
Identity-Processing Style, Psychosocial Resources, and Adolescents' Perceptions of Parent-Adolescent Relations

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This study aimed to generalize and extend research on identity styles among early adolescents in the Netherlands. The study investigated associations between perceived parent-adolescent relations and identity-processing styles among 13-year-old adolescents and the role identity styles played in mediating relationships between parent-adolescent relations and the identity commitments early adolescents held and the levels of self-regulation they exercised. Associations between perceived parent-adolescent relations and a normative style were positive and those with a diffuse-avoidant style were negative. Parental information solicitation was related to information-style scores. All three styles were related to identity commitments and self-regulation. Linkages with the normative style were positive and those with the diffuse-avoidant style negative. An informational identity style was associated positively with commitment but negatively with self-regulation. The relationship between adolescents' perceptions of open parental communication and their levels of identity commitment was partially mediated by a normative style. The role parent-adolescent relations may play in developing identity processes and self-regulation during early adolescence is considered.

Keywords: *identity style; parent-adolescent relations; adolescence; self-regulation; commitment; psychosocial resources*

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For adolescents proceeding on the road to self-governance, identity formation is a major developmental challenge they must negotiate (Erikson, 1968). As social roles change and ties with parents are transformed, a coherent and committed sense of identity provides adolescents with a personal standpoint for making decisions and solving conflicts and enables them to become relatively more autonomous and responsible for their own lives. Recent research has revealed stylistic differences in how youth approach or manage to avoid the tasks of constructing and reconstructing an individualized sense of identity. Although considerable research has examined social-cognitive, psychosocial, and personality dimensions associated with identity styles, relatively less attention has been devoted to factors such as parental relations that may contribute to individual differences in identity styles. Also, most investigations have been carried out with late-adolescent college students. Erikson, however, highlighted the role that pubertal and social changes during early adolescence play in instigating the psychosocial crisis of identity versus identity diffusion:

The end of childhood . . . [involves a] crisis of wholeness. Young people must become whole people in their own right, and this during a developmental stage characterized by a diversity of changes in physical growth, genital maturation, and social awareness. The wholeness to be achieved at this stage I have called a *sense of inner identity*. (p. 87)

Building on Erikson's view, Marcia (1983) theorized that one of the important influences on identity formation in late adolescence is the extent to which a self-reflective approach to oneself and one's future is adopted in early adolescence. One objective of the present study was to investigate relationships between parent-adolescent relations and identity-processing style in a sample of early adolescents. In addition, because identity-processing styles are postulated to play a role in how individuals form, maintain, and revise identity commitments and how they regulate their lives (Berzonsky, 1990, 2004a), we sought to determine whether identity style would mediate relationships between parent-adolescent relations and the possession of psychosocial resources such as identity commitments and effective self-regulation.

Identity-Processing Style

Identity style refers to differences in the social-cognitive strategies and processes individuals rely on to make decisions, process self-relevant information, and form identity commitments. Three identity-processing styles have

been identified: normative, informational, and diffuse-avoidant (Berzonsky, 1989, 1990). Adolescents with a normative style deal with identity conflicts and form commitments by internalizing and adopting prescriptions and expectations of significant others in a relatively automatic fashion. Adolescents with an informational identity-processing style deliberately seek out and process self-relevant information before negotiating identity conflicts and forming commitments. Adolescents with a diffuse-avoidant identity style procrastinate and delay dealing with identity conflicts and personal problems as long as possible. When they do act, their behavior is influenced mainly by external demands and consequences. Although they readily react to situational influences, such accommodations tend to be relatively ephemeral acts of behavioral or verbal compliance rather than long-term stable revisions in their self-structure or sense of identity (Berzonsky, 1990, 1994).

These identity styles refer to the social-cognitive processing strategy that adolescents characteristically use or prefer to use when dealing with identity conflicts and forming identity commitments (Berzonsky, 1990, 2004a). Identity development is associated with psychosocial resources that provide a committed sense of purpose and the personal will and competence to regulate one's life effectively (Erikson, 1968). Identity commitments serve as guides and standards for making decisions and solving problems (Berzonsky, 2003; Erikson, 1968; Meeus, 1996; Meeus, Iedema, Helsen, & Vollebergh, 1999). High levels of self-regulatory resources are associated with personal effectiveness, adaptability, and a diversity of desirable outcomes, including high levels of academic achievement, interpersonal effectiveness, adjustment and low levels of problem behaviors and pathology (Baumeister, Heatherton, & Tice, 1994; Tangney, Baumeister, & Boone, 2004). Research indicates that late adolescents with a normative style are conscientious, committed, and goal directed, and they tend to function in a conforming, socially structured, closed fashion: Their behavior is regulated by internalized imperatives and expectations about how they should act (Berzonsky, 2003, 2004a; Dollinger, 1995; Jakubowski & Dembo, 2004; Soenens, Duriez, & Goossens, 2005). An informational style is associated with open-mindedness, high levels of commitment, autonomous self-regulation, and academic and emotional autonomy (Berzonsky, 1990, 2004a; Berzonsky & Kuk, 2005; Dollinger, 1995; Jakubowski & Dembo, 2004; Soenens, Berzonsky, Vansteenkiste, Beyers, & Goossens, 2005). A diffuse-avoidant identity style has been found to be negatively correlated with commitment, autonomy, self-efficacy, self-awareness, and self-regulation (Berzonsky, 1994, 2004a; Berzonsky & Kuk, 2005; Jakubowski & Dembo, 2004; Soenens, Berzonsky, et al., 2005).

