Risk Factors Associated With the Chronicity of High Potential for Child Abuse and Neglect

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The present 4-year follow-up study involves 56 mothers who were evaluated by social agencies as being abusive and neglectful or at high risk for child abuse and neglect. The aim of the study is to analyze the relationship between psychosocial risk factors (relating to the history and current situation of the mothers) that were present at the time the families were initially recruited and the fact that some of the mothers continue to show a high potential for child abuse and neglect (chronic abuse and neglect), whereas others were able to overcome the problem (transitory abuse and neglect). Results indicate that the following variables are particularly associated with situations involving chronic problems of abuse and neglect: initial level of severity of potential for abuse and neglect; dual-parent status; a large number of children at the time of intervention (3.13 times more risk of chronicity for large families); the fact that as a child the mother herself had been placed in a foster home (3.7 times more risk); that she had been sexually abused (3.5 times more risk); and that as an adolescent she had run away from home (3.02 times more risk). Our results indicate that mothers who have a combination of more than eight risk factors are four times more likely to be in the chronic group.

KEY WORDS: risk factors; neglect; chronicity; abuse.

The most frequently reported cases of maltreated children in North America involve both child neglect and physical abuse. In the United States, the National Child Abuse and Neglect Data System (NCANDS) established that in 1997 there were confirmed cases of maltreatment in 13.9 children out of every 1,000. Of those cases, 56% involved neglect. In comparison, a Canadian incidence study carried out by Trocmé *et al*. (2001) reported a rate of 9.71 children out of every 1,000. Although neglect is the main motive for investigating child protection violations, other forms of maltreatment, that is physical and sexual abuse, are present in 52% of the cases (Trocmé *et al*., 2001). These results confirm the findings of Ney, *et al.*

(1994), who reported that only 5% of officially confirmed cases involved only one form of maltreatment. Because most maltreated children have experienced multiple forms of maltreatment, from a clinical perspective it is important to take into consideration research that involved children who have experienced both abuse and neglect (Dubowitz, 1999).

In many cases, psychosocial intervention with neglecting and abusive families appears to be a long-term process (Ayoub *et al.*, 1992; Crittenden, 1996) with mixed results (Gutterman, 1999). We know little of the long-term effects of intervention programs with abusive families, particularly because very few studies have lasted for more than 2 years (Ethier & Lacharité, 2000). In Quebec, Lessard (2000) reported a mean duration of Child Protection Service (CPS) interventions of 2 years with a standard deviation of 8 months. From a clinical standpoint, it has been observed that some families make significant progress, that is, psychosocial intervention aimed at protecting the child proves to be no longer necessary after a certain period of time. Other families, however, require constant child protection monitoring or become

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child protection cases again some time after their file has been closed.

Although chronicity is well recognized at a clinical level (Dubowitz, 1993; Gaudin *et al.*, 1993; Nelson, 1997), we found that very few studies have examined characteristics of families that display problems of chronic neglect and abuse compared to families who manage to overcome these problems. In a follow-up conducted 7 years after their initial study, Haapasalo and Aaltonen (1999) reported that mothers recruited from Child Protection Services (CPS) still scored significantly higher than comparison mothers on most of the Child Abuse Potential Inventory (CAPI) scales, indicating a persistent high potential for child abuse. Analyses also showed that CAPI scores were best predicted by maternal social problems, including the mother's experiences of childhood abuse and her current socioeconomic status (SES). Although their study provides insight into the variables that relate to the persistence of child abuse potential years after CPS intervention, its results do not enable us to identify the variables that characterize mothers or families displaying short- or long-term problems of child abuse or neglect. In the present study, we will consider the association between the major risk factors for child abuse or neglect and the chronicity of this problem.

PSYCHOSOCIAL RISK FACTORS RELATED TO ABUSE AND NEGLECT

Many studies have shown that there is a strong association between child abuse and neglect and the problems posed by poverty (Zuravin & Greif, 1989), low education (Duncan & Brooks-Gun, 1997), social isolation (Polansky *et al.*, 1981), maternal depression (Egeland *et al.*, 1980), break-ups and violence in childhood (Quinton & Rutter, 1988), and low level of intellectual functioning (Crittenden, 1988). From an ecological perspective (Bronfenbrenner, 1979; Garbarino & Collins, 1999), it is presumed that presence and severity of multiple risk factors, individual characteristics (break-ups and violence in childhood, low education, low level of intellectual functioning), family characteristics (high number of children, low income, single-parent family, violent partner), and environmental characteristics (low social support) increase the likelihood of chronic abuse and neglect.

