

A new typology of fathering: defining and associated variables

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A new typology of fathering: defining and associated variables

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Abstract

Our goal was to identify types of parenting based on self-report measures of fathers' involvement and parental attitudes. The present investigation studied 468 two-parent, French Canadian families with at least one child between 0 and 6 years of age, living in a disadvantaged environment. The present study, conducted on a sample of fathers, revealed the presence of the three basic types of parenting identified by Baumrind (authoritarian, authoritative, and permissive), and also of a new type of parenting (stimulative parenting). The fathers in this latter group provide more emotional support to children and are more stimulating, as is evidenced by the greater psychological presence of children in the father's cognitions and by the fact that they more frequently introduce their children to new activities. These fathers are characterized by more secure social relationships. The father's parental stress level was found to be the most important variable discriminating between different types of fathering. Authoritarian and authoritative fathers are more at risk of maltreating their children because their more favorable attitude toward use of physical punishment is combined with greater parental

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stress, less parental involvement of mothers, and a larger number of children in the home. Authoritarian fathers are even more at risk of maltreating their children because of more difficult family socioeconomic conditions, in particular lower levels of maternal education and income.

Key words: father involvement, authoritarian parenting, physical punishment, parental stress, parental attitudes, maltreatment risk

Research has shown that the two main dimensions of parental behavior are warmth and control. Warmth refers to the amount of responsiveness and affection, whereas control refers to the amount of supervision and to the imposition of rules, i.e., restrictions to the child's liberty. In Baumrind's (1966, 1967) studies, interviews and observation of middle-class parents with preschool-aged children revealed three patterns concerning parents' attitudes and values about parenting, their values about children's nature, and the specific practices they use to socialize their children (Robinson, Mandleco, Frost Olsen & Hart, 1995). These well-known patterns are: authoritative parenting, authoritarian parenting and permissive parenting. *Authoritative* parents are generally sensitive and responsive to children's needs, affectionate, set clear limits while also allowing children to be autonomous. They tend to be good arguers, using reason to gain compliance and encouraging verbal give-and-take in reaching agreement with the child; they use discipline when necessary to get children to comply (Baumrind, 1971; Bayer & Cegala, 1992). *Authoritarian* parents tend to be

unresponsive to children's needs and wishes and frequently resort to control to insure obedience and respect for authority. They usually do not offer reasons when they issue directives and tend to be negative in affect (Bayer & Cegala, 1992). Control may be exercised through threats and physical force, as well as through depriving the child of objects or privileges (Janssens, 1994). Bayer and Cegala (1992) also found that verbal aggressiveness was positively related to authoritarian style. A study conducted in Mexico showed that authoritarian parenting style was the most important predictor of use of physical punishment, as reported by mothers (Frias-Armenta & McCloskey, 1998). *Permissive* parents are responsive to children's needs, but set few limits and rarely exercise control over the child, in order to allow free expression of feelings.

Authoritative parents tend to have children who, as preschoolers, are cheerful, socially responsive, self-reliant, achievement-oriented, and cooperative with adults and peers (Baumrind, 1971). This type of parenting is also more highly correlated with academic and social competence of children during grade-school years (see Hastings & Rubin, 1999). Authoritarian parents tend to have irritable children, whereas permissive parents often have children who are more dependent, self-oriented, and aggressive. Other studies have confirmed that authoritative parenting is related to positive outcomes for children's social, cognitive, and emotional development (Maccoby & Martin, 1983; Peterson & Rollins, 1987), and have shown that the two other parenting styles are associated with children's acting-out behavior (Hetherington & Martin, 1986).

As the parents in Baumrind's sample were reasonably warm and accepting, she did not identify a category that emerged in later studies: *uninvolved parenting*, an extremely lax, non-controlling approach displayed by parents who have either rejected

their children or are so overwhelmed with their own stress and problems that they have little time or energy to devote to child-rearing (Becker, 1964; Maccoby & Martin, 1983). The children of these neglectful parents display both social and academic deficits, and tend to become very hostile and rebellious adolescents who are prone to antisocial or delinquent acts (Patterson, DeBaryshe & Ramsey, 1989).

Relatively little is known about the characteristics of families practicing different types of parenting, apart from the fact that parents with lower socioeconomic status (SES) are more restrictive and authoritarian, and that higher-SES parents tend to be either permissive or authoritative (Maccoby, 1980). Moreover, mothers are more likely to use reasoning and nurturing behavior to achieve their parenting goals while fathers use more forceful techniques based on parental authority and power (Bentley & Fox, 1991; Pruett, 1993; Volling & Belsky, 1992). Baker and Heller (1996) found fathers to be more authoritarian, less permissive, and more uninvolved than mothers.

