Exposing the role of coparenting and parenting for adolescent personal identity processes

G. Albert Sznitman, S.Van Petegem, G. Zimmermann

University of Lausanne

Author Note

Gillian Albert Sznitman, FAmily and DevelOpment Research Center (FADO), Institute of Psychology, University of Lausanne; Stijn Van Petegem, FAmily and DevelOpment Research Center (FADO), Institute of Psychology, University of Lausanne; Grégoire Zimmermann, FAmily and DevelOpment Research Center (FADO), Institute of Psychology, University of Lausanne.

Correspondence concerning this article should be addressed to Gillian Albert Sznitman, FAmily and DevelOpment Research Center (FADO), Institute of Psychology, University of Lausanne, Geopolis, CH-1015 Lausanne, Switzerland, Phone: +41 21 692 32 79, E-mail: gillian.albertsznitman@unil.ch.

Introduction

It is well-accepted that from a very young age social context plays a paramount role in shaping who we become, as established by Erik Erikson's seminal theory of psychosocial development (Erikson, 1968). The family context is the first social milieu that a child is exposed to and continues to play a significant role in the lives of adolescents. During these adolescent years, a critical developmental task is the formation of a coherent sense of identity, that is, a coherent set of goals, values, and commitments that define who one is. Unsuccessful resolution of this developmental task has repercussions on adolescents' future well-being and psychosocial functioning (Erikson, 1968; Waterman, 2007; Waterman et al., 2013). In fact, adolescents who lack a coherent sense of identity are more at risk for maladjustments, including internalizing (Crocetti, Klimstra, Keijsers, & Hale, 2009; Schwartz et al., 2011) and externalizing difficulties (Crocetti et al., 2009).

While identity formation has often been considered to be an internal psychological process, identity is in fact formed through interactions between person and context (Erikson, 1968; Kroger, 2004) and needs to be examined within the different ecological environments in which it is embedded (Bronfenbrenner, 2005). Among proximal contexts, the importance of the parent-child relationship and parenting behaviors has received much attention from identity researchers and its influence on identity formation has been widely supported (e.g., Beyers & Goossens, 2008; Luyckx, Schwartz, Goossens, Beyers, & Missotten, 2011; Luyckx, Soenens, Vansteenkiste, Goossens, & Berzonsky, 2007; Sartor & Youniss, 2002). However, in line with family systems theorists (Bowen, 1978; Minuchin, 1985; Minuchin, 1974), families are composed of a number of interacting relationships, that should be understood as an organized whole and are not reducible to the sum of their parts. Thus, the family context must not simply be reduced to this parent-child relationship. A number of family theorists contend that the coparental

relationship, defined as the collaboration between parents in regards to child rearing, provides a

more comprehensive understanding of family functioning (see Feinberg, 2003; McHale, 2007;

McHale & Rasmussen, 1998). In this light, the general aim of this study was to examine the

associations between perceived coparenting and adolescent personal identity formation, which to

the best of our knowledge remains unexplored in the literature, thereby testing whether perceived

parenting would act as an explaining mechanism between coparenting and personal identity

formation.

Adolescent Identity Formation

        In Marcia's (1966) operationalization of Erikson's theory of identity development,

identity formation was presented as being a function of adolescents' degree of exploration (i.e.,

the process of exploring different identity alternatives in varying life domains) and commitment

(i.e., the adherence to a set of values and beliefs). More recently, several authors have stressed the

importance of a deeper understanding of the underlying processes at play in identity formation

and have developed models that aim to better capture these processes (for reviews, see Crocetti &

Meeus, 2015; Luyckx et al., 2011). In an extension of Marcia's work, Luyckx and colleagues

(Luyckx et al., 2008; Luyckx, Goossens, Soenens, & Beyers, 2006) proposed a dual-cycle model

of identity formation in which the authors "unpacked" the dimensions of exploration and

commitment. The first cycle, commitment formation, refers to a general exploration of identity

commitments (*exploration in breadth*) with the forming of initial identity commitments

(*commitment making*). The second cycle, commitment evaluation and maintenance, involves a

thorough evaluation of one's existing commitments (*exploration in-depth*), and should these

initial commitments seem adequate, they will be integrated and internalized (*identification with*

commitment). Should these identity commitments not seem adequate, they will be re-evaluated

and reconsidered for other alternatives (*reconsideration of commitment*; see Crocetti, Rubini, &

