Abstract

The prevalence, correlates, comorbidity and service use of three anxiety disorders in a broad sample of Chilean children and adolescents is reported in this study. The disorders studied were Separation anxiety (SAD),

*Corresponding author: Flora de la Barra, East Psychiatry Deptment, University of Chile, Chile, Tel: 5695321155; E-mail: torbarra@gmail.com

ventral pre frontal cortex in attention bias to threat in the pathway to anxiety disorders. Parenting style can also act as a risk factor or mediator [2-14].

Longitudinal studies indicate a moderate homotypic continuity for

anxiety disorder (GAD), eating disorder, major depressive disorder, dysthymia, schizophrenia, ADHD, oppositional-de ant disorder (ODD), conduct disorder, alcohol use disorders, cannabis use disorders, nicotine dependence, and other substance use disorders. Other diagnoses were excluded, as well as other anxiety disorders.

e four impairment algorithms contained in the DISC-IV interview were ascertained according to the extent in which symptoms in six domains had stressed the child or a ected his or her school achievement, or relationships with caretakers, family, friends or teachers. Impairment criteria A required that at least one of the impairments is given an intermediate or severe rating (sometimes or many times; bad or very bad); criteria B indicated that at least two intermediate or severe impairments; criteria C, at least one impairment

	Total	Male	Female	Age 4-11	Age 12-18
	% SE	% SE	% SE	% SE	% SE
Any of the three anxiety disorders	8.3 0.9	5.8 0.9	11.0 1.7	9.2 1.1	7.4 1.4
Social Phobia	3.7 0.8	1.8 0.7	5.7 1.5	3.5 0.9	3.9 1.2
Generalized anxiety disorder	3.2 0.5	1.2 0.5	5.3 0.9	3.8 1.0	2.6 1.0
Separation anxiety disorder	4.8 0.6	4.0 0.8	5.7 0.9	6.1 0.9	3.4 1.0

Table 2: 12-month prevalence rates of anxiety disorders including impairment in Chile. N= 560.

Table 3a: Bivariate analysis between predictors and anxiety diagnoses.

slightly higher in children [Table 2].

e statistical signi cance of these di erences was calculated in the bivariate and logistic multivariate regressions that followed.

e results of the bivariate analysis of associated factors showed that feminine gender was a risk factor for Social Phobia and GAD but not for Separation Anxiety [O.R.=1.36, C.I.=0.73-2.52]. Age di erences did not reach signi cance in the bivariate analysis for any of the three disorders, therefore were not included in the logistic regression. Having a family income 5 times higher than poverty line was protective for any anxiety and SAD. Income 8 times over poverty cut-o protected from any anxiety and GAD. A positive evaluation of family functioning lowered the risk for all anxiety disorders except GAD. Family psychopathology increased the risk for SAD. Living in a one-parent family was a risk factor for GAD, and living with other persons predisposed to social phobia. Maltreatment increased the risk for all anxiety disorders and sexual abuse to all except GAD. Stressful situations such as severe illness or death of a relative did not increase risk for any anxiety disorders, nor did school dropout [Table 3a].

In the logistic regression analysis [Table 3b] feminine gender maintained the e ect of increasing risk for Social phobia [O.R= 2.83, C.I.=1.09-7.35, p<0.05] and GAD [O.R= 4.16, C.I.=1.59-10.94, p<0.01]. Income 5 times [O.R.=0.37, C.I.=0.18-0.76, p=0.01] or 8 times above the poverty line [O.R.= 0.35, C.I.=0.15-0.83, p=0.05] had a protective e ect for Separation Anxiety. Family psychopathology was a risk factor for any of the three anxiety disorders [O.R. 2.93, C.I. 1.29-6.65, p<0.05], but not for speci c disorders. Living with only one parent increased risk for GAD [O.R.=2.27, CI=1.20-4.28, p=00.05]. A positive perception of family functioning proved to be protective for social anxiety [O.R.=0.45, C.I.=0.22-0.89, p=0.05]. Maltreatment did

not increase risk, but sexual abuse increased risk for any of the three anxiety disorders [O.R.=2.21, C.I.=1.18-4.13, p=0.05].

ere was high comorbidity among Anxiety disorders. e most prevalent association was GAD and SAD, followed by GAD and Social Phobia [Table 4a].

Comorbidity along with other disorders was also very high. Social Anxiety showed the highest comorbidity: 49.8% with disruptive disorders and 39.5% with depressive disorders. GAD showed 39.1% comorbidity with disruptive disorders and 38.4% with depressive disorders. Separation Anxiety was comorbid with Depressive disorders in 28.9%, and with disruptive disorders in 24.7%. Having any of the three anxious disorders showed 4.6% comorbidity with substance abuse [Table 4b].

ere were no signi cant di erences among the di erent anxiety diagnoses regarding service use [Table 5]. 41.7% of the children with any of the three anxiety disorders attended some service for their care, compared to 21.5% with other diagnoses [O.R.=2.64, C.I.=1.37-5.08, p<0.01].

e most used were services delivered in the school system [22.3%], compared to 11.0% of children with other non-anxious disorders [O.R.= 2.32, C.I.=1.03-5.25, p<0.05]. e second most used services were those delivered in specialized mental health facilities; 18.4% vs. 8.5% used by children and adolescents with other diagnoses

[O.R.=2.44, C.I.=1.39-4.29, p<0.01]. ey attended other medical services only in 4% of the cases, compared to 1% used by children with other psychiatric diagnoses [Table 6].

