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Perception of need for help and use of mental health services in children and adolescents. Do they share the same predictors?

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The study identifies the variables that predict the perception of need for psychiatric help and the use of mental health services in children and adolescents from 7 to 17 years old attending psychiatric and pediatric outpatient consultation. The perception of problems and consultation depend on the degree of functional impairment, parents' perception of the existence of problems, the age of the child, temperamental traits, parental rearing style and severe stressful life-events. The variables that permit realization of the existence of problems but do not lead to consultation are primarily developmental difficulties. Families consult with professionals, despite not perceiving the existence of psychiatric problems, when children have difficulties in their behavioral style. The presence of psychopathology is not enough to explain the perception of the need for help by the subject or the fact of attending consultation. Resultant indicators may be useful for planning mental health services.

Percepción de necesidad de ayuda y uso de servicios de salud mental en niños y adolescentes. ¿Comparten los mismos predictores? El estudio identifica las variables que pueden predecir la percepción de necesidad de ayuda psicológica y el uso de los servicios de salud mental en jóvenes de 7 a 17 años que acudían a consultas ambulatorias psiquiátricas y pediátricas. La percepción de la existencia de problemas y la consulta por ellos depende de que los padres los perciban, de la incapacidad funcional que producen, la edad del niño, su temperamento, los acontecimientos estresantes que ha sufrido, y del estilo educativo de los padres. Las dificultades evolutivas se perciben como problemas pero no conducen a consulta. Las familias consultan con los profesionales, a pesar de que no perciban la existencia de problemas, cuando los niños presentan dificultades menores en su comportamiento. La presencia de psicopatología no es suficiente para explicar la percepción de la necesidad de ayuda o de acudir a consulta. Los indicadores hallados pueden ser útiles para planificar los servicios de salud mental.

Mental health service planning and its use is a matter of interest for the health policy of most developed countries. Literature on the use of services has covered various issues. One area is the investigation of unmet needs. Within the general population, research in the field has demonstrated that the majority of people with a diagnosis do not seek treatment (Pincus, Zaris & First, 1998) and that a substantial proportion of children's needs are not adequately addressed (Bums, Costello, Erkanli & Tweed, 1997; Clausen, Dresser, Rosenblatt & Attkisson, 1998; Flisher et al., 1997; Pumariega, Glover, Holzer & Nguyen,1998; Staghezza, Bird, Gould & Canino, 1995). Costello, Burns, Angold and Leaf (1993) have reported that one in five children has a psychiatric disorder, one in ten suffers some degree of functional impairment, but only one in twenty receives some mental health care.

Another area of interest relates to the chain of health agents that have to refer the child to mental health services. Various studies point out the need for a comprehensive system that should include different professionals, highlighting the important role that the school and the pediatricians or general practitioners play in bridging the gap between mental health service need and service utilization (Armbruster, Gerstein & Fallon, 1997; Barker & Adelman, 1994; Buckner & Bassuk, 1997; Godfrey, 1995; Rae-Grant, Offord & Munroe Blum, 1989; Staghezza et al., 1995). These studies call for sensitizing and educating parents in order to improve the detection of problems and so as to increase the probability of the parent asking for help under specific circumstances (Logan & King, 2001; Pavuluri, Luk & McGee, 1996).

A sector of the relevant research has focused on when subjects use services, who uses those services and how and why they use them. From these studies, we know that parents can provide valuable information on service use (Breda, 1996). There is controversy concerning the agreement between parents and children on reporting use of services. While Leaf et al. (1996) found low agreement between the information given by parents and children on this topic, Stiffman et al. (2000) have indicated that there is a poor-to-excellent correspondence between –parent-adolescent information.