Meeus, 2008; Skhirtladze, Javakhishvili, Schwartz, Beyers, & Luyckx, 2016; Zimmermann, Lannegrand-Willems, Safont-Mottay, & Cannard, 2015). Lastly, an individual may find themselves stuck in a process of *ruminative exploration,* in which they feel incapable of closing down the exploration process and are unable to make firm commitments. In research mainly conducted in western societies, it was found that these later two identity processes (reconsideration of commitment and ruminative exploration) have been associated with poorer psychosocial outcomes in adolescents (Beyers & Luyckx, 2016) whereas the four former identity processes (exploration in breadth, commitment making, exploration in depth, and identification with commitment) would rather indicate positive identity development (i.e. a sense of identity coherence; Eichas, Meca, Mongomery, & Kurtines, 2015), as they have been associated with a host of positive outcomes, including academic adjustment and self-esteem (e.g., Luyckx, Goossens, & Soenens, 2006; Luyckx, Soenens, Goossens, & Vansteenkiste, 2007).

Coparenting and Identity Formation

Over the past 40 years, personal identity formation has been more so conceived as an intra-individual process (Côté & Levine, 1988; van Hoof, 1999). However, in Erikson's original writings (1968, 1974, 1980), he emphasized the importance of person-context interaction for the development of a personal identity. Thus, the development of a coherent sense of self results from the interaction between a person and the different contexts that surround them, with one of the most important contexts being that of their family. More recently, several authors have refocused on the importance of context for identity formation, using process-oriented models to examine the associations between the parent-child relationship and identity formation (e.g., Beyers & Goossens, 2008; Crocetti, Branje, Rubini, Koot, & Meeus, 2017; Luyckx, Soenens, Vansteenkiste, et al., 2007; Smits et al., 2008). Although these studies typically focused on the role of the parent-child relationship, family systems theory posits that the family is composed of a

number of interacting systems, with the parent-child relationship being just one (Minuchin, 1974). Another important relationship that adolescents are implicated in and that has received far less empirical attention is the coparental relationship (Minuchin, 1974).

Coparenting refers to the collaboration between parental figures in regards to the rearing of a child for whom they share responsibility and can be characterized as a family group level dynamic (Feinberg, 2003). In other words, the coparental relation can be seen as encompassing all exchanges or actions occurring between parental figures having to do either implicitly or explicitly with the taking care of their child (McHale, 1997). Coparenting can be distinguished from parenting, which has to do specifically with the individual relationship each parent has with his or her child. While both parental figures are implicated in the coparental relation, it remains separate from the marital (romantic) relationship between parental figures (Belsky, Crnic, & Gable, 1995) as well as the individual parent-child relationship (Minuchin, 1974). In fact, coparenting has emerged as a unique construct separate from that of parenting, accounting for additional variance in regards to the prediction of child adjustment (Belsky, Putnam, & Crnic, 1996; Caldera & Lindsey, 2006).

Often studied facets of coparenting include cooperation and triangulation (Margolin, Gordis, & John, 2001; Teubert & Pinquart, 2010). Cooperation refers to the inter-parental exchange of information concerning the child, as well as support and respect between parents in regards to childrearing issues, creating an environment of open communication and mutual loyalty (Teubert & Pinquart, 2010). Triangulation is characterized by the implication of the child in parental arguments concerning childrearing matters in an effort to form a coalition between one parent and the child in order to exclude or undermine the other parent (Teubert & Pinquart, 2010). Interactions involving triangulation can often be conflictual in nature, and thus triangulation is sometimes considered to be a specific type of coparental conflict (Favez & Frascarolo, 2013).

Given adolescents' increasing need for independence and their exposure to new social experiences, the coparenting relationship may be of particular importance during this developmental period (Feinberg, Kan, & Hetherington, 2007). A secure and consistent base is crucial for healthy development, however, during adolescence this can become more challenging for parents to provide. Given that coparenting implicates a coordination between parents, they are confronted with the need for regular readjustment and high levels of coordination as adolescents explore new aspects of themselves and test certain limits (Steinberg & Silk, 2002; Teubert & Pinquart, 2011a). In fact, coparental discord and the use of coparental triangulation has been associated with adolescent antisocial behavior and internalizing symptoms (Baril, Crouter, & McHale, 2007; Buehler & Welsh, 2009; Feinberg et al., 2007). While the majority of research on coparenting and adolescence focuses on the implications of suboptimal coparenting on maladaptive psychosocial development, less research has investigated the relation between coparenting and more developmental processes, such as identity formation. Given that identity formation is the key developmental task of adolescence and that coparenting can be especially challenging during this time, it is of particular importance to explore the potential relationship between these two constructs.

