



Perceived parenting dimensions and identity styles: Exploring the socialization of adolescents' processing of identity-relevant information

Ilse Smits^{a,*}, Bart Soenens^b, Koen Luyckx^{a,1}, Bart Duriez^a,
Michael Berzonsky^c, Luc Goossens^a

^a*Catholic University of Leuven, Belgium*

^b*Ghent University, Belgium*

^c*State University of New York at Cortland, New York, USA*

Abstract

This study examined the relationships between crucial dimensions of perceived parenting (support, behavioral control, and psychological control) and the three identity styles defined by Berzonsky [Berzonsky, M. D. (1990). Self-construction over the life span: A process perspective on identity formation. *Advances in Personal Construct Psychology*, 1, 155–186.]. Each identity style was hypothesized to relate to a specific pattern of perceived parenting dimensions. Hypotheses were examined in a sample of middle and late adolescents ($n = 674$). An information-oriented style was positively predicted by parental support. Contrary to expectations, however, an information-oriented style was also positively predicted by psychological control. A normative identity style was positively predicted by support and behavioral control. In line with expectations, a diffuse-avoidant identity style was positively predicted by psychological control and negatively by maternal (but not paternal) behavioral control. Findings are discussed in

*Corresponding author at: Department of Psychology, Catholic University of Leuven, Tiensestraat 102, 3000 Leuven, Belgium. Tel.: +32 16325725; fax: +32 16325725.

E-mail address: Ilse.Smits@psy.kuleuven.be (I. Smits).

¹Postdoctoral researchers of the Flemish Fund for Scientific Research (FWO).

light of the literature on the socialization of identity formation and directions for future research are outlined.

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Q1 Introduction

The development of a stable and coherent identity is considered a central developmental task during adolescence (Erikson, 1968). It was already acknowledged by Erikson, though, that not all adolescents are equally successful in negotiating this task. Whereas some adolescents arrive at a clear and integrated identity, others end up in a state of identity confusion. To account for such differences, several frameworks identified important individual differences in adolescents' approach to identity formation in general (e.g., Marcia, 1980) and in their style of identity exploration in particular (e.g., Berzonsky, 1990). The model of Berzonsky (1990), which distinguishes three styles of exploring and processing identity-relevant information, takes a central position in current identity formation research. Although research documented the validity of a distinction between Berzonsky's identity styles, the contextual origins of these styles received little attention. The present study addresses the possible role of socialization in the identity exploration process by examining associations between three core parenting style dimensions and Berzonsky's identity styles.

The identity style model

Marcia's (1966) identity status paradigm has long been the prevailing model in identity research. Marcia defined individual differences in identity formation along the dimensions of exploration and commitment. Exploration refers to the questioning and weighing of various alternatives or possible selves. Commitment pertains to decision making in identity-relevant domains. Within the identity status paradigm, self-reported commitment and exploration are used to define four identity statuses: achievement (high commitment/high exploration), moratorium (low commitment/high exploration), foreclosure (high commitment/low exploration) and diffusion (low commitment/low exploration).

Although most researchers considered identity statuses as personality outcomes, they can also be conceptualized in terms of a process model. The four outcomes classified by Marcia may represent or at least be associated with different styles of decision making and problem solving (Berzonsky, 1990). Elaborating on this, Berzonsky (1990) developed a process-oriented and dynamic model of identity formation. Specifically, Berzonsky (1990) focuses on the exploration process and identifies differences in how individuals seek, process, and use identity-relevant information. The model distinguishes three styles of exploration that are thought to represent the socio-cognitive underpinnings of Marcia's (1966) model: The information-oriented, the normative, and the diffuse-avoidant style.

