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RESEARCH ARTICLE

FAMILY DYSFUNCTION ASSOCIATED WITH THE SEVERITY OF ANXIETY DISORDER IN CHILDREN

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ABSTRACT

Background: Anxiety disorders represent the highest prevalence of all psychiatric disorders of childhood and adolescence, causes of these disorders are diverse; are involved biological, environmental and psychosocial factors, how a psychosocial risk factor is the family atmosphere. **Objective:** determine whether the family function is associated with severity of anxiety disorder in children 8 to 12 years. **Material and method:** study Observational, analytic, transversal and prospective conducted in a population of children aged 8 to 12 years diagnosed with anxiety disorder, entitled Naval Hospital Specialties Veracruz. 2 tests were applied, the first assesses the severity of anxiety disorder (SCAS) and second functionality by child family Apgar. **Results:** 107 patients where 24.3% of them identified with severe anxiety were included; belonging to a functional family had an OR of 0.1 (95% CI from 0.07 to 0.5), have family dysfunction showed an OR of 5.3 (95% CI 2.0 - 13.9) and have a severe family dysfunction allowed an OR of 62.6 (95% CI calculate 3.4 -114.5) all value of p <0.05. **Conclusion:** There is a positive association between family dysfunction and severity of anxiety disorder.

Abbreviations: APGAR: Adaptation, Participation, Personal Resource Gradient, Affection, and Resources; SCAS: Spence Children's Anxiety Scale

INTRODUCTION

Anxiety disorders are a group of disorders characterized by the presence of concern, fear or excessive fear, stress or activation causes marked distress or significant impairment clinically activity of the individual diseases (Rapee, 2016). According to WHO, in general, 20% of children and adolescents having mental disorders, with anxiety disorders one of the prevailing up to adulthood and represents the highest prevalence of all disorders of childhood and adolescence values between 9 and 21% of children in Mexico (Cardenas *et al.,* 2010). Anxiety disorder can significantly impair the academic, emotional, social present and future development of the child who suffers, causing social isolation, poor school performance without forgetting the complications that can bring in the adult to continue the prolonged disorder (Simon *et al.,* 2009). The causes of anxiety disorders are diverse; are involved both biological and environmental factors such as psychosocial stress, family atmosphere, threatening life experiences and interaction of multiple other determinants. A troubled family environment, may contribute to the development and maintenance of anxiety disorders, evolving to chronicity and precipitating relapse or failure to established treatments (Ginsburg *et al.,* 2014).

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The severity of anxiety, or the extent of their symptoms, can be measured using several instruments, including the anxiety scale for children Spence (SCAS). This questionnaire, It was developed to assess the severity of anxiety symptoms widely according to the dimensions of anxiety disorder proposed by the DSM-IV and measures anxiety disorders in childhood and adolescence (Rapee, 2016). SCAS was created in 1997 and is an instrument consisting of 44 items that respond to self children; It was developed with the intention to investigate a wide range of anxiety symptoms in children general population, distributing to evaluate separation anxiety, obsessive-compulsive disorder, panic disorder, social phobia and generalized anxiety from 6 reagents for each symptom, as well also it quantifies from 3 agoraphobia items, 5-item fear of physical harm and has 6 items filler which do not qualify, which were included in order to reduce the impact of negative bias that will produce the list of problems mentioned in the rest questionnaire. The way which is graded on a scale from 4 options ranging from 0 to 3 forever and ever. The scale has been widely used in clinical settings for the evaluation of therapy, serving as support for the clinician to identify the impact of this in patients with symptoms of anxiety, because it is sensitive to treatment. There are several ways in which you can set breakpoints, always taking into account the age and gender of the child, used for general assessment total score, ranking severe anxiety from 40 points for children and 50 points for girls (Susan *et al.,* 2010). Family function, can be evaluated from different resources and one of them is the

family APGAR adapted for children from 8 years old, which evaluates five basic family functions: Adaptation, Participation, Gradiente staff resource, Affection and Resources; its application is recommended for children with anxiety or depression. The instrument consists of 5 questions andeach is scored on a value of 0 to 2, obtaining at the end an index of 0 and 10, it is interpreted as normal family functionality if obtained from 7 to 10 points, moderate family dysfunction if obtained from 4 to 6 points and serious dysfunction with a score of 0 to 3 (Cuba, 2014). The objective of this research was to identify the impact of family function in the severity of anxiety disorder in children 8 to 12 years attending the consultation of pediatric neurology at Naval Hospital Specialties Veracruz.