It has been postulated that by late adolescence, most normal individuals are capable of using the cognitive strategies that underpin the three styles (Berzonsky, 1990). Consistent with this view, the IQ and SAT scores of university students with different identity styles have not been found to differ significantly (Berzonsky & Ferrari, 1996; Berzonsky & Kuk, 2005). A relevant question is, Why do individuals develop different style preferences? One possibility is that social relationships within the home may contribute to individual differences in identity style.

Adolescents' Perceptions of Parent-Adolescent Relations and Identity Style

Perceived parent-adolescent relationships have been found to be associated with identity style in late adolescents. For example, authoritative parenting practices, which include communicating explanations, being responsive, and making reasonable demands within a climate of warmth and acceptance, were linked to an informational style, and permissive parenting was correlated with diffuse-avoidance (Berzonsky, 2004b). A normative style was related to strict authoritarian parenting (Berzonsky, 2004b) and to family cohesion, care, and emotional closeness (Fullinwider-Bush & Jacobvitz, 1993; Mathis & Adams, 2004; Passmore, Fogarty, Bourke, & Baker-Evans, 2005).

Although these findings are consistent with the view that parenting practices contribute to differences in identity style, they are based mainly on retrospective accounts of late adolescents or young adults, who may experience or perceive family interactions differently than they did when their identity styles were developing. Soenens, Luyckx, Beyers, Sierens, and Goossens (2004) compared relationships between identity styles and perceived parental behaviors in separate samples of middle and late adolescents. In both samples, a normative style was associated with emotional closeness and strict parental control, and a diffuse-avoidant style was associated with negative parental relations, including intrusive psychological control and limited behavioral control. Although an informational style was associated with parental practices that encouraged autonomy in both samples, it also was associated with intrusive psychological control in the sample of younger adolescents. Soenens et al. speculated that when adolescents first begin to rely on an informational style, they may feel pressured by parents and find parental supervision to be overly intrusive. Thus, parenting practices might relate differently to identity styles when adolescents are developing their identity styles than after their identity styles have stabilized later

in adolescence. Therefore, we investigated the role that parental solicitation (i.e., efforts to control adolescents' activities and actively solicit information), adolescents' willingness to disclose to parents, and open communication within the family may play in accounting for differences in identity style in 13-year-old early adolescents. Because a parental emphasis on providing explanations and responding to questions and feedback from adolescents should encourage the adoption of an informational style (Berzonsky, 2004b), we predicted that an informational style would be positively associated with open communication and disclosure. Because parental supervision and structure and family closeness should enhance the extent to which adolescents comply with parents and internalize their standards (Barber, Stolz, & Olsen, 2005; Mathis & Adams, 2004; Soenens, et al., 2004), we predicted that a normative style would be positively associated with the parental solicitation of information and adolescent disclosure. Because diffuse-avoidance is associated with permissive, unstructured parental behavior and discipline (Berzonsky, 2004b; Fullinwider-Bush & Jacobvitz, 1993), we expected a diffuse-avoidant style to be negatively linked with open communication, parental solicitation, and adolescent disclosure. The present study focused on adolescents' perceptions of their relationships with their parents. Although an adolescent's perception of parental monitoring and family communication may differ from that of the parents or an independent third party, research indicates that adolescents' personal views of family interactions may be better predictors of their behavior and senses of well-being than information from other sources (Cottrell et al., 2003; Stice & Barrera, 1995).