Information-oriented individuals (i.e., achievers and moratoriums) deal with identity issues by actively seeking out and evaluating relevant information before making commitments. When confronted with information that is dissonant with their self-conceptions, they will revise these self-conceptions. *Normative* individuals (i.e. foreclosures) rely on the norms and expectations of significant others (e.g., parents or authority figures) when confronted with identity-relevant issues. They rigidly adhere to their existing identity structure, into which they assimilate all identity-relevant information. *Diffuse-avoidant* individuals (i.e., diffusions) avoid personal issues and procrastinate decisions until situational demands dictate their behavior, resulting in a fragmented identity structure (Berzonsky, 1990).

Abundant research documented the validity of distinguishing among these three identity styles. It has been shown that each style is characterized by a specific pattern of psychosocial and social-cognitive correlates and consequences (Soenens, Duriez, & Goossens, 2005). However, little research devoted attention to potential determinants of these styles. A number of studies explored the idea that individual differences in identity styles are at least partly rooted in underlying differences in personality (Dollinger, 1995; Duriez, Soenens, & Beyers, 2004). Apart from this, the family context is also considered to contribute to the formation of identity in general and to the development of one's identity style in particular (Grotevant, 1987).

Parenting and identity development

From theoretical perspectives such as family systems theory (Grotevant & Cooper, 1985; Perosa, Perosa, & Tam, 1996) and attachment theory (Bowlby, 1969), the quality of parents' rearing style is thought to contribute to differences in identity exploration. A central idea in attachment theory, for instance, is that high-quality parenting contributes to a positive sense of self and others that provides a secure base for exploration (Allen & Land, 1999; Benson, Harris, & Rogers, 1992).

The notion that nurturant parents promote high-quality exploration and subsequent commitment received support in identity status research (e.g., Adams, Dyk, & Bennion, 1990; Sartor & Youniss, 2002). Less research has been conducted, however, on the relation between parenting and identity styles. Adolescents with an information-oriented identity style were found to perceive their parents as authoritative (Berzonsky, 2004) and as engaging in open communication (Berzonsky, Branje, & Meeus, in press). In line with expectations, Berzonsky (2004) found a normative identity style to relate to perceptions of authoritarian parenting and Adams, Berzonsky, and Keating (2006) found that these adolescents perceive their family as lacking expressiveness (i.e., lack of openness to ideas and feelings). Unexpectedly, a normative style also related positively to authoritativeness (Berzonsky, 2004) and cohesive, trusting family relations (Adams et al., 2006; Berzonsky et al., in press). Finally, a diffuse-avoidant style was found to relate to authoritarianism and permissiveness (Berzonsky, 2004) and lack of expressiveness in family communications (Adams et al., 2006). Although this limited literature provides some insight in the parenting environment associated with each identity style, it fails to relate the identity styles to the crucial dimensions of parenting style. In line with recent developments in the socialization literature (Barber, Stolz, & Olsen, 2005), this study examined three key dimensions of parenting: support, behavioral control, and psychological control.

A dimensional approach to parenting

Much parenting research followed a typological approach, in which parenting dimensions are aggregated to form a parenting style index (e.g., authoritative parenting). The typological approach builds on the assumption that it is necessary to consider the interactive effects of different dimensions of parental behavior (Maccoby & Martin, 1983). The most comprehensive study on parenting and identity styles to date (Berzonsky, 2004) also adopted this typological approach.

An important drawback of this approach is that the contribution of each individual parenting dimension cannot be isolated (Barber et al., 2005). Therefore, the present study examines relations between the identity styles and the three parenting dimensions that are considered to represent the building blocks of parenting (Barber et al., 2005). *Support* refers to the degree to which adolescents experience their parents as warm, involved, and responsive to their feelings in times of distress. Support is viewed as essential in adaptive development in general and in identity development in particular (Grotevant, 1987). Specifically, supportive parenting is thought to foster a thorough exploration of identity-relevant information. *Behavioral control* involves the provision of sufficient regulation of children's behavior, for instance, by communicating clear expectations for behavior and monitoring this behavior. Insufficient behavioral control deprives adolescents of adequate guidance and may leave them with a chaotic and overwhelming number of identity-relevant options. Accordingly, lack of behavioral control may forestall high-quality identity exploration. *Psychological control* is defined as characteristic of parents who pressure their children through manipulative and intrusive behaviors such as guilt-induction, shaming, and conditional approval (Barber, 1996). Psychological control is thought to frustrate the need for autonomy, thereby inhibiting identity formation. Consistent with this notion, Luyckx, Soenens, Vansteenkiste, Goossens, and Berzonsky (in press) demonstrated that psychological control relates to lack of commitment-making abilities as well as to superficial or broad exploration.

