

Impact of parental emotional support and coercive control on adolescents' self-esteem
and psychological distress: Results of a four-year longitudinal study

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Abstract

This study aims at investigating the impact of parental practices on youths' adjustment. In all, 605 adolescents completed questionnaires at ages 14, 16 and 18. Self-esteem, psychological distress as well as parental emotional support and coercive control were measured. Analyses based on individual growth models revealed that self-esteem increased with age, but psychological distress remained stable over time. Boys reported higher levels of self-esteem and lower levels of psychological distress than girls. Maternal and paternal emotional support reinforced self-esteem over time. Maternal coercive control undermined self-esteem, but only at ages 16 and 18. Psychological distress decreased with parental emotional support but increased with parental coercive control at ages 14, 16 and 18. Overall, these results indicate that positive parental practices are related to youths' well-being. These findings support the importance of establishing intervention strategies designed to promote best practices among parents of teenagers to help them develop into well-adjusted adults.

Key words: Adolescents, parental support, parental control, parental practices, self-esteem, psychological distress

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Youths face various changes in their body and their cognitive development during adolescence. They navigate between self-identity development and graduated autonomy, but are still influenced by their relationship with their parents. This important relationship in turn has an effect on their psychological adjustment. Despite extensive research and theoretical work in this area, few longitudinal studies have been conducted on the impact of parenting during adolescence. The objective of this study is to investigate the impact of parental emotional support and coercive control on adolescents' self-esteem and psychological distress between the ages of 14 and 18.

Parenting: Parental emotional support and coercive control

Despite the multiple ways in which parenting practices have been operationalized (Bellerose, Cadieux, & Noël, 2001; Picard, Claes, Melançon, & Miranda, 2007) and classified (e.g., Baumrind, 1996; Maccoby & Martin, 1983; Parker, Tupling, & Brown, 1979), parenting has historically been associated with emotional support and control (Bellerose et al., 2001; Maccoby & Martin, 1983). Parental emotional support refers to parents' emotional characteristics, such as warmth, acceptance, attention, responsiveness, involvement and support (Deschesnes, Shaefer, & Couture, 1997; Huver, Otten, de Vries & Engels, 2010). The definition of parental control may differ depending on which behavior it refers to. Adequate parental control refers to an adequate level of boundaries, demandingness, protection and supervision (Baumrind, 1966; Maccoby & Martin, 1983), while parental coercive control involves overprotection, overcontrol, intrusion, rejection

or even hostility (Bellerose et al., 2001; Deschesnes et al., 1997; Parker et al., 1979; Rohner, Khaleque, & Cournoyer, 2005).

Factors influencing parental emotional support and control

Levels of parental emotional support have been found to vary depending on various characteristics, such as the age and gender of the adolescent. Previous studies have found that younger adolescent boys and girls perceive more support from both their mother and their father than older adolescents do (Bellerose et al., 2001; De Goede, Branje, & Meeus, 2009; Meeus, Iedema, Maassen, & Engels, 2005; Rey, Bird, Kopec-Schrader, & Richards, 1993). Nonetheless, from middle adolescence to late adolescence, perceived emotional support may stabilize, although De Goede et al. (2009) report that it appears to increase slightly among girls in their study.

Adolescents' age and gender may also influence their perception of parental coercive control. In Bellerose and colleagues' (2001) study, there is no difference in perceived coercive control from the father, but 16-year-old adolescents perceive more control from their mother. Rey and colleagues (1993) highlighted a slight but significant difference between boys' and girls' perceptions of parenting, girls perceiving their fathers as being more controlling than boys do. Subsequent studies have also proposed that boys may perceive a higher level of permissiveness (or less control) from their parents than girls do, suggesting that parents may be more restrictive with girls than with boys (Bellerose et al., 2001; Claes & Lacourse, 2001; McKinney & Renk, 2008; Radziszewska, Richardson, Dent, & Flay, 1996). Mothers and fathers may adopt different parenting behaviors based on their child's gender.