The Mediation Role of Identity Style in the Link Between Perceived Parent-Adolescent Relations and Psychosocial Resources

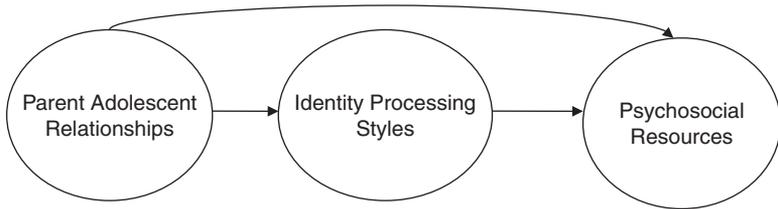
A second objective of the study was to evaluate whether identity style mediated relationships between parent-adolescent relations and psychosocial resources or intrapersonal qualities or dimensions, such as a committed sense of purpose and the will to effectively restrain or regulate behavior, postulated to develop in the context of social relationships (Erikson, 1964, 1968). As indicated in Figure 1, we hypothesized that parent-adolescent relations contribute to psychosocial resources directly and indirectly through identity style. Authoritative parental practices such as communicating reasons and explanations and providing supervision and acceptance

have been found to be positively associated with the extent to which adolescents are committed to a clear set of values and standards (Berzonsky, 2004b; Grotevant & Cooper, 1985; Marcia, 1980; Steinberg, Elmen, & Mounts, 1989). Being conscientious, self-disciplined, and willing and able to effectively regulate behavioral actions likewise has been found to be associated with parental structure, support, and acceptance and negatively related with parental rejection and/or permissiveness (Barber et al., 2005; Finkenauer, Engels, & Baumeister, 2005; Kremen & Block, 1998; McCrae & Costa, 1988; Purdie, Carroll, & Roche, 2004). These findings indicate that parental supervision and control exercised within a family climate of warmth and trust encourages adolescents to internalize parentally endorsed values and standards and learn to control behaviors and impulses that may conflict with those internalized standards. Therefore, we hypothesized that open communication, adolescent disclosure, and the parental solicitation of information would make a positive contribution to differences in adolescent commitment and self-regulation.

On the basis of the hypothesized contribution of parent-child relations to differences in identity style on one hand and to differences in psychosocial resources on the other hand, we also hypothesized that adolescents' identity styles would mediate this relationship between parent-adolescent relations and psychological resources. We expected that both informational and normative styles would contribute to high levels of commitment and self-regulation, albeit for different reasons. Increased reliance on a normative style would lead adolescents to internalize and comply with parental standards, commitments, and expectations in a relatively automatic fashion (Berzonsky, 2004b; Soenens, Berzonsky, et al., 2005). The increased use of an informational style would lead adolescents to explore options and process and evaluate self-relevant information in a more mentally effortful manner, which would enable them to make informed personal commitments and more effectively regulate their lives by knowing what they realistically can and cannot do and change (Higgins, 1996). Finally, diffuse-avoidance was predicted to be negatively associated with these psychosocial resources: Procrastination, delay, and self-centered action would negatively affect the formation of personal commitments and the ability to effectively regulate and control actions in relation to those goals.

In sum, the present study sought to investigate the role that parent-adolescent relations may play in the development of differences in identity style. Also, it aimed to evaluate a conceptual model that postulated that relationships between parental behaviors and psychosocial resources would be mediated at least partially by identity style.

Figure 1
Conceptual Model of Hypothesized Relationships Between Parent-Adolescent Relations, Identity Style, and Psychosocial Resources



Method

Participants

Participants came from the family sample of a longitudinal study, Conflict and Management of Relationships (Meeus et al., 2004). In that study, 938 early adolescents (mean age = 12.4 years, $SD = 0.6$ years) and 393 middle adolescents (mean age = 16.7 years, $SD = 0.8$ years) from 12 high schools selected randomly from secondary schools located in the province of Utrecht, the Netherlands, annually filled out a battery of questionnaires at school.

At the first measurement, all indigenous early adolescents (728) received a letter including an invitation to participate with both parents during annual home visits as well. Of the 728 families invited, 491 families initially agreed to participate. Because of our restriction of including only two-parent families, 90 one-parent families who agreed to participate were not able to take part in this additional research project. Of the remaining 401 families, 323 families were randomly selected to participate from Wave 2 onward. We refer to this sample as the family sample. Because the measures used in the present study were assessed only in the family sample, we used a set of other variables to test whether there were differences between the adolescents who participated in the family sample and those who did not. For this analysis, data on the 638 (728 minus 90) early adolescents from two-parent families were used. A multivariate analysis of variance showed no differences between participants in the family sample ($n = 323$) and nonparticipants ($n = 315$) on adolescents' conflicts with

fathers and mothers, generalized anxiety disorder, depression, and delinquency, $F(5, 632) = 1.62, p > .01$. After the listwise deletion of cases with missing values, the final sample consisted of 281 adolescents (154 female, 127 male), with a mean age of 13.3 years ($SD = 0.51$ years). The mean ages were 13.40 years ($SD = 0.54$ years) for boys and 13.24 years ($SD = 0.48$) for girls. Although slightly more boys ($n = 29$) than girls ($n = 13$) were deleted because of missing data ($\chi^2 = 7.53, p < .01$), there were no significant differences in age or educational level between the participants and the adolescents who were deleted from the sample. Taken together, these analyses showed that adolescents from the family sample did not differ from the nonparticipating early adolescents in the quality of parent-adolescent relationships and in psychosocial adjustment and that missing values did not distort the data of the family sample used in the present study.