The present study

This study aims to relate Barber et al.'s (2005) framework of parenting dimensions to Berzonsky's (1990) identity styles. On the basis of the extant literature, each identity style was hypothesized to relate to a specific pattern of perceived parenting dimensions.

Hypothesis 1. The flexible and deliberate exploration of information-oriented adolescents was thought to take root in a supportive, well-structured and non-intrusive parenting environment. Therefore, an information-oriented identity style was hypothesized to relate positively to perceived support and behavioral control and negatively to perceived psychological control.

Hypothesis 2. A normative identity style, involving compliance to parental standards and a closed-minded and rigid attitude to identity-relevant information, was thought to develop in a highly structured and involved yet pressuring parenting environment. Thus, this style was expected to relate positively to perceived support and behavioral control, and psychological control.

Hypothesis 3. The avoidant, unstructured, and insecure approach to identity exploration that characterizes diffuse-avoidant adolescents was thought to reflect a non-supportive, chaotic, and pressuring parenting environment. Therefore, a diffuse-avoidant style was expected to relate to low perceived support and behavioral control, and to high-perceived psychological control.

Hypotheses were examined in a sample of middle to late adolescents who rated the parenting dimensions for their mother and father separately, allowing us to assess whether the findings replicate across parental gender. In testing the main hypotheses, we also controlled for the possibly confounding effects of adolescent age and gender and, more importantly, we examined whether the associations between parenting and the identity styles are invariant across adolescent age and gender.

Method

Participants and procedure²

The sample consisted of 674 participants (50% male). The perfectly balanced gender distribution was due to the sampling procedure. Dutch-speaking Belgian educational science students ($n = 168$) participated in the context of a psychology course. First, they were asked to complete a questionnaire themselves. Second, they were asked to collect data (a) from one fellow-college student of the opposite gender and (b) from two middle adolescents (one male and one female) between 15 and 18 years of age following the academic track in high school. Because students received course credit, response rates were high ($>98\%$). The resulting sample consisted of adolescents ranging in age between 15 and 22 years (with a mean of 17.9 years). Of the participants, 87.5% came from intact families, 10% had divorced parents, and 2% of the adolescents came from a family in which one parent had deceased. As this study deals with

²Our sample consisted of college students who completed a questionnaire during a first phase of data collection ($n = 168$) and middle and late adolescents who were invited by the college students to participate in a second phase of data collection ($n = 506$). One may wonder whether the relatively uncontrolled nature of this second phase led to a different pattern of results. To examine this, we compared the correlation matrices of both phases by means of a single multivariate Chi-square test. Specifically, two correlation matrices were compared between the phases of data collection, one containing the paternal parenting dimensions and the identity styles, and one containing the maternal parenting dimensions and the identity styles. No overall differences appeared neither for the maternal ratings ($\Delta X^2(15) = 22.04, p > .05$) nor for the paternal ratings ($\Delta X^2(15) = 23.71, p > .05$). Similarly, we examined whether the correlations among the study variables differ between late adolescents (i.e., college students, $n = 336$) and middle adolescents (i.e., high school students, $n = 338$). No significant differences were found for the maternal ratings ($\Delta X^2(15) = 14.05, p > .05$) or for the paternal ratings ($\Delta X^2(15) = 18.62, p > .05$). Finally, we examined whether the correlation matrices differed for males ($n = 337$) and females ($n = 337$). Although we did not find a difference for the paternal ratings ($\Delta X^2(15) = 18.13, p > .05$), a difference emerged for the maternal ratings ($\Delta X^2(15) = 31.52, p < .05$). Follow-up analyses showed that this was due to two correlations differing significantly between males and females: The correlation between maternal psychological control and a normative style (which was slightly positive in males, $r = .11, p = .06$ and slightly negative in females, $r = -.11, p = .04$) and the correlation between maternal support and psychological control (which was less pronounced in males, $r = -.34, p < .001$ than in females, $r = -.50, p < .001$). Together, these analyses suggest that the pattern of relations between the study variables is generally consistent across (a) method of data collection, (b) age, and (c) gender. Given these findings, it was deemed legitimate to examine our hypotheses in the sample as a whole rather than to perform the analyses on its sub-samples.

