

ABSTRACT PAGE:

Abstract: The goal of this study was to examine relationships between several family characteristics and the adjustment (at individual, relational and school levels) of 63 school-aged children and adolescents growing up in families that received psychosocial interventions by Social Services of the Seville Council. The second aim was to explore possible differences in family characteristics between at-risk children non-adapted to their classroom and adapted children. We compared at-risk children to their classmates ($N = 747$) and established the rate of at-risk children non-adapted to their classroom. First, the models tested showed low to moderate prediction ability, with ecological levels of family variables playing a specific role depending on the outcome considered. Perceived satisfaction was relevant for internalizing problems, quality of home environment predicted the externalizing problems and both relational and group-level variables explained social skills and academic performance. Second, at-risk children non-adapted to their classroom performed more poorly than adapted ones when several development measures were considered. Taking family variables into account, only the mother's perceived competence and socio-economic status were statistically different for adolescents non-adapted to the classroom, compared to the adapted children.

Keywords: psychosocial risk; family preservation; Social Services; child adjustment; school adaptation.

MANUSCRIPT:

Introduction

The understanding of child and adolescent adjustment has been carried on by a contextual, transactional and ecological-systemic macro-model that recognizes the complex nature of the configuration of a positive adaptation (Bronfenbrenner, 1979; Lerner, 1989; Sameroff & Mackenzie, 2003). In this framework, family variables have been considered fundamental, taking into account that family is the first context for child socialization and development. However, if the basic needs of their members are not satisfied, the integrity of the family context is threatened. Because children are the most vulnerable members and being a parent is not easy, several studies have focused on the family variables necessary for the adjustment of children who grow up in at-risk family contexts (Magnusson & Duncan, 2002).

The main purpose of this paper is to explore several family characteristics and multiple measures of adjustment of school-aged children and adolescents who grow up in at-risk family contexts. We examined two goals. First, we evaluated the relative importance of several family characteristics for the adjustment of these children, with a close focus on the ecological levels and a multiple-outcome consideration. Second, we explored possible differences in family characteristics between at-risk children non-adapted to school context and adapted children, considering school-age and adolescent children separately. To follow the second aim, we analyzed the rate of at-risk children non-adapted to school context using classmates as a comparison group to establish cut-off points.

Current models of risk and protection recognise family functioning as complex, multi-level, reciprocal and inter-connected, focusing on the process underlying risk and protective factors (Cowan, Cowan & Schultz, 1996). Two mains points were considered. First, risk situations require the consideration of the whole ecological context, taking into account the different levels where factors increase or reduce the probability of maladaptive results. In line

with this conceptualization, efforts to understand adaptive and maladaptive development require a complex assessment of different domains in children's lives (Sameroff & Mackenzie, 2003). Second, the point is not only the existence of risk factors, but the mechanisms or processes that connect these factors. It is necessary to consider the level of permanence of these factors in the family and their combination in a concrete situation (Cicchetti, Toth, Bush & Gillespie, 1988; Rutter, 1987).

Despite the theoretical importance of these assumptions, we still lack properly designed empirical studies consistent with this theoretical framework. Four principal gaps in research on at-risk families have been identified: the omission of a multi-level consideration of family functioning, the narrowing in a concrete aspect of child development as an outcome, the consideration of at-risk contexts without a developmentally sensitive perspective and the comparative (inter-groups) but non-explicative (intra-groups) approximation to understand these contexts.

First, few investigations have examined at-risk family contexts with a multi-level approximation. For this reason, although we know a lot about family characteristics that lead to adjustment problems for children in disadvantaged families, these approximations have not been guided from a comprehensive framework that lead us to downplay the relevance of each family level in the configuration of problems and competence (Cummings, Davies & Campell, 2000).

Much research has considered the relevance of individual characteristics of family members as relevant for child development. For example, the importance of the primary caregiver's perception about their parenting role has been examined. Perceived parental satisfaction, defined as quality of affect associated with parenting (Johnston & Mash, 1989), appears to be associated with both internalizing and externalizing child problems in community samples with pre-school and school-aged children, and in samples of children with behaviour disorders and physical problems (Ohan, Leung & Johnston, 2000; Rogers & Matthews, 2004). However, research examining this issue with at-risk samples has been limited (Carpenter & Donohue, 2006) and the results inconclusive. Medora, Wilson and

Larson (2001), in their study with ethnically diverse low-income mothers, did not find a significant relationship between perceived satisfaction and controlling parenting or child abuse.

Another individual characteristic, perceived parental competence, is the degree to which a parent feels competent and confident in handling child problems (Johnston & Mash, 1989). This has been related to child behaviour in community samples for fathers, but not as consistently for mothers, although there are some exceptions, like the relationship of both a father's and mother's competence with antisocial behaviour of community adolescents (Dekovic, Janssens & Van As, 2003). Again, the role of perceived parental competence in at-risk samples has not yet been studied.

From a relational perspective, relevance of informal social support for caregivers in families at risk has been broadly recognized. Although disadvantaged families are not isolated, their social networks are often reduced, showing less access to informal support and less support from closed contexts (Rodrigo, Martín, Máiquez & Rodríguez, 2007). The relevance of informal social support for parental practices and child maltreatment has been repeatedly shown (e.g., Gracia & Musitu, 2003). However, the link between informal support and child outcomes has been studied much less often (Jack, 2000). Data available for at-risk samples are limited to pre-school age children and focused on social competence as an outcome, revealing that greater informal social support predicts significantly higher levels of children's social competence (Oravec, 2004).