On a theoretical level, Bowen (1978) alluded to the relationship between identity formation and triangular interactions in families, in his theory of family systems. According to Bowen (1978), triangulation may be employed by either one or both parents as a manner of reducing the tension between them, given that a two-person system can tolerate much less stress than a three-person system. By including a third person in this tension, it helps to offload the stress from one person onto another. However, this implication of the child blocks his ability to differentiate from the family and hence he does not have the ability to explore self-determined interests and values, therefore impinging on identity formation (Perosa, Perosa, & Tam, 2002).

Although alluded to theoretically, no empirical research to date has explored this relationship between coparenting and adolescent identity formation. Existing evidence has suggested a relationship between coparenting and constructs associated with identity such as adolescent adjustment. For example, Buehler and Welsh (2009) found coparental triangulation to be longitudinally associated with higher levels of internalizing problems in adolescents. In another longitudinal study, Feinberg, Kan, & Hetherington (2007) showed coparental conflict to predict adolescent maladjustment. Thus, in line with theoretical suggestions as well as findings supporting the relationship between the identity processes of ruminative exploration and reconsideration of commitment and internalizing problems in adolescents (Beyers & Luyckx, 2016), we expected to find a relationship between coparental triangulation and these two maladaptive processes of identity formation. Furthermore, Shoppe-Sullivan and colleagues (2009), found coparental cooperation to prevent increases in externalizing behaviors in children. Given empirical research findings suggesting an association between coparental cooperation and psychological adjustment in adolescents, we expected perceived coparental cooperation to be associated with the identity processes of commitment making, identification with commitment, exploration in breadth, and exploration in depth.

Moreover, we expected that such associations between perceived coparenting and identity would be explained by adolescents' perceptions of parenting. In accordance with family systems theory (Minuchin, 1974), the different familial relationships do not exist in isolation. In fact, the different relationships within a family can be highly interconnected and, thus, what occurs in one relationship may have an effect on others (Cox & Paley, 2003). In light of this, the *spillover hypothesis* (Erel & Burman, 1995) postulates an interdependence between familial relationships and suggests that emotions and experiences from one relationship (e.g., between parents in the coparental relationship) can spillover onto and influence other relationships (e.g., how parents

interact with their children), which in turn may impact the development of the child (Teubert &

Pinquart, 2011b). In fact, several researchers have found parenting to either partially or fully

mediate the association between coparenting and children's internalizing and externalizing

problem behavior (Jones, Shaffer, Forehand, Brody, & Armistead, 2003; Shook, Jones, Forehand,

Dorsey, & Brody, 2010). In order to best understand how the family plays a role in the

functioning of each of its members, it is important to consider the family not just as one system,

but as an interaction of a number relationships (Cox & Paley, 2003). Drawing upon the spillover

hypothesis, we expected to observe an association between more optimal coparenting and

parenting as well as, an association between more negative coparenting and parenting, with

perceived parenting serving as an explanatory mechanism between perceived coparenting and

adolescent identity processes.

Parenting and Identity Formation

Building upon the family systems theory of Bowen (1978) and in line with previous work

linking perceived parenting and identity formation (e.g., Beyers & Goossens, 2008; Luyckx,

Soenens, Vansteenkiste, et al., 2007), two dimensions of parenting appear to be of particular

importance in regards to adolescent identity processes, those of autonomy support and

psychological control (Barber, 1996; Barber & Harmon, 2002). Parenting behaviors that are

autonomy supportive are those that are supportive of a child's point of view and encourage the

child to explore and act upon his/her personal interests and values (Ryan & Deci, 2000; Soenens

et al., 2007). Parental support of autonomous functioning allows adolescents to become self-

governing individuals, as they are able to base their actions on personal interests and values and

hence feel a sense of freedom and engagement in their choices (Soenens et al., 2007). Abundant

findings support the association between perceived autonomy-supportive parenting and adaptive

adolescent functioning, including higher well-being and adjustment (e.g., Grolnick, Deci, &

