

BRIEF REPORT

Anxiety in the parents of children treated in paediatric emergency services in Andalusia and its association with aspects of family functioning

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Objective. To assess the level of anxiety in the parents of children treated in hospital emergency departments in Andalusia and its association with dimensions of family functioning.

Methods. Descriptive observational study based on a cross-sectional survey. We recruited a convenience sample of parents bringing children to 6 pediatric emergency services in the Spanish autonomous community of Andalusia in 2012. The variables recorded were place of origin, educational level, anxiety level on the Spielberger State-Trait Anxiety Inventory, and family functioning according to the Family Adaptability and Cohesion Scale, version 2.

Results. A total of 637 parents were included. Their mean (SD) age was 35.4 (8.4) years; 399 (62.6%) were women. The mean anxiety score was 44.26 (10.15), and we found no differences between mothers and fathers. Lower anxiety levels were associated with higher levels of family cohesion ($r = -0.37$; $P < .001$) and adaptability ($r = -0.36$; $P < .001$).

Conclusion. The parents of children attended in pediatric emergency departments in Andalusia have high levels of anxiety. Anxiety is inversely associated with family adaptability and cohesion.

Keywords: Anxiety. Family. Social support. Hospital emergency service.

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La ansiedad y su asociación con elementos de funcionamiento familiar en los padres de niños atendidos en servicios de urgencias pediátricas andaluzas

Objetivo. Determinar el grado de ansiedad y su asociación con diversos elementos del funcionamiento familiar en progenitores cuyos hijos fueron atendidos en servicios de urgencias pediátricas andaluzas.

Metodología. Estudio observacional descriptivo tipo encuesta de análisis transversal. Se seleccionó, mediante un muestreo por oportunidad, a los progenitores de los niños que fueron atendidos en 6 servicios urgencias pediátricos de la Comunidad Autónoma de Andalucía en 2012. Se recogieron datos demográficos, lugar de origen, nivel educativo, el grado de ansiedad mediante el Inventario de Ansiedad Estado-Rasgo de Spielberger (STAI) y el funcionamiento familiar según la Escala de Cohesión y Adaptabilidad Familiar, versión 2 (FACES II).

Resultados. Se incluyeron 637 progenitores, con una edad media de 35,4 (DE = 8,4) años, de los cuales 399 (62,6%) fueron mujeres. La puntuación media en ansiedad fue de 44,26 (DE = 10,15), sin diferencias significativas respecto al sexo de los padres. Los grados menores de ansiedad se asociaron a mayor cohesión ($r = -0,37$; $p < 0,001$) y adaptabilidad familiar ($r = -0,36$; $p < 0,001$).

Conclusiones. El grado de ansiedad de los padres de niños atendidos en los servicios de urgencias pediátricas andaluzas es algo elevado y se asocia de forma inversa con la cohesión y la adaptabilidad familiar.

Palabras clave: Ansiedad. Familia. Apoyo Social. Servicios de Urgencias.

Introduction

A number of emotional changes associated with ill-health situations in the hospital and community settings have long been studied. The paediatric setting is of recent interest in all of them¹⁻⁵. This is due to the implications of emotional alterations, such as anxiety, stress or anger, in clinical care processes, recovery of health, aggression towards professionals, or user satisfaction^{2,6-8}.

Anxiety has been understood as a complex response characterized by motor, cognitive and affective manifestations in which feelings of apprehension predominate

in situations perceived as potentially threatening or dangerous^{1,9}. Certain characteristics of family functioning, such as family cohesion and adaptability, have been associated with family anxiety in the health context¹⁰. Family cohesion is understood as the degree of affection and union among the members of a family unit¹⁰. Adaptability is defined as the ability to adapt when a new situation demands it¹¹. These two components of family functioning may be especially relevant given the role they play as a protective factor in potentially anxiogenic situations^{10,11}. Therefore, the objective of this study was to determine the degree of anxiety and its association with elements of family functioning

in parents whose children were cared for in paediatric emergency departments in Andalusia.