Lamb (1986) proposed three main dimensions of paternal involvement: interaction, accessibility, and responsibility. Of the many possible categories of interaction, the category most frequently evaluated by researchers, through interviews, questionnaires, or daily logs, is that of basic care (feeding, bathing, changing diapers, etc.), either in terms of absolute or relative frequency, or amount of time. Several researchers also appraise physical play and/or quiet time, socialization, education, affection, or leisure activities. Observational studies generally examine basic care, play and/or expression of affection. Other researchers prefer to quantify the sum of activities involving interaction with the child. Until now, few studies have simultaneously examined the multiple dimensions of fathering, including relations among child-rearing attitudes

and practices, role involvement, and satisfaction (De Luccie, 1996). In short, it is essential to explore many of the dimensions of fathers' involvement in greater depth, and more particularly the interaction among them. Magnusson (1995) recommended a focus on the organization and patterning of individuals' behaviors rather than a focus on discrete behaviors. Jain, Belsky, and Crnic (1996) identified a four-cluster solution of types of fathering, based on the observation of interactions between 69 fathers and their child: caretakers, playmates-teachers, disciplinarians, and disengaged fathers. However, analyses of variance of potential determinants provided evidence of differences only between two higher order groups. The progressive fathers (caretaker and playmate-teacher groups) were more educated, had more prestigious occupations, were less anxious, hostile and irritable, and experienced fewer daily hassles than the traditional fathers (disciplinarian and disengaged groups).

This study of a large sample of two-parent families living in a disadvantaged environment, with at least one child between 0 and 6 years of age, was aimed at verifying the existence of different types of fathering on the basis of self-report measures of involvement and parental attitudes.

Method

Subjects and data collection procedures

The present investigation studied 468 two-parent, French Canadian families with at least one child between 0 and 6 years of age living in a disadvantaged environment. Spouses had to have cohabited for at least one year. A representative sample of

subjects was recruited from two semi-rural communities north of Montreal and from two Montreal neighborhoods (Quebec, Canada). The four communities had to meet the following criteria: (1) presence of over 300 families with at least one child under six years of age, and (2) a total of at least 25% of families living under the poverty line. A letter was sent to each of the families prior to the interview to inform them of a coming home visit. Households were excluded from the study only after six unsuccessful attempts to meet the family. Fathers (biological and non-biological) and mothers participated in separate face-to-face interviews, beginning with the father. In order to avoid potential reading difficulties and confidentiality issues, participants were simply asked to point to a number on a scale drawn on a card (in front of them).

Fathers' mean age was 37.8 (SD = 6.0; range from 23 to 63), and mothers' was 35.2 (SD = 5.0; range from 24 to 52). For fathers, mean number of years of education was 13.0 (SD = 2.9; range from 3 to 23), compared to 12.6 years (SD = 2.7; range from 5 to 22) for mothers. More precisely, 57.9% of fathers and 66.3% of mothers had 12 years or less schooling. Eighty percent (80%) of fathers and 66.3% of mothers were employed. Overall, in 43.5% of the families, both parents had a job. The annual income of 58.3% of fathers and 85% of mothers was \$30,000 (CAN) or less; only 18.5% of fathers and 5.4% of mothers earned \$40,000 or more per year. The vast majority of the families (89.4%) were made up of the two biological parents, whereas 10.6% were reconstituted families. Spouses had cohabited for an average of 8.5 years (SD = 4.3; range from 1 to 23 years). The mean number of children per household was 2, with a range from 1 to 6.

Instruments

Fathers' involvement

Fathers' involvement was assessed using the *Montreal Father's Involvement Questionnaire*, an instrument composed of 47 items with a 5-point Likert scale (1 = never to 5 = very often) or a 6-point Likert scale (1 = never to 6 = every day), divided into 6 scales. Whereas "involvement" often refers to the general level of interaction with a child, in the present study we examine it in terms of the different dimensions identified through factor analysis. Emotional support was measured by 12 items pertaining to parental behaviors that clearly communicate to the child that he or she is appreciated, loved, supported, and protected. Opening to the world included 9 items such as initiating the child to new games or activities. Basic care comprised 9 items, such as bathing, dressing, feeding, and nursing the child. Physical play (7 items) included tickling, play-wrestling, or laughing with the child. Evocations (6 items) encompassed instances in which the parent talks to others about positive aspects of the child and/or about pleasant times spent together. Discipline (4 items) concerned parental activities aimed at correcting the child's conduct or teaching age-appropriate behavior. Table 1 shows the internal consistency (Cronbach's alphas), temporal stability (test-retest correlations over a month for 33 subjects), and the proportion of variance explained by each of the factors identified through factor analysis.

Fathers' parental attitudes

Attitudes may be defined as an individual's predisposition, reaction to, or affective evaluation of the alleged facts about an object or situation (Holden & Edwards, 1989).

Attitudes are a function of beliefs, both of which are social cognitions hypothesized to be causally linked to behavior (Bugental, Blue & Druscoza, 1989; Iverson & Segal, 1992). There is some evidence suggesting that parental beliefs and attitudes are associated with child-rearing practices (Holden & Edwards, 1989).