However, one of the main topics in the literature concerning services has been the study of those factors that are central to the process of help-seeking in order to provide satisfactory services. Within the group of demographic variables, there is agreement in that individuals who are white and older more *easily* use services

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(Schonert & Muller, 1996; Verhulst & Van der Ende, 1997). Research on socioeconomic status (SES) and gender revealed contradictory results. While some studies discuss higher service utilization by individuals with low SES (Costello, Farmer, Angold, Burns & Erkanli, 1997; John, Offord, Boyle & Racine, 1995), others have found opposing results (Cunninggham & Freiman, 1996; Pavuluri et al., 1996; Saunders, Resnick, Hoberman & Blum, 1994). With respect to gender, Fombonne and Vermeersch (1997), and Garralda and Bailey (1988) report that boys *use more services*, whereas Rickwood and Braithwaite (1994) and Schonert and Muller (1996) have stated that girls use *more mental health facilities*. Among familial variables, parental psychopathology, parents' perception of the child's problems, parental burden, psychosocial stress in the family, parental rates of criticism and hostility regarding the problem, one parent family and poor satisfaction with family life are factors associated with the use of mental health services (Angold et al., 1998; Flisher et al., 1997; Garralda, & Bailey, 1988; Goodman et al., 1997; Hoeger, 1995; Jensen, Bloedau & Davis, 1990; Pavuluri et al., 1996; Saunders et al., 1994; Staghezza et al., 1995). Moreover, insurance coverage (Burns et al., 1997), poor grades or physical handicap (Flisher et al., 1997; Verhulst & van der Ende, 1997), teacher's perceived needs (Staghezza et al., 1995) and physical and sexual abuse and neglect (Barber, Rosenblatt, Harris, & Attkisson, 1992) are related to help-seeking. However, psychiatric symptoms and disorders – used as an independent variable in the majority of the studies – appear to be the most important factor (Burns et al., 1997; Fombonne, & Vermeersch, 1997; Hoeger, 1995; Jensen et al., 1990; Laitinen-Krispijn, Van der Ende, Wierdsma & Verhulst, 1999; Rickwood & Braithwaite, 1994; Staghezza et al., 1995; Verhultst & Van der Ende, 1997). The consensus is that symptoms and dysfunction have independent effects on the use of services (Leaf et al., 1996). Pincus et al. (1998) note that clinicians should not consider a need for treatment based solely on diagnosis, since other non diagnostic factors (i.e., coping strategies, social support, etc.) must also be borne in mind. For these authors, functional impairment is the link between diagnosis and need for treatment. Few works have studied the impact of impairment on the use of services, and those that did include this variable have found that most impaired children received more services from mental health specialists (Angold, Costello, Burns, Erkanli & Farmer, 2000; Goodman et al., 1997; Leaf et al., 1996).

The goal of this study was to identify the variables that predict the perception of need for psychiatric help in children and adolescents, as well as the utilization of psychiatric services to determine if the background variables that motivate each of these are identical. This relates to the overall objective of understanding factors other than psychopathology that clinicians and policy makers should take into account before considering treatment. Such factors could also greatly affect the ongoing prevalence of untreated mental health problems and the planning of services. The predictive variables selected were those that predate psychopathology (temperament, marital discord, stressful events, etc.) and are important, given that they are the first link in the chain of problems. We wanted to determine the contribution of these variables in the perception of problems and in seeking help. The information obtained may be helpful for: (1) understanding the underlying motivation for seeking psychiatric services, (2) ascertaining the actual facts that create the perception of need for help and, (3) in the end, having useful information available for planning services.

Methods

Sample

The sample included 285 (75%) psychiatric outpatients, recruited from three primary mental health services for children and adolescents, and 95 (25%) pediatric cases, also from primary care. Psychiatric and pediatric centers were representative of the primary care centers of the area. Subjects participating were volunteers who were representative of the population attending these centers with regard to age, sex and socioeconomic status. Children and adolescents were mainly Caucasian (97.9%) from 7 to 17 years old. In the psychiatric group, the mean age was 12.8 years (SD= 3.1). 46% were boys. Following Hollingshead's Socioeconomic Index (1975), 91% were associated with low and mean low levels and 9% to high-mean high levels. In the pediatric group, the mean age was 11.0 years (SD= 2.9). 49% were boys. 77% were associated with low and mean low socioeconomic levels and 23% to high-mean high levels. Hollingshead's levels were grouped into three categories (0= low; 1= mean plus mean-low; and 2= high plus high-mean), as there were too few subjects in higher cells. Psychiatric children used psychiatric services while pediatric children could or could not use mental health services.