Methodology

We performed a descriptive, cross-sectional, observational study in 6 paediatric emergency departments in the Autonomous Community of Andalusia in 2012. Hospitals are centres of reference in provincial capitals serving a population between one hundred and fifty thousand and five hundred thousand inhabitants. The study was approved by the respective Clinical Research Ethics Committees of each center and the ethical principles of the Declaration of Helsinki and subsequent amendments were fulfilled.

The parents, whose children were attended at the participating centres and who consented to participate in the study, were included by non-probabilistic chance sampling. Only the participation of one of the parents of the same patient was considered, and in case both wanted to participate, both were allowed but only one was considered, being chosen at random for the database. We excluded parents whose linguistic or educational level was insufficient to understand the issues raised, or if there were any clinical circumstance of the patient that would discourage them from momentarily abandoning care or attention, or if they had not signed informed consent.

The application of the questionnaires was carried out by interviewers accredited and trained for the study who came to the centres and requested the cooperation of the families. The interviewers visited each center on 10 occasions on average, avoiding the summer period, given that in some of these centres the population potentially served varies considerably. The evaluation was carried out before medical discharge.

Demographic data (age, sex), participant and child, place of origin (immigrant / non-immigrant) and educational level were collected. In order to assess anxiety, the state anxiety subscale of the latest Spanish version of Spielberger's State Anxiety Trait Inventory (STAI)^{12,13} was used. The form used to measure state anxiety was chosen because it is ideal for assessing anxiety generated by a specific situation. The form comprises 20 items with 4 possible response options, ranging from 0 (nothing) to 3 (a lot), with a possible total score range from 0 to 60. In order to evaluate family functioning, we used the Spanish short version of the Family Cohesion and Adaptability Scale version 2 (FACES II)^{14,15}. The global scale is composed of 20 items with a range of response options from 5 alternatives ranging from 1 (never or almost never) to 5 (almost always). The scale allows one to obtain a score on the cohesion and the adaptability of the family nucleus based on two subscales composed respectively of 10 items, so each scale has a total range of scores between 10 and 50.

The quantitative variables are presented as mean and standard deviation (SD) and the qualitative variables as absolute values and percentages. For the com-

parison of means analysis we used Student's t-test, and the Pearson bivariate correlations test with bilateral significance and reliability of the scales was tested using Cronbach's alpha test. Differences with a p value <0.05 were considered statistically significant. Sample size was estimated, assuming a 95% confidence level, an error rate of 5%, a distribution of responses of 50% and a population under 17 years of age in the provinces of Eastern Andalusia of 800,000 subjects. The minimum recommended sample was 384, so a minimum of 90 participants were needed from each center. Statistical analyses were performed using SPSS version 15.0 for Windows.

Results

A total of 764 families were evaluated, of which 29 did not meet any of the inclusion criteria and 98 did not consent to participate. Finally, 637 parents were included, with a mean age of 35.4 (SD 8.4) years, of whom 399 (62.6%) were women (Table 1).

The mean anxiety score shown by participants was 44.26 (SD = 10.15). There were no statistically significant differences in anxiety according to gender ($t = 1.29$, $p = 0.20$). Regarding family functioning, cohesion showed a mean score of 36.81 (SD = 8.55) and family adaptability 34.79 (SD = 7.78).

The psychometric properties of the evaluation instruments used were excellent. The internal consistency for the STAI had a Cronbach alpha score of 0.90, while for the FACES II Scale it was 0.93 for the cohesion scale and 0.91 for the adaptability.

Parent anxiety showed a statistically significant and inverse association with family cohesion ($r = -0.37$, $p < 0.001$) and family adaptability ($r = -0.36$, $p < 0.001$) (Figure 1).

Discussion

The present study shows that improved family functioning, specifically the degree of family cohesion and adaptability, was related to lower levels of parent anxiety during the urgent care of the child.

These results are in line with previous studies that found that a high level of cohesion and family functioning was associated with lower levels of anxiety in other contexts¹⁰. Possibly, those families that enjoy solid affective degrees and union and that put into operation strategies of efficient adaptation to novel situations, can improve their psychological adjustment to and protection against anxiogenic situations, such as the urgent attention of their children. On the other hand, those family groups that do not enjoy these advantages may be more vulnerable to the pernicious effects of anxiety: an example being unorganized families, single parents, of immigrant origin, with socioeconomic difficulties or other problems.