Discussion

In this study, we report a prevalence of 8.3% in Separation Anxiety, social anxiety and generalized anxiety disorders within a study of a broad range of psychiatric disorders in Chilean children and adolescents [22]. As only those three anxiety disorders were evaluated we cannot compare with "any anxiety "reported in other studies. Only some studies report prevalence of speci c narrow categories of anxiety disorders. Studies also show di erences in the time lapse evaluated, age of the children and adolescents, and instruments used for calculating prevalence.

e prevalence rates found for the three anxiety disorders in Chile are higher than most other studies, whatever instrument used as evaluation tools. However, rates for social phobia are lower than the United States and Mexico. e three anxiety disorders evaluated in this study are more prevalent in girls than in boys, coinciding with all the other studies [3,13,24,26,30,31].

Our results indicate that anxiety disorders taken as a group are the second most prevalent disorders. On the other hand, disruptive disorders are higher. is nding is similar to that from Puerto Rico [13] and North Carolina [30], but di erent from the NCSR-A in the United States [3] and Mexico City [30] where Anxiety disorders were the more prevalent psychopathology and in Bangladesh [23] these two groups have similar prevalence.

In the current study we found several risk and protective factors in the bivariate analysis, but some of them lost signi cance on the logistic regression. Feminine gender remained signi cant as a risk factor for Social phobia and GAD, family psychopathology and sexual abuse for any anxiety disorder, and living with one parent for GAD. Higher family income retained the protective e ect for SAD and the child's perception of good family functioning lowered risk for social phobia. Reviews of Epidemiology of anxiety disorders in children and adolescents report predictors for anxiety disorders that were also found in our study: low household income, family psychopathology and a history of neglect or abuse [5,6]. e exception is ethnicity, which we did not evaluate as an associated factor. e NCS-A study, Mexico City and Puerto Rico study found no interaction between individual and

	Social phobia	Separation anxiety	Generalized Anxiety
Social phobia (N=58)	-------	32.30%	30.50%
Separation anxiety (N=76)	24.60%	-------	38.10%
Generalized anxiety (N=51)	34.80%	57.10%	-------

Table 4a: Percentage of Comorbidity between anxious disorders.

Disorders	Depressive	Disruptive	Substance abuse
Any anxious disorder	36.1	35.6	4.6
Social phobia	39.5	49.8	0
Generalized anxiety disorder	38.4	39.1	0
Separation anxiety	28.9	24.7	0.8

Table 4b: Percentage of comorbidity among anxiety disorders and other groups of disorders (with impairment D). N=560.

	School	Mental Health	Other Medical	Social Service	Other Service	Total Service
	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)
Any anxious disorder	1.04 (0.48-2.26)	0.93 (0.48-1.79)	0.62 (0.10-3.90)	--	0.60 (0.27-1.31)	1.02 (0.53-1.95)
Social phobia	1.32 (0.44-3.98)	1.47 (0.65-3.34)	1.35 (0.24-7.67)	--	0.11 (0.01-1.11)	1.23 (0.53-2.88)
Generalized anxiety	0.63 (0.19-2.07)	1.40 (0.45-4.35)	1.00 (0.12-8.32)	--	1.26 (0.30-5.28)	1.12 (0.43-2.95)
Separation anxiety	1.14 (0.48-2.69)	1.47 (0.65-3.30)	1.41 (0.22-8.93)	--	1.19 (0.50-2.84)	1.43 (0.62-3.28)
*: p < 0.05						

Table 5: Relationship between anxiety disorders (plus impairment) and service use. N= 560.

Disorders	School	Mental Health	Other Medical	Social	Other	Total
	%	%	%	%	%	%
	OR (CI)	OR (CI)	OR (CI)	OR (CI)	OR (CI)	OR (CI)
Non-Anxiety	11.00%	8.50%	2.90%	0.40%	2.10%	21.50%
	1	1	1	-------	1	1
Anxiety	22.30%	18.40%	4.40%	0.00%	3.80%	41.90%
	2.32* (1.03-5.25)	2.44** (1.39-4.29)	1.54 (0.29-8.10)	------	1.88 (0.62-5.64)	2.64** (1.37-5.08)
*p<0.05		**p<0.01				

Table 6: Comparisons of service use for anxiety disorders vs. other non-anxiety disorders (N=1558).

Am Acad Child Adolesc Psychiatry 49: 980-989.

4. American Psychiatric Association (2000) Diagnostic and Statistical Manual of mental Disorders. Fourth Revision.

5. Beesdo