Measures

The presence of psychopathology was established with the structured Diagnostic Interview for Children and Adolescent-Revised (DICA-R; Reich, Shayka & Taibleson, 1991) adapted for the Spanish population (Ezpeleta, de la Osa, Doménech, Navarro & Losilla, 1997; de la Osa, Ezpeleta, Doménech, Navarro & Losilla, 1997). The DICA-R covers the most-frequent diagnostic categories in children and adolescents following DSM-III-R definitions (APA, 1987). It includes a section pertaining to psychosocial stresses and developmental milestones (Reich, 1992).

For the assessment of impairment, the Children's Global Assessment Scale (CGAS; Shaffer et al., 1983) was used. It was created as a unidimensional scale that synthesizes the child's level of functioning with only one score. The scale ranges from 1 (maximum impairment) to 100 (normal functioning). Scores higher than 70 indicate a normal adaptation. Psychometric properties within a Spanish sample have been reported by Ezpeleta, Granero and de la Osa (1999).

The Revised Dimensions of Temperament Survey (R-DOTS; Windle, & Lerner, 1986) assesses the nine temperamental dimensions described by Thomas and Chess from the information of parent or children, depending on age. The questionnaire was developed using a theoretical criterion. The items reflected the clinical aspects of each dimension. The factorial structure reported by Windle and Lemer (1986) gives empirical support to the theoretical classification. Family conflict was assessed with the two scales (marital discord and acceptance) of the Children's Perceptions Questionnaire (CPQ; Emery, & O'Leary, 1982). R-DOTS and CPQ translations into Spanish were revised by judges who were in agreement as to how the Spanish version should reflect the content of the original items. Parental rearing style was evaluated with the EMBU (Castro, Toro, Van der Ende, & Arrindell, 1993).

The perception of need for help was obtained at the end of the interviews with the questions: *Do you have any problems that you think you would need help with?* or *Does your son/daughter have*

any problems that you think he/she would need help with? The information about the use of mental health services was obtained with the interview question: *Has there ever been a time when you were (your son/daughter was) having trouble or problems and went to talk to a counselor, psychologist, psychiatrist, doctor or any other professional person about them?*

Procedure

After obtaining informed written consent from parents and oral assent from children to participate in the study, different interviewers (previously trained in the use of the DICA-R and CGAS) interviewed the children and the parents. After the interview, they assigned the CGAS score. Later, parents and children answered the questionnaires. Data were collected from the psychiatric patients at the initial assessment.

The data analysis was performed with the SPSS System (version 10.0.6 for Windows). Through logistic regression models adjusted by psychopathology, variables that predicted the perception of need for help and receipt of mental health services were examined. The dependent variables were 'perception of need for help' and the 'use of mental health services'. Initial models were selected by areas of content (demographics, temperament…). Interviewers explained the nature of problems of interest for this research, indicating that they were related to psychiatric problems (behavior, feelings, emotions, substance use, etc.) and not to physical problems. Any contact with mental health services was included.

Psychopathology was defined as the presence of any disorder in the DICA-R, and it was considered a covariate in all the models because of the relationship between the presence of a disorder and the perception of need for help or use of services. The algorithm that combined information from parents and children was selected for models containing the use of services as a dependent variable. The models containing the perception of need for help included the perception of psychopathology reported by each informant (parents OR children).

Although interaction terms were not significant, they were included in some final models in order to obtain good adjustment. The sample-size changes within the different models were based on age groups, the informant for whom the questionnaire was designed, and missing data (informants that did not want to answer the questionnaires). It was confirmed that there was no significant difference in gender, age and psychopathology between the various models and the original sample.