Parental attitudes were evaluated with the *Adult-Adolescent Parenting Inventory* (Bavolek, 1984), a questionnaire with a 5-point Likert scale (1 = strongly agree to 5 = strongly disagree). The AAPI was developed initially as a screening tool to identify individuals at high risk for child abuse. The two subscales selected for the present study were the Empathic Awareness Scale (8 items; Cronbach's alpha=.76) and the Physical Punishment Scale (10 items; alpha=.76). Empathy and punishment are two salient categories of parental attitudes which generally are negatively correlated. Empathy is defined as an awareness of a child's needs, which entails the ability of the parent to understand the condition or state of mind of the child without actually experiencing his or her feelings (Bavolek, 1984).

Fathers' Psychological Characteristics

Several researchers have pointed to the relationship between fathers' personality traits (self-esteem, autonomy, sociability, etc.) and their involvement as fathers. An increasing number of researchers also examine the concept of attachment across the lifespan. The mental representations (internal working models) developed during infancy through interactions with parents are assumed to shape personality, which in turn is believed to exert a direct influence on parenting. We therefore decided to explore the effect of adult attachment on fathering. The father's personality traits related to his

attachment history were measured with the *Attachment Style Questionnaire* (Feeney, Noller & Hanrahan, 1994). This instrument consists of 40 items with a 6-point Likert scale (1=totally disagree to 6=totally agree). It measures the general style of social relations, and is not solely centered on romantic relationships as are numerous instruments that measure adult attachment. The three-factor solution corresponds to the three constructs central to Hazan and Shaver's (1987) conceptualization of adult attachment: security ($\alpha=.53$ with 7 items), anxiety (.71 with 14 items), and avoidance (.52 with 9 items).

The father's parenting stress was evaluated with the short version (36 items) of the *Parenting Stress Index* (PSI : validated for the French-speaking population of Quebec by Bigras, LaFrenière, & Abidin, 1996). The total stress score (Cronbach's $\alpha=.88$) is the sum of three subscales: parental distress, dysfunctional parent-child interactions, and stress about a difficult child.

Fathers' work

A certain number of studies have shown that there are associations between the father's work and his paternal involvement (Feldman, Nash, & Aschenbrenner, 1983). In this study, we decided to evaluate the effect of three work-related dimensions: psychological involvement in work, satisfaction with work, and quantitative involvement or amount of time devoted to work. Fathers' involvement in their work was measured with the *Job Involvement Scale* (Lodahl & Kejner, 1965), a 4-point Likert scale. This instrument consists of 20 items and has an internal consistency of 0.74. Fathers' satisfaction with their work was assessed with the *Minnesota Satisfaction Questionnaire*

(Weiss, Davis, England, & Lofquist, 1967), a 4-item index with a 7-point Likert scale. This instrument showed an alpha of 0.78 in our sample. Finally, fathers were asked to report the number of hours worked per week. The response choices for hours worked were: (1) less than 10 hours per week; (2) from 10 to 20 hours per week; (3) from 21 to 30 hours per week; (4) between 31 and 40 hours per week; and (5) over 40 hours per week.

Spouse-related variables

Spousal harmony is considered by a number of researchers as a determinant of paternal involvement. The quality of the couple's relationship, as assessed by the female spouse, was measured using the *Locke-Wallace Marital Adjustment Scale* (Locke & Wallace, 1959). Cronbach's alpha was 0.72 (16 items). This instrument is highly correlated ($r=.88$) with Spanier's (1976) *Dyadic Adjustment Scale*.

Cowan and Cowan (1987) reported that women who made room for their husbands to become involved with their child through their own involvement outside the family home generally had husbands who took greater responsibility for childcare. Maternal involvement might therefore be a possible predictor of paternal involvement. Maternal involvement was evaluated by summing the mothers' responses to the 47 items contained in the *Montreal Father's Involvement Questionnaire*, with regard to their own behavior. Cronbach's alpha was 0.83.

Socioeconomic characteristics

Fathers and mothers were asked to report their annual income. The choice of answers (in Canadian dollars) was: (1) less than \$10,000; (2) \$10,000 to \$19,000; (3) \$20,000 to \$29,000; (4) \$30,000 to \$39,000; and (5) \$40,000 or more.

Level of education was based on fathers' and mothers' statements as to the last year of schooling completed.

Results

Intercorrelations between quantitative and qualitative dimensions of fathering

Table 2 presents the correlations between the dimensions of paternal involvement and fathers' parental attitudes. The table shows that the more fathers are in favor of physical punishment, the more they are involved in imposing discipline, and the less they are involved in providing emotional support. Empathic attitudes toward children are positively correlated to involvement in emotional support, opening to the world, basic care, and physical play. Only discipline and evocations are not positively correlated to empathy. Finally, empathic attitudes are negatively correlated to attitudes toward physical punishment. The greater the father's parental empathy, the less likely he is to have a favorable attitude toward physical punishment.