parental influence, it is important to note that all middle adolescents and most college students were still living with their parents. Most college students in Belgium (i.e., 95%) either still live with their parents (i.e., commuters) or return home for the weekend (Luyckx et al., *in press*). Hence, with few exceptions, participants had frequent contacts with their parents. Participation was voluntary and confidentiality was guaranteed.

Measures

Identity styles

Participants completed a Dutch version of the Identity Style Inventory (ISI-3; Berzonsky, 1992). The ISI-3 was translated into Dutch using a committee approach. This approach involved that three experienced researchers translated the questionnaire. Differences in translations were discussed in committee and disagreements were resolved through consensus. Next, a translation–back translation procedure was used. Items were translated into English and an independent person matched the original and the back-translated items. Correct matching was achieved for all items. Cronbach’s alpha for the information-oriented scale (11 items, e.g., “When making important decisions, I like to have as much information as possible”) was .69. Cronbach’s alpha for the normative scale (9 items, e.g., “I prefer to deal with situations in which I can rely on social norms and standards”) was .52. Cronbach’s alpha for the diffuse/avoidant scale (10 items, e.g., “When I have to make a decision, I try to wait as long as possible in order to see what will happen”) was .68. Although reliability was moderate for the information-oriented and the diffuse-avoidant scale and low for the normative style scale, this is in line with previous psychometric findings (Berzonsky, 1992; Soenens, Duriez et al., 2005).

Parenting dimensions

Participants completed a brief Dutch version of the Child Report of Parent Behavior Inventory (CRPBI; Schaefer, 1965) that has been widely used and validated in previous research (e.g., Soenens, Vansteenkiste, Luyten, Duriez, & Goossens, 2005). Items were rated for mothers and fathers separately. Cronbach’s alphas for support (7 items, e.g., “My mother/father makes me feel better after I discussed my worries with him/her”) were .89 and .90 for mothers and fathers, respectively. Cronbach’s alpha for behavioral control (7 items, e.g., “My mother/father allows me to do anything I want”—reverse coded) was .82 for mothers and fathers. Cronbach’s alphas for psychological control (7 items, e.g., “My mother/father is less friendly to me if I don’t see things like he/she does”) were .82 and .80 for mothers and fathers, respectively. This adapted and translated version of the CRPBI has been widely used and validated in previous research (e.g., Soenens, Vansteenkiste et al., 2005).

Results

Descriptive statistics and correlations

Descriptives (i.e., means and standard deviations) and correlations among the study variables can be found in Table 1. The information-oriented style related positively to maternal perceived

Table 1
Means, standard deviations, and correlations among the study variables

Variables	<i>M</i>	<i>S.D.</i>	1	2	3	4	5	6	7	8
1. Information-oriented	3.04	.52								
2. Normative	2.94	.43	.04							
3. Diffuse-avoidant	2.71	.53	-.38***	-.02						
4. Maternal support	3.87	.75	.16***	.19***	-.12**					
5. Maternal behavioral control	3.28	.76	-.11**	.11**	.03	-.13***				
6. Maternal psychological control	2.34	.76	-.01	-.01	.16***	-.43***	.34***			
7. Paternal support	3.21	.91	.04	.23***	-.10*	.33***	.10**	-.18***		
8. Paternal behavioral control	3.23	.81	-.06	.00	.08*	.02	.51***	.15***	-.09*	
9. Paternal psychological control	2.29	.76	.04	-.07	.19***	-.13***	.06	.42***	-.53***	.37***

* $p < .05$.