Material and Social Poverty

Abuse and neglect, particularly emotional neglect, is present at all levels of society, but the large majority of the cases handled by Child Protection Services show a family income that is below the poverty line. Research has established a strong relationship between poverty and abuse and neglect (Zuravin & Greif, 1989; Brown *et al.*, 1995). Neglecting and abusive families are among the least educated and poorest of society (American Association for Protecting Children [AAPC], 1989; Crittenden, 1988; Department of Health and Human Services [DHHS], 1994). The poverty of these families is not related solely to low income: lack of personal resources (young age of the mother at the birth of her first child, many children in the family, parents with a low level of education, poor social support, parents with psychological problems), and adverse environmental conditions add to their economic destitution (Duncan & Brooks-Gunn, 1997; McLoyd & Wilson, 1991). Several studies have reported that neglectful and abusive families are socially isolated (Erickson & Egeland, 1996; Polansky *et al.*, 1981). Very little communication takes place between family members and, when it does occur, it tends to be rather brief and negative (Burgess & Conger, 1978; Crittenden & Bonvilian, 1984). These studies suggest that neglectful and abusive families have difficulty finding satisfactory social support both inside and outside the family.

Parental Stress and Depression

Dating back to the first studies done in the field, parental stress and depression have been identified as being present in mothers who severely neglect or abuse their child (Cummings & Cicchetti, 1990; Downey & Coyne, 1990; Egeland *et al.*, 1980; Kinard, 1982; Scott, 1992). According to Egeland *et al.*, (1980), it is less a question of stress related to changes in one's life than a situation of chronic stress resulting from difficult living conditions, the absence of social support, depression of the parent and, in some cases, mental health problems (Friedrich & Eibender, 1983).

Experiences Involving Abuse, Break-Ups in Childhood

Many of the maltreatment-related risk factors reported in the literature relate to events that took place or relationships that existed in the parent's childhood: rigid discipline, cruelty, rejection, experiences of abandonment, consecutive placement in foster homes, violence, neglect, or sexual abuse (Egeland, 1988; Ethier *et al.*, 1995; Quinton & Rutter, 1988).

Main and Hesse (1990) found that emotional break-ups in childhood, repetitive placement in foster homes and experiences of abuse are undeniable sources of trauma.

When these highly emotional experiences are unresolved by the individual, they may have an adverse effect on affective relations and the general adaptation of the parent (Egeland & Susman-Stillman, 1996; Fonagy & Target, 1997). On the basis of a study carried out by Egeland and Susman-Stillman (1996), parents who were abused as children and who continued the pattern of abuse with their own child had experienced more traumatic experiences in their childhood than other parents who were abused but who did not become abusers themselves.

Low Level of Intellectual Functioning

In studies done on child maltreatment (abuse or neglect) some authors have reported that low level of intelligence of the parent represents a significant risk for abuse or neglect (Crittenden, 1988; Pianta *et al.*, 1989; Polansky *et al*., 1981; Wolfe & Werkele, 1993). High rates of child abuse and neglect have been found in studies involving parents with intellectual impairment. In one large-scale study done by Whitman *et al.*, (1987), in attempting to trace all parents with intellectual disabilities living in St. Louis, USA, noted that of the 388 parents listed, 45% had children that had been placed in foster homes. Whitman and Accardo (1990), in their assessment of 107 children whose parents had intellectual disabilities and who had been referred to a specialized child-care service, reported that more than 66% of them had been victims of abuse or neglect. One must be cautious, however, in the interpretation of these findings: a number of studies have found that level of parental incompetence is not directly related to the degree of intelligence unless the IQ is below 60. (Budd & Greenspan, 1984; Keltner, 1994; Tymchuk & Feldman, 1991). According to Tymchuk and Andron (1990), IQ is insufficient in determining parental competence. Psychiatric morbidity, the absence of social support and difficult living conditions are factors associated with parental incompetence that are more important than the degree of intelligence.

The aim of the present study is to examine the association between presence of major psychosocial risk factors for child maltreatment and the chronicity of child abuse and neglect. It deals with parental abuse or high potential for abuse and neglect that persist even though the parents have received services to help them and their family over a period of 4 years. From a theoretical standpoint, we put forth the hypothesis that chronic abuse and neglect is associated with presence of a greater number of risk factors that are related to the history and current living situation of the parent. From a child protection perspective, we believe that it is important to identify the parents who are likely to have more difficulty in overcoming child maltreatment problems in order to better adapt intervention programs to their needs.