Types of fathering

A classification analysis (hierarchical cluster analysis using Ward's method, with square Euclidean distances as measures of dissimilarity) was performed on the fathers using the z scores for the six paternal involvement factors and the two types of parental

attitudes in order to establish the types of paternal parenting. After excluding 34 cases with missing data, the analysis revealed the existence of four groups.

Oneway analysis of variance among the four groups of fathers showed significant differences between group means for the six dimensions of paternal involvement and the two types of attitudes (Table 3). Fathers in Group 1 (34.8% of the sample) had lower mean scores for emotional support, basic care, physical play, and empathy than the three other groups, and expressed more favorable attitudes toward physical punishment than Groups 2 and 3. Their parenting style therefore tended toward the authoritarian type. Fathers in Group 2 (20% of the sample) and group 4 (19.1% of the sample) had comparable, high scores on emotional support, physical play, and empathy. On the other hand, Group 2 fathers were less involved in discipline and were less favorable toward physical punishment than the three other groups. Therefore, we believe that Group 2 corresponds to permissive parenting, whereas Group 4 corresponds to authoritative parenting. Finally, Group 3 fathers (26% of the sample) had scores similar to those of Group 4 with regard to basic care, physical play, empathy, and discipline, but had higher scores than the three other groups with regard to emotional support, opening to the world, and evocations. This group can be said to engage in “stimulative parenting”.

Intercorrelations between dimensions of fathering and their potential determinants

Table 4 shows that the only variable significantly correlated with quality of the spousal relationship is emotional support. Maternal involvement, on the other hand, is positively correlated with the father’s scores on emotional support, opening to the world,

basic care, physical play, and evocations, but not with the father's scores on discipline and parental attitudes. The mother's age is negatively correlated with the father's scores on emotional support, physical play, and evocations, whereas it is positively correlated with the father's empathic attitude.

As to variables linked to the father's work (involvement, satisfaction, time), the mean number of hours of work per week is negatively correlated to involvement in basic care. The more the father works, the less he is involved in basic care.

The number of children in the household is negatively correlated with paternal involvement in emotional support, basic care, physical play, and evocations, and positively correlated to favorable attitudes toward physical punishment. Thus, the greater the number of children, the less fathers are involved with them and the more they tend to use physical punishment.

Fathers' income is positively correlated to empathic attitudes and involvement in discipline, but negatively correlated to opening to the world. Level of education is positively correlated to involvement in basic care, physical play, and discipline, as well as to empathic attitudes, but negatively correlated to attitudes favoring physical punishment.

Mothers' income is positively correlated to their spouse's involvement in basic care, opening to the world, and empathic attitudes, but negatively correlated to the father's attitude toward physical punishment. Mothers' level of education is positively correlated to paternal involvement in basic care, physical play, discipline, opening to the world, and empathic attitudes. In short, higher socioeconomic status of fathers and/or

mothers tends to be linked to more empathic paternal attitudes and greater paternal involvement, particularly in providing basic care.

The father's age is negatively correlated to three dimensions: opening to the world, physical play, and evocations. The younger the father, the more he stimulates his child, and the more present the latter seems to be in the father's cognitions.

Parental stress is significantly correlated with seven of the eight dimensions; only physical play is uncorrelated to parental stress. The greater the level of parental stress reported by the father, the less he is involved in basic care, emotional support, and opening to the world, the less he engages in evocations, the less empathic his attitude, and the more he is involved in discipline and favorable toward physical punishment.

Adult attachment scales are correlated with the various dimensions of paternal involvement. Security is positively correlated to involvement in opening to the world, physical play, evocations, and empathic attitudes, and negatively correlated to punitive attitudes. Anxiety is positively correlated to involvement in discipline and favorable attitudes toward physical punishment, and negatively correlated to empathic attitudes. Finally, avoidance is positively correlated to favorable attitudes toward physical punishment and negatively correlated to involvement in basic care and empathic attitudes.

Familial characteristics of the types of fathering

The oneway analyses shown in Table 5 indicate that the four groups differ significantly with regard to maternal age and involvement, mean number of hours worked by the father, the number of children, three of the four socioeconomic variables,

the father's parental stress, and two of the three adult attachment variables. Authoritarian fathers work longer hours and have a lower level of education than authoritative fathers. Their spouses also have lower incomes than those in the authoritative group. Spouses of authoritarian fathers have a lower level of education than spouses of stimulative or authoritative fathers. On the other hand, authoritarian and authoritative groups have similar scores for parental stress and adult attachment psychological characteristics. On average, the families of authoritarian fathers are composed of a larger number of children than the permissive and stimulative groups. Stimulative fathers are more secure in their social relationships and their spouses are more parentally involved than the three other groups. Finally, stimulative fathers' parental stress level is comparable to that of permissive fathers.