** $p < .01$.

*** $p < .001$.

support and negatively to behavioral control. The normative style related positively to perceived maternal and paternal support and to perceived maternal behavioral control. Across parental gender, the diffuse-avoidant style related negatively to perceived support and positively to perceived psychological control.

Primary analyses: regression analysis

Hierarchical multiple regression analyses were performed (a) to control for background variable effects, (b) to control for shared variance between the identity styles, (c) to examine the relative contribution of the parenting dimensions in the prediction of identity styles, and (d) to examine interactions between background variables and parenting dimensions. The background variables (gender and age) and the identity styles not being regressed were entered as control variables in Step 1. The perceived parenting dimensions were entered in Step 2. Interactions between perceived parenting dimensions and age and gender, respectively, were entered in Step 3. Analyses were conducted for maternal and paternal ratings of parenting separately. Results can be found in Table 2 (mothers) and Table 3 (fathers).

Hypothesis 1: Information-oriented identity style

Tables 2 and 3 show that the variables in Step 1 significantly predicted the information-oriented style for both perceived parenting of mothers ($R^2 = .21$, $F(2, 644) = 43.04$, $p < .001$) and fathers ($R^2 = .21$, $F(2, 630) = 43.85$, $p < .001$). This was due to significant effects of age, gender, and the diffuse-avoidant style. Older adolescents and boys tend to use the information-oriented style more than younger adolescents and girls. As in previous research, the diffuse-avoidant style was negatively related to the information-oriented style. The perceived parenting dimensions of mothers ($\Delta R^2 = .03$, $F(3, 641) = 9.39$, $p < .01$) and fathers ($\Delta R^2 = .02$, $F(3, 627) = 4.69$, $p < .01$), entered in Step 2, were found to add to the prediction. Some of the expectations about the information-oriented identity style were confirmed and others were not. In line with expectations,

Table 2
Hierarchical regression of identity styles on maternal ratings of parenting

Predictor	Information-oriented			Normative			Diffuse-avoidant		
	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3
Gender	-.11**	-.14***	-.14***	-.01	-.04	-.04	-.18***	-.18***	-.17***
Age	.23***	.22***	.21***	-.05	.00	.00	-.15***	-.17***	-.18***
Information-oriented				.07	.03	.04	-.34***	-.35***	-.35***
Normative	.06	.03	.03				-.00	.00	.00
Diffuse-avoidant	-.33***	-.34***	-.34***	-.01	.00	.00			
Support (S)		.19***	.18***		.22***	.22***		.03	.03
Behavioral control (BC)		-.05	-.04		.12**	.12**		-.10***	-.09**
Psychological control (PC)		.16***	.15***		.04	.05		.19***	.20***
Age × S			.01			.02			-.02
Age × BC			.03			-.05			-.05
Age × PC			-.06			.08			.01
Gender × S			-.06			-.03			-.01
Gender × BC			.09*			-.04			.10**
Gender × PC			-.05			-.07			-.10*
Adjusted R^2		.24***	.24***		.04***	.05***		.21***	.22***
ΔR^2	.21***	.03***	.01	.00	.05***	.01	.18***	.03***	.02*

* $p < .05$.

** $p < .01$.

*** $p < .001$.

the information-oriented style was positively predicted by maternal and paternal perceived support. Contrary to expectations, perceived behavioral control did not add significantly to the prediction of an information style. Also contrary to expectations, the information-oriented style was positively predicted by psychological control. Interactions between the perceived parenting dimensions and the background variables did not add to the prediction.