The model's ability to discriminate between the groups defined by the dependent variables (perceived need for help and service utilization) was assessed with the sensitivity, the specificity, overall correct classification and the area under the receiver operator curve (ROC). The model calibration was examined using the Hosmer and Lemeshow test. Finally, Nagelkerke R^2 was used to estimate how much variance was accounted for in the models.

Results

95% percent of the parents thought their children needed help and 89% of the children perceived the existence of problems. In the group of parents that did not perceive problems in the child, 47.5% consulted. 5% of the parents and 11% of the children that perceived problems were not helped.

Predictors of perception of need for psychiatric help

Child's perception. Table 1 synthesizes the results of the logistic regression models based on the information of the child. Only significant odds ratios ($p<0.05$) are listed. The primary predictors for children perceiving that they needed psychiatric help were: older age, higher functional impairment, negative mood, short attention span, the feeling of not being accepted by their parents (EMBU and CPQ), the perception that the mother and/or the father rejects them and the father having low or no control over what they do (they feign ignorance of their education), being afraid of being hit or hurt by somebody close to them, or physical abuse of the child or of other members of the family. The presence of legal problems in the family diminished the probability that the child perceived the need for help. The models including parents' information on parental rearing style and the total problems did not show any significant results.

Parents' perception. Table 1 presents results of the variables related to parents' perception of their children's need for psychiatric help. A high functional impairment in the child made the parents think about the need for psychiatric help. Temperamental traits characterized by high activity during sleep, a negative mood, low rhythmicity in sleep pattern, and a short attention span were also predictive of need for help. With regard to parental rearing style, parents' perceptions that the child needed help were higher among those parents whose children reported that the mother and/or the father rejected them (EMBU and CPQ), or among children whose mother stated she excessively overprotected the child or was not affective with them. Children's perceptions about the parents' lack of emotional warmth predicted the parents' perception of problems, although this variable was only significant when the child had no psychopathology. Finally, the existence of stressful events for the child and the presence of multiple developmental problems within the child were also predictive of the need for help.

Predictors of use of mental health services

Table 2 shows the predictors of use of services. Help-seeking was predicted by: Older age, high functional impairment, parents' perception of need for help, high approach to new stimuli, low adaptability, a negative quality of mood and a short attention span as dimensions of temperament, the feeling of rejection or lack of emotional warmth in the parenting style of the mother or father (based on the child's report), the lack of emotional warmth (based on the mother or father's report), the presence of fights in the family as stressful events, and the total number of stressful events. Developmental problems were not significantly related to the use of services.

Discussion

Factors that predicted the perception of need for help were different, depending upon the informant. The variables that explained why the parents believed their children needed help were consistent with those that led them to consultation. Differing factors between children and parents with regard to the perception of need for psychiatric help were: age, temperamental traits related to sleep, parental rearing style and stressful life events. Poduska (2000) also found that children's rating of their own psychological well-being was not associated with the parental perception of their chil-

Table 1
Logistic regression models of perception of need of psychiatric help adjusted by psychopathology