Levels of parental control and emotional support may also vary according to the parents' gender (Conrade & Ho, 2001; Deschesne et al., 1997; McKinney & Renk, 2008; Parker et al., 1979; Rey et al., 1993). Research suggests that mothers are generally more caring (Deschesnes et al., 1997; Parker et al., 1979) and slightly more overprotective than fathers (Parker et al., 1979). Mothers are more likely to be perceived as authoritative (adequate level of control, and high level of warmth, democracy and responsiveness) or permissive (high level of warmth and responsiveness, and low level of control and demandingness) than fathers (Conrade & Ho, 2001; McKinney & Renk, 2008). Meanwhile, fathers are sometimes perceived as more authoritarian (high level of control and low level of warmth and responsiveness) than mothers, although results reportedly vary across studies (Conrade & Ho, 2001; McKinney & Renk, 2008).

Because adolescents' needs vary according to their age and the developmental challenges they face, parents' levels of control should vary according to these needs and decrease as the child matures, while parental emotional support seems to remain essential in every developmental stage of adolescence (Hamburg, 1974; Maccoby & Martin, 1983). However, the separation process may reduce the level of support needed from the parents as adolescents grow up (Meeus et al., 2005). Overall, results of previous studies suggest that adolescents' perceptions of their parents' coercive control and emotional support change over time. More studies are thus needed to better understand these changes in various relationship characteristics (De Goede et al., 2009).

Self-esteem and parenting

A high level of self-esteem is commonly associated with psychological well-being (Rosenberg, Schooler, Schoenbach, & Rosenberg, 1995) and happiness (Baumeister,

Campbell, Krueger, & Vohs, 2003). Adolescence is a critical period for the development and consolidation of self-esteem (Bolognini, Plancherel, Bettschart, & Halfon, 1996). In their meta-analysis, Robins, Tryesniewski, Tracy, Gosling and Potter (2002) examine the trajectory of self-esteem across the lifespan. They conclude that self-esteem levels, which are generally high during childhood, drop significantly during adolescence and rise gradually throughout adulthood (Robins et al., 2002). Nevertheless, according to other authors, these variations would be relatively small (Huang, 2010; Kling, Hyde, Showers, & Buswell, 1999). During childhood, self-esteem levels would not differ by gender (Breton, Légaré, Laverdure, & D'Amours, 1999; Robins et al., 2002) but in the adolescence period, self-esteem levels would decrease more for girls than for boys (Birndorf, Ryan, Auinger, & Aten, 2005; Breton et al., 1999; Robin et al., 2002; Seidah, Bouffard, & Vezeau, 2004) and would remain lower for women throughout adulthood (Robins et al., 2002).

In most studies, adolescents' self-esteem has been positively associated with perceived parental emotional support (Breton et al., 1999; DeHart, Pelham, & Tennen, 2006; Herz & Gullone, 1999) and negatively associated with perceived parental coercive control (Aquilino & Supple, 2001; DeHart, et al., 2006; Herz & Gullone, 1999; Soenens, Vansteenkiste, Luyten, Duriez, & Goossens, 2005). Moreover, McKinney, Milone and Renk (2011) and Milevsky, Schlechter, Netter and Keehn (2007) report that a democratic parenting style, generally characterized by a high level of emotional support and adequate control (Baumrind, 1991, 1996), is associated with higher self-esteem among adolescents and young adults. Martinez and Garcia (2007) found that adolescents with authoritarian parents (high demandingness and low responsiveness) exhibit the lowest scores for self-

esteem. The literature thus suggests that parenting practices involving emotional support and an adequate level of control create a favorable context for higher levels of self-esteem in adolescents.

Psychological distress and parenting

There appears to be a consensus in the literature that psychological distress involves symptoms of anxiety and depression (Labelle et al., 2001; Martin, Sabourin, & Gendreau, 1989; Mirowsky & Ross, 2002). Studies generally agree that high levels of psychological distress are more common among girls and that levels of distress increase with age, younger adolescents feeling less distressed than their elder peers (Breton et al., 1999; Deschesnes et al., 1997; Deschesnes, 1998). Some investigations revealed that the presence of psychological distress is less common among adolescents who report high maternal and paternal emotional support (Breton et al., 1999; Deschesnes et al., 1997). Parental emotional support is also related to emotional adjustment in adolescents. However, as adolescents grow older, support decreases, as does the extent of this relation (Meeus et al., 2005).