A multifactorial model was used to identify the characteristics that distinguish between these four different types of fathering. We performed a stepwise discriminant function analysis to explore the optimal interaction between variables in order to predict case allocation. Independent predictor variables were entered using the overall Wilks' lambda to select subsequent variables for inclusion. The statistical criteria were set so that the probability of F-to-enter was 0.05 and of F-to-remove, 0.10. Variables initially retained for analysis were those for which univariate analyses had shown significant between-group differences. To correct for problems arising from multicollinearity between independent variables, only one of the two variables was retained in cases in which correlations were greater than or equal to 0.45. Thus, we excluded father's level of education (highly correlated with that of the mother). We also excluded the mean

number of hours worked by the father and maternal income because there were missing data for these two variables, which lowered the total number of cases.

Discriminant analysis led to inclusion of five variables in the model, in the following order: 1- Father's parental stress; 2 - Mother's level of education; 3 - Father's level of security in social relationships ; 4 - Number of children in the household; 5 - Maternal involvement. Table 6 shows that three functions allow one to discriminate significantly among the four groups. The first function, which explains 65.5% of the total variance, discriminates between the authoritarian and authoritative groups, on the one hand, and the permissive and stimulative groups, on the other, on the basis of three variables: parental stress, maternal involvement, and number of children. Authoritarian and authoritative families are characterized by fathers with a higher parental stress level, mothers with lower parental involvement, and a larger number of children, compared to permissive and stimulative families. The second function, accounting for 20.3% of the variance, reflects fathers' level of security with regard to social relationships. This function discriminates between stimulative fathers and the three other groups, as stimulative fathers are significantly more secure in their social relationships than other fathers. The third function (14.2% of the variance) concerns the mother's level of education and discriminates between the authoritarian group and the three others. Spouses of authoritarian fathers have a lower educational level than other groups. Taken together, these three functions allow correct classification of 42% of the cases in each of the four groups. Table 7 shows that the rate of correct classification into Groups 1, 2, and 3 is well above chance (respectively 49%, 41%, and 43%), but that the rate of correct classification into Group 4 (28%) is no better than chance (0.25).

Discussion

This study demonstrated that it is possible to establish a typology of fathers based on quantitative and qualitative self-report measures of fathering. The results of the present study, conducted on a sample of fathers, revealed the presence of the three basic types of parenting identified by Baumrind (1966), and in addition, a new type of parenting: stimulative parenting. In fact, stimulative fathers are a sub-set of the authoritative group. Fathers in the stimulative group (about a quarter of the sample) provided more emotional support to children and stimulated them more, as is evidenced by the number of evocations outside of the home and involvement in opening to the world. Evocations are an indicator of the psychological presence of children in the father's cognitions and, according to Palkovitz (1997), constitute an important aspect of paternal involvement which has not yet been explored. Our analyses show that the most distinctive feature of stimulative fathers is that they are more secure in their social relationships than other fathers. Thus, a father who is secure in his social relationships is not only more likely to have a warm relationship with his children, but also to be more involved in stimulating them, for example by initiating them into new activities or by creating new games for them. Note that this type of stimulation is entirely distinct from the parent's ability to stimulate the child in the context of a learning-oriented interaction. To our knowledge, this study is the first to present evidence of a direct link between fathering and personal characteristics related to the father's attachment history, i.e., the

working model of self-as-parent. However, it would be important to replicate this analysis using adult attachment scales with higher internal consistency.

Contrary to some other studies (see Grossman, Pollack & Golding, 1988), our study found significant relationships between quantitative and qualitative measures of fathering. More specifically, empathic parental attitudes were found to be positively correlated to dimensions of paternal involvement. Fathers with more empathic attitudes toward children also tend to be more involved with them in terms of time.

Although Group 2 fathers are less involved in basic care and opening to the world than fathers in Groups 3 and 4, analysis of fathering predictors confirm that Group 2 corresponds much more closely to permissive parenting than to uninvolved parenting. Thus, multifactorial analysis reveals that the permissive group (group 2) is closer to the stimulative group (Group 3) in that they both score lower on fathers' level of parental stress and higher on maternal involvement. Furthermore, Group 2 fathers, in addition to having an empathic parental attitude, are as involved as Group 4 (authoritative) fathers in terms of emotional support and physical play.

Onatsu-Avilommi, Nurmi and Aunola (1998) showed that the more parenting stress reported by fathers, the more their grade-school-aged children used maladaptive strategies. The present study demonstrates that the father's parental stress is the most important variable for discriminating between types of fathering, which supports Abidin's (1986) parenting model based on numerous studies of the mother-child relationship. Moreover, the results show that fathers' parental stress is linked to psychological characteristics of adult attachment. This is consistent with Belsky's (1984) model, according to which the personal and psychological characteristics of fathers are the

main determinants of parenting and also possibly of child maltreatment. Likewise, Woodworth, Belsky and Crnic's (1996) study of a sample of 64 fathers concluded that fathers' personal characteristics were more predictive of parenting than distal variables (SES, social-contextual factors, etc.).