PARTICIPANTS

Participants were initially recruited from two different studies on the effects of an intervention program called the Personal, Family and Community Help Program (PFCHP), which was first applied to child *maltreating families* (Palacio-Quintin *et al.*, 1994) and then to *families at risk* for child abuse and neglect (Ethier *et al.*, 1995). Approximately half of the families were taking part in the PFCHP program whereas the others were receiving regular services from social agencies (enhancement of parental skills and the parent–child relationship, and referral to appropriate community services). *Maltreating families* (n = 58) were initially recruited from Child Protection Services (CPS) and showed, at the time, severe child abuse or neglect according to CPS files and their results on the Child Well-Being Scales (Magura & Moses, 1984), a standardized instrument adapted and validated for the French-speaking population in Quebec by Vézina and Bradet (1990). *At-risk families* (n = 29) were receiving the services of a Local Community Services Center (LCSC) and were initially recruited on the basis of showing at least 4 risk factors for child abuse or neglect from a list of 22 risk factors drawn up by Browne and Sagi (1988) and Crittenden (1992). A mean of 7.6 risk factors was observed in the families at that time. All participants from CPS and LCSC services were recruited on voluntary basis.

Four years after the initial recruitment, a follow-up was conducted involving 37 mothers (63.8% of the initial sample) who were recruited by the CPS, and 25 mothers (86.2% of the initial sample) who were considered by the LCSC to be at high risk for child abuse or neglect. Attrition was mainly the result of participants having moved out of the area covered by the current study and mothers refusing to take part in the follow-up study. Analyses were conducted to compare the attrition cases to those who took part in the follow-up on the basis of child maltreatment severity and the number of risk factors and sociodemographic variables. The results showed that there were no significant differences between the two groups of mothers for any of the variables.

At the time of the *initial recruitment*, the mean age of participants in the current study was 29 years, ranging from 20 to 46 years of age. The mothers had completed from 3 to 14 years of schooling with a mean of 9.5 years. For the majority of them (78.6%), the family income was

below $20,000 (Canadian dollars). A relatively small proportion of the families had employment income (23.2%); the majority of them were receiving social welfare payments. The mean number of children per household was 2.4, ranging from 1 to 6. At the time of the initial recruitment, the mean age of the eldest child in the family was 51.7 months with a standard deviation of 21.9 months. In the majority of the families (55.4%), the mother had been living alone with her children for at least 4 months.

Classification of Cases — Chronic Versus Transitory

For the purpose of the present study on chronicity, we used a double criterion to classify evolution of the mothers following the intervention. Mothers whose CPS or LCSC files were still active at the time of the follow-up and/or who displayed high tendencies or a high potential for abuse (a score of 166 or more on the overall scale of the Child Abuse Potential Inventory, which corresponds to the 95th percentile rank of the norm group) were classified as having "chronic problems." Mothers whose CPS or LCSC files were inactive *and* who scored below the 95th percentile on the CAPI were classified as having "transitory problems." A double criterion was used because continuity of CPS and LCSC services sometimes varies, depending on the availability of resources.

When the above criteria were applied, a group was formed of 35 mothers who still exhibited problems of child maltreatment 4 years after having begun receiving CPS or LCSC services. These 35 mothers made up the *chronic problems group* (CH). The other 21 mothers were classified as having displayed *transitory problems* of child abuse or neglect (the transitory problem group TR) and their files had been closed for at least 4 months. Preliminary analyses indicated no significant differences between the groups with respect to the recruitment location, that is the CPS or the LCSC (maltreating vs. at risk: $\chi^2 = 1.18$; $p = .28$), the type of intervention (PFCHP vs. regular services: $\chi^2 = 0.25$; $p = .62$) and the combination of recruitment location by type of intervention ($\chi^2 = 0.23$; $p = .63$).

MEASURES

The instruments described in the present paper are only a part of a battery of tests used at the time of the initial recruitment, at the end of the intervention programs and at the follow-up. The instruments were chosen in order to categorize the mothers according to the chronic or transitory nature of their child maltreatment problem, presence of risk factors in the family environment and the parental characteristics generally associated with neglect and abuse.

Demographic Questionnaire

A brief questionnaire was used to organize and standardize information regarding the composition of the family and the characteristics of its members (age, education, work experience, income).

Psychosocial Interview (Ethier *et al.*, 1991)

Developed following an extensive literature review on the predictive variables of maltreatment, this structured interview covers the following dimensions: (1) social support of the parent (an adaptation of the test developed by Sarason *et al.*, (1983), which is used to assess the density and composition of the social support network and the parent's satisfaction regarding the quality of support received; (2) characteristics of the parent's own family, including a history of placement in foster homes, and experiences of neglect or abuse in childhood; (3) changes or continuity in the parental couple (the number of parent figures with whom the child has been in contact, the quality of the mother's relationship with each of her partners, the quality of the partner's relationship with the child).