Ryan, 1997). Conversely, parental psychological control refers to parenting behaviors that intrude on a child's thoughts and feelings and are often characterized by the use of manipulative techniques such as guilt induction, shaming, conditional regard, and love withdrawal (Barber, 1996; Barber & Harmon, 2002). Hence, previous research consistently found perceived psychological control to relate to maladaptive adolescent outcomes, including lowered well-being (e.g., Soenens, Vansteenkiste, Luyten, & Duriez, 2005), psychopathology (e.g., Barber, Stolz, & Olsen, 2005;) and problem behavior (e.g., Pettit, Laird, Dodge, & Bates, 2001).

Based on Blatt's theory (1974), two forms of psychological control have recently been elaborated, those targeted at maintaining interpersonal closeness or relatedness (*dependency-oriented psychological control*) and those that relate to issues of academic achievement (*achievement-oriented psychological control*; Soenens, Vansteenkiste, & Luyten, 2010). For example, a parent who becomes upset with their child whenever their child wishes to go play with friends would be demonstrating dependency-oriented psychological control, whereas a parent who is friendly with their child only when they succeed on an exam, would be exhibiting achievement-oriented psychological control. While both types of psychological control have been associated with internalizing difficulties in emerging adulthood (Soenens & Vansteenkiste, 2010), they remain unique from one another, demonstrating differing paths of action, with dependency-oriented psychological control acting through dependency and achievement-oriented psychological control through self-criticism (Soenens et al., 2010). In the present study we differentiated between these two types of psychological control to examine whether they would have differing associations with identity dimensions. Specifically, we predicted that dependency-oriented psychological control would be associated with less adaptive and more maladaptive exploration, given that exploratory behaviors may entail a separation from parental figures, whereas achievement-oriented psychological control rather would be associated with less

commitment to identity alternatives, given the elevated pressure an adolescent might feel to make the correct choice.

A number of researchers have used process oriented models of identity formation (i.e., exploration in breadth, commitment making, exploration in breadth, and identification with commitment) to assess the associations between perceived autonomy-supportive and psychologically controlling parenting with adolescent personal identity (e.g., Beyers & Goossens, 2008; Luyckx, Goossens, & Soenens, 2006; Luyckx, Soenens, Goossens, et al., 2007; Luyckx, Soenens, Vansteenkiste, et al., 2007). Overall, the findings of these studies suggest psychologically controlling parenting to be associated with higher levels of exploration in breadth and lower levels of commitment making and identification with commitment, whereas autonomy-supportive parenting showed the opposite pattern of results. These studies, however, did not include an integrated six-dimensional model of identity and hence were unable to assess associations with the more maladaptive dimensions of ruminative exploration and reconsideration of commitment along with the four adaptive identity dimensions. In the same way, authors of these studies did not differentiate between dependency-oriented and achievement-oriented psychological control. In the present study, we propose a more refined examination of the association of parenting with identity and its potential role as an explanatory mechanism between coparenting and adolescent personal identity.

The Present Study

In line with family systems theory (Bowen, 1978; Minuchin, 1974), the general aim of the present study was to examine how multiple familial subsystems interact to ultimately be associated with adolescent identity processes. More specifically, our goal was to examine the relationship between coparenting, parenting, and adolescent identity processes. To our knowledge, no research has included coparenting in regards to adolescent identity processes,

supporting the novelty of the current study. Furthermore, we used a more fine-grained model to assess identity as well as two subtypes of psychologically controlling parenting, that is, achievement-oriented and dependency-oriented psychological control. In doing so, we hope to help elucidate not only how multiple familial relationships influence adolescent identity formation but also help fill the gap in the literature in regards to the potential relationship between coparenting and adolescent development.

More specifically, we first expected more adaptive coparenting (high levels of cooperation) to be associated with more adaptive parenting (high levels of autonomy support) and conversely more maladaptive coparenting (high levels of triangulation) to be associated with more maladaptive parenting (high levels of psychological control). In turn, we predicted autonomy-supportive parenting to be positively related to adaptive identity processes and negatively to maladaptive identity processes. Similarly, we also predicted psychologically controlling parenting to be positively related to maladaptive identity processes and negatively associated with positive identity processes, with achievement-oriented control mainly being linked to the commitment dimensions and dependency-oriented control especially relating to the exploration dimensions. Figure 1 depicts the hypothesized general model.