Concerning the family as a whole, different studies have included contextual variables. One often-studied contextual variable is the socio-economic status of the family, which is associated with the child or adolescent externalizing and internalizing problems (Bradley & Corwyn, 2002; Conger, Wallace, Sun, Simons, McLoyd & Brody, 2002), with school competence (Bradley & Corwyn, 2002; Conger et al., 2002; Gottfried, Gottfried, Bathurst, Guerin, & Parramore 2003) and less commonly with social competence.

In addition to socio-economic status, more parenting-related contextual variables that could be relevant for at-risk families have also been studied, such as the quality of the home

environment, showing a relationship with child and adolescent adjustment, individual, relational and school level in different ethnics and backgrounds, although with variability throughout ethnic, cultural and economic contexts (Bradley, 2002; Bradley & Corwyn, 2005).

A second gap in the literature concerns the limited conceptualization of adjustment. Despite the recognition that risk and protective factors might be differently related to different outcomes, in many studies only one outcome tends to be considered (Dekovic, 1999). Consequently, we have not yet consistently identified the specific role of these variables considering each outcome in an independent way. A clear example of this lack of studies with at-risk families is the insufficient focus on the internalizing problems of children (Ackerman, Brown & Izard, 2004).

Fortunately, few exceptions to these gaps have shed light on the role of different family-level variables for different child outcomes in disadvantaged families. The most frequent finding is the related weight of family socio-economic status when more proximal family variables are taken into account considering externalizing problems (see Felner, Brand, DuBois, Adan, Mulhall & Evans, 1995). However, the opposite result has been shown, socio-economic status moderates more proximal family variables, in the case of school adjustment (e.g., Ginsburg & Bronstein, 1993). Felner et al. (1995) studied 398 school-aged students from a low-income area and found that stressful life events and family environment were more important for psychological adjustment than socio-economic status. This status and stressful life events were the best predictors for school adjustment.

Third, considering developmental tasks as dynamic is a general assumption, special attention has been given to adolescence for the comprehension of the relationships between at-risk family variables and adolescent adjustment in this specific period (Compas, 2004). Although there are no doubts about adolescence as a particular vulnerable stage for adjustment, this special feature has been not sufficiently compared with other developmental stages, considering school-aged children or adolescents separately.

Fourth, we tend to consider the evaluation of at-risk family contexts in a comparative manner, emphasizing the differences between at-risk and non-risk families. These

comparative approximations do not give us the opportunity to learn about the intra-group differences in these families and how these differences are related to child and adolescent development (O'brien, 2005).

This gap is especially true for school adjustment of children who grow up in at-risk families. Attention has been given to this developmental outcome, because children from disadvantaged backgrounds experience more problems both during school, and after completing school (Dowrick & Crespo, 2005). However, this attention has not been characterized by a comprehensive explication focused on an intra-group exploration of the process related to the positive adaptation to the environment demands that are unique to these families (Weissberg & Greenberg, 1998).

The study by Robinson, Lanzi, Weinberg, Ramey and Ramey (2002) using Project Head Start data was a unique exception. It described family characteristics and developmental outcomes of at-risk children who were highest achieving at school in comparison with the rest of at-risk children who were non-highest achieving. Results showed that these highest achieving children, in comparison with the non-highest achieving at-risk ones, grew up in families less publicly assisted, with a higher socio-economic status, more favourable family contextual circumstances, more social support, responsiveness and non-restrictive attitudes, and more encouraging their children to succeed in school. Regarding developmental outcomes, these at-risk children with high academic achievement were perceived by teachers and parents as more socially competent, more motivated to succeed academically, and as exhibiting more positive overall classroom behaviour and adjustment. Unfortunately, this study was conducted considering a specific age (third grade) and did not provide information about the possible peculiarities of other developmental stages.

In summary, although there has been much progress in research on families in at-risk contexts, there are several gaps to overcome. This study extends previous work by examining several family factors and multiple child outcomes simultaneously. Considering previous findings, we hypothesized that individual variables would be relevant for individual

adjustment, relational variables would predict social skills, and group-level variables would be important for school performance.

Second, to expand previous findings for at-risk children who, despite their at-risk status still adapt well in school, we compared well-adapted and non-adapted at-risk children regarding family factors and developmental outcomes. To establish cut-off points for being well-adapted we used a comparison group of classmates of these children ($N = 747$) and examined this question for both school-age children and adolescents. Based on previous findings, we expected to find significant differences between both at-risk groups regarding family factors and developmental outcomes, with more favourable results for children adapted to the classroom. Due the absence of research in different developmental stages, we cannot determine differences between the school-aged and adolescent samples.

Method

Participants

The sample consisted of 63 families who received a psychosocial intervention by Social Services of the Seville Council in Spain for family preservation reasons. There was a high percentage of single-parent families (63.6%) and step-families (10.6%) in the sample. The mean number of children in the family was 2.4. In 15.2% of the cases, the family included extended family members. The families lived in small houses ($M = 67 \text{ m}^2$, $SD = 15.5 \text{ m}^2$), frequently described as noisy (70%). Forty-seven percent of the families received economic support from Council Services.