Without addressing the specific concept of psychological distress, several researchers have found a relation between coercive control and symptoms of depression and anxiety among adolescents (e.g., Barber & Harmon, 2002; Soenens et al., 2005). For example, Aquilino and Supple (2001) found that the presence of parental coercive control in adolescence was associated with an increased incidence of depressive symptoms in young adults. Moreover, several studies have suggested that adolescents who perceive their parents as having a democratic parenting style generally show fewer depressive symptoms (McFarlane, Bellissimo, & Normand, 1995; Milevsky et al., 2007; Pedersen,

1994; Piko & Balázs, 2012; Radziszewska et al., 1996; Rapee, 1997). Anxiety symptoms are also reported less frequently in young people who perceive their parents as having a democratic parenting style (Pedersen, 1994; Rapee, 1997) and more frequently in adolescents perceiving overcontrol by their parents (Festa & Ginsburg, 2011). A recent study even found that the effect of perceived parental emotional support and coercive control during adolescence is related to psychological adjustment at age 30 (Raudino, Fergusson, & Horwood, 2013). This demonstrates the long-lasting effect and importance of parent-child relationships across the life span. Therefore, emotional support and non-abusive parental control appear to be associated with reduced symptoms of psychological distress in adolescents. However, few studies have investigated these relations over time during adolescence.

Goals and hypotheses

While there is a growing body of research suggesting that parenting style is predictive of psychological adjustment, questions remain concerning the development of this interaction. There is also insufficient research examining the effect of both the mother's and the father's emotional support and coercive control over time combined with the adolescent's gender. Steinberg, Mounts et al. (1991) and Steinberg, Lamborn et al. (1994) pointed out that longitudinal studies are needed to better describe this phenomenon, and this statement is still true 20 years later. There have been longitudinal studies conducted since then (e.g., Aquilino & Supple, 2001; De Goede et al., 2009; Galambos, Barker, & Almeida, 2003; Raudino et al., 2013; Steinberg et al., 1994); however, in some of them, parental practices were evaluated at only one time point, and the effect of mothers' and fathers' practices were not investigated separately (e.g.,

Aquilino & Supple, 2001; Galambos et al., 2003; Raudino et al., 2013; Sternberg et al., 1994). Our study will thus extend their work by suggesting a trajectory of the impact of both maternal and paternal parental practices on adolescents' psychological adjustment from ages 14 to 18.

To address these gaps in the literature, we surveyed a sample of 605 youths aged 14 to 18 years at three different time points to evaluate the impact of various parental practices on self-esteem and psychological distress. More specifically, the study aims to 1) describe the evolution of self-esteem and the potential impact of parental support and control on self-esteem, and 2) describe the progression of psychological distress and the potential effects of parental support and control on this progression. Based on previous studies, we hypothesize that self-esteem will increase with age and parental support, decrease with parental abusive control and be higher among boys. We also expect to find an increase in levels of psychological distress with age and among girls. Finally, we posit that psychological distress will decrease with higher parental support and lower parental coercive control.

Method

Participants

The data used in this study were collected during the first three survey waves (2002, 2004 and 2006) of an ongoing longitudinal study. The survey was designed primarily to provide estimates of the prevalence of health risks, such as low self-esteem, psychological distress, drop-out from school and drug use. In 2002, a representative sample of 1176 students aged 14 years attending public and private high schools in the Saguenay-Lac-Saint-Jean (SLSJ) region was selected by the Ministry of Education,

Recreation and Sports (MELS) of the province of Quebec, Canada. Among these potential participants, a subset of 605 (51.4% retention) showed interest and received authorization from a parent to participate in the longitudinal study. These 605 students (55.4% girls), who were 14 years of age, completed the questionnaire and constituted the initial longitudinal sample. Of these, 408 (67.4%) also completed the questionnaires at 16 years old and 413 (68.3%) at 18 years old. Further details of this longitudinal study are provided in other publications (Laberge et al., 2011; Laberge et al., 2012).