Child Abuse Potential Inventory — CAPI

This instrument was developed by Milner (1980) and translated into French for use in Quebec by Palacio-Quintin and Palacio-Quintin (1992). Widely used in research on child abuse and neglect, the CAPI consists of 160 statements to which respondents must indicate their agreement or disagreement. A weighted compilation of the responses leads to an overall potential abuse score and six subscale scores: problems with others, problems with family, problems with children, sadness, rigidity, and distress. The North-American standards provided by the author suggest a critical cutoff point at the 95th percentile rank, beyond which the parent shows a high potential for child abuse. The predictive validity of the CAPI has been reported by Milner *et al.*, (1984) and its psychometric properties are discussed in Milner (1994).

Raven's Progressive Matrices (Raven *et al.*, 1983)

This instrument is used to evaluate the level of intellectual functioning. Raw scores may be converted into

Table I. Risk Factors (Maternal or Familial Characteristics) Potentially Associated With the Chronicity of Maltreatment

	Source: PI = Psychosocial Interview; DQ = Demographic Questionnaire
History of the mother	
Placement in a foster home during her childhood or adolescence	The placement must be the result of psychosocial intervention; respite care (weekends) is not taken into account. (PI)
Victim of sexual abuse during her childhood or adolescence (intra- and extrafamilial abuse)	Fondling, invitation to sexual relations, rape. The relationship with the person(s) involved (close family, extended family, acquaintance, stranger) and the frequency of the events (infrequent, occasional, regular) must be specified. (PI)
Running away from home during her adolescence	Over the course of her adolescence, the mother left her family environment for an extended period of time without telling her parent figures. (PI)
Break-ups in childhood in relationships with her parent figures	Exclusively situations involving the death of one of the parents or separation of the parent couple. (PI)
Unavailability of her parent figures	One of the mother's parents suffered from diagnosed mental health problems or used drugs or alcohol excessively. (PI)
Neglect reported during her childhood or adolescence	In a list of nine elements (ex.: deprived of care, clothing, food), at least one element of neglect reported. (PI)
Victim of physical violence	Occasional or regular physical violence toward the mother in her own family. (PI)
Mother's present situation	
Familial unemployment	The family has no employment income and lives off social assistance payments. (DQ)
Limited number of persons in her social support network	Less than four persons are reported in the questionnaire on social support. The score corresponds to the lower quartile of the distribution of the sample. (PI)
Having lived with a violent partner in the past	Since the birth of her first child, the mother has been subjected to physical violence by her partner. (PI)
Low intelligence level on Raven's Matrices	The result obtained on Raven's Matrices is below the 25th percentile for the general population.
Low level of education	High school not completed: less than 11 years of schooling. (DQ)
High number of children	The family has four or more dependent children. (DQ)
High number of partners	Since the birth of her first child, the mother has lived with three or more different partners. (PI)

percentile ranks according to the performance of an individual in comparison with his/her age group. The validity and psychometric properties of this widely used instrument have been reviewed and discussed in Raven *et al.*, (1983).

Variables Potentially Associated With the Chronicity of Child Maltreatment

A set of 14 variables (see Table I) was compiled, taken from the Demographic Questionnaire, the Psychosocial Interview, and Raven's Progressive Matrices. These variables were chosen based on the fact that they corresponded to the psychosocial risk factors presented in the introduction and are frequently mentioned as events or conditions likely to exacerbate child maltreatment (Browne & Sagi, 1988; Crittenden, 1992; Daro, 1996). For the purposes of this paper, these events and conditions will be called the "risk factors" of chronicity of child maltreatment. The variables were divided up according to whether they relate to (1) events that occurred in the mother's own family or characteristics of that family, or (2) actual characteristics of the mother with respect to her adult life. In the con-

text of the present paper, these variables will be studied from the viewpoint of the risk of chronicity that may be associated with them.

PROCEDURE

As explained previously, the measures reported here come from a battery of tests that were administered to the participating families on three separate occasions: at the time of their recruitment (T1), at the end of the intervention programs 2 years later (T2) and at the follow-up, 4 years after the recruitment (T3). The data reported here were gathered using the Demographic Questionnaire, the Psychosocial Interview and Raven's Progressives Matrices at T1, and the CAPI at T1, T2, and T3. Testing and interviews with the mothers took place in their homes, except in cases where confidentiality of the information received could not be ensured because of the presence of other persons, in which case the mothers were met at the CPS center or the Local Community Services Center. Graduate psychology students, who had received previous training, administered the questionnaires and carried out the psychosocial interview. The instruments were administered

in the form of an interview because some of the mothers were illiterate or had difficulty reading the forms.

RESULTS

Our study of the maternal and familial characteristics likely to be related to the problem of chronic child abuse or neglect was divided into three parts: (1) comparison of the demographic characteristics of the two groups (CH and TR); (2) comparison of the initial level of severity (represented here by potential for child abuse) and its evolution over time; and (3) evaluation of the relative risk of chronicity for each of the psychosocial risk factors.