MODEL (Child's perception)		**P value**	**OR**	**95% CI OR**	
Demographics & mixed (N=261)	Age	0.027	1.14	1.02 to 1.29	[1] χ^2=6.79 (P=0.559); [2] R^2=0.30
	Impairment	<0.0005	0.96	0.93 to 0.98	[3] AUC=0.79 (95% CI: 0.73 to 0.84)
					[4] Sens.=48.2%; [5] Spec.=83.9%; [6] OC=72.8%
Temperament (R-DOTS) (N=167)	Mood	0.009	0.91	0.85 to 0.98	χ^2=3.98 (P=0.860); R^2=0.28
	Attention span	0.015	0.90	0.83 to 0.98	AUC=0.77 (95% CI: 0.70 to 0.85)
					Sens.=53.2%; Spec.=83.8%; OC=72.5%
Marital discord (CPQ) (N=155)	Acceptability	0.024	1.16	1.02 to 1.31	χ^2=8.93 (P=0.258); R^2=0.20
					AUC=0.70 (95% CI: 0.62 to 0.78)
					Sens.=45.2%; Spec.=71.0%; OC=60.6%
Rearing style (EMBU) (N=167)	Rejection	0.020	1.03	1.00 to 1.05	χ^2=14.5 (P=0.070); R^2=0.22
Informant CHILD about MOTHER					AUC=0.73 (95% CI: 0.66 to 0.81)
					Sens.=37.3% ; Spec.=80.6%; OC=65.3%
Rearing style (EMBU) (N=160)	Rejection	<0.0005	1.09	1.04 to 1.15	χ^2=10.0 (P=0.263); R^2=0.29
Informant CHILD about FATHER	Control	0.004	0.91	0.85 to 0.98	AUC=0.79 (95% CI: 0.72 to 0.86)
					Sens.=43.6%; Spec.=84.8%; OC=70.6%
Rearing Style (EMBU) (N=157) *Informant MOTHER*		None significant			
Educational Style (EMBU) (N=124) *Informant FATHER*		None significant			
Stressful events (N=167)	Legal problems	0.013	0.04	0.00 to 0.51	χ^2=3.21 (P=0.360); R^2=0.30
	Fear to beat	0.043	3.51	1.04 to 11.8	AUC=0.73 (95% CI: 0.66 to 0.80)
	Abuse	0.037	7.42	1.1 to 48.6	Sens.=22.9%; Spec.=97.2%; OC=70.1%
Total problems (N=167)		None significant			
MODEL (Parent's perceive the child needs help)		**P value**	**OR**	**95% CI OR**	
Demographics & mixed (N=263)	Impairment	<0.0005	0.93	0.91 to 0.94	[1] χ^2=11.3 (P=0.185); [2] R^2=0.47
					[3] AUC=0.76 (95% CI: 0.69 to 0.83)
					Sens.77.2% ; Spec.80.7%; OC =78.9%
Temperament (R-DOTS) (N=226)	Activity sleep	0.006	0.88	0.80 to 0.96	χ^2=1.73 (P=0.988); R^2=0.38
	Mood	0.025	0.91	0.84 to 0.99	AUC=0.76 (95% CI: 0.68 to 0.84)
	Rhythm sleep	0.027	0.91	0.83 to 0.99	Sens.=88.9%; Spec.=59.7%; OC=79.6%
	Attention span	0.014	0.91	0.88 to 0.98	
Marital discord (CPQ) (N=204)	Acceptability	<0.0005	1.38	1.18 to 1.61	χ^2=7.31 (P=0.503); R^2=0.33
					AUC=0.75 (95% CI: 0.67 to 0.83)
					Sens.=91.6%; Spec.=49.2%; OC=78.9%
Rearing style (EMBU) (N=215)	Rejection	0.008	1.04	1.01 to 1.06	χ^2=13.1 (P=0.109); R^2=0.33
Informant CHILD about MOTHER	Emotional warmth	0.006			AUC=0.80 (95% CI: 0.74 to 0.87)
	Emotional warmth * Psychopathology	0.088			Sens.=90.8%; Spec.=51.4%; OC=77.2%
	Emotional warmth for:Psychopathology = Absent	0.006	0.89	0.81 to 0.97	
	Psychopathology = Present	0.192	0.97	0.92 to 1.02	
Rearing style (EMBU) (N=207)	Rejection	0.006	1.04	1.01 to 1.07	χ^2=13.2 (P=0.105); R^2=0.35
Informant CHILD about FATHER	Emotional warmth	0.006			AUC=0.82 (95% CI: 0.75 to 0.88)
	Emotional warmth * Psychopathology	0.105			Sens.=89.6%; Spec.=52.8%; OC=76.8%
	Emotional warmth for: Psychopathology = Absent	0.006	0.91	0.85 to 0.97	
Rearing style (EMBU) (N=214)	Psychopathology = Present	0.273	0.97	0.93 to 1.02	χ^2=15.0 (P=0.058); R^2=0.39
Informant MOTHER	Emotional warmth	0.004	0.93	0.88 to 0.98	AUC=0.72 (95% CI: 0.64 to 0.80)
	Control	0.009	1.08	1.02 to 1.14	Sens.=90.5%; Spec.=59.7%; OC =80.8%
Stressful events (N=205)	Other problems	0.036	5.26	1.12 to 24.8	χ^2=0.03 (P=0.984); R^2=0.28
					AUC=0.67 (95% CI: 0.59 to 0.76)
					Sens.=84.7%; Spec.=59.5%; OC=75.6%
Total problems (N=205)	Total developmental problems	0.017	1.10	1.02 to 1.19	χ^2=6.73 (P=0.457); R^2=0.32
					AUC=0.69 (95% CI: 0.61 to 0.77)
					Sens.=84.5%; Spec.=62.8%; OC =74.4%