Finally, we also examined the role of age, gender, and family structure. In line with previous research, mean-level differences in age, gender, and family structure were expected for some of the variables. For instance, Luyckx, Vansteenkiste, and Goossens (2009) found girls to score higher on exploration in depth and ruminative exploration, while in another study Luyckx and colleagues (2008) found greater levels of commitment making and lower levels of exploration in breadth as a function of age. In spite of these hypothesized mean-level differences, we expected structural relations to be similar across age, gender, and family structure. This is in line with previous research which examines associations between parenting and identity and

found an absence of moderation by these variables (Crocetti et al., 2017; e.g., Luyckx, Soenens,

Vansteenkiste, et al., 2007).

Method

Participants and Procedure

The data for this study was collected as part of a larger longitudinal study, which was in

compliance with the ethical code of the Swiss Society of Psychology (SSP). All participants were

in their last year of mandatory secondary school (i.e., 9th grade). Self-report questionnaire

packages were group-administered in class in the presence of two trained members of the

research team. In total, 1,105 adolescents (51% female, 49% male) agreed to participate.

Participants had a mean age of 15.08 years ($SD = .64$), with 98% of adolescents falling between

the ages of 14 and 16 years old. The majority of participants were of Swiss nationality (71%)

with French being the predominantly spoken language at home (84%). In terms of family

structure, 71% of participants reported coming from intact homes (i.e., living with both biological

parents), 24% from separated/divorced families, and 5% from other family structures (e.g., one

parent deceased). Overall, 1.86% of the data was missing. This information was likely to be

missing at random, as Little's MCAR-test (Missing Completely at Random) was non-significant

$[\chi^2(181)=199.66, ns]$. Therefore, missing data was dealt with through a procedure of Full

Information Maximum Likelihood (FIML; Enders & Bandalos, 2001).

Measures

French versions of all questionnaires were administered, which, for the majority of scales,

were already available. For those that were not, we employed a back translation procedure in

accordance with the International Test Commission (Hambleton, 2001).

Identity. Personal identity formation was assessed using the 25-item Dimensions of

Identity Development Scale (Luyckx et al., 2008; Luyckx, Goossens, Soenens, et al., 2006;

Zimmermann et al., 2015). This self-report questionnaire evaluates identity processes in relation

to adolescents' future plans and ideas for future life paths. Items were rated on a 5-point Likert

scale, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Sample items include: 'I have

decided on the direction I want to follow in my life' (Commitment Making; 5 items); 'I sense that

the direction I want to take in my life will really suit me' (Identification with Commitment; 5

items); 'I think actively about different directions I might take in my life' (Exploration in

Breadth; 5 items); 'I regularly talk with other people about the plans for the future I have made

for myself' (Exploration in Depth; 2 items); 'I think about whether the aims I already have for my

life, really suit me' (Reconsideration of Commitment; 3 items); 'I keep wondering, which

direction my life has to take' (Ruminative Exploration; 5 items). Cronbach's alphas were

comparable to those found in other studies (e.g., Skhirtladze et al., 2016; Zimmermann et al.,

2015): .88 for commitment making, .86 for identification with commitments, .80 for exploration

in breadth, .35 for exploration in depth, .57 for reconsideration of commitment and .81 for

ruminative exploration. While exploration in depth demonstrated a lower reliability than the other

scales, given that alpha coefficients decrease with fewer items (Iacobucci & Duhachek, 2003) and

that this scale has only two items, this alpha was considered acceptable given that the inter-item

correlations was .21 ($p < .001$), which is comparable to previous research (e.g., Zimmermann et

al., 2015). Confirmatory Factor Analyses (CFA) were performed to check the factor structure of

each questionnaire. Model fit was evaluated using the combined cutoff of .06 for the root mean

square error of approximation (RMSEA) and .08 for the standardized root mean square residual

(SRMR) (Hu & Bentler, 1999). The comparative fit index (CFI) of 0.95 was also used as an

indicator of good model fit (Marsh, Hau, & Wen, 2004). A CFA indicated that the six-factor

model fit the data adequately, $\chi^2(258) = 879.34$; $p < .001$, SRMR = .06, RMSEA = .05, CFI = .94.