Participants in this study are from SLSJ (a geographically isolated population in northern Quebec, Canada), a relatively homogeneous region that differs from other regions of the province notably in terms of its genetics, ethnicity and culture (Perron, 1997). For the first data collection (in 2002), only Francophone schools were targeted. In fact, in 2004, 98.5% of participants said they were Francophone, and the other 1.5%, Anglophone. Most adolescents in this study lived with both parents during the three waves of data collection (74.6% at age 14, 73.3% at age 16 and 63.9% at age 18). A small proportion lived with a single parent (mother or father alone, or with a partner) (25.2% at age 14, 24.2% at age 16, and 21.7% at age 18). As might be expected, the proportion of adolescents who did not live with a parent increased with age (1.7% at 16 years versus 11.0% at 18). Finally, 8.9%, 10.2% and 12.1% of adolescents aged 14, 16 and 18 respectively reported experiencing food insecurity (Anderson, 1990), which is associated with low socioeconomic status and well-being (Nord & Prell, 2007).

Procedures

In 2002, participants completed the self-administered questionnaire at school. In 2004, they received a letter inviting them to complete the questionnaire online.

Confidentiality was ensured by a personal password. A paper version of the questionnaire was mailed to those who had not responded to the online questionnaire after a period of two weeks. For the third wave of data collection in 2006, participants could choose to attend one of the group sessions taking place at school or to complete the questionnaire at home and mail it later. The study received the institutional review board's (IRB) approval, and informed consent was obtained from all participants and their parents.

Measures

Demographics questionnaire

Variables assessed in the demographics questionnaire included participants' age, gender and family structure.

Self-esteem

The French version of the Rosenberg Self-Esteem Scale (Rosenberg, 1965; Vallières & Vallerand, 1990) was used. The scale consists of 10 items that are rated on a four-point Likert scale with responses ranging from Strongly Disagree (1) to Strongly Agree (4). Internal consistencies range from .70 to .88 in French-Canadian populations (Vallières & Vallerand, 1990). The overall self-esteem scores vary from 10 to 40, a high score reflecting a high level of self-esteem.

Psychological distress

Psychological distress was measured using the Indice de détresse psychologique de l'enquête Santé Québec (IDPSQ-14; Prévile, Boyer, Potvin, Perreault, & Légaré, 1992), an adaptation of the Psychiatric Symptom Index (Ilfeld, 1976). Its 14 items record symptoms of anxiety, depression, aggressiveness, and cognitive problems (e.g., *feel nervous or shaky inside, feel lonely, lose your temper, have your mind go blank*).

Symptom intensity is rated on a four-point Likert scale, ranging from never (1) to very often (4). Scores ranging between 14 and 56 are converted into scores from 0 to 100 by linear transformation. The IDPSQ-14 has considerable internal consistency and construct validity (Deschesnes, 1998). Reliability in this sample was high ($\alpha = 0.88$).

Parental emotional support and coercive control

The Parental Emotional Support and Coercive Control Questionnaire was developed by Deschesnes et al. (1997) and is based on the questionnaires developed by Schaefer (1965), Sielgelman (1965) and Parker and colleagues (1979). It is composed of two distinct scales measuring emotional support and coercive control. Emotional support was assessed according to a four-item scale referring to such aspects as attention, affection and positive feedback from parents. Coercive control was assessed by a five-item scale related to psychological violence and abusive intrusion by parents in the youth's life. Each item is answered on a Likert-type scale ranging from 1 (very often) to 5 (never). Total scores range from 0 to 16 for the emotional support scale, and from 0 to 20 for the coercive control scale. Adolescents must complete one questionnaire concerning their mother and another one concerning their father. In cases where adolescents have little or no contact with one or both biological parents, they complete the questionnaire referring to the female and male adults whom they consider to play these roles (step-parent, adoptive parent, grandparent, etc.). Deschesnes and colleagues reported an internal consistency of 0.84 for all scales concerning the female parent and 0.80 for those concerning the male parent.