Social and Demographic Characteristics

Table II shows the comparison of demographic variables between the CH and TR groups. The results indicate that there are no significant differences between the groups with respect to the age of the mother, her level of education, and the employment status of the family. The first significant difference that appears is the age of the eldest child: for mothers displaying chronic problems, the eldest child was on average approximately 12 months older ($t = 2.00$; $p = .05$). A marginal difference can also be observed with respect to the number of children, the CH group having on average slightly more children than the TR group ($t = 1.74$; $p = .08$). These two situations could be seen as being interdependent: in families with an older child, there is a greater probability that the mother has other children. Given that the mean age of the mothers is similar in both groups, the results indicate that the participants in the CH group had their first child at a younger age than the participants in the TR group.

Single-parent families (at T1) are proportionally more numerous in the TR group, 76.2% compared to 42.9% ($\chi^2 = 6.13$; $p = .01$). More mothers who were living alone with their children when intervention began display transitory problems of child maltreatment. Differences in family income are difficult to analyze because of the skewness of the categories of income (which were initially in blocks of $5,000 Canadian dollars when the data was gathered) and the number of participants. When we realized that different combinations of blocks of income led to different results, we decided to simply report the frequencies observed when income was grouped in blocks of $10,000 Canadian dollars. Moreover, contamination of multiple effects is seen here: (1) single-parent families have lower incomes and (2) because the majority of the families were living off social welfare, those with more children receive higher payments. Poverty is a well-known correlate of child maltreatment. In our sample, most of the families are living on a low income in comparison with the general population. Therefore, our data do not enable us to state that there is a possible relationship between poverty level and the chronicity of maltreatment in a subpopulation of low-income families.

Initial Level of Abuse Potential and Its Subsequent Evolution

Abuse potential was measured using Milner's Child Abuse Potential Inventory (Milner, 1990). It is important

Table II. Demographic Characteristics of the "Chronic" and "Transitory" Groups at the Time of Recruitment

	Chronic Problems ($n = 35$)		Transitory Problems ($n = 21$)		
	M	(SD)	M	(SD)	t (two-tailed p)
Age of the mother	29.02	(6.4)	29.3	(4.1)	.18
Education	9.46	(1.8)	9.62	(2.4)	.28
Number of children	2.7	(1.5)	2.1	(1.1)	1.74[†]
Age of the eldest child (months)	56.2	(21.7)	44.4	(20.8)	2.00*
	N	%	N	%	χ^2 (two-tailed p)
Single-parent families	15	(42.9)	16	(76.2)	6.13**
Dual-parent families	20	(57.1)	5	(23.8)	
Employed	8	(22.9)	5	(23.8)	.01
Unemployed	27	(77.1)	16	(76.2)	
Annual income ($CAN)					
$10,000–$14,999	13	(37.1)	15	(71.4)	—
$15,000–$24,999	14	(40.0)	6	(28.6)	
$25,000 or more	8	(22.9)	—	—	

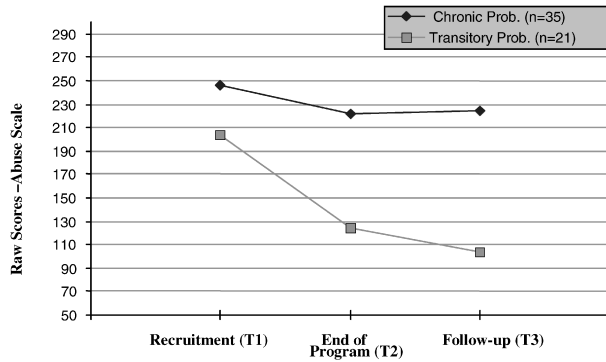*$p < .05$. **$p < .01$. [†]$p = .08$.

Fig. 1. Evolution of mean CAPI scores for the CH and TR groups, between the time the families were recruited and the follow-up 4 years later.

to remember that according to the norms provided by the author, a raw score over 214 is a sign of high potential for abuse and a score between 166 and 214 represents a tendency for abuse. Figure 1 shows the curves for the change in mean CAPI scores for each of the two groups. Because the CAPI score was one of the two criteria used for creating the CH and TR groups, the follow-up results were expected to be much lower for the TR group. In fact, we observed that at T1 the mean scores for both groups are beyond the cutoff point of the 95th percentile rank. Furthermore, it is interesting to note how the curve for the results of the TR group decreases significantly ($F_{mult}2.53 = 5.07$; $p = .01$) in comparison with the CH group, and that the mean CAPI result is lower for the TR group at TI. The

means observed were 245.7 for the CH group and 204.3 for the TR group, showing a marginal but statistically nonsignificant difference ($F = 3.65$, $p = .06$).