Most of the adolescents were Dutch (98.7%) and lived with both parents (97.8%). Different levels of education were represented, with approximately 50% of the adolescents at schools preparing for university, 35% of the adolescents preparing for higher education, and 15% of the adolescents preparing for blue-collar work (because some classes are combination classes of different school levels, exact numbers cannot be provided).

Procedure

Adolescents participating in this study came from 12 high schools located in the province of Utrecht, the Netherlands. Before the study, both students and their parents received written information and, if the students and the parents wished to participate, were required to provide written informed consent. The adolescents annually filled out questionnaires both at school and during home visits. Interviewers visited adolescents at school and asked participating adolescents to gather in classrooms to fill out a questionnaire. Interviewers also visited the families at home. During the home visits, interviewers encouraged complete responding and made sure that adolescents filled out the questionnaire in a separate room or at separate tables. The adolescents and parents also completed an additional questionnaire not relevant to the present study. The adolescents received 10 euros for participating at school.

Measures

Identity style. Identity styles were assessed using the Identity Style Inventory (ISI; Berzonsky, 1992), which measures three social-cognitive

styles of making decisions, processing self-relevant information, and negotiating identity issues: (a) an informational identity style (11 items; e.g., "When I have to make a decision, I like to spend a lot of time thinking about my options"), (b) a normative identity style (9 items; e.g., "I prefer to deal with situations where I can rely on social norms and standards"), and (c) a diffuse-avoidant identity style (10 items; e.g., "I'm not really thinking about my future now; it's still a long way off"). We used the version of the ISI that had been translated, back-translated, and validated with Dutch-speaking Belgian samples (Soenens, Berzonsky, et al., 2005; Soenens, Duriez, et al., 2005).

Because the scales were developed to be used with late-adolescent college students, some minor modifications were necessary to make the items relevant to early adolescents. Specifically, the wording of one question on the normative scale (Question 21) that stresses certainty about one's college major was altered to reflect future educational goals ("I know that I am going to go to college/university and what academic area I am going to study"). Coefficient α values for the three scales were estimated to be .74 for diffuse-avoidance, .60 for informational, and for .44 normative. Deleting Items 19 (never having doubts about religious beliefs) and 40 (relying on friends and relatives for advice) from the normative scale resulted in an α coefficient of .50. Validity and psychometric data for the ISI are presented in Berzonsky (1989, 1990, 1992). Psychometric information relevant to the Dutch version of the ISI is presented in Soenens, Duriez, et al. (2005).

Self-regulation. Self-regulation was measured with 11 items from the Self-Control Scale developed by Tangney et al. (2004). On a 5-point, Likert-type scale (1 = *not at all*, 5 = *very much*), adolescents indicated how self-descriptive they thought various statements were of themselves ("I wish I had more self-discipline," "I have trouble concentrating"). The α coefficient was .65. Validity and psychometric data were presented by Tangney et al.

Identity commitment. Commitment was assessed by an identity commitment scale embedded within the ISI (Berzonsky, 1992). The scale was designed to measure the commitment dimension in the Marcia (1980) identity status model, and it is operationally defined by items independent from those used to assess identity styles (Berzonsky, 1989, 2003). The commitment scale contains 10 items that focus on the strength of values and goals (e.g., "I know what I want to do with my future"). The wording of two questions that mention a college major was altered slightly to make them appropriate for 13-year-olds: ISI Item 15 ("I'm really into school; it is right for

me”) and ISI Item 20 (“I’m not sure what I am doing in school”). The α coefficient was .62. Convergent validity and reliability data were presented by Berzonsky (1989, 1990, 2003).

Parent-adolescent relations. Two self-report scales developed by Stattin and Kerr (2000) were included to assess the adolescents’ perceptions of their relations with their parents. On 5-point, Likert-type scales (1 = *no, never*; 5 = *yes, always*), the adolescents responded to questions about potential ways in which their parents could obtain information about their behaviors and activities. These scales included (a) parental solicitation (five items; e.g., “How often do your parents ask you to sit and tell them what happened at school on a regular school day?”; the coefficient α in the present study was estimated to be .66) and (b) adolescent disclosure (five items; “Do you keep a lot of secrets from your parents about what you do during your free time?”; coefficient $\alpha = .74$). Psychometric data relevant to the scales were presented by Stattin and Kerr. Open communication within the family was measured by a Dutch adaptation of the Parent-Adolescent Communication Scale (Barnes & Olson, 1985; Jackson, Bijstra, Oostra, & Bosma, 1998). On a 5-point, Likert-type scale, the adolescents indicated the extent to which they agreed with items about their communication with their parents (10 items; e.g., “My parents are always good listeners”). The α coefficient was estimated to be .85. Psychometric and convergent validity data for the communication scale were presented by Barnes and Olson (1985).

