anxiety)

Predicted					Percent Correct
		Patients Anxious		Control cases Non -anxious	
Observed	Patients	Anxious	16	4	80.00%
	Control	Non -anxious	5	15	75.00% 77.50%

Table (3c) Statistics of Variables in Logistic Regression Equation

Variable	B	S.E.	Wald	df	Si	R	Exp(B)
Age	-.3216	.4564	.4965	1	.4810	.000	.7250
Breast Feeding	0.8060	.5784	1.9417	1	.1635	0.000	.4466
Age of weaning	-.2280	.1170	3.7971	1	0.0513*	-.1872	.7961
Total IQ	-.3216	.1731	3.5478	1	.0596*	-.1696	.7218
Verbal IQ	-.3044	.1203	6.4003	1	.0114**	.2859	1.3558
Performance IQ	-.0638	.0798	.6387	1	.4242	.000	1.0659

*P<0.1

**P<0.05

sonal communications was reported in 40% among patients and 25% among controls. On the other hand home atmosphere was said to be quiet in 55% of patients and 70% in control cases. d) The mean size of the family was 5.65 ± 2.8 for patients and 5.6 ± 2.3 for control (table 2)

Psychometric Study:(table ,2)

Results of Wechsler intelligence scale of children on patients and control cases showed that the mean verbal IQ was 86.55 ± 11.96 while for the control cases was 98.1 ± 13.416 . Performance IQ was 75.75 ± 12.026 for patients and

74.45 ± 9.687 for control. Total IQ was 84.25 ± 9.307 for patients and 88.6 ± 10.58 for control cases; non of these differences showed statistical significance.

Statistical analysis

No statistical significance as the difference between the 2 groups in the already mentioned parameters at 5% level. Logistic regression analysis was used to assess the global interaction of all these variables using backward stepwise method showed that a model combination of breast feeding, high age of weaning and

low score of WISC give the prediction of anxious (80%) and non anxious (75%) with overall prediction of (77.5%). The goodness of fit of this model was 41.914; $X^2=18.547$ df =5; $P=0.0023$ (Tables 3a,b,c).

Discussion Comparing the psychosocial variables of children with separation anxiety disorder with the control showed that separation anxiety was more apparent in first child, breast fed with an older age of weaning. None of these differences showed statistical significance at 5% level (in the weaning age $P=0.05$). What is interesting in these findings is that breast feeding was more among anxious children in spite of its importance for the psychological and physical health of the child as confirmed by many authors (Ali & Lowart, 1981; Pendaeli & Swift, 1976, Apoke 1967), this could be explained that in some children breast feeding for a longer period may enforce attachment to and dependency on the which may create difficulties on separation. In this regards the quality of relationship with the care giver is more important than the duration of this relationship.

Results of the family studies showed that the difference between patients and control regarding the family size, parent-child relationship, mother's anxiety, home atmosphere and economic status were not significant which denotes that none of these factors per se could have a significant contribution in pathogenesis of separation anxiety among children. The lower WISC score showed by anxious children could be due to decreased socialization results from fear of separation or simply due to constitutional low intelligence. This could be a cause or a result of separation anxiety; however many studies reported that children with psychiatric disorder show lower scores in WISC than normal children (Rowley,

1961; Reitan and Ball 1973). The model developed by the study directed the attention to the care giver who fed the child during infancy a specially feeding and to the age of weaning; this in particular points of the fact that the relationship should be managed not to enforce the child dependency with concomitant difficulty of separation specially for children with low intelligence. In this situation, early training of the child to separate from the care giver should be considered; a practice that guards against separation anxiety later on.

Comments:

- 1- The study showed the complex relation between children with separation anxiety disorder and their environment and none of the factors included in the study could be considered in the pathogenesis of separation anxiety.
- 2- The study confirmed the view of Heard, (1982) that anxiety of children is state dependent i.e. depending of the current situation more than the hereditary or permanent psychosocial factors.
- 3- Any model of the relationship between child and the environment should fulfill the significant degree of goodness of fitness. This fact was emphasized by Chess and Thomas, 1984
- 4- The results of this study should be regarded in the context of the small sample used but we cannot ignore its importance in opening the way for future studies.

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دراسة اجتماعية سيكومترية لأطفال يعانون من قلق الاتصال

تمت مقارنة عشرون طفلاً شخصوا على أنهم يعانون من قلق الاتصال وفقاً لمحاكاة مع عشرون طفلاً آخرين مكافئين لهم من حيث الجنس و السن في المجالات الآتية:

متغيرات اجتماعية، مثل التغذية بالحليب خلال الطفولة - سن الفطام - العلاقة بين الطفل و الوالدين - جو المنزل - المستوى الاقتصادي للأسرة - شخصية الأم.

. الدرجات على مقياس لذكاء الأطفال

و كان هدف الدراسة هذا البحث عن دور تلك المتغيرات في إحداث قلق الاتصال لدى الأطفال. و باستعمال مقاييس الدلالة الإحصائية لم يتضح أن إيا من تلك المتغيرات له تأثير ذو دلالة. كما استخدم تحليل التباين لتقديم التفاعل العام الشامل لكل هذه المتغيرات مجتمعة، واستخدم التحليل التراجعي للوصول إلى أعلى نمط للتنبؤ بالتفاعل بين هذه المتغيرات. أن الرضاعة عن طريق الثدي و ارتفاع سن الفطام وانخفاض درجة الذكاء على مقياس وكسلر هي لمتغيرات التي أعطت أكبر نسبة تنبؤ بالقلق (٨٠٪) و القلق (٧٥٪) و كذلك درجة التنبؤ الكلى (٧٧,٥٪) ونوقشت النتائج في ضوء الدراسات السابقة فوصلنا إلى نتيجة أن قلق الاتصال لدى الأطفال لا يمكن إرجاعه إلى عامل مرسب واحد و أنه لا يوجد مبرر للمبالغة في دور العوامل الاجتماعية المبكرة و أن الاضطرابات يمكن القول أنه "مستقل" و تحتاج هذه النتيجة إلى مزيد من دعم البحوث التي تجرى في المستقبل