As limitations of our study we would indicate the

Table 1. Characteristics of the sample and analysis according to gender

	Global (N = 637)	Father (N = 238)	Mother (N = 399)	p
Patient's age in years [mean (SD)]	5.4 (4.2)	5.7 (4.4)	5.2 (3.8)	0.150
Male sex of the patient [n (%)]	387 (60.6)	170 (71.4)	216 (54.1)	< 0.001
Age of parent in years [mean (SD)]	35.4 (8.4)	36.7 (8.4)	34.6 (8.4)	< 0.001
Educational level [n (%)]				0.570
No studies	71 (11.1)	16 (6.7)	55 (13.8)	
Primary	211 (33.1)	83 (34.9)	128 (32.1)	
Intermediate	215 (33.8)	97 (40.8)	118 (29.6)	
High	140 (22.0)	42 (17.6)	98 (24.5)	
Place of origin [n (%)]				0.580
Immigrant	137 (21.5)	54 (22.7)	83 (20.8)	
Non-immigrant	500 (78.5)	184 (77.3)	316 (79.2)	
Hospital [n (%)]				0.150
Hospital Complex Torrecárdenas, Almería	91 (14.0)	21 (8.8)	70 (17.5)	
Hospital Universitario Carlos Haya, Málaga	97 (15.0)	43 (18.1)	54 (13.5)	
Hospital de Poniente, Almería	97 (15.0)	33 (13.9)	64 (16.0)	
Hospital Clínico Universitario San Cecilio, Granada	114 (18.0)	58 (24.4)	56 (14.0)	
Hospital Complex of Jaén	117 (18.0)	31 (13.0)	86 (21.7)	
University Hospital Virgen de las Nieves, Granada	121 (20.0)	52 (21.8)	69 (17.3)	
Anxiety level [mean (SD)]	44.26 (10.15)	44.93 (10.16)	43.85 (10.14)	0.200
Family cohesion [mean (SD)]	36.81 (8.55)	36.38 (8.47)	37.07 (8.59)	0.33
Family adaptability [mean (SD)]	34.79 (7.78)	34.32 (7.30)	35.08 (8.05)	0.240

*Chi-square test.

type of sampling, the lack of consideration of some potentially relevant variables such as the pathology and severity of paediatric patients, or aspects that generate emotional disturbance and dissatisfaction such as emergency waiting times or interaction with health personnel. In spite of this, it can be concluded that the anxiety levels of the parents of children treated in the paediatric emergency departments of Andalusia are high and are inversely associated with family cohesion and adaptability. Professionals and approaches to care should be sensitive to this situation, as it could give rise

to greater fragility, defencelessness and even inequality in health.

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Conflict of interest

The authors declare no conflict of interest in relation to this article.

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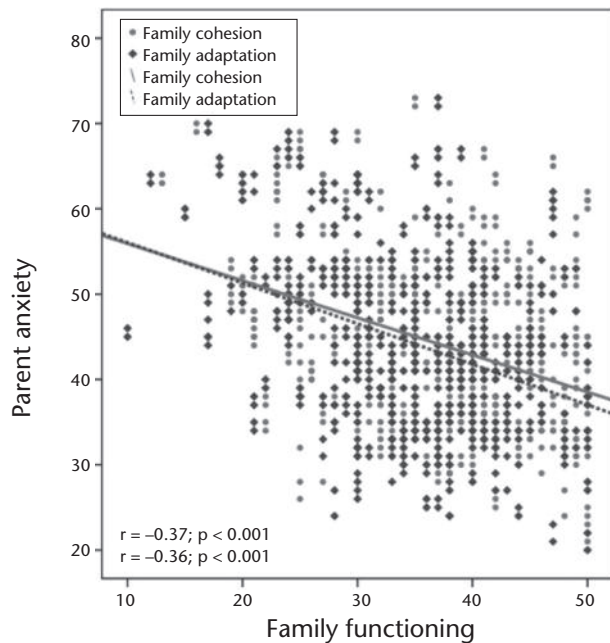


Figure 1. Grouped dispersion diagram of the correlation between parent anxiety and family functioning

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