Results

Zero-Order Correlations

Most hypothesized bivariate relationships between parent-adolescent relations and identity style were significant: parental solicitation, open communication, and adolescent disclosure were all positively correlated with a normative style and negatively associated with a diffuse-avoidant identity style (Table 1). Parental solicitation and open communication also were positively correlated with an informational style. As hypothesized, all three parent-adolescent variables were positively correlated with commitment and self-regulation. Finally, as predicted, commitment and self-regulation were positively correlated with a normative style and negatively correlated with diffuse-avoidance. An informational style was positively associated with commitment.

Table 1
Correlations Between Parent-Adolescent Relations, Identity Style, Self-Regulation, and Commitment

Variable	1	2	3	4	5	6	7	8
1. Informational style		.21**	-.06	.19**	.14*	.08	.26**	-.03
2. Normative style			-.03	.11	.28**	.20**	.56**	.27**
3. Diffuse-avoidant style				-.23**	-.32**	-.41**	-.30**	-.33**
4. Parental solicitation					.39**	.50**	.14*	.12*
5. Communication						.64**	.34**	.35**
6. Adolescent disclosure							.21**	.27**
7. Identity commitment								.35**
8. Self-regulation								

** $p < .01$. * $p < .05$.

Path Analyses

The hypothesis that linkages from parent-child relations to commitment and self-control would be mediated by identity style (Figure 1) was evaluated using structural equation modeling (Baron & Kenny, 1986; Holmbeck, 1997; Kim, Kaye, & Wright, 2001; MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002).

First, a direct-path model including parent-adolescent relations, commitment, and self-regulation was tested in which parent-adolescent relations directly predicted commitment and self-regulation. The correlation between commitment and self-regulation was constrained to zero because otherwise the model would be saturated. This model did not provide a very good fit to the data, $\chi^2(1) = 20.50$, goodness-of-fit index (GFI) = .97, root mean square error of approximation (RMSEA) = .26. However, constraining the nonsignificant paths between parental solicitation and commitment and self-regulation and between disclosure and commitment, and in addition removing the constraint on the correlation between commitment and self-regulation, significantly increased the fit of the model without changing the other path coefficients, $\chi^2(3) = 0.47$, GFI = .99, RMSEA = .00. The results of this model indicated that open communication was the only parent-adolescent variable significantly associated with commitment and self-regulation (Table 2).

Next, a fully mediational model was estimated in which the paths of parent-adolescent relations to commitment and self-regulation were fully mediated by identity style (Table 2). The fit of this model was adequate,

Table 2
Path Coefficients Between the Variables

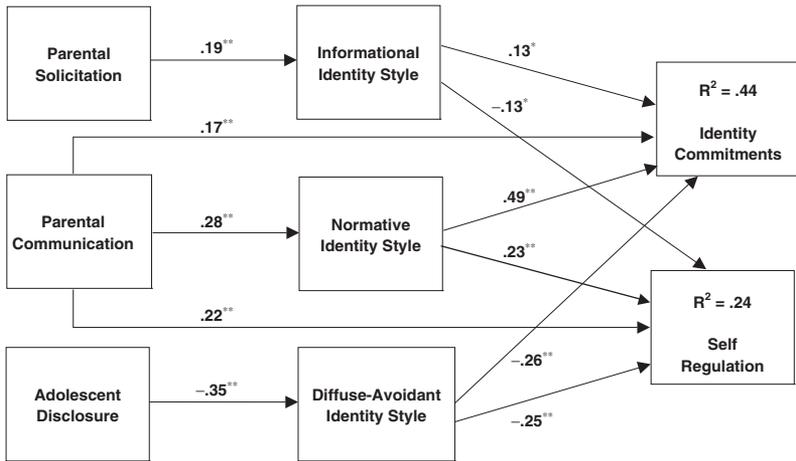
	Model 1: A → C	Model 2: A → B → C	Model 3: A → B → C + A → C
Solicitation → informational		.19**	.19**
Solicitation → diffuse-avoidant		-.03	.00
Solicitation → normative		.00	.00
Communication → informational		.12	.12
Communication → diffuse-avoidant		-.10	-.10
Communication → normative		.26**	.28**
Disclosure → informational		-.10	-.10
Disclosure → diffuse-avoidant		-.34**	-.35**
Disclosure → normative		.03	.00
Solicitation → commitment	.01		.00
Solicitation → self-regulation	-.04		.00
Communication → commitment	.35**		.17**
Communication → self-regulation	.29**		.22**
Disclosure → commitment	.11		-.11
Disclosure → self-regulation	-.01		.00
Informational → commitment		.14**	.13*
Informational → self-regulation		-.12*	-.13*
Diffuse-avoidant → commitment		-.32**	-.26**
Diffuse-avoidant → self-regulation		-.27**	-.25**
Normative → commitment		.52**	.49**
Normative → self-regulation		.29**	.23**
Solicitation ↔ communication	.38**	.38**	.38**
Solicitation ↔ disclosure	.50**	.50**	.50**
Communication ↔ disclosure	.64**	.64**	.64**
Informational ↔ diffuse-avoidant		-.01	.00
Informational ↔ normative		.18**	.18**
Normative ↔ diffuse-avoidant		.07	.00
Commitment ↔ self-regulation	.27**	.18**	.16**