Perceived coparenting. Adolescent perceptions of coparenting were assessed using the cooperation and triangulation subscales of the parental dyad sub-section of the Coparenting Inventory for Parents and Adolescents (CI-PA; Teubert & Pinquart, 2011a). Adolescents completed the 4-item parental cooperation subscale (e.g., 'If I have a problem, my parents solve it together') and the 4-item triangulation subscale (e.g., 'I get involved in my parents' arguments'). Items were responded to on a 5-point Likert scale, ranging from 0 (*not at all true*) to 4 (*completely true*). The subscales demonstrated high levels of internal consistency ($\alpha = .82$ for cooperation and $\alpha = .83$ for triangulation). The CI-PA demonstrated a satisfactory model fit, $\chi^2(19) = 67.83$; $p < .001$, SRMR $= .05$, RMSEA $= .05$, CFI $= .98$.

Perceived parenting. Adolescents also reported on their perceptions of parental autonomy support and dependency-oriented and achievement-oriented psychological control. Items of all subscales were rated on a 5-point Likert scale, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Autonomy support was assessed using seven items from the autonomy support subscale of the Perceptions of Parents Scale (POPS; e.g., 'My mother/father helps me to choose my own direction'; Grolnick, Ryan, & Deci, 1991; Mantzouranis, Zimmermann, Biermann-Mahaim, & Favez, 2012). Cronbach's alpha was .74 and a CFA indicated an adequate fit of the one factor model, $\chi^2(21) = 1153.41$; $p < .001$, SRMR $= .03$, RMSEA $= .05$, CFI $= .97$. The two subtypes of psychological control were assessed using the 17-item Dependency-Oriented and Achievement-Oriented Psychological Control Scales (DAPCS; Soenens, Vansteenkiste, & Luyten, 2010; Mantzouranis et al., 2012). Sample items include: 'My parents are only happy with me if I rely exclusively on them for advice' (dependency-oriented psychological control, 8 items) and 'My parents are less friendly with me if I perform less than perfectly' (achievement-oriented psychological control, 9 items). Both subscales demonstrated

acceptable internal consistency (α = .78 for DPC and α = .91 for APC). A CFA revealed an

acceptable fit, $\chi^2(116) = 567.54$; $p < .001$, SRMR = .05, RMSEA = .06, CFI = .92.

Results

Preliminary Analyses

Descriptive statistics and correlations among study variables are presented in Table 1. To

examine the potential role of background variables, a multivariate analysis of covariance

(MANCOVA) was conducted with gender and family structure as independent fixed variables,

age as a covariate, and the dimensions of coparenting, parenting, and identity as dependent

variables. A significant multivariate effect based on Wilk's Lambda was obtained for age

[$F(11, 977) = 3.50$, $p < .05$, $\eta^2 = .04$], gender [$F(11, 977) = 8.78$, $p < .001$, $\eta^2 = .09$], and family

structure [$F(11, 977) = 14.92$, $p < .001$, $\eta^2 = .15$]. Subsequent univariate analyses were

completed, indicating that older adolescents perceived more parental achievement-oriented

psychological control [$F(11, 977) = 15.68$, $p < .01$, $b = .17$], more dependency-oriented

psychological control [$F(11, 977) = 9.57$, $p < .01$, $b = .11$] as well as less parental autonomy

support [$F(11, 945) = 9.39$, $p < .01$, $b = -.10$]. Older adolescents also expressed more

reconsideration of commitment as compared to younger adolescents [$F(11, 977) = 6.17$, $p < .01$,

$b = .11$]. Furthermore, as for family structure, more cooperation as well as less triangulation and

achievement-oriented psychological control were reported in intact families as compared to non-

intact families (see Table 2). Lastly, girls demonstrated more exploration in breadth, ruminative

exploration, exploration in depth, and reconsideration of commitment and less commitment

making, identification with commitment and parental achievement-oriented psychological

control, as compared to boys. Given these results, we controlled for age, gender, and family

structure in the primary analyses.

Structural Relations Between Coparenting, Parenting, and Identity

Structural equation modeling (SEM) was used to test the hypothesized model, using robust maximum likelihood estimation in Mplus 7.00 (Muthén & Muthén, 2012). We modeled our variables as latent variables, which were indicated by three parcels each, composed of randomly assigned items of the appropriate scales.