Spousal harmony is considered by a number of researchers as the most important factor predicting paternal involvement (Feldman et al., 1983; Snarey, 1993). Our results support those of Grossman et al. (1988) in that no significant correlation was found between the spousal relationship and dimensions of paternal involvement, except for a weak positive correlation with emotional support. Feldman et al. (1983) concluded that for their upper-middle class, highly educated sample, the quality of the spousal relationship was consistently the most powerful predictor of paternal involvement and satisfaction. Perhaps the spousal relationship is a more predictive variable for highly educated, upper-middle class families than for individuals from a low to average socio-economic level such as our sample of families. On the other hand, for this type of study it may be more appropriate to use a variable such as the parenting alliance developed by Abidin and Brunner (1995), rather than a more distal variable such as the quality of the spousal relationship (see also McBride & Rane, 1998).

The positive correlation between attitudes toward physical punishment and involvement in discipline ($r=.33$) suggests that physical punishment is probably an important means for fathers to discipline their children. Indeed, in general, people in industrialized countries tend to be tolerant toward the use of physical punishment (Payne, 1989; Tiller, 1991). Physical punishment is commonly viewed as a primary and essential disciplinary technique (Buntain-Ricklefs, Kemper, Bell & Babonis, 1994;

Holden, Coleman & Schmidt, 1995; Lutenbacher & Hall, 1998). Holden and Zambarano (1992) found a positive correlation between mothers' and fathers' self-reports of spanking and two indices of parental cognitions, attitudes, and behavioral intentions regarding punishment.

Our results also indicate that favorable attitudes to physical punishment are common among fathers, at least those living with a spouse in a disadvantaged environment. Thus, 54% of our sample, including not only authoritarian but also authoritative fathers, were more favorable toward physical punishment. Studies in the United States (Straus, 1991) and in Sweden (Stattin, Janson, Klackenber-Larsson, & Magnusson, 1995) have shown that physical punishment also appears to be widely used by parents. The literature also shows that fathers believe more strongly in physical punishment (Tiller, 1991).

There seems to be a very fine line between physical punishment and physical abuse of children. Studies on physical abuse have shown that abusive interactions often take place in the context of discipline using physical punishment (see Sternberg, 1997). According to Belsky's (1984) model, physical abuse can be linked to numerous distal and proximal factors. However, two factors seem particularly decisive: cultural attitudes about the appropriateness of physical punishment and stress levels. Parenting attitudes, child-rearing practices and child maltreatment are closely related to one another (Lenton, 1990; Susman, Trickett, Iannotti, Hollenbeck & Zahn-Waxler, 1985; Webster-Stratton, 1985). A number of theorists have postulated that there exists an important relationship between the lack of parental empathy and abusive parental behavior (Bavolek, 1984; Feshbach, 1989; Minor, Karr, & Jain, 1987). Brems and Sohl (1995)

report that individuals who scored higher on a measure of empathy were less likely to endorse physical punishment as an appropriate choice of intervention. A strong belief in the value of physical punishment can also be an antecedent of abusive parenting (Bavolek, 1984; see Tiller, 1991). As to the stress factor, stressful life circumstances are now known to contribute significantly to abuse (see Sternberg, 1997). Parents who physically abuse their children report higher stress levels (Justice, Calvert, & Justice, 1985). Thus, the stress factor may explain the frequently observed escalation from physical punishment to physical abuse.

Our findings indicate that high levels of parental stress among authoritarian and authoritative fathers, combined with attitudes favorable to physical punishment, less maternal involvement, and a larger number of children per household put this group at a higher risk of maltreating their children than fathers in the permissive and stimulative groups. Although Baumrind concluded that authoritative parenting was the most favorable for child development, it is highly likely that child development is linked to the interaction of the two parents' respective parenting styles. For this reason, in future studies it would be important to take into account the attitudes and parental involvement of both parents.

Authoritarian fathers (almost 35% of the sample) are even more at risk of maltreating their children because the families' socioeconomic situation is more difficult, particularly with regard to the mother's level of education and income. Note that authoritarian fathers' income is not significantly different from that of authoritative fathers, but the former have to work more hours per week, which leads to a

corresponding increase in their level of fatigue and stress and a decrease in the time they spend with their children.

Theory suggests that fathers who are more favorable toward physical punishment are likely to be more at risk of physically abusing their children, whereas fathers who are less parentally involved are likely to be more at risk of neglecting their children. Authoritarian fathers would be expected to be at higher risk of neglect and physical abuse, given their lack of warmth and tendency to be controlling, whereas authoritative fathers, who also exercise control but are warmer, would only be at risk of inflicting physical abuse. In future studies, it would be interesting to verify these assumptions about specific types of maltreatment.