The average age of the female caregivers was 40.5 years ($SD = 6.4$). Their educational level was quite low: 36.4% had no education or were illiterate, another 36.4% completed elementary school, 26% of the mothers finished secondary school and only 1.5%

obtained a university degree. In addition, most were employed (79.7%), but with unfavorable labour circumstances: Only 59% of the women had stable jobs, in the most cases, without qualification (88.2% worked as seller, baker, cleaner assistant, etc.), and in no case with a high qualification.

The children were equally distributed by sex (50% were boys), and were between 7 and 16 years old ($M = 11.55$, $SD = 2.79$). Most did not have school problems, although 30% received some kind of school support and 35% repeated a year.

To examine our second question, 747 children served as the comparison group. These children were the classmates of the at-risk children. This sample was equally distributed by sex (50.5% were boys), between 7 and 17 years old ($M = 12.48$, $SD = 2.07$). Most had no school problems, and 20% received some kind of school support. The educational level of their female caregivers was: Part (15.9%) had no education or were illiterate, 27.7% finished elementary school and 56.4% had a secondary or university education. Sixty percent of the mothers worked, 55% in a low-qualified job, 27% in a semi-skilled job and 18.4% in a high-qualified job.

Procedure

Psychologists of the 11 districts of the Council Social Services of Seville selected 116 families to participate in a preventive parent education program during the 2005-2006 academic year (*Formación y Apoyo Familiar*). The program's characteristics led us to establish three inclusion criteria for our research. The families had to have: (1) been referred by Social Services as living in at-risk psychosocial conditions, (2) received psychosocial intervention from Social Services because of family preservation reasons, and (3) contained one or more school-aged children or adolescents.

At the beginning of the program, the parents were interviewed at the Council of Social Services. Because most of time, only female caregivers participated, we have only considered information about the mothers in this study. The psychologists of the Council

conducted a semi-structured personal interview with each mother for approximately one hour. In the next session, two members of our research group interviewed the mothers again, filling in a broad battery of instruments, and providing them with a self-administered form, which the mothers (who had difficulty writing and reading) completed with researcher support.

The research members asked for the parent's permission to evaluate their children in a school context. Authorization for 63 children was obtained. There were two main reasons we could not pursue all of the authorizations. First, some characteristics of this population (skipping classes, dropping out, etc.) hampered data collection, particularly for older adolescents. Second, sometimes the mothers feared their child would be stigmatized at school even though the data recollection was kept absolutely anonymous in the classrooms (lower than 5%). There were no statistical differences between both groups of families (rejected and authorized) in the assessed socio-demographic and psychosocial variables.

Two members of the research group went to the schools and evaluated not only at-risk children, but also their schoolmates. Only the teachers were informed about the characteristics and the aims of the study. In the case of the adolescents ($n = 551$), they and the whole class filled in the questionnaires anonymously for 35-45 minutes. Only the at-risk adolescents were identified, without knowledge of the classmates. Meanwhile, the teachers completed a questionnaire about the adolescents at risk, for approximately 20 minutes. In the case of school-aged children ($n = 103$), the teachers were the only informants (that is, no child self-reported data are available). They were asked information about the at-risk child and four classmates randomly selected, spending about one hour to complete the required information.

Measures

Family factors

Individual factors

Self-perceived parenting. The mothers evaluated themselves as parents, using the Parental Sense of Competence scale (PSOC) (Johnston & Mash, 1989). This scale is composed of 16 items rated on a 6-point scale (1=*no, strongly disagree* to 6=*yes, strongly agree*). The PSOC has two scales: (1) perceived competence as parent (e.g., manageable, meet expectations, have skills) and (2) perceived satisfaction with parental role (e.g., not accomplished, feel manipulated, tense). The mothers were asked about items like “*Being a parent is manageable, and any problems are easily solved.*” The reliability analysis with this sample showed an alpha $\alpha = .78$ for perceived competence and $\alpha = .61$ for perceived satisfaction.

Relational factors

Need for social support perceived by the mother. To assess needs for social support, the Arizona Social Support Interview Schedule (ASSIS) was used (Barrera, 1980). This structured interview asks about the source of informal support in different domains (emotional, tangible and informative). Mothers were asked to indicate on a 10-point scale (1=*no need* to 10=*absolutely necessary*) the amount of support that they need (e.g., “*How much did you need help for unburdening yourself / advice / physical help or money over last month?*” The Cronbach analysis conducted in this study showed an acceptable value of the reliability coefficient ($\alpha = .82$).

Group-level factors

Socio-economic status. This variable was derived by the educational level of the primary caregiver (the mother) coded on a 1-4 scale. The categories are: elementary education not completed, completed elementary education, completed secondary education and completed university education.