The estimated measurement model yielded a good fit, $\chi^2(409) = 1012.13$, $p < .001$; RMSEA = .04; SRMR = .04; CFI = .96, with high factor loadings for all indicators (ranging between .40 and .94, $p < .001$), demonstrating that latent variables were successfully related to the observed variables. We then tested the hypothesized model, in which each of the coparenting variables were modeled as predictors of the parenting variables, which in turn were modeled as predictors of the identity variables. Correlations between variables at the same level were allowed. The final structural model fit the data well, $\chi^2(535) = 1318.93$, $p < .001$; RMSEA = .04; SRMR = .05; CFI = .95, and is shown in Figure 2. In general, both coparenting variables were related to specific aspects of parenting, which were in turn related to specific identity dimensions. More specifically, perceived coparental cooperation was found to relate to more autonomy-supportive parenting and to less achievement-oriented psychological control. Perceived coparental triangulation, on the other hand, was related to less autonomy-supportive parenting and more achievement- and dependency-oriented psychological control. Perceived autonomy-supportive parenting, in turn, was related to more commitment making, identification with commitments, exploration in breadth, and exploration in depth and less ruminative exploration. Furthermore, perceived parental dependency-oriented psychological control was related to more ruminative exploration and reconsideration of commitments. Achievement-oriented psychological control, by contrast, did not relate significantly to any of the identity dimensions.

Multigroup comparisons were performed to test whether the structural model would hold across age, gender, and family structure. Comparison of the constrained and unconstrained models were tested based on differences in CFI (ΔCFI), which should be less than .01 (Cheung & Rensvold, 2002). First, we tested for measurement equivalence across groups by comparing a freely estimated model (unconstrained) with a constrained model in which factor loadings were set equal between groups. When measurement invariance was obtained, structural models were compared, by comparing a freely estimated model (with all structural paths set free) and a constrained model (with all paths set equal across groups). For age, gender, and family structure, multigroup comparison provided evidence for measurement equivalence [ΔCFI = .000; ΔCFI = .001; ΔCFI = .001; for age, gender and family structure respectively], suggesting that scales were interpreted in the same way independent of age, gender and whether adolescents were from intact or non-intact families. Evidence for structural equivalence was also obtained across age, gender, and family structure [ΔCFI = .000; ΔCFI = .001; ΔCFI = .003], suggesting that the structural relations presented in Figure 2 are valid across age, gender and intact and non-intact families.

Discussion

The present study sought to provide a more comprehensive understanding of how the family environment contributes to adolescent identity formation by explicating the relationship between coparenting, parenting, and adolescent identity processes. While the findings from numerous studies have established the importance of parenting for adolescent personal identity (Beyers & Goossens, 2008; Luyckx, Soenens, Goossens, et al., 2007; Luyckx, Soenens, Vansteenkiste, et al., 2007), to our knowledge, the present study is the first to bring to light the role of coparenting as a family systems dynamic in regard to adolescent identity. Coparenting takes account of the individuals in a family within a larger family system and can thus provide a

clearer idea of the overall family environment as compared to parenting which focuses

specifically on the unique relationship between each parent and child. Results of the present study

largely supported the hypothesized model, finding perceived coparental cooperation and

coparental triangulation to be associated with each of the personal identity dimensions. These

associations held true for age, gender as well as for adolescents who lived with both biological

parents and for those whose parents were no longer together.

   In line with previous research and the hypothesized model, more adaptive coparenting

was associated with more adaptive parenting (Bonds & Gondoli, 2007; Easterbrooks & Emde,

1988). Parents who were perceived as more cooperative in their coparenting relationship were

also perceived as being more supportive of their adolescents' autonomy and less psychologically

controlling in regards to achievement, creating an atmosphere of collaboration, acceptance, and

support. Conversely, adolescents who perceived their parents as using more triangulation also

reported more dependency-oriented and achievement-oriented psychological control and less

autonomy support. In other words, these adolescents experience a familial environment that is

more manipulative and controlling. These associations between coparenting and parenting

provide further support for a potential spillover from one familial relationship to another as

theorized by the spillover hypothesis (Erel & Burman, 1995), that is, negative interactions

between parents in their coparental relationship may spill over into the parental relationship

resulting in more negative interactions between parent and child. This spillover is not limited to

negative interactions, but a positive spillover may also be observed between coparenting and

parenting. It thus seems that, while these two subsystems are unique from one another (Belsky et

al., 1996; Caldera & Lindsey, 2006), they are intimately related.