Although the risk of maltreatment varies from one type of fathering to another, it would seem that all those in favor of physical punishment, even stimulative fathers, are at risk of physically abusing their children if the occasion arises. However, it is also important to remember that risk of maltreatment does not equal maltreatment. It would be particularly interesting to examine, in future studies, whether various types of fathering differ in terms of the father's ability to regulate his stress in the context of parental discipline, and also in other contexts. Finally, it would undoubtedly be highly interesting to use Baumrind's classification scheme in studies that directly scrutinize maltreating families, using a systemic approach that examines both maternal and paternal involvement in a perspective of role complementarity.

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Table 1. Psychometric properties of the Montreal Father's Involvement Questionnaire

	Internal consistency (alpha)	Temporal stability (r)	Explained variance (%)
Emotional support	.86	.72	10.7
Opening to the world	.75	.77	7.0
Basic care	.73	.50	6.4
Physical play	.72	.75	6.4
Evocations	.74	.61	6.0
Discipline	.75	.74	5.7

Table 2. Intercorrelations among dimensions of fathers' involvement and parental attitudes of fathers (n = 434)

	1	2	3	4	5	6	7
1- Emotional support							
2- Opening to the world	.41 ³						
3- Basic care	.32 ³	.45 ³					
4- Physical play	.39 ³	.42 ³	.39 ³				
5- Evocations	.44 ³	.33 ³	.10 ¹	.31 ³			
6- Discipline	.13 ²	.20 ³	.14 ²	.16 ³	.05		
7- Attitude - physical punishment	-.10 ¹	-.09	-.03	-.02	.08	.33 ³	
8- Attitude - empathy	.21 ³	.12 ¹	.17 ³	.17 ³	.09	.01	-.40 ³

¹ p ≤ .05

² p ≤ .01

³ p ≤ .001

Table 3. Comparison of means (standard deviation) of dimensions of paternal involvement and attitudes among the 4 groups of fathers

	Group 1 (n = 151) authoritarian parenting	Group 2 (n = 87) permissive parenting	Group 3 (n= 139) stimulative parenting	Group 4 (n = 83) authoritative parenting	Oneway F (3, 430)
Emotional support	3.67 ^a (.65)	4.24 ^b (.46)	4.62 ^c (.31)	4.30 ^b (.41)	84.99 ³
Opening to the world	2.95 ^a (.61)	3.06 ^a (.65)	4.02 ^b (.47)	3.53 ^c (.48)	89.62 ³
Basic care	3.12 ^a (.76)	3.65 ^b (.70)	4.11 ^c (.75)	4.26 ^c (.53)	63.68 ³
Physical play	4.75 ^a (.72)	5.10 ^b (.47)	5.52 ^b (.39)	5.31 ^b (.40)	46.46 ³
Evocations	3.34 ^a (.69)	3.46 ^a (.61)	4.38 ^b (.43)	3.34 ^a (.46)	87.30 ³
Discipline	4.16 ^a (1.02)	3.17 ^b (1.06)	4.25 ^{ac} (1.06)	4.57 ^c (.61)	33.59 ³
Physical punishment	3.48 ^a (.52)	4.04 ^b (.52)	3.81 ^c (.50)	3.25 ^d (.51)	42.93 ³
Empathy	3.38 ^a (.56)	4.11 ^b (.54)	3.97 ^b (.66)	3.86 ^b (.59)	36.90 ³

³ $p \leq .001$

a, b, c, d different letters means significant differences on two by two comparisons (Scheffé : $p < .05$)

N.B. A high score on physical punishment indicates that the father's attitude toward physical punishment does not tend to be favorable.

Father involvement

Table 4. Correlations between dimensions of fathering and their potential determinants (n = 434)

	Emotional Support	Opening to world	Basic care	Physical play	Evocations	Discipline	Physical punishment	Empathy
Spouse								
Spousal relationship	.14 ²	.09	.03	-.01	.09	-.03	-.02	.03
Maternal involvement	.19 ³	.21 ³	.11 ¹	.21 ³	.16 ³	.09	.07	.02
Mother's age	-.10 ¹	-.07	-.03	-.17 ³	-.13 ²	.06	-.01	.13 ²
Father's work^a								
Involvement	.03	-.04	.01	.04	-.07	-.04	-.05	.04
Satisfaction	.03	.07	.05	.01	.08	-.05	-.09	.06
Mean nb. hours/week	-.02	-.06	-.17 ²	-.01	.11 ¹	.02	.05	-.04
Children								
Nb. per household	-.10 ¹	-.09	-.16 ³	-.14 ²	-.07	.08	.11 ¹	-.11 ¹
SES								
Father's income ^b	-.01	-.10 ¹	-.01	.00	-.04	.11 ¹	-.01	.17 ³
Father's educational status	.03	.06	.21 ³	.14 ²	-.02	.11 ¹	-.10 ¹	.33 ³
Mother's income ^c	-.02	.12 ¹	.28 ³	.05	-.02	.09	-.11 ¹	.25 ³
Mother's educational status	.04	.13 ²	.24 ³	.21 ³	.00	.12 ¹	.05	.33 ³
Father's personal characteristics								
Age	-.07	-.10 ¹	-.07	-.21 ³	-.10 ¹	-.03	-.02	.06
Parental stress	-.22 ³	-.19 ³	-.10 ¹	-.08	-.15 ²	.24 ³	.38 ³	-.36 ³
Security	.09	.19 ³	.07	.10 ¹	.27 ³	-.01	-.10 ¹	.10 ¹
Anxiety	-.04	-.06	-.07	.03	.03	.14 ²	.26 ³	-.28 ³
Avoidance	-.06	-.09	-.11 ¹	-.05	-.02	-.04	.30 ³	-.31 ³