Data analysis

Individual growth models using the SAS PROC MIXED method (version 9.1) (Singer & Willett, 2003) were used to analyze changes over time, as well as parental practices as predictors of self-esteem and psychological distress. This method was selected because it allows us to overcome some of the limitations of traditional repeated measure techniques and to include individuals who were not assessed at every time point (Dupéré, Lacourse, Vitaro, & Tremblay, 2007). The procedure allowed us to model the changes over time (within-person variation) as well as the way they vary across people (between-people variation) using the maximum likelihood method (Singer & Willett, 2003). At first, two unconditional models (model A in Table 1 for self-esteem and in Table 2 for psychological distress) without independent variables were assessed. These unconditional models served to evaluate the influence of time on self-esteem and psychological distress. Independent variables (age, gender, maternal and paternal emotional support, maternal and paternal coercive control) were then added one by one to the models (models B, C, D, E, F). The final model selection was based on the Akaike information criterion (AIC) (Akaike, 1974; Dupéré et al., 2007; Singer, 1998) and the Bayesian information criterion (BIC) (Dupéré et al., 2007; Schwarz, 1978). For both self-esteem and psychological distress, model F was the best model, because it minimizes the selection criteria. All the continuous variables were centered around their mean to facilitate their interpretation (Dedricks et al., 2009).

Results

Self-esteem

As shown in Table 1, the results of model A (unconditional) reveal that the initial level of self-esteem ($P < 0.000$) and time ($P < 0.000$) were significant. This indicates that

participants differ in their initial level of self-esteem and that this level increases over time. In other words, self-esteem follows a linear trajectory over time, confirming the first hypothesis suggesting that self-esteem increases with age between ages 14 and 18. The model that best explains adolescents' self-esteem from ages 14 to 18 according to the variables under study is model F (AIC = 8125.6 and BIC = 8195.9). Variables that have a major and positive effect on self-esteem are age, gender (boys having higher self-esteem than girls) and maternal and paternal emotional support. For example, an increase of 1 in the average for maternal emotional support increases the self-esteem score by 0.37 if other variables remain constant. Gender differences in self-esteem confirm the second hypothesis of the study. Since the effect of emotional support on self-esteem over time is significant only on the mother's side, our hypothesis is only partially supported in this regard. Moreover, two interaction effects over time were observed. First, the results show that the positive effect of maternal emotional support diminishes with age. So even if it continues to have a positive effect on adolescents' self-esteem until age 18, the impact of maternal emotional support is greater at younger ages. Second, the results show that despite the fact that a mother's coercive control has no significant effect on self-esteem at age 14, its impact changes over time and becomes significantly negative at age 16 and 18. Therefore, the assumption that parental coercive control reduces adolescents' self-esteem is partially confirmed since this impact is significant only from age 16 and only for maternal coercive control, paternal coercive control having no significant effect on self-esteem.

Psychological distress

Model A2 (unconditional) indicates that the initial level of distress differs significantly from one participant to another ($p < 0.000$) (see Table 2). However, model A2 reveals that time has no significant effect on levels of psychological distress between ages 14 and 18 ($p < 0.315$). Therefore, the adolescents' age was not included in subsequent analyses. Model F was also identified as one of the best explanatory models of adolescents' psychological distress (AIC = 11434.1 and BIC = 11469.2). Indeed, the results show that all independent variables in the study (except age) have an effect on the level of psychological distress. Therefore, gender (being male) and both maternal and paternal emotional support (if the score increases compared with the average) reduce the level of psychological distress in adolescents at ages 14, 16 and 18. Finally, the more maternal and paternal coercive control increases, the more psychological distress increases.

Discussion

This study aimed at evaluating the impact of parental emotional support and coercive control on self-esteem and psychological distress among 14- to 18-year-old youths. The longitudinal scheme with three measurement times made it possible to perform parametric analyses of the self-esteem and psychological distress trajectories, in addition to confirming most of the hypotheses of this study. Overall, these analyses helped to refine our understanding of child-parent relationships during adolescence by providing a detailed description of the effects of mothers' and fathers' parenting, age and gender on adolescents' psychological adjustment. Moreover, we examined the impact of parental emotional support and coercive control on self-esteem and psychological distress in early, middle and late adolescence.