Hypothesis 2: Normative identity style

The variables in Step 1 did not explain any variance in the prediction of the normative style. The perceived parenting dimensions of mothers ($\Delta R^2 = .05$, $F(3, 641) = 11.35$, $p < .001$) and fathers ($\Delta R^2 = .05$, $F(3, 627) = 11.99$, $p < .001$) added to the prediction. Again, only partial support was obtained for our hypotheses. As expected, support positively predicted the normative style and perceived behavioral control also positively predicted the normative style, although this effect occurred for maternal ratings only. Contrary to expectations, psychological control did not significantly predict the normative style. Interactions between the parenting dimensions and the background variables did not add to the prediction.

Hypothesis 3: Diffuse-avoidant identity style

The variables in Step 1 significantly predicted the diffuse-avoidant style in the maternal ($R^2 = .18$, $F(2, 644) = 41.61$, $p < .001$) and paternal model ($R^2 = .19$, $F(2, 630) = 42.50$, $p < .001$).

Table 3
Hierarchical regression of identity styles on paternal ratings of parenting

Predictor	Information-oriented			Normative			Diffuse-avoidant		
	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3
Gender	-.11**	-.11**	-.11**	-.01	-.02	-.02	-.19***	-.18***	-.17***
Age	.22***	.21***	.20***	-.07	-.05	-.04	-.15***	-.18***	-.19***
Information-oriented				.07	.05	.06	-.34***	-.36***	-.36***
Normative	.06	.04	.05				-.02	-.01	.00
Diffuse-avoidant	-.34***	-.36***	-.37***	-.02	-.01	.00			
Support (S)		.10*	.09*		.26***	.27***		.05	.04
Behavioral control (BC)		-.01	.00		.00	.00		-.07	-.07
Psychological control (PC)		.16***	.17***		.08	.07		.25***	.24***
Age × S			-.01			.03			-.04
Age × BC			-.06			-.01			-.10**
Age × PC			-.06			.07			.01
Gender × S			.01			-.06			-.02
Gender × BC			.01			-.07			.07
Gender × PC			-.07			.05			-.11*
Adjusted R^2		.22***	.22***		.05***	.05***		.23***	.24***
ΔR^2	.20***	.02**	.01	.01	.05***	.01	.19***	.04***	.02**

* $p < .05$.

** $p < .01$.

*** $p < .001$.

This was due to significant effects of gender, age and the information-oriented style. Boys and younger adolescents scored higher on the diffuse-avoidant style than girls and older adolescents. The perceived parenting dimensions of mothers ($\Delta R^2 = .03$, $F(3, 641) = 8.05$, $p < .001$) and fathers ($\Delta R^2 = .04$, $F(3, 627) = 11.57$, $p < .001$) added to the prediction. Perceived support did not predict the diffuse-avoidant style. As expected, perceived psychological control positively predicted the diffuse-avoidant style, and perceived behavioral control negatively predicted the diffuse-avoidant style, although this effect occurred in the maternal ratings only. Finally, the diffuse-avoidant style was significantly predicted by the Step 3 interactions both in the maternal ($\Delta R^2 = .02$, $F(6, 635) = 2.18$, $p < .05$) and paternal model ($\Delta R^2 = .02$, $F(6, 621) = 2.64$, $p < .05$). In the maternal model, significant interactions were found between gender and behavioral control and between gender and psychological control. Behavioral control negatively predicted the diffuse-avoidant style among males ($\beta = -.17$, $p < .01$) but not among females ($\beta = -.02$, $p > .05$). The diffuse-avoidant style was positively predicted by maternal psychological control in both genders, but the association was more pronounced in males ($\beta = .26$, $p < .001$) than in females ($\beta = .12$, $p < .05$). In the paternal model, significant interactions were found between age and behavioral control and between gender and psychological control. When dividing the sample into three age groups (<16, 17–20, >20), paternal behavioral control negatively predicted the diffuse-avoidant style among late adolescents (>20) only (β s were $-.15$, ns, $.00$, ns, and $-.31$, $p < .05$, respectively).