[1] Hosmer and Lemeshow goodness-of-fit test ; [2] Nagelkerke R^2 ; [3] Area under the ROC Curve ; [4] Sensitivity ; [5] Specificity ; [6] Overall classification.

dren's need for services. Because these two informants differ in their perceptions, both must consequently be considered in the process of obtaining services.

Parents are key individuals with regard to perception of need for psychiatric help and consultation with mental health services, as they are the primary decision makers. As would be expected, the majority of the subjects who perceived need for help received mental health services, and the majority of those who did not perceive problems did not seek help. The percentage of parents stating that their children had problems was higher than the percentage of children reporting that they had problems. A small proportion of children were aware that they would need professional help. However, most importantly, 11% of children perceived problems that were untreated. 5% of parents perceived problems but found some kind of barrier that impeded access to services. Conversely, 47.5% of those who did not realize the existence of problems were adequately advised to seek help. These data indicate that, although health agents are doing a good job of advising those who have no insight into the existence of their problems (47% of the families), there is still a proportion of children with unmet needs. Children perceived they had problems primarily when their functioning was altered, when they were older, realized they were irritable, did not pay attention (or were told they did not) and became more aware of this. On the other hand, parents realized that their children had problems mainly when they recognized that they, themselves, were giving little affection to the children. Many of the variables that predicted parents' perception of problems also predicted use of services. Odds ratios were practically identical. Parents' models had a very good rate of classification. Although some work has been done on barriers to services in Spanish speaking children outside Spain (Díaz, Prigerson, Desai, Rosenheck, 2001), no similar studies exist in our country. Future research should more fully investigate the causes of and barriers to unmet mental health needs among Spanish children.

Certain discrepancies existed in the variables that predicted perception and those related to seeking help, especially in the models for temperament, parental rearing style and stressful life-events. For instance, in the temperament model, help-seeking was predicted by two dimensions that were not predictive in the perception model (Approach and Adaptation). This finding is com-

Table 2
Logistic regression models of mental health service utilization adjusted by psychopathology