The first model developed in the present study shows that self-esteem tends to rise during adolescence, even if the progression is relatively slow. This increase is consistent with results reported in some studies (e.g., Deihl, Vicary, & Deike, 1997; Kling et al., 1999), while it contradicts other studies that documented a decrease in self-esteem during adolescence (e.g., Robins et al., 2002; Seidah et al., 2004). A recent meta-analysis showed that when measured using the Rosenberg or Coopersmith scales, self-esteem tends to increase slightly during adolescence, unlike with other self-esteem measurement tools (Huang, 2010). This observation may partially explain the increase observed in self-esteem between the ages of 14 and 18.

The model further indicates that boys show higher levels of self-esteem than girls. These results are consistent with those of previous studies (Birndorf et al., 2005; Breton et al., 1999; Deschesnes et al., 1997; Robins et al., 2002; Seidah et al., 2004). Indeed, it has been suggested that girls tend to be more severe in their self-evaluation (Bolognini et al., 1996), which may explain why they have slightly lower scores for reported self-esteem than boys. It is also possible that self-esteem is influenced by various factors that impact social expectations concerning boys and girls, such as body image dissatisfaction (Blackburn et al., 2008; Kling et al., 1999), societal values still marked by machismo (Polce-Lynch, Myers, Kliewer, & Kilmartin, 2001) or the popular belief that girls have lower self-esteem than boys during adolescence (Kling et al., 1999).

In accordance with earlier findings on parenting styles (DeHart et al., 2006; Herz & Gullone, 1999; McFarlane et al., 1995; Milevsky et al., 2007) or parent-adolescent relationships (Breton et al., 1999), the trajectory model developed in the present study reveals that maternal and paternal emotional support both promote better self-esteem in

adolescents. In Aquilino & Supple's (2001) study, parental support in adolescence was not related to young adults' self-esteem. In our study, the positive effect of maternal support (but not of paternal support) on self-esteem decreases over time. This finding had not been reported in the literature so far, since maternal and paternal support had been combined in the longitudinal studies reviewed. As suggested by Meeus and colleagues. (2005), parental support may be more important in early adolescence, before the separation process begins. Nonetheless, both maternal and parental support still had an effect at age 18. Other studies are thus needed to better understand the interaction of mothers' and fathers' support over time.

Although some studies have found a relation between adolescents' self-esteem and parental coercive control (Aquilino & Supple, 2001; DeHart et al., 2006; Herz & Gullone, 1999), only a few described the development of this relation over time. Contrary to the initial hypothesis, the results suggest that parental coercive control negatively influences adolescents' self-esteem only from age 16 and when it comes from the mother. Some studies have already indicated that adolescents' perceptions of parental coercive control or rejection increase over time (Bellerose et al., 2001; Picard et al., 2007). The present study does not specify, however, whether this perception is related to a real increase in the level of control by the parents or to a greater need for autonomy during adolescence (Hamburg, 1974; Maccoby & Martin, 1983). Nevertheless, the model developed in the present study demonstrates that maternal coercive control has a significant negative impact on self-esteem at ages 16 and 18. Further research would be needed to better understand the role of paternal and maternal control on adolescents' self-esteem.

According to our best explanatory model of psychological distress, age has no significant influence on the level of perceived psychological distress. Youths reported similar levels of distress from ages 14 to 18. Even though other studies have found age variations in psychological distress (e.g., Deschesnes et al., 1997), Botticello (2009) also found constant levels of distress during adolescence. Gender, however, had a significant influence on the level of psychological distress, girls reporting higher levels of distress than boys. This latter finding is consistent with the consensus in the literature regarding gender differences (Botticello, 2009; Breton et al., 1999; Deschesnes et al., 1997; Picard et al., 2007). In Marcotte, Fortin, Royer, Potvin and Leclerc's (2001) study, in which girls reported more depressive symptoms and boys more behavioral problems, the authors attempt to explain this finding by suggesting that manifestations of psychological distress differ between boys and girls during adolescence. Therefore, the measure of psychological distress based on internalized symptoms may not be representative of boys' realities. It has also been shown that girls are less reticent than boys to admit to their psychological distress (Dumont, 2000).