Discussion

The present study examined relationships between crucial dimensions of parenting style and the identity styles defined by Berzonsky (1990). In general, each identity style was found to relate to a specific pattern of perceived parenting dimensions.

Parenting and identity styles

The *information-oriented* identity style was positively predicted by perceived parental support. This effect, which was replicated across parental gender, is in line with our hypothesis that nurturant parenting would foster an open and flexible exploration of identity-relevant information. Specifically, this finding confirms the idea derived from attachment theory that high-quality parenting contributes to children's sense of self and others which, in turn, provides them with the self-confidence that is necessary to explore the world (e.g., Benson et al., 1992). Unexpectedly, however, an information-oriented style was also positively predicted by perceived parental psychological control, suggesting that psychologically controlling parenting fosters an active search for identity alternatives in at least some adolescents. It seems unlikely, however, that the type of identity exploration that is driven by intrusive parental pressure will ultimately result in a coherent and stable set of commitments. Additional research on the link between psychological control and the information-oriented style is needed.

In line with expectations, the *normative* identity style was positively predicted by perceived supportive parenting as well as by perceived (maternal) behavioral control. Contrary to expectations, however, perceived psychological control did not add to the prediction. Hence, although we anticipated that normative adolescents would experience their rearing as involved and pressuring, parents are described in positive terms only. Past research with the identity statuses has shown that foreclosed adolescents report high levels of support and involvement (e.g., Papini, Micka, & Barnett, 1989) as well as impairments related to lack of interpersonal boundaries and independence (e.g., enmeshment; Perosa et al., 1996). Similarly and Berzonsky (2004) found both authoritative and authoritarian parenting to predict a normative identity style, indicating that parents of normative adolescents are perceived as supportive yet somewhat overprotective. Our findings neither confirm these findings nor the idea that a combination of support and manipulative control would foster the rule-obedient, rigid, and conformist attitude characteristic of normative oriented adolescents.

In line with expectations, the *diffuse-avoidant* identity style was predicted by a maladaptive pattern of perceived parenting. In particular, across parental gender, positive associations were found between perceived psychological control and the diffuse-avoidant identity style. These associations held across adolescent gender, although they were somewhat more pronounced in males. The positive association between psychological control and the diffuse-avoidant style is consistent with past research in which adolescents in the diffusion status and adolescents with a diffuse-avoidant identity style were shown to report negative parenting styles (e.g., authoritarianism; Berzonsky, 2004) as well as with research demonstrating relations between psychological control and impaired commitment-making (e.g., Luyckx et al., in press). As psychologically controlling parents project their standards and aspirations onto their children and manipulate their children to comply with these standards, children may lose touch with their own feelings and

aspirations. When facing important choices, these children are likely to experience severe doubts about which path to choose as well as concerns about choosing the wrong path (Soenens, Vansteenkiste et al., 2005). Possibly as a result of this, children may avoid and postpone making commitments until situational demands dictate their behavior (Berzonsky, 1990).

Consistent with our hypotheses and with Berzonsky's (2004) finding that permissiveness relates positively to diffuse-avoidance, perceived behavioral control was also (negatively) related to the diffuse-avoidant identity style. This association was most pronounced in the maternal ratings. In the paternal ratings, the link between behavioral control and diffuse-avoidance was qualified by an interaction with age, with paternal behavioral control predicting less diffuse-avoidance in older adolescents only. A lack of behavioral control may contribute to an ill-structured perspective on one's personal development. As these adolescents may experience the number of possibilities and choices in life as overwhelming, they may lose their hold on the exploration process and start procrastinating decisions. As the interaction with age in the paternal ratings suggests, appropriate levels of behavioral control may be particularly important during later stages of identity development, when the establishment of stable and personally endorsed commitments becomes a normative developmental task (Erikson, 1968).