MODEL		P value	OR	95% CI OR	
Demographics & mixed (N=235)	Age	0.001	1.29	1.11 to 1.52	[1] χ^2=3.97 (P=0.860); [2] R^2=0.67
	Impairment	0.004	0.95	0.91 to 0.98	[3] AUC=0.95 (95% CI: 0.93 to 0.98)
	Parent's perception	<0.0005	33.2	8.8 to 124	[4] Sens.=96.7%; [5] Spec.=67.8% ; [6] OC =91.6%
Temperament (R-DOTS) (N=250)	Approach	0.013	1.17	1.04 to 1.33	χ^2=4.99 (P=0.758); R^2=0.45
	Adaptability	0.015	0.84	0.73 to 0.97	AUC=0.87 (95% CI: 0.81 to 0.93)
	Mood	0.001	0.80	0.71 to 0.91	Sens.=95.5%; Spec.=51.0%OC=86.4%
	Attention span	0.047	0.92	0.84 to 0.99	
Developmental problems (N=253)		None significant			
Marital discord (CPQ) (N=228)	Acceptabilitty	0.003	1.34	1.10 to 1.62	χ^2=4.96 (P=0.762); R^2=0.35 AUC=0.83 (95% CI: 0.75 to 0.90) Sens.=95.7%; Spec.=43.9%; OC=86.4%
Rearing style (EMBU) (N=238) *Informant CHILD about MOTHER*	Rejection	0.002	1.05	1.02 to 1.09	χ^2=9.51 (P=0.301); R^2=0.35
	Emotional Warmth	0.014	0.94	0.89 to 0.99	AUC=0.83 (95% CI: 0.77 to 0.89) Sens.=94.0%; Spec.=44.4%; OC=82.8%
Rearing style (EMBU) (N=230) *Informant CHILD about FATHER*	Rejection	0.001	1.06	1.02 to 1.10	χ^2=8.45 (P=0.391); R^2=0.38
	Emotional Warmth	0.044	0.95	0.91 to 0.99	AUC=0.85 (95% CI: 0.79 to 0.91) Sens.=93.8%; Spec.=45.3%; OC=82.6%
Rearing style (EMBU) (N=238) *Informant MOTHER*	Emotional Warmth	<0.0005	0.86	0.80 to 0.92	χ^2=2.08 (P=0.978); R^2=0.42 AUC=0.86 (95% CI: 0.80 to 0.92) Sens.=95.8%; Spec.=44.9%; OC=85.3%
Rearing style (EMBU) (N=181) *Informant FATHER*	Emotional Warmth	0.001	0.90	0.83 to 0.96	χ^2=8.51 (P=0.385); R^2=0.38 AUC=0.83 (95% CI: 0.74 to 0.92) Sens.=96.7%; Spec.=45.2%; OC=87.5%
Stressful events (N=307)	Fights	0.005	4.84	1.63 to 14.40	χ^2=0.34 (P=0.844); R^2=0.34 AUC=0.79 (95% CI: 0.73 to 0.86) Sens.=94.8%; Spec.=49.1%; OC=86.0%
Total problems (N=307)	Total stressors	0.004	1.47	1.13 to 1.91	χ^2=0.49 (P=0.993); R^2=0.35 AUC=0.81 (95% CI: 0.75 to 0.87) Sens.=95.6%; Spec.=47.5%; OC =87.6%

[1] Hosmer and Lemeshow goodness-of-fit test ; [2] Nagelkerke R^2; [3] Area under the ROC Curve ; [4] Sensitivity ; [5] Specificity ; [6] Overall classification.

plex to explain, but it may be that a behavioral style characterized by responding to new stimuli or difficulty in changing behavior in the desired direction causes problems in the relationship with the environment. This ultimately results in the individual seeking out services because others have been alerted to the problem (teachers, pediatricians, other family members etc.). Other dimensions related to sleep irregularities were perceived but were not considered severe enough to require consultation. There was a definite agreement between difficulties in attention and mood.

With respect to parental rearing style, perception of the need for help was predicted by a lack of parents' participation in children's education and by the overprotection of mothers, although these variables did not predict use of services. It may be common practice in the Spanish culture for fathers to be less involved in the education of their children and for a tendency towards the maternal over-protectiveness of these children. The presence of such behavior may result in limited insight into the existence of psychiatric problems and into the help sought for them. Moreover, in this study, parental rearing style reported by the father or the mother was not related to the child's perception of having problems. The most important variable was the children's own perception about how parents educate them, and specifically, if they perceived rejection or lack of interest on the part of the father. The lack of emotional warmth from parents was only significant in children without psychopathology. In other words, healthy children may be more sensitive to the lack of parental affection leading to parents being more aware of difficulties. In contrast, pathological children may experience other situations that would lead them to perceive problems (for instance, rejection).