The second trajectory model developed in the present study demonstrates an effect of both maternal and paternal emotional support and coercive control on levels of psychological distress. Results in the literature, however, are inconclusive in this regard. Two studies found lower levels of psychological distress in adolescents who perceived their parents as more supportive, but did not find the deleterious effect of parental coercive control on distress (Breton et al., 1999; Deschesnes et al., 1997). Conversely, some authors argue that parental coercive control is the factor that has the greatest negative impact on adolescents' psychological well-being (Aquilino & Supple, 2001;

Picard et al., 2007). Picard and colleagues (2007) further advance that the presence of parental rejection has a major adverse effect that could even cancel the protective effect of maternal care (which is similar to the concept of emotional support). Since the present study did not specifically measure parental rejection, it might be interesting for future studies to include this aspect in the assessment of parental control in order to evaluate the impacts of rejection on youths' psychological distress.

Overall, results of the current study reveal the importance of both maternal and paternal support on psychological adjustment throughout adolescence. Other studies have found that, as adolescents grow older, parental support declines, as does the importance of its association with emotional adjustment (Meeus et al., 2005). This was the case for the effect of maternal support on self-esteem, but not for psychological distress. In that regard, our results support the individuation theory, which suggests that adolescents need parents who are supportive, without being intrusive or coercive, to develop individuality and autonomy (Aquilino & Supple, 2001).

Limitations

First, it is important to highlight the fact that variables other than age and gender necessarily modulate the relationship between parents and adolescents and the impact that this relationship may have on psychological adjustment. However, not to affect the robustness of the statistical method employed in this study (Dupéré et al., 2007), the only variables included in the model created here were gender (of parents and adolescents) and age (of adolescents). It might be interesting for future studies to explore other factors that may influence parenting style and adolescents' psychological adjustment, such as youths' temperament (Williams et al., 2009), parents' personality (Huver et al., 2010), or parents'

psychological distress symptoms (McLeod, Weisz, & Wood, 2007; McLeod, Wood, & Weisz, 2007). These features raise the issue of interdependence between the parent-adolescent relationship and the impact of genetic factors on adolescents' psychological adjustment.

While attitudes and parenting practices have often been categorized into parenting styles, measuring support and control on a continuum in the present study provided a more detailed classification. However, it would have been relevant to incorporate broader aspects of parental support in the measure, such as supervision or parental guidance. These aspects of parental control have been previously identified as beneficial and necessary for adolescents' positive psychological adjustment (Marcotte et al., 2001). Also, the present study considered only the youths' perceptions of their parents and their own well-being while previous studies indicate that there are differences between parents' and adolescents' perceptions regarding various aspects of their relationships (parenting, communication, etc.) (Hartos & Power, 2000; Smetana, 1995; Tein, Roosa, & Michaels, 1994). The best option would be to assess the perception of both parents and adolescents; however, in cases where only one actor can be questioned, it is nevertheless preferable to evaluate youths' perceptions to assess the impact of parenting on their adjustment, in spite of the putative bias (Tein et al., 1994).

Despite these limitations, the longitudinal scheme of the present study has been helpful not only in establishing relations between variables, but also in understanding the evolution of this interaction during adolescence. It gave us the opportunity to use a robust statistical technique (parametric analysis of trajectories) (Dupéré et al., 2007) that provided an understanding that would not be possible with other analyses (e.g.,

MANOVA repeated measures) used in several other longitudinal studies. These analyses also allow the integration of participants who did not take part in all data waves, which reduces some bias related to the participants' characteristics.

Conclusion

Finally, the results overall confirm the importance of parental support and control in youths' psychological adjustment. Although several studies have been conducted on this topic, the present study highlighted the significant effect of parenting practices over a period of four years, in addition to distinguishing the effects of emotional support and coercive control, both from mothers and from fathers. To promote better self-esteem and reduce psychological distress among adolescents, it is important for parents to offer their support throughout adolescence and to avoid abusive control. Various prevention and intervention programs have been developed to promote optimal parenting practices, including the online directory of programs created by the Canadian Association of Family Resource Programs (Association Canadienne des programmes de ressources pour la famille, 2010) or the Triple P program (Calam, Sanders, Miller, Sadhnani, & Carmont, 2008; Sanders, 1999), which uses mass media to reach parents. In conclusion, efforts should be continued to promote optimal parenting practices not only during childhood but also during adolescence, which are crucial development phases for youths and their families.

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