Note: Model 1: direct-effect model with parent-adolescent relations (A) directly predicting commitment and self-regulation (C). Model 2: indirect-effects model with relationships between parent-adolescent relations (A) and commitment and self-regulation (C) mediated by identity style (B). Model 3: Model 1 plus Model 2.

$\chi^2(6) = 20.60$, GFI = .98, RMSEA = .09. Constraining the nonsignificant correlations smaller than .10 led to a decrease in the RMSEA to .06.

Finally, a partly mediational model was estimated in which both direct effects from parent-child relation to commitment and self-regulation and indirect effects from parent-adolescent relations through identity style to commitment and self-regulation were estimated (Table 2). To prevent

Figure 2
Significant Paths From Structural Equation Model 3
and Their Standardized Regression Estimates



Note: For convenience of presentation, covariances between variables are omitted (they are presented in Table 2).

* $p < .05$. ** $p < .01$.

estimating a saturated model, we constrained to zero paths found to be non-significant and less than .10 in the direct and indirect path models. We compared the fit of the model with the remaining direct paths freely estimated and a model in which the direct paths were constrained to zero (i.e., a model partly mediated by identity style vs. a model fully mediated by identity style). The fit of these models was $\chi^2(8) = 2.26$, GFI = .99, RMSEA = .00, and $\chi^2(11) = 22.52$, GFI = .98, RMSEA = .06, respectively. Consequently, the less constrained model with both direct and indirect paths from parent-adolescent relations to identity style provided a better fit than the model in which these paths were mediated completely by identity style, $\Delta\chi^2(3) = 20.26$, $p < .01$. Significant paths of the final model with partial mediation are presented in Figure 2. Parental solicitation was positively related to an informational identity style, communication was positively related to a normative style, and adolescent disclosure was negatively related to a diffuse-avoidance style. Whereas a normative identity style was positively related to both commitment and self-regulation, a diffuse-avoidance style was negatively related to both measures. An informational style was related positively to commitment but negatively

to self-regulation. In addition, open parental communication was directly positively related to commitment and self-regulation.

Three conditions are necessary to establish a mediational relationship (Baron & Kenny, 1986): (a) the independent variable (i.e., parent-adolescent relations) predicts both the dependent variable (i.e., self-regulation and identity commitment) and the mediational variables (i.e., identity styles), (b) the mediational variables predict the dependent variables, and (c) the relationship between the independent and dependent variables is attenuated when the mediational variables are included in the prediction equation. All of the associations between the hypothesized mediational and the dependent variables were significant. The normative and diffuse-avoidant (negatively) identity styles predicted both identity commitment and self-regulation. The informational style was linked positively to commitment but negatively to self-regulation. However, because only one independent variable (open parental communication) was a significant predictor of the dependent variables, the only mediational link between parental relations and commitment and self-regulation that could be tested involved the normative style. A Sobel test (McKinnon, Warsi, & Dwyer, 1995) revealed that the normative identity style significantly mediated the relationship from communication to commitment and self-regulation ($Z = 4.37, p < .0001$). Comparisons of the direct paths in the constrained and unconstrained model using Fisher r -to- Z transformations revealed that the coefficients from communication to self-regulation were not significantly different, but the coefficients from communication to commitment were. Thus the findings provided at least partial support for the mediational hypothesis. Specifically, the path from open parental communication to identity commitment was partially mediated by a normative identity style. The model explained 44% of the total variation in commitment and 24% of the variance in self-regulation.