With regard to stressful life-events, while children were aware of problems if they felt physically threatened, or if there was physical abuse by some member of the family, parents perceived children could have problems for *other* reasons (i.e., finding out that they had been adopted, mental health problems in close non-family individuals, separation from the family, etc). Thus, parents underecognized or underevaluated the severity of the circumstances. The existence of fights at home was one reason that lead to seeking help, although this variable did not emerge as being significant within the perception model. In some cases, this could indicate that others having knowledge of fights or their consequences may have referred the child for consultation (teacher, for example). In other cases, parents who do not perceive actual problems during a consultation become motivated, through environmental problems, to obtain professional diagnosis as a preventive measure. The severity of legal problems in the family may interact with insight into the child's own problems. The importance of the children's information on stressful-events was reflected in the model by the «total problems» variable: the total number of stressful events predicted consultation.

Figure 1 presents the synthesis of the relation between perception of need for help and use of services. Perception of problems and consultation for these depends on the degree of functional impairment the problems cause, the age of the child (older children perceive and consult with a higher probability than younger ones), temperamental traits related to affective uneasiness (negative mood), low persistence and attention to the task, parental rearing style characterized by rejection and low emotional warmth, and severe stressful life events. There seems to be a tendency for parents and children to agree on the variables that provide insight into the existence of problems and ultimately lead to help-seeking. Furthermore, the variables that allow individuals to realize the existence of problems but do not lead to consultation for them are, on the whole, developmental difficulties reported by the parents: sleep irregularities, developmental delays and extreme degrees of implication in the education of the autonomy of the child (overprotection-no control). Parents, and some pediatricians, have the idea that developmental problems are solved without intervention (enuresis would be a common example). Finally, families consult when children have a behavioral style that could be interpreted as intrusive and meddlesome, when the behavior is difficult to change in the desired direction, and when there are fights at home. In these situations, schoolteachers were the agents who mainly referred the child to mental health services. As mentioned earlier, other studies have highlighted the importance of teachers in the network of mental health services. Perception of the need for help was related to family or developmental problems. A high impairment or the generalization of problems to different contexts led to consultation.

The presence of psychiatric disorders is one of the best predictors of use of services. In recent research, Poduska (2000) reported that the predictors of parents perceiving their children as needing mental health services were children's behavioral symptoms (as rated by parents and teachers). However, as can be seen from

	Perception And Consultation	Perception But No Consultation	No Perception But Consultation
Demographic / mixed	• High impairment (P&C) • Older age (C) • Parent's perception (P)		
Temperament	• Negative mood (P&C) • Low attention (P&C)	• Sleep irregularities (P)	• Approach to new stimuli • Difficulty in adaptation
Developmental problems		• Developmental problems(P)	
Educational style	• Rejection (P&C) • Low emotional warmth (P&C)	• Low control of the father (C) • High overprotection of the mother (P)	
Stressful life-events	• Physical abuse (C) • Others (P)		• Fights at home
P&C: Significant variables reported by parents and children; P: Significant variables reported by parents; C: Significant variables reported by children			

Figure 1. Variables related with perception of need of help and consultation

our results, the presence of psychopathology is not enough to explain that the subjects perceive the need for help or attend consultation; clearly there are other variables having considerable weight. Consequently, for planning services, a definition of needs that is based solely on diagnosis would be insufficient (as was also noted by Pincus et al., 1998).

The results of this study may also be useful for investigating whether steps indicated in the service network are well established. For example, the finding that families did not recognize the existence of problems when children have difficulties in adaptation, and that these families receive mental health services, could reflect the fact that health agents (in this case, teachers) are acting efficiently. More knowledge of the variables that predict perception of the existence of problems and use of mental health services could facilitate a better estimation of demands, and a more widespread use of services. Furthermore, if replication of this study confirms identical variables as predictors of use of services, specific prevention programs could be directed to diminish these problems, reducing both service use and costs.

The primary goal of this study was to determine what variables, other than psychopathology, predicted the perception of need for or use of services, and not to ascertain if children/parents actually perceived or used services. For this reason, the sample was comprised primarily of children receiving services (75%). The results of this work could be extrapolated to individuals receiving psychiatric or pediatric consultation. However, generated models were exploratory and future research should validate this across criterion outcomes in order to examine the invariance of the models, in terms both of the perception of needing help and in seeking consultation.

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