Quality of the home environment. In the interview between the researchers and the caregivers, both the school-aged and the adolescent versions of the Home Inventory

Observation Measure (HOME) were completed (Bradley & Caldwell, 2000). This inventory assesses the quality and the amount of support, stimulation and organization offered daily in the family environment to the child, at both physical and social levels. Through a semi-structured interview and direct observation, the interviewer rated the presence/absence of these characteristics in the family environment. The scale was applied at Social Services and the mothers were asked about observation items. Their answers were compared with the direct observation of the psychologists, fitting in 99% of the cases. In the remaining 1% of the cases, the observation data prevailed. The reliability analysis with this sample showed an alpha $\alpha = .76$ in the adolescent version and $\alpha = .61$ in the school-aged children.

Developmental outcomes

Internalizing and externalizing problems. The teachers completed the Social Skills Rating System (SSRS) (Gresham & Elliot, 1990) assessing internalizing (e.g., “*appears lonely*,” N items = 6) and externalizing problems (e.g., “*gets angry easily*,” N items = 6) in both the school-age and adolescent samples. The response categories ranged from a 0 (*Never*) to 2 (*Very often*). The reliability analysis with this sample showed acceptable values of the reliability coefficient for both the internalizing problems scale ($\alpha = .90$ for the school-aged version and $\alpha = .88$ for the adolescent ones) and the externalizing problems scale ($\alpha = .73$ for the school-aged version and $\alpha = .71$ for the adolescent children).

Academic performance. Three indicators were used to assess academic performance. The first indicator was the academic competence scale of the Social Skills Rating System completed by teachers (Gresham & Elliot, 1990). This scale consists of 9 items, tapping overall academic and intellectual functioning, reading and mathematics skills, academic motivation and parental academic encouragement. The teachers compared the functioning of the children in these areas with the whole class, using a 5-point scale (1=*performance less than 10% of the whole class* to 5=*performance higher than the 10% of the whole class*). The

reliability analysis with this sample showed an alpha $\alpha = .95$. The second indicator was the grade point average (ranging from 0 to 10) in the semester previous to the evaluation, collected from the school-tutor. The third indicator was a dichotomized variable, which indicated whether the child had to repeat the academic year in the past. A factor analysis on these three indicators produced a single factor solution explaining 70.78% of variance. Each child was assigned the factor score for academic performance, which was used in subsequent analyses.

Social skills. Through the teachers' form of the Social Skills Rating System (Gresham & Elliot, 1990), both the school and adolescent version, the children's social skills were evaluated. The form consisted of a scale of 30 items in a 0 (*Never*) to 2 (*Very often*) format, assessing cooperation, assertiveness, and self-control. The teachers gave information about the social skills with items like, "*Controls temper in conflict situations with peers,*" and "*Attends to instructions.*" The reliability analysis showed acceptable values of the reliability coefficient ($\alpha = .94$ for the school-aged version and $\alpha = .93$ for the adolescents).

Indicator of classroom adaptation

School-aged classroom behaviour. The teachers completed the Classroom Behaviour Inventory (Schaefer & Edgerton, 1978), answering 42 items in a 1 (*Nothing*) to 5 (*A lot*) format about intelligent behaviour in the classroom, extroversion, consideration of others, independence and task orientation (e.g., "*Likes to talk or socialize with other children*" and "*Is quickly distracted by noise and activity*"). The alpha test realized with this sample showed a value of $\alpha = .96$.

Adolescent classroom behaviour. The adolescents self-reported this information through the Magallanes' Scales of Adaptation (García & Magaz, 1998). This scale consists of 31 items in a 1 (*Never*) to 5 (*Always*) format, evaluating the school behaviour as a whole, related to

teachers and to classmates (e.g., “*I get along with my classmates*” and “*I pay attention in classes*”).

Analytic approach

To answer the first research question, hierarchical linear regression analyses were used separately for each developmental outcome: internalizing problems, externalizing problems, social skills and academic performance. We entered the control variables (age and sex of the children) in the first block. The second block consisted of the individual characteristics of the female caregiver: competence and satisfaction as a parent. We entered the relational variable third: need for social support of the mother. Last were the group-level variables: socio-economic status and quality of the home environment.

Second, we explored possible differences between at-risk children non-adapted to their classroom and the adapted ones. We analyzed the rate of at-risk children non-adapted to their class using the classroom adaptation measure as reference criterion for establishing the statistical level of adaptation of each at-risk subject to the classroom. There is no clear consensus about the best method to follow this aim (Robinson et al., 2002), but to point out the position of a subject within the z-score distribution of a group is one of the most commonly used. This procedure involved (1) drawing the z-score distribution of each classroom using classroom adaptation as indicator, (2) estimating each at-risk child’s position relative to his/her classroom, and (3) analyzing variance with family variables and developmental outcomes to determine differences between non-adapted and adapted at-risk children. The age was controlled in two developmental stages in the last step (school-aged children and adolescents), because of the broad range addressed in this study.

Results

Family predictors of individual, relational and school adjustment

Descriptive analyses: Table 1 shows the means, standard deviations, and intercorrelations among the measures of family factors (perceived competence and satisfaction, need for social support, socio-economic status and quality of home environment) and developmental outcomes (internalizing problems, externalizing problems, social skills and academic performance). For all variables, we examined sex and age differences by conducting 2 (gender) x 3 (age: school-age and adolescence) analyses of variance (ANOVA) on outcome measures and family factors.