MATERIALS AND METHODS

A cross-sectional, analytical, observational and prospective study was conducted between October 2017 and January 2018, in the service of pediatric neurology at Naval Hospital Specialties Veracruz. It included the total population of children diagnosed with anxiety disorder, aged 8 and 12, who were in control by the department of pediatric neurology (NP) and agreed with their parents, participate in research making this record from the signature on a consent and informed consent respectively; children who did not cooperate or mental disabilities were excluded. The researcher aboard patients and their parents to verify the selection criteria at the end of the consultation usual assessment scheduled for service neuropaediatric to subsequently apply the questionnaire infant APGAR to identify their family role and scale of Spence (SCAS) to classify the severity of anxiety disorder at that time. The description of the quantitative variables was performed through measurements of central tendency (average) and dispersion (standard deviation); comparison was performed using Student's t test for independent samples, while variables were expressed from absolute and relative frequencies (%) and comparison was performed using test X^2or Fisher's exact test (less than 30 subjects or patients ≤5 within a cell in the table tetrachoric population); the strength of association is determined from the calculation of odds ratios (OR) and confidence interval at 95% (95%), taking the statistical significance for all above cases with a value of p <0.05.

RESULTS

107 patients were included, without exclusions or deletions. Patients were 42 men and 65 women with an average age of 9.9 years with standard deviation (SD) ± 1.5 years; a total of 26 (24.3%) patients with severe anxiety (AS), of which 23 (88.5%) were under drug treatment and 3 were identified (11.5%) were untreated being patients attending their first assessment service and 81 (75.7%) patients with severe anxiety (ANS), all with active drug treatment granted by the NP service. The predominant sex in those with AS was 69.2% women with cases in the same situation as with ANS group with 58% of cases; the age group with AS was 9.9 (SD ± 1.6) years and ANS Group with 9.9 (SD ± 1.5) with a value of p> 0.05; AS group and ANS were composed mainly of children with schooling 5th primary with 34.6% and 32.1% respectively of its members. No statistically significant association between sex or educational and anxiety levels (Table 1). With regard to family conditions, the primary caregivers of children with severe anxiety were her mother in 50% of cases and brother in 23.1%, while the ANS group the mother was the primary caregiver in 58% of patients, followed by 17.3% grandfather occasions.

Table 1. Gender and schooling according to the degree of anxiety

		Severe anxiety		No severe anxiety		OR	95%	P value
		Total	%	Total	%			
Sex	Man	8	30.8%	3. 4	42.0%	0.6	0.2-1.5	0.03
	Woman	18	69.2%	47	58.0%			
Scholarship	1st grade	0	0.0%	0	0.0%	-	-	-
	2nd grade	4	15.4%	3	3.7%	4.7	0.9-22.7	0.057
	Grade 3	5	19.2%	24	29.6%	0.5	0.1-1.6	0.4
	4th grade	5	19.2%	18	22.2%	0.8	0.2-2.5	1
	5th grade	9	34.6%	26	32.1%	1.1	0.4-2.8	0.8
	6th grade	3	11.5%	10	12.3%	1.2	0.3-5.0	0.7

Source: self made. Association calculated using Fisher's exact test. statistical significance with p value <0.05

Table 2. Family characteristics of the populations studied

		Severe anxiety		No severe anxiety		OR	95%	P value
		Total	%	Total	%			
Child caregiver	Mother	13	50.0%	47	58.0%	0.7	0.2-1.7	0.4
	Father	1	3.8%	2	2.5%	1.58	0.1-18.1	0.5
	Grandfather (a)	0	0.0%	14	17.3%	-	-	-
	Brother (a)	6	23.1%	5	6.2%	4.5	1.2-16.8	0.02
	Uncle (a)	2	7.7%	6	7.4%	1.4	0.2-7.3	0.6
	Babysitting / other	4	15.4%	7	8.6%	1.9	0.5-7.1	0.4
Kind of family	nuclear Simple	18	69.2%	52	64.2%	1.25	0.4-3.2	0.8
	extensive	1	3.8%	fifteen	18.5%	0.1	0.02-1.4	0.1
	single-parent	5	19.2%	12	14.8%	1.3	0.4-4.3	0.5
	composite	2	7.7%	2	2.5%	3.2	0.4-24.6	0.2
Number of brothers	brotherless	8	30.8%	16	19.8%	1.8	0.6-4.8	0.3
	1 brother	8	30.8%	3. 4	42.0%	0.6	0.2-1.5	0.4
	With 2 or more siblings	10	38.5%	31	38.3%	1.0	0.4-2.5	0.8
family function	functional family	8	30.8%	57	70.4%	0.1	0.07 to 0.5	0.0008
	mild dysfunction	eleven	42.3%	24	29.6%	1.7	0.7-4.2	0.3
	severe dysfunction	7	26.9%	0	0.0%	62.6	3.4-1145	<0.001