Relationships Between Risk Factors and the Chronicity of Abuse and Neglect

Table III shows the observed and relative (%) frequencies of each of the risk factors (RF) present in the CH and TR groups. Percentage of chronic cases indicates the proportion of participants classified as "chronic" among those for whom the risk factor is present. The odds ratios are presented as a measure of association between the presence of an RF and the chronicity of maltreatment and are calculated by putting the incidence rate of chronicity among participants exposed to a given RF over the incidence rate among participants not exposed to the same RF. When the value of the odds ratio is 1.00, it means that exposed and nonexposed participants show the same incidence rate of chronicity. The greater the odds ratio, the more the RF may be associated with chronicity. For example, for an odds ratio of 3.0, participants for whom the risk factor is present would have three times more risk of displaying the problem than those for whom the RF is absent. It is also important to remember that the results reported here are calculated based on a sample of mothers who have exhibited problems of child maltreatment in the past. That is why a relatively high frequency for each of the RFs was observed in the sample.

Table III. Distribution of Risk Factors in the CH and TR Groups and Calculation of the Odds Ratio of "Chronicity" Associated With Those Factors

Risk factors	CH group, N (%)	TR group, N (%)	% of cases per RF	Chi square	Odds ratio	95% Confidence bounds	
Childhood history							
Placement in a foster home	16 (45.7)	4 (19.0)	80.0	4.28*	3.57	0.98	12.82
Victim of sexual abuse	21 (60.0)	6 (28.6)	77.8	5.32*	3.75	1.17	12.00
Running away during adolescence	17 (48.6)	5 (23.8)	77.3	3.49†	3.02	0.91	10.07
Break-ups with parent figures	25 (71.4)	13 (61.9)	65.8	.54	1.54	0.49	4.84
Unavailability of parent figures	21 (60.0)	13 (61.9)	61.8	.02	0.92	0.30	2.80
Neglect reported in childhood	25 (71.4)	17 (81.0)	59.5	.65	0.58	0.16	2.19
Victim of physical violence	12 (34.3)	9 (42.9)	57.1	.41	0.69	0.23	2.11
Adult life situation							
Familial unemployment	27 (77.1)	16 (76.2)	62.8	.00	1.05	0.29	3.78
Limited social network	13 (37.1)	6 (28.6)	68.4	.43	1.47	0.46	4.75
Violent partner in the past	24 (68.6)	11 (52.4)	68.6	1.45	1.98	0.65	6.05
Low intellectual functioning	11 (31.4)	3 (14.3)	78.6	2.18	2.75	0.67	11.32
Low level of education	22 (62.9)	11 (52.4)	66.7	.59	1.54	0.47	4.36
High number of children	12 (34.3)	3 (14.3)	80.0	2.86†	3.13	0.77	12.79
High number of partners	26 (74.3)	14 (66.7)	65.0	.37	1.44	0.44	4.71

*$p < .05$. †$p = .01$.

Table IV. Analyses of the Differences in Total Risk Factors per Group

	Chronic problems (n = 35)		Transitory problems (n = 21)		t (two-tailed p)
	M	σ	M	σ	
Childhood history	3.9	(1.8)	3.2	(1.7)	1.47
Adult life situation	3.8	(1.4)	3.0	(1.5)	2.04*
Total	7.8	(2.5)	6.2	(2.0)	2.41*

$^*p < .05.$

Statistically, the RF most often associated with a situation involving chronic problems is "victim of sexual abuse" ($\chi^2 = 5.32$; $p = .02$). The mothers in the sample who display this RF have 3.75 times more risk of displaying chronic maltreatment problems than those for whom this RF is absent. Among all the mothers exposed to that RF, 77.8% were categorized as exhibiting chronic problems. Only one other RF has a statistically significant association with chronic problems: "placement in a foster home." Of the 20 mothers displaying this RF, 16 (80%) are categorized among the chronic problem cases ($\chi^2 = 4.28$; $p = .04$). The odds ratio for this RF is 3.57.

Two other RFs lead to odds ratios of chronic problems over 3, but the difference in distribution in the sample does not reach a statistically significant threshold; the RF "high number of children" leads to 3.13 times more risk of chronicity ($\chi^2 = 2.86$; $p = .09$) and the RF "running away during adolescence" has an odds ratio of 3.02 ($\chi^2 = 3.49$; $p = .06$).

Some RFs were observed in similar proportions in both groups: "unavailability of parent figures" is present in approximately 60% of the mothers in both groups, and "familial unemployment" is present in approximately 76%. Finally, two RFs were observed slightly more often in the mothers displaying transitory problems, although the difference in frequencies is not statistically significant: "neglect reported in childhood" and "victim of physical violence."