Regarding sex, no main effects were found. Regarding age, a main effect was found for perceived satisfaction, $F(1,63) = 5.70, p < .05$, with school age being the period when mothers feel more satisfied with their role ($M = 3.92$), in comparison to the adolescents ($M = 3.45$). Academic performance showed differences regarding the age, $F(1,60) = 7.29, p < .01$, with better academic results for school-aged children ($M = -0.03$) than for the adolescents ($M = -1.82$). Two significant gender x age interactions were found for socio-economic status ($F(1,63) = 5.70, p < .05$) and for social skills ($F(1,60) = 5.80, p < .05$). In both cases, boys scored higher in school age, while girls scored higher in adolescence.

INTRODUCE TABLE 1

As described in Table 1, family factors were not related to each other in most cases. Only perceived satisfaction was negatively related to the need for social support and positively related to the quality of home environment. Regarding to the relationships between family factors and developmental outcomes, only a third of the correlations were significant or moderate in magnitude. A high perceived satisfaction of the mother was, unexpectedly,

related to higher levels of internalizing problems. Need for social support was negatively related to social skills and academic performance. Finally, the quality of the home environment was negatively related to externalizing problems, and positively related to internalizing problems and social skills. Neither the mother's perceived competence nor the socio-economic status was related to any developmental outcome.

Importance of family factors for child adjustment: In order to examine the relative importance of different levels of family factors, a hierarchical linear regression analysis was conducted for each developmental outcome. Table 2 summarizes these results.

INTRODUCE TABLE 2

After controlling age and sex, the model accounted for a significant ($p = .02$) percentage of the variance (17%) for internalizing problems of children. Only perceived satisfaction emerged as an important predictor, indicating more internalizing problems for children who had more satisfied mothers.

For externalizing problems, the model explained 23% of the variance ($p = .00$). Apart from sex of the child, group-level variables were the most important predictors for this outcome. Quality of home environment contributed uniquely to explain externalizing problems.

The model for social skills accounted for 31% of the variance ($p = .00$). The results showed that both child characteristics were significant predictors, with younger children and girls showing better social skills. Moreover, the relational variable (need for social support) and quality of the home environment contributed to explanation of social skills: higher social skills were predicted by a lower need for social support and higher quality home environment.

Finally, the assessed variables accounted for 43% of variance in academic performance ($p = .00$). In addition to age, similar to the social skills model, relational and group-level variables were unique predictors for academic performance. Lower need for

social support and, in this case, higher socio-economic status, predicted better academic performance.

Differences between at-risk children non-adapted and adapted to their classroom

In order to examine the second research question, analyses proceeded in several steps. First, we drew the z-score distribution of each classroom using classroom adaptation as an indicator. We separately considered the 60 classrooms participating in this study and calculated z-scores of the classmates. At-risk children values were excluded to prevent data contamination. In the next step, the z-scores of each at-risk child were computed considering the classmates scores.

The drawing of the z-score distributions allowed us to establish the position of each at-risk child in comparison to his/her classmates. Children scoring lower than -1 Z were considered non-adapted. Approximately a third of the at-risk school-aged children (34.8%) and a quarter of the at-risk adolescents (23.1%) scored lower than the cut-off point.

Table 3 shows means, standard deviations and results of comparisons between non-adapted and adapted children at risk, separately for school-age children and adolescents. Given the size of the sample, Mann-Whitney U non-parametric tests were used.

INTRODUCE TABLE 3

No significant differences were found in family factors for school-aged children at risk. For adolescents, perceived competence and socio-economic status were significantly different between non-adapted and adapted adolescents, with a lower perceived competence and a higher socio-economic status in families whose adolescent children were not adapted to the classroom, in comparison to the adapted adolescents.

Regarding developmental outcomes, Table 3 shows that both non-adapted school-aged children and adolescents presented significantly higher rates of externalizing problems

and lower rates of social skills, in comparison to adapted children. Moreover, non-adapted school-aged children showed significantly higher rates of internalizing problems and lower rates of academic performance, in comparison to school-aged children adapted to their classroom.

Discussion

This paper explored several family characteristics and multiple adjustment measures of school-aged children and adolescents who grow up in at-risk family contexts. The results showed: 1) Family factors played a differential role regarding the kind of outcome predicted. Internal adjustment (internal problems) was low, explained by the mother's individual variables (perceived satisfaction); external but individual adjustment (external problems) was moderately predicted by group-level variables (quality of home environment); and external but interactive adjustment measures (social skills and academic performance) were moderately predicted by relational and group-level measures. 2) At-risk school-aged children non-adapted to the classroom differed from the adapted ones in all the adjustment measures considered in this article. The adolescents at-risk non-adapted to the classroom differed from adapted ones in externalizing problems, social skills, the mother's perceived competence and socio-economic status.

Family predictors of individual, relational and school adjustment

We expected that family variables would play an important and specific role in predicting child adjustment. We hypothesized that individual variables would be relevant for individual adjustment; relational variables would predict social skills; and group-level variables would be important for school performance.