Source: self made; Note: calculated using Fisher's exact test / Chi2 Association. statistical significance with p value <0.05

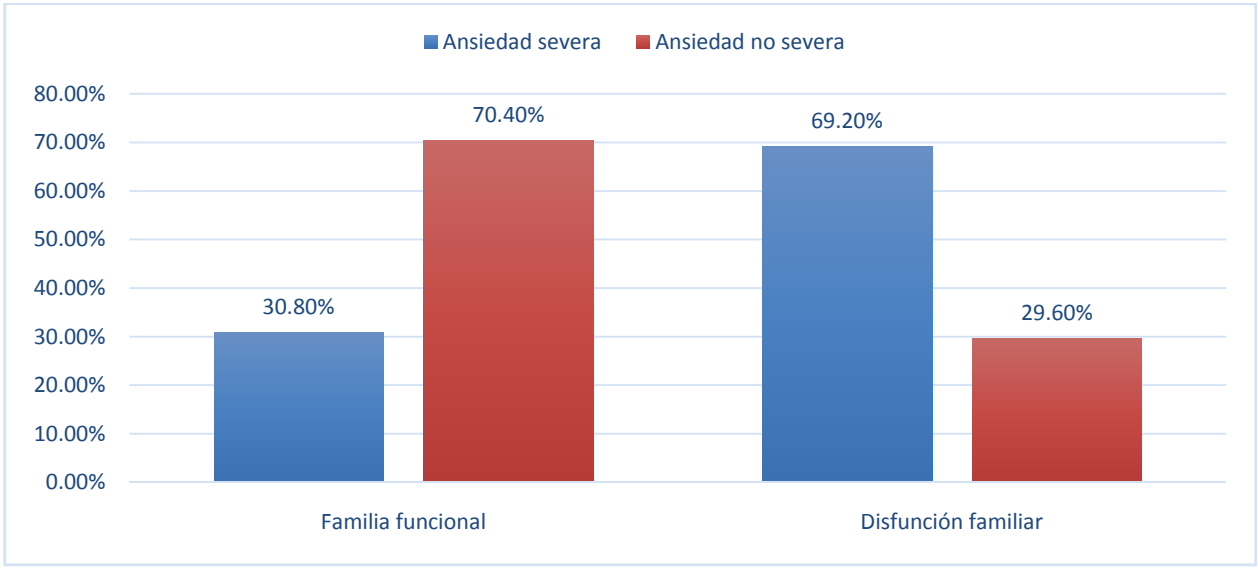

Figure 1. Global Comparison of family function according to the degree of anxiety