Discussion

This study examined the role that adolescents' perceptions of parent-adolescent relations may play in the development of differences in identity style and evaluated the mediating role of identity style in the relationship between perceived parental behaviors and psychosocial resources in a sample of early adolescents. This way, our study generalizes and extends research on identity-processing styles downward to a sample of early adolescents. Although Marcia (1983) theorized about the role that differences in being introspective and engaging in self-reflective processes during early

adolescence may play in the successful formation of an identity in late adolescence, virtually all research on identity-processing styles has been conducted with samples of late adolescents. Our study provides evidence for linkages between parent-adolescent relations, identity style, and two psychosocial variables, commitment and self-regulation. Some of our findings are consistent with research on late adolescents, but there were some notable exceptions. To summarize, consistent with research based on late adolescents (Berzonsky, 1990, 2004a), early adolescents with high diffuse-avoidance scores had low levels of commitment and self-regulatory resources, and they perceived their parents as being low in trust, openness, and supervision. In contrast to research with late adolescents (Berzonsky, 1990, 2004b), a normative style appeared to be relatively more adaptive than an informational style: normative scores were positively linked to levels of both commitment and self-regulation, whereas informational scores were negatively associated with effective self-regulation. Also, open, trusting communication with parents was related to a normative but not informational style. The latter was related to the parental solicitation of information about adolescents' actions and whereabouts.

Identity Style in Early Adolescence

One objective of the study was to investigate the role that parent-adolescent relationships in early adolescence may play in contributing to differences in identity-processing styles. The findings support the view that parent-adolescent relations contribute to differences in identity style. A normative identity style was associated with positive parent-adolescent relations, including open, trusting communication and a willingness for adolescents to disclose information to their parents. The linkage between open parental communication and a normative style is consistent with previous research with late adolescents in which high normative scores were found to be associated with parental warmth, reasonable demands and expectations, family cohesion, and a balance of individuation and emotional closeness within the family (Berzonsky, 2004b; Fullinwider-Bush & Jacobvitz, 1993; Mathis & Adams, 2004). Contrary to prediction, the parental solicitation of information was not uniquely associated with a normative style. Perhaps when adolescents trust their parents and communicate openly with them, parents do not need to actively track and control their behavior. The negative association found between parent-adolescent relations and diffuse-avoidance is consistent with previous research linking diffuse-avoidance to overly permissive practices and limited parental supervision, guidance, and monitoring (Berzonsky, 2004b).

Even though, as hypothesized, a moderate positive zero-order correlation between open communication and an informational style was found, the parental solicitation of information was the only parent-adolescent variable uniquely associated with an informational style (Figure 2). Although this finding was not predicted, it is in line with some recent findings that parental psychological control (i.e., being manipulative and intruding on an adolescent's plans and goals) was associated with an informational identity style in a sample of middle adolescents but not a sample of late adolescents (Soenens et al., 2004). Perhaps early adolescents with high informational scores perceived that their parents were making what they considered to be intrusive attempts to monitor and keep track of their activities and whereabouts. In contrast, early adolescents with high normative scores were more likely to perceive their interactions with their parents as involving an open, reciprocal communication process within which they willingly provided information about their friends and what was going on in their lives. As Stattin and Kerr (2000) postulated, parents may obtain knowledge about an adolescent's friends and whereabouts from their own active efforts to track and solicit information or from an adolescent's willingness to disclose and share information with them. The present findings suggest that informational and normative identity styles may be associated with different sources of parental knowledge. Because information about parent-adolescent relations in the present study was obtained from self-reports provided by the adolescents, an alternative explanation is that identity style moderated the way adolescents construed their communications with their parents.

The findings further indicated that low levels of parental tracking, communication, and disclosure were associated with a diffuse-avoidant identity style. Consistent with the linkage between limited parental knowledge and low levels of supervision to problem behavior (Dishion & McMahon, 1998; Patterson & Stouthamer-Loeber, 1984), diffuse-avoidance has been found to be associated with increased risk for a variety of difficulties and problem behaviors, including depressive reactions (Nurmi, Berzonsky, Tammi, Kinney, 1997), neuroticism (Dollinger, 1995), eating disorders (Wheeler, Adams, & Keating, 2001), conduct disorders (Adams et al., 2001), delinquency (White & Jones, 1996), and work- and alcohol-related problems (Jones, Ross, & Hartmann, 1992).

Consistent with previous findings with late adolescents (Berzonsky, 1989, 2003), all three identity styles were uniquely associated with identity commitments and convictions. The positive linkage with informational and normative styles indicated relatively stable well-structured senses of self. The negative linkage with diffuse-avoidance is consistent with the view that