Despite our prediction about the relevance of individual variables for individual adjustment, only the perceived satisfaction of the mother was related to internalizing problems, explaining 17% of variance. Moreover, this relationship was positive, indicating more problems for children with mothers who were more satisfied. These results are inconsistent with previous findings with community samples (Johnston & Mash, 1989; Ohan et al., 2000; Rogers & Matthews, 2004), indicating a different role of perceived satisfaction as a mother for child adjustment in at-risk families. An explanation of this discrepancy can be related to the presence of other variable that could moderate the relationships between perceived satisfaction as a mother and internalizing problems of the child. Although not evaluated in this study, few scholars have emphasized the relevance of perceived difficulty being a parent in at-risk families as a moderator between perceived satisfaction as a mother and adjustment problems of the child. Although to display high satisfaction as a mother could be relevant for different individual and family aspects this variable is not necessarily related to better parental practices. Results found by Medora et al. (2001) partially support this assumption. They evaluated 176 ethnically diverse low-income mothers and showed a relationship among perceived satisfaction with personal problems of the mother, family problems and positive reasoning with a child, but not with controlling parenting, negative parental practices or global probability of child abuse. It is possible that at-risk mothers who are less satisfied with their parental role are most reflexive and critique their practices and are most conscious of their limitations. Unfortunately, the role of the perceived difficulty of being a parent has just begun to be explored in at-risk samples (Rodrigo et al., 2007) and its relationship with child adjustment is unknown.

Regarding externalizing problems, quality of home environment significantly increased the explained variance for this developmental outcome. This result is similar to previous studies that reported a relationship between quality of home environment and externalizing problems when other contextual variables, such as socio-economic status, were controlled (Felner et al., 1995). Bradley and Corwyn (2005) reflected on the differences in relative importance of home environment in different ethnic, cultural and economic groups. As they

affirmed, different impacts of this measure for child adjustment are expected in different contexts. In our previous work (Menéndez, Hidalgo, Sánchez, López, Lorence & Jiménez, 2007), we found that the averaged quality of at-risk homes is significantly lower than normative samples. Probably, an extreme low quality of home environment in this sample means a powerful lack of coping with the parental functions necessary to satisfy the developmental needs of these children, resulting in a relevant role, particularly for externalizing problems, due to the kind of parenting task considered in this measure (stimulation, support, structuration, etc.), related to child adjustment with the environment and the regulation of the behaviour.

In predicting social skills, the model accounted for 31% of variance. Lower needs for social support and higher quality of home environment explained better results in the social skills domain, partially supporting our expectations. We hypothesized that social skills would be predicted by relational-level variables, due to the related nature of both variables, although previous findings with disadvantaged families are not consistent. Oravec (2004) found that informal social support predicted social skills of pre-school aged children, arguing that this resource may impart a sense of communalism and emotional connectedness to mothers and contribute to children's modelling of prosocial behaviour, as children observe and imitate relatives and close friends who help their families. Children living in at-risk contexts have less contact with members of informal support networks and may not experience the social interaction, security, and support necessary to develop these prosocial skills. They can be more open to receive this learning from their caregivers. In this way, mothers reporting low levels of need for support could be experiencing more favourable conditions that help children exercise and improve their social skills. Finally, several studies have shown the relevance of home environment for the social competence of children and adolescents in disadvantaged families (Bradley, 2002). Our study, from an ecological perspective, confirms the relevance of both variables (social support and home environment) in predicting social skills of children and adolescents at-risk.

Finally, the model for academic performance explained 43% of the variance. Lower need for social support and higher socio-economic status predicted higher academic performance. These results partially support our expectations about group-level variables predicting academic performance, due to the relevance of socio-economic status in the case of school adjustment despite more proximal variables (Ginsburg & Bronstein, 1993). However, Felner et al. (1995), considered social support of the mother in an ecological-based study and this variable was not a relevant predictor for academic performance. The lack of a role of schools as a source of support for at-risk families could explain our finding. That disadvantaged families have less access to informal and close support sources is broadly recognized, and the important lack in communication between these families and schools is a good example that translates into academic failure for children who grow up in these families. In this way, when schools support at-risk families, they improve the child's academic performance indirectly (Rodrigo et al., 2007). It is possible that mothers evaluated in our study have a school at their disposal and consequently report less need for social support.

Differences between at-risk children non-adapted and adapted to their classroom

When we explored family characteristics and developmental outcomes of children and adolescents at risk, considering if they were adapted or not to their classroom, we expected to find significant differences between both at-risk groups, with more favourable results for children adapted to the class. The results partially supported this assumption, because at-risk children non-adapted to their classroom performed more poorly than adapted children on several development outcome measures and non-adapted adolescents obtained poor results in perceived competence and socio-economic status, regarding family factors.

Both school-aged children and adolescents non-adapted to the classroom showed significantly higher values in externalizing problems and lower social skills. As we pointed out in the theoretical introduction, consideration of risk situations requires a complex look into the whole family. Our study confirms the notion of transactional relationships between risk factors

and the tendency to reinforce mutually, generating transactional processes or trajectories. The presence of a complex mixture of risk factors probably leads these children to perform negatively in other areas of functioning not directly related with school context (Rutter, 1987).

Because of the absence of comparative research between different developmental stages, we did not harbour expectations regarding age questions. Considering developmental outcomes, school-aged children non-adapted to the classroom differed from adapted ones in internalizing problems and academic performance. The absence of differences in academic performance between non-adapted adolescents and the adapted ones was a surprising result, because much research has shown strong relationships between classroom behaviour and academic failure. Adolescent school behaviour was the only outcome self-reported; perhaps what adolescents consider a good classroom behaviour differs from their teachers and takes social, but not academic, aspects into account.