^a n = 343

^b n = 427

^c n = 406

¹ p ≤ .05

² p ≤ .01

³ p ≤ .001

Father involvement

Table 5. Comparison of means (standard deviation) for different variables among the 4 groups of fathers (n = 434)

	Group 1 authoritarian	Group 2 permissive	Group 3 stimulative	Group 4 authoritative	Oneway F (2, 431)
Spouse					
Age	35.40 (4.96)	34.92 (5.29)	34.23 (4.83)	36.19 (4.78)	2.71 ¹
Spousal relationship	106.54 (23.73)	109.77 (19.70)	111.99 (21.17)	105.71 (23.08)	1.80
Maternal involvement	4.41 ^a (.36)	4.45 ^a (.30)	4.58 ^b (.31)	4.43 ^a (.34)	6.10 ²
Father's work^A					
Involvement	2.46 (.39)	2.56 (.41)	2.46 (.37)	2.55 (.37)	1.70
Satisfaction	5.17 (1.17)	5.16 (1.21)	5.34 (1.12)	4.92 (1.35)	1.57
Mean nb. hours/week	4.65 ^a (.64)	4.46 ^{ab} (.79)	4.57 ^{ab} (.71)	4.30 ^b (.85)	3.38 ¹
Children					
Number	2.15 ^a (.94)	1.77 ^b (1.00)	1.81 ^b (.80)	1.96 ^{ab} (.94)	4.51 ²
SES					
Father's income ^B	3.17 (1.28)	3.30 (1.25)	3.14 (1.21)	3.16 (1.20)	.34
Father's educational status	12.37 ^a (2.81)	13.43 ^{ab} (2.80)	13.21 ^{ab} (3.06)	13.60 ^b (2.68)	4.48 ²
Mother's income ^C	1.79 ^a (1.15)	2.22 ^{ab} (1.23)	2.09 ^{ab} (1.27)	2.33 ^b (1.26)	3.92 ²
Mother's educational status	11.84 ^a (2.36)	12.53 ^{ab} (2.77)	12.94 ^b (2.78)	13.49 ^b (2.66)	7.89 ³
Father's personal characteristics					
Age	38.39 (6.49)	37.70 (5.74)	37.08 (5.47)	37.95 (5.73)	1.07
Parental stress	78.21 ^a (14.88)	67.68 ^b (14.50)	67.34 ^b (13.11)	76.34 ^a (13.77)	18.48 ³
Security	27.47 ^a (4.26)	27.30 ^a (3.73)	29.81 ^b (4.04)	27.32 ^a (4.15)	9.90 ³
Anxiety	45.87 ^a (8.09)	42.47 ^b (7.74)	43.46 ^{ab} (8.32)	45.99 ^a (7.73)	4.92 ²
Avoidance	29.93 ^a (4.67)	28.64 ^b (5.23)	28.64 ^b (5.83)	29.37 ^{ab} (4.70)	1.85

^A n = 343

^B n = 427

^C n = 406

¹ p ≤ .05

² p ≤ .01

³ p ≤ .001

a, b, c, d different letters means significant differences on two by two comparisons (Scheffé : p < .05)

Table 6. Summary of the discriminant function analysis

Function	Eigen value	% Variance	Canonical correlation	After function	Wilk's Lambda	Chi-square	df	Alpha
				0	.76	117.93	15	.001
1	.20	65.5	.40	1	.91	42.44	8	.001
2	.06	20.3	.24	2	.96	17.62	3	.001
3	.04	14.2	.20					

Father involvement

Table 7. Classification results (number and percent)

Actual group membership	Predicted group membership			
	1	2	3	4
1 (n = 148)	72 (48.6)	23 (15.5)	30 (20.3)	23 (15.5)
2 (n = 87)	18 (20.7)	36 (41.4)	20 (23.0)	13 (14.9)
3 (n = 113)	22 (19.5)	26 (23.0)	49 (43.4)	16 (14.2)
4 (n = 82)	23 (28.0)	20 (24.4)	16 (19.5)	23 (28.0)