adolescents with a diffuse-avoidant identity style have a fragmented, unstable, confused sense of self (Berzonsky, 1990, 1994). Each style also was uniquely associated with self-regulation. Adolescents with high normative scores had higher levels of self-regulatory resources; those with high diffuse-avoidant scores had lower levels. Contrary to predictions based on previous research with late adolescents (e.g., Berzonsky & Kuk, 2005; Dollinger, 1995; Soenens, Berzonsky, et al., 2005), an informational style was negatively associated with self-regulation. This negative relationship between an informational style and self-control suggests the possibility that an informational style in early adolescence may be less adaptive than a normative one. A balance of autonomy and connectedness to parents is related to effective self-regulation and positive psychosocial outcomes (Barber et al., 2005; Grotevant & Cooper, 1985; Noom, Dekovic, & Meeus, 1999). Perhaps as adolescents begin to differentiate themselves and their views from those of their parents and strive to become more autonomous and self-reliant, they experience increases in problems and stress and decreases in effective self-regulation. Given that an informational style is associated with effective self-regulation and positive psychosocial resources among late adolescents (Berzonsky, 1990, 2003; Nurmi et al., 1997; Soenens, Berzonsky, et al., 2005), most likely these problems and difficulties will be temporary. Indeed, Beyers and Goossens (1999) found that emotional autonomy from parents was associated with stress among 7th and 9th graders but not 11th graders. Nonetheless, longitudinal data are needed to evaluate this hypothesis. We should emphasize that the bivariate Informational \times Self-Regulation correlation was negative but nonsignificant, $r(280) = -.03$. A post hoc analysis indicated that the inverse partial Information \times Self-Regulation correlation was significant when the effect of commitment was controlled, partial $r(279) = -.14$, $p < .05$. Thus, it is possible that as information-oriented adolescents form clear and stable standards and commitments, they become more effective in regulating their behavior and actions in terms of those standards. Longitudinal data lagged over time are needed to evaluate this possibility.

The Mediational Role of Identity Style

The final objective of the present study was to determine whether identity style would mediate relationships between perceived parent-adolescent relations and psychosocial resources. Firm identity commitments and self-regulation were both positively correlated with open parental communication, the parental solicitation of information, and adolescent disclosure to

parents. When a direct-path model was tested, only parental communication uniquely predicted commitment and self-regulation. A model including both the direct effects from parent-adolescent relations to commitment and self-regulation and the indirect effects through identity style provided only some evidence for partial mediation. Specifically, the path from parental communication to identity commitment was mediated by a normative identity style. These findings supported the hypothesis that open, trusting communication between early adolescents and their parents may lead adolescents to adopt a normative approach to identity issues and decisions, which in turn leads them to internalize goals, values, and commitments. In other words, open, trusting relations between early adolescents and their parents may facilitate the formation of a coherent, albeit parentally dictated, sense of identity. Alternatively, it may be that early adolescents who use a normative identity style may be more likely than their informational and diffuse-avoidant counterparts to perceive their interactions with their parents as being positive, open, and trusting. In either case, the present findings indicate that a normative style of processing self-relevant information and negotiating identity issues may mediate the relationship between parental communication with early adolescents and the extent to which those adolescents form identity commitments.

Limitations

Several notes of caution are warranted in interpreting our findings. First, all information about the variables was reported by the adolescents, which may at times diverge from reports provided by independent observers or the parents themselves (Cook & Goldstein, 1993). However, an adolescent's personal construction of "reality" may turn out to be more consequential for his or her behavior and psychosocial well-being than information provided from other sources (Berzonsky, 1990; Cottrell et al., 2005; Stice & Barrera, 1995). Nonetheless, in further research, it would be useful to attempt to replicate the findings using information from multiple sources. Second, even though we framed the study in terms of a causal influence of parenting and a mediational role of identity style, because all of the data were obtained concurrently, we cannot conclude that the order of the variables is as we have hypothesized. Our discussion of "effects," "contributions," and the like, therefore, is based on conceptual rather than empirical considerations. Collecting longitudinal data and evaluating cross-lagged paths between parental, identity style, and psychosocial variables would provide an empirical basis for beginning to evaluate some alternative explanations

of our findings. Finally, some of the measures we used, especially the normative style scale, had relatively low reliability. Thus, our findings may have underestimated or failed to detect some significant effects.

Some Concluding Thoughts

The present study extends existing research on identity style by focusing on a sample of early adolescents. Taken together, our findings indicate that a normative identity style may be functional and adaptive in early adolescence. This is not to say that a normative style will necessarily be maladaptive in late adolescence. The possession of stable commitments and goals, even ones co-opted from others, may provide a positive sense of agency and self-regulation (Berzonsky, 2003), especially in relatively well-structured settings characterized by stable, recurring expectations, demands, and problems. However, in relatively diverse, unstructured contexts characterized by changing demands and expectations, late adolescents with an informational style may fare better than their normative counterparts. Our study also revealed that when the effects of the other variables in the model were controlled, an informational style was negatively associated with effective self-regulation. Perhaps early adolescents have not fully developed the rational-analytical, meta-representational strategies that constitute an informational style (Berzonsky, 2004a), or they may not have yet internalized a stable set of personal standards and goals in terms of which they can effectively regulate their behavior. Given that considerable research with late adolescents has underscored the adaptive role that an informational style plays in self-governance, these findings suggest that there may be developmental changes in the functional effectiveness of an informational style.

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