In addition to the existing relation between each of the RFs studied and the status of the maltreatment problem (chronic or transitory), the sum of the risk factors present

will be examined in the next analyses. Table IV shows the total mean number of risk factors per group, as well as the category to which they belonged, that is, RFs relating to the mothers' childhood or adolescence or those related to the mothers' adult life.

The mothers who were categorized as displaying chronic problems of child maltreatment show on average more RFs than the mothers displaying transitory problems ($t = 2.41$; $p = .02$). The mean observed for the CH group is 7.8, compared to 6.2 for the TR group. Analysis of the means of the RFs according to category indicate that mothers in the CH group displayed on average more RFs relating to their adult life ($M = 3.8$) than the mothers in the TR group ($M = 3.0$) ($t = 2.04$; $p = .05$).

These same variables are examined from another viewpoint in Table V, where the effect of the extent of exposure to risk factors is analyzed. Using the median value of the observed distributions as a cutoff point, the sample was divided into two subgroups: mothers exhibiting the most RFs, i.e. 8 or more (the "more exposed" sub-group) and those displaying the least number of RFs, that is, seven or less (the "less exposed" sub-group). Results of the analysis of the differences in distribution per group indicate that the percentage of mothers displaying chronic problems is higher for the "more exposed" sub-group ($\chi^2 = 6.32$; $p = .01$). A total of 78.6% of the mothers exhibiting eight or more RFs have chronic maltreatment problems, compared to 46.4% of the mothers in the "less exposed" group. Mothers displaying eight or more RFs have 4.23 times more risk of having chronic problems than the other maltreating mothers.

Predicting Chronicity

One last analysis was carried out in order to verify the predictive value of the variables studied thus far. Firstly, the risk factors with an odds ratio lower than or equal to 1 were removed from the compilation of the total number of RFs. "Unavailability of parent figures" ($RR = 0.92$), "neglect reported in childhood" ($RR = 0.58$), "victim of physical violence" ($RR = 0.69$), and "familial unemployment"

Table V. Frequencies of Chronic and Transitory Problems of Maltreatment as a Function of the Extent of Exposure to Risk Factors

	Chronic problems		Transitory problems		Percentage of "chronic" cases		
Extent of exposure	N	%	N	%	per RF	χ^2	Odds ratio
More exposed (8 RF and +)	22	(62.9)	6	(28.6)	78.6	6.32**	4.23
Less exposed (7 RF and −)	13	(37.1)	15	(71.4)	46.4		

$^*p < .05.$ $^{**}p = .01.$

Table VI. Discriminant Analysis of the CH and TR Groups Based on the CAPI Score and the Total Number of Risk Factors

	Chronic problems (n = 35)		Transitory problems (n = 21)		Wilk's lambda	F
	M	(SD)	M	(SD)		
"Abuse" score on the CAPI (T1)	245.7	(86.4)	204.3	(62.9)	.936	$3.65^{p=0.06}$
Number of risk factors	5.4	(1.9)	3.7	(1.6)	.821	11.78***
Correct classification percentage	74.3%		71.4%		Overall 73.2%	
Lambda discriminant function:	.80		$\chi^2 = 11.66$**			

** $p < .05$.

($RR = 1.05$) were therefore removed. Secondly, the total number of RFs thus obtained was used together with the CAPI score at the time of recruitment in order to examine the adequacy of the prediction of cases of chronic and transitory maltreatment problems based on these two variables. Results of the discriminant analysis are shown in Table VI. The mean number of RFs observed in the CH group is 5.4, compared to 3.7 in the TR group. Using both variables in the discriminant equation leads to a proper classification of 73.2% mothers of the sample. The classification rate is comparable in both groups: 74.3% of the participants in the CH group and 71.4% of the participants in the TR group were correctly predicted. The Chi square in the classification obtained (11.66; $p = .003$) is statistically significant.

DISCUSSION

Overall, our results indicate that the following variables are significantly associated with situations of chronic problems of abuse and neglect: initial level of severity of potential for abuse; number of children at the time the case was opened; dual-parent status; the fact that the mother herself had been placed in a foster home; that she had been sexually abused; and that she had run away from home during her adolescence. Finally, the more a mother displays risk factors, the greater the chances that chronic neglect and abuse will occur.

Initial severity of potential for abuse is represented here by the CAPI score. First, one must not lose sight of the fact that from the beginning the majority of the mothers displayed results that place them in the critical zone. It would be risky to attempt to determine a cutoff point beyond which the probability of exhibiting a problem of abuse and neglect would be significantly increased. Moreover, the specific contribution of this variable to the classification of the mothers reaches a marginal value that is not statistically significant ($F = 3.65$; $p = .06$). The overall tendency, however, is there: the mothers we classified as having chronic problems obtained on average a

higher score on the CAPI. The latter instrument measures various characteristics, including distress, rigidity in attitudes and problems with self, with the family, with the child, and with others. In clinical terms, it can be expected that intervention carried out involving parents who display more of such problems may be of a longer duration.