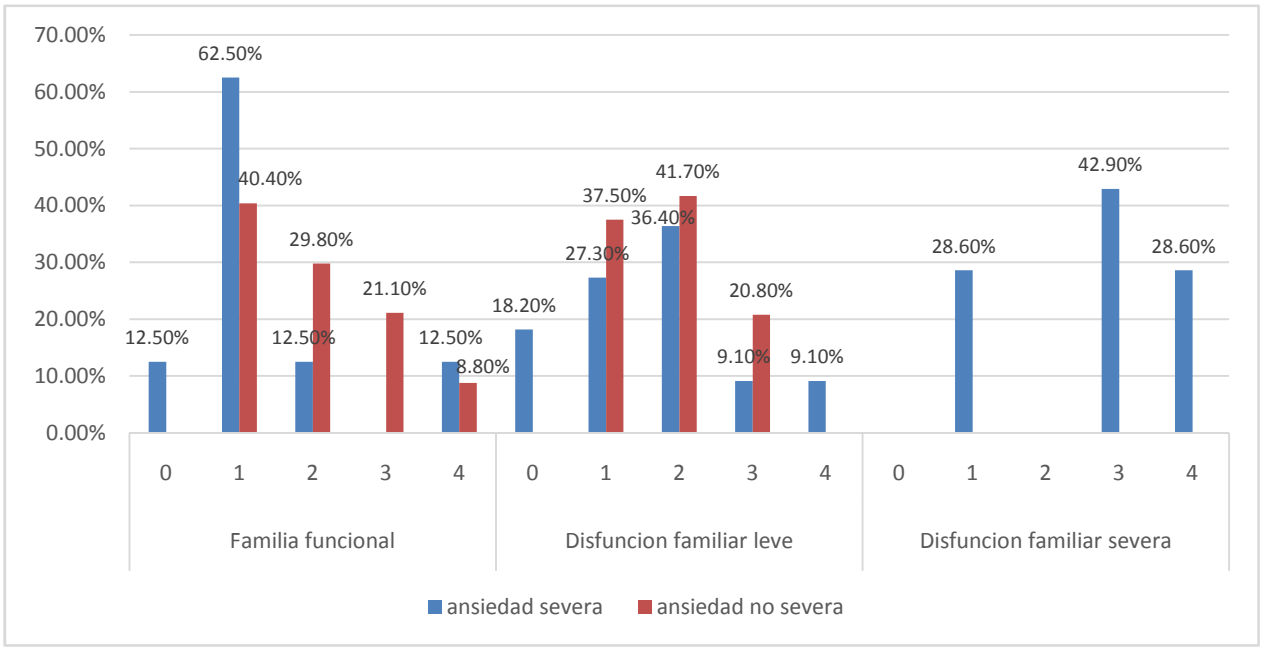

Figure 2. Severity of anxiety disorder according to family time operation treatment

We must emphasize that having a brother as a caregiver showed an OR of 4.5 (95% CI 1.2 -16.8) for severe anxiety; also belonging to a functional family had an OR of 0.1 (95% CI 0.07 to 0.5), while having family dysfunction generally showed an OR of 5.3 (95% CI 2.0 - 13.9) and have a severe family dysfunction allowed an OR of calculating 62.6 (95% CI 3.4-114.5) all with p value <0.05 indicating association with severe anxiety. Table 2 family data of the study groups are described, Figure 2 shows the distribution between treatment time, family function and the severity of anxiety disorder, identifying functional families severe anxiety mainly in patients who have been treated for less than six months (62.5%), while in families with mild dysfunction include patients treated between 6 months and one year (36.4%), finally, in families with severe dysfunction most often is for those who used treatment between one and three years (42.9%), highlighting in this family group the presence of severe anxiety by 28% in patients with therapeutic regimen of 3 to 5 years, which is higher than presented in families with mild dysfunction and proper function.

DISCUSSION

The results of this investigation indicate a prevalence of severe anxiety in 24.3% of participants, being very similar to that reported by Orgilés *et al.* in the literature value of 26.4% (Orgilés *et al.,* 2012); also it identified that there is a higher prevalence for anxiety disorders in women, as marked on other investigations (Abambar *et al.,* 2013). It is known that family dysfunction is an identified risk factor for developing anxiety disorder in children, (Abambar *et al.,* 2013; Blossom *et al.,* 2013) and we could see from this research that the role of the family permeates during development of the disease, facilitating the emergence of severe anxiety in those with dysfunctional families, affecting even those who are under medical treatment, a situation that check the referred to by the evidence that good parenting in the family, you can dampen the development and / or progression of anxiety disorder in youth, (eleven)Which family function it is associated with the severity of anxiety disorders and poor response to treatment of

this (Hughes *et al.,* 2008). Figure 2 allows us to visualize this situation as severe anxiety is manifested in all states of family function, however, we must emphasize that within dysfunctional families occur more frequently despite having a drug treatment established for more than three years, showing better results during the first quarter of treatment. One result that most attract our attention was the fact identified as a risk factor for severe anxiety having as primary caregiver to a brother, supporting the hypothesis that the child's caregiver also exerts influence on the development of the pathology and response to treatment, especially in families where parents are more stress (Schleicher *et al.,* 2015). We believe that the role of the brother as a caregiver in children with anxiety disorder must be studied as there is evidence that the father's role differs from the mother in the care of children with anxiety disorder, and its habits a factor that determines the behavior of the disease in children (Bögels and Phares, 2008), Additional genetic factors and environmental (fifteen), So you might think that exerts its own dynamics to develop that role involved to facilitate the presence of anxiety disorder in children, based on the assertions of Ginsburg and colleagues indicate that the family is a cofactor that has an impact direct from a whole or from each of its members in the development of anxiety disorders in children form (Ginsburg *et al.,* 2004).

Conclusion

The predominance in females within anxiety disorder and the prevalence of severe anxiety is consistent with that reported in the scientific literature, in addition, this research showed that there is a positive association between family dysfunction and severity disorder anxiety in children, while sex, education, family type and number of siblings are not associated with the severity of anxiety disorder in children. We can infer that after the first year of treatment, patients present with a relapse with regard to controlling the severity of anxiety disorder, especially in families with severe dysfunction, however, the research design used limits the possibility of establishing a longitudinal analysis to confirm this assertion.

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