Regarding family factors, the differences were significant for non-adapted adolescents considering socio-economic status and the mother's perceived competence. At-risk adolescents non-adapted to the classroom came from families with higher socio-economic status, contradicting broad literature regarding this question (Bradley & Corwyn, 2002; Conger et al., 2002; Gottfried et al., 2003). However, despite favourable family circumstances, mothers of these non-adapted adolescents reported a lower perceived competence than the adapted ones.

In consequence, these results are only partially congruent with findings of Robinson et al. (2002), who found worse results for non high-achieving children at risk considering several group-level variables, including a lower socio-economic status. Moreover, our results are not statistically significant in almost all cases, perhaps due to sample size.

Perhaps the specific trends that a family as a whole must cope with when children enter into adolescence helps explain the differences regarding perceived competence only for non-adapted adolescents (Compas, 2004). Adolescents participate in different contexts and, although parental influence continues being important, external influences add to the

vulnerability of this stage, leading at-risk mothers to feel less competent with their parental tasks.

These findings reaffirm the Bronfenbrenner assumption (1979) about the relevance of mesosystemic relations for development because family disadvantage is not only disruptive for family interaction patterns but may also affect the experiences that children and adolescents from such backgrounds have in other primary developmental contexts.

Limitations, future directions and conclusions

It is clear that our findings represent only an initial step in approximating family characteristics and developmental outcomes in at-risk situations. Some limitations should be noted. First, the sample size is small and therefore the results must be interpreted with caution. Second, old adolescents have not been correctly represented in this study. Both limitations are mostly a consequence of some characteristics of this population: they are reluctant to participate in research, skip classes and drop out of school, etc. On the other hand, these limitations emphasize the relevance of these results. It is not an easy task to provide information about at-risk families, especially when the school context of each child is evaluated.

Despite this, relevant information about family factors and developmental outcomes in at-risk families has been shown. The results shed light about the differential relevance of ecological-level family variables (perceived satisfaction, need for social support, socio-economic status and quality of home environment) for different developmental outcomes. This information is relevant not only for future research, but also for intervention decisions. The results related to the second question reaffirm the need to consider at-risk families as contexts embedded in a whole framework that influences child adjustment in other developmental contexts. Moreover, these results provide a preliminary guide for policy decisions about relevant family dimensions and developmental outcomes to consider in the intervention with at-risk families whose children are not adapted to the school context. These

results report the appropriateness of design interventions centred in several aspects of childhood development during school age and emphasize the relevance of supporting at-risk parents, particularly their perceived competence when they have adolescent children.

References

Ackerman, B. P., Brown, E. D., & Izard, C. (2004). The relations between contextual risk, earned income, and the school adjustment of children from economically disadvantaged families. *Developmental Psychology, 40*(2), 204-216.

Barrera, M. (1980). A method for the assessment of social support networks in community survey research. *Connections, 3*, 8-13.

Bradley, R. H. (2002). Environment and parenting. En M. H. Bornstein (Ed.), *Handbook of parenting: Vol. 2. Biology and ecology of parenting* (2nd ed., pp. 281-314). New Jersey: Erlbaum.

Bradley, R. H., & Caldwell, B. (2000). *HOME Inventory*. Little Rock: Center for Research on Teaching and Instruction, University of Arkansas.

Bradley, R. H., & Corwyn, R. F. (2002). Socioeconomic status and child development. *Annual Review of Psychology, 53*, 371-399.

Bradley, R. H., & Corwyn, R. F. (2005). Caring for children around the world: A view from home. *International Journal of Behavioral Development, 29*(6), 468-478.

Bronfenbrenner, U. (1979). *The ecology of human development*. Cambridge: Harvard University Press.

Carpenter, A., & Donohue, B. (2006). Parental satisfaction in child abuse and neglect: A review of standardized measures. *Aggression and violent behavior, 11*, 577-586.

Cicchetti, D., Toth, S. L., Bush, M. A., & Gillespie, J. F. (1988). Stage-salient issues: A transactional model of intervention. *New Directions for Child Development*, 39, 123-145.

Compas, B. E. (2004). Processes of risk and resilience during adolescence. In R. M. Lerner & L. Steinberg (Eds.). *Handbook of adolescent psychology* (2nd ed., pp. 263-296). New Jersey: Wiley.

Conger, R. D., Wallace, L. E., Sun, Y., Simons, R. L., McLoyd, V. C., & Brody, G. H. (2002). Economic pressure in African American families: A replication and extension of the family stress model. *Developmental Psychology*, 38, 179-193.

Cowan, P. A., Cowan, C. P., & Schulz, M. S. (1996). Thinking about risk and resilience in families. In E. M. Hetherington & E. A. Blechman (Eds.). *Stress, coping, and resiliency in children and families* (pp. 1-38). New Jersey: Erlbaum.

Cummings, E. M., Davies, P. Y., & Campell, S. B. (2000). *Developmental psychopathology and family process. Theory, research, and clinical applications*. New York: The Guilford Press.