Factors accounting for the mixed pattern of findings

As illustrated above, we obtained evidence for both expected and unanticipated relations. In our view, a number of factors, pertaining to both measurement issues (e.g., reliability) and theoretical issues (e.g., the role of moderating factors) may account for this mixed pattern of findings. Each of these factors provides directions for future research.

First, the amount of explained variance in this study is low to modest. Because modest effect sizes are relatively common in research on identity styles (e.g., Adams et al., 2006), it seems likely that other factors (e.g., personality) besides parenting also contribute to identity style development. An interesting avenue for future research could be to examine the combined and interactive influence of parenting and personality in the prediction of identity styles.

Second, the relatively low effect sizes may be partly due to the quality of the measures used in this study. Specifically, in line with previous research, the reliability estimates of the ISI-3 were quite modest. This may lead to an underestimation of some relations, particularly with the normative style scale. It will be important for future research to develop a more internally consistent measure of the identity styles and to replicate the current study with that measure.

Third, constructs were assessed through adolescent self-report only. Although it is appropriate to gather information about subjective processes such as identity development from the adolescents themselves, the use of a single informant may have caused problems of shared method variance and self-presentational bias. This could be particularly important with respect to the normative style. Adolescents with a normative style may be more prone to show bias in parenting reports (Berzonsky, 2004) and underreport maladaptive parenting qualities. It is important to replicate our findings with multi-informant parenting assessments. Related to this, the content of our measures may also explain some of the unexpected findings. Our measure of psychological

control, for instance, taps rather overt types of parental manipulation and intrusiveness. Due to a possible reporter bias of normative oriented individuals, future research may benefit from implicit measures of parental control to uncover the socialization dynamics associated with the identity styles.

Fourth, the present study examined main effects of parenting on identity styles only without considering the role of possible moderating variables. Moderators that were not observed in this study could help explain some of the unexpected findings. The association between perceived psychological control and the information-oriented style, for instance, may be moderated by commitment, with psychological control only relating to an active type of exploration that does not result in commitments. The latter interpretation is consistent with research showing that adolescents who explore without making commitments (i.e., moratorium) perceive their parents as intrusive (e.g., Perosa et al., 1996). Further, to the extent that adolescents actively explore identity-relevant information to meet parental pressures, they may engage in a ruminative, anxious, and indecisive rather than in reflective and self-endorsed exploration (Baumeister, Shapiro, & Tice, 1985; Luyckx et al., *in press*). Similarly, the unexpected lack of association between perceived psychological control and the normative style may be due to the fact that some normative oriented adolescents really identify with their parents' norms, whereas others feel pressured to follow these norms. It seems likely that the former normative adolescents experience their parents as more supportive and less controlling than the latter normative adolescents. Together, then, it will be important to identify theoretically relevant moderators that allow to distinguish subgroups within the identity styles. Such an approach may allow for a more detailed investigation of the socialization processes involved in the identity styles.

Limitations

There are a number of limitations to the design of this study. First, our sample comprised white and highly educated adolescents only. Therefore, we cannot state with certainty that our findings generalize to other cultures or to populations with a more diverse educational background. Second, due to its cross-sectional nature, our study cannot clarify the directions of effects in association between parenting dimensions and identity styles. The unexpected relation between psychological control and the information-oriented style, for instance, could represent a child rather than a parent effect. The long and wide search for identity alternatives may create worry or even anxiety in parents because it does not seem to result in stable and well-defined commitments. Driven by worry and anxiety, parents may increase their psychological control in an attempt to pressure their children to make commitments. Similarly, the undecided behavior of diffuse-avoidant adolescents may provoke negative feelings in parents so that they respond in a more controlling and less constructive or structuring fashion to their children's behavior. The positive relation between perceived support and the normative identity style may also represent a child effect. Normative adolescents tend to behave in line with parental expectations, which may elicit parental approval and support. Hence, longitudinal research studying the socialization of identity styles from a more dynamic perspective might be fruitful.

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