The mothers in our sample who displayed more than eight risk factors had slightly over four times the risk of having problems of chronic abuse and neglect. The fact that these results come from data gathered on a longitudinal basis gives them greater validity than if a retrospective study had been conducted. These results concur with Brown *et al.* (1995), who found that over the course of a 17-year longitudinal study the prevalence rate of abuse and neglect went from 3% when there are no identified risk factors to 24% when the family had at least four risk factors. This finding has considerable significance for practitioners and will help them identify the children who are at greatest risk for child maltreatment.

Furthermore, it is worth noting that the only factors for which a statistically significant relationship can be observed (when they are considered individually) are those that relate to the parent's antecedents during childhood or adolescence. Many researchers (Crittenden, 1996; Egeland, 1988; Quinton & Rutter, 1988) have placed importance on the link between parental problems and the negative experiences that the parent had in his/her own family during childhood and adolescence. These negative experiences—that involve neglect, physical violence, abandonment, and break-ups—are presently recognized as maltreatment risk factors in the general population. Our data add to that: regarding the chronicity of problems of maltreatment, it is not so much experiences of neglect, unavailability of parent figures or even physical violence that prove to be the most critical. For persons who have lived through such experiences, the percentages of chronic and transitory cases are statistically comparable. However, 80% of mothers who had been placed in foster homes and 77.8% of those who had been subjected to sexual abuse exhibit chronic problems of abuse and neglect. This type of antecedent therefore appears to be more specific to the

chronicity of maltreatment. Having been a victim of sexual abuse, having been placed in a foster home and having run away from home as an adolescent are events that are not necessarily independent of one another. They do, however, refer to situations that are intense on an emotional and even traumatic level in the relationships experienced in the parent's own family, and these situations have an adverse affect on the general adaptation of the parent.

The above data are in line with clinical research carried out by Egeland and Susman-Stillman (1996) and Main and Hesse (1990), who studied the effects of trauma experienced by young children. Parents who have unresolved trauma develop psychic mechanisms that are detrimental to their capacity for attachment and especially to their sensitivity as parents.

There are fever research data on chronic maltreatment. Our study shows that after 4 years of intervention and services received, 62% of the mothers still display a high level of abuse and neglect problems. This percentage may appear high when one considers the intervention efforts that were expended for these mothers over such a long period of time. These findings confirm that child maltreatment is a serious problem for which treatment is often required over several years. Chronically abusive and neglectful parents carry with them distress that originates in their childhood, they have numerous needs, and these needs cannot be quickly fulfilled. We must, therefore, expect to carry out long-term intervention with these very vulnerable families, and take into account the characteristics that are specific to them. For example, we observed that the mothers in the chronic group were living in a dual-parent situation more than the mothers in the other group. In these families, the fathers are often considered by the mothers has being more a source of problems than a source of support (Lacharité *et al.*, 1996). The fathers are, among other things, perceived by the mothers as being profiteers of resources rather than providers.

However, it is possible to identify a certain number of familial characteristics (especially maternal characteristics, because mothers made up the present sample) based on which one could expect that intervention would have to last several years or would have to be intensive in order to provide better protection for the child. Our findings indicate that more than 78% of the mothers who have a low level of intellectual functioning (who are below the 25th percentile for the general population) display problems of chronic maltreatment. There is no doubt that a low level of intellectual functioning is detrimental to a parent's ability to adapt to the realities of daily life. Finally, becausse the majority of the families were living in poverty, we can see that economic and social destitution just add to the personal vulnerability of the parent.

Results of the present study shed new light on the problem of abuse and neglect. They must, however, be carefully interpreted because of the actual definition of chronicity: how long after intervention should a situation of maltreatment be considered as transitory? At what point should it be considered as chronic? In fact, when observing the evolution of families over time, we must be mindful of the "unstable" nature of the concept of transitory abuse and neglect. The fact that a family is no longer the subject of intervention by Child Protection Services and that one of the parents does not exhibit a potential for "critical" abuse guarantees neither the total absence of neglectful and violent behaviors toward the child nor future recurrence of those behaviors.

Similarly, the fact that a family displays problems of abuse and neglect over a long period of time does not mean that the situation cannot improve. In fact, results provide certain indicators on how intervention should be carried out with these families and on prevention in general. In terms of intervention, one cannot change the fact that these mothers have suffered abuse and abandonment during their childhood. We can, however, change our intervention so that it takes their personal distress more into account. In terms of prevention, it is imperative that actions be taken that are designed to reduce the sexual abuse of children and prevent break-ups at an early age.

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