Dekovic, M. (1999). Risk and protective factors in the development of problem behavior during adolescence. *Journal of Youth and Adolescence*, 28(6), 667-685.

Dekovic, M., Janssens, J., & Van As, N. (2003). Family predictors of antisocial behavior in adolescence. *Family Process*, 42(2), 223-235.

Dowrick, P. W., & Crespo, N. (2005). School failure. In T. P. Gullota & G. R. Adams (Eds.). *Handbook of adolescent behavioral problems. Evidence-based approaches to prevention and treatment* (pp. 589-610). New York: Springer Science & Business Media.

Felner, R. D., Brand, E., DuBois, D. L., Adan, A. M., Mulhall, P. F., & Evans, E. G. (1995). Socioeconomic disadvantage, proximal environmental experiences, and socioemotional and academic adjustment in early adolescence: Investigation of a mediated effects model. *Child Development*, 66, 774-792.

García, E. M., & Magaz, Á. (1998). *EMA: Escalas Magallanes de Adaptación. Manual de referencia*. Baracaldo: COHS.

Ginsburg, G. S., & Bronstein, P. (1993). Family factors related to children's intrinsic/extrinsic motivational orientation and academic performance. *Child Development*, 64(5), 1461-1474.

Gottfried, A. W., Gottfried, A. E., Bathurst, K., Guerin, D. W., & Parramore, M. M. (2003). Socioeconomic status in children's development and family environment: Infancy through adolescence. In M. H. Bornstein & R. H. Bradley (Eds.). *Socioeconomic status, parenting, and child development* (pp. 189-208). New Jersey: Lawrence Erlbaum.

Gracia, E., & Musitu, G. (2003). Social isolation from communities and child maltreatment: a cross-cultural comparison. *Child Abuse and Neglect*, 27(2), 153-168.

Gresham, F. M., & Elliot, S. N. (1990). *Social Skills Rating System. Manual*. Circle Pines: American Guidance Service.

Jack, B. J. (2000). Ecological influences on parenting and child development. *Social Work*, 30, 703-720.

Johnston, C., & Mash, E. J. (1989). A measure of parenting satisfaction and efficacy. *Journal of Clinical and Child Psychology*, 18, 167-175.

Lerner, R. M. (1989). Individual development and the family system: A life-span perspective. In K. Kreppner & R.M. Lerner (Eds.), *Family systems and life-span development* (pp. 15-31). New Jersey: Erlbaum.

Magnusson, K. A., & Duncan, G. J. (2002). Parents in poverty. In M. H. Bornstein (Ed.), *Handbook of parenting: Vol. 4: Social Conditions and Applied Parenting* (2nd ed., pp. 95-121). Mahwah, NJ: Erlbaum.

Medora, N. P., Wilson, S., & Larson, J. H. (2001). Attitudes toward parenting strategies, potential for child abuse, and parental satisfaction of ethnically diverse low-income U.S. Mothers. *The Journal of Social Psychology*, 141(3), 335-348.

Menéndez, S., Hidalgo, M. V., Sánchez, J., López, I., Lorence, B., & Jiménez, L., (2007) *Houses and homes at psychosocial risk: Results of HOME Inventory in a sample of Spanish families*. Paper presented at the 13th European Conference on Developmental Psychology, Jena, Germany.

O'Brien, M. (2005). Studying individual and family development: Linking theory and research. *Journal of Marriage and Family*, 67, 880-890.

Ohan, J. L., Leung, D. W., & Johnston, C. (2000). The Parenting Sense of Competence Scale: Evidence of a stable factor structure and validity. *Canadian Journal of Behavioural Science*, 32(4), 251-261.

Oravec, L. M. (2004). *Social skills and behavior problems of African American Head Start preschoolers: Role of parenting, informal social support, and children's exposure to family conflict and community violence*. Unpublished doctoral dissertation, University of Maryland.

Robinson, N. M., Lanzi, R. G., Weinberg, R. A., Ramey, S. L., & Ramey, C. T. (2002). Family factors associated with high academic competence in former Head Start children at third grade. *Gifted child quarterly*, 46(4), 278-290.

Rodrigo, M. J., Martín, J. C., Máiquez, M. L., & Rodríguez, G. (2007). Informal and formal supports and maternal child-rearing practices in at-risk and non at-risk psychosocial contexts. *Children and Youth Services Review*, 29(3), 329-347.

Rogers, H., & Matthews, J. (2004). The parenting sense of competence scale: Investigation of the factor structure, reliability, and validity for an Australian sample. *Australian Psychologist*, 39(1): 88-96.

Rutter, M. (1987). Psychosocial resilience and protective mechanisms. *American Journal of Orthopsychiatry*, 57, 316-331.

Sameroff, A. J., & Mackenzie, M. J. (2003). Research strategies for capturing transactional models of development: The limits of the possible. *Development and Psychopathology, 15*, 613-640.

Schaefer, E. S., & Edgerton, M. (1978). *Classroom Behavior Inventory*. Chapel Hill: University of North Carolina.

Weissberg, R. P., & Greenberg, M. T. (1998). School and community competence-enhancement and prevention programs. In W. E. Damon (Ed.), *Handbook of child psychology: Vol. 4. Child psychology and practice* (5th ed., pp. 877-954). Texas: Wiley.