   In regard to the main goal of the present study, the family system as a whole was

associated with the intrapsychic development of adolescents, as alluded by Bowen (1978). More

specifically the way that parents collaborate in their child rearing responsibilities appears to have

an influence on their adolescent's intrapsychic world via the parenting relationship the adolescent

has with each of their parents. Autonomy-supportive parenting seemed to encourage the proactive

processes of identity formation and, more specifically, commitment making, identification with

commitment, exploration in breadth, and exploration in depth. Thus, when parents acted in a way

that was encouraging of self-directed exploration in line with their adolescents' personal interests

and values, adolescents were in turn better able to explore different identity possibilities, form

initial commitments, and ultimately identify with and integrate these commitments into their

sense of identity (Ryan & Deci, 2000; Soenens et al., 2007). Furthermore, a lack of autonomy-

supportive parenting seemed to promote ruminative exploration in adolescents. When parents

gave less support to their adolescents to pursue goals and desires that were in line with the

adolescents' personal values, adolescents had a harder time with the developmental process of

identity formation, demonstrating a constant cycle of worry over identity related decisions and an

inability to close the exploration process. In this light, autonomy-supportive parenting appears to

be of particular importance. Not only does its presence promote a positive resolution of this

developmental task, a lack thereof appears to leave adolescents in a state of worry over identity

related issues. This may suggest that it is important for adolescents to feel supported but not

controlled by their parents. When adolescents feel supported it may provide them with a sense of

security to explore identity possibilities, whereas if they feel unsupported or alone with this

difficult task, the number identity related possibilities may be experienced as overwhelming,

leaving adolescents in a state of indecisiveness out of fear of making the wrong decision.

One specific dimension of identity formation that has demonstrated contradictory results

in past studies in regards to parenting is that of exploration in breadth. Past findings have

suggested autonomy supportive parenting to be negatively related to exploration in breadth and

psychologically controlling parenting to be positively related to exploration in breadth (Beyers &
Goossens, 2008; Luyckx, Soenens, Vansteenkiste, et al., 2007). The results of the present study
are not in line with previous empirical results, as parental autonomy support was found to be
related to more exploration in breadth and parental dependency-oriented psychological control to
be unrelated to broad exploration. Furthermore, dependency-oriented psychological control was
found to be positively associated with ruminative exploration. These results are, however, in line
with the recent distinction between a proactive exploration in breadth and a dysfunctional
ruminative exploration (Beyers & Luyckx, 2016; Luyckx et al., 2008). In fact, these results may
provide further clarification as to the once "contradictory" aspects of exploration in breadth,
finding it to be related to both adaptive (e.g., openness) and maladaptive (e.g., anxiety and
depression) outcomes (Kidwell, Dunham, Bacho, Pastorino, & Portes, 1995; Luyckx, Soenens, &
Goossens, 2006). Thus, adolescents whose parents use more manipulative techniques express
more maladaptive exploration, whereas, adolescents whose parents are supportive of their
autonomy express more broad exploration. Given that past studies in which researchers explored
the association between parenting dimensions and exploration in breadth did not make the
distinction between exploration in breadth and ruminative exploration, the results of the present
study provide new empirical support for this distinction in relation to parenting.

Contrary to our hypotheses, only dependency-oriented psychological control and not
achievement-oriented psychological control was related to identity processes. More specifically,
dependency-oriented psychological control was associated with more maladaptive exploration
(i.e., ruminative exploration and reconsideration of commitment) and unassociated with adaptive
exploration. These findings are in contrast to the recent findings of Ingoglia, Inguglia, Liga, and
Lo Coco (2017), whom found achievement-oriented psychological control to be uniquely
associated with identity and unrelated to dependency-oriented psychological control. This may be

partially due to a methodological difference between the two studies. Specifically, Ingoglia and colleagues (2017) consisted of emerging adults for whom the issue of academic success may be central for parents, as compared to adolescents for whom issues may center more so around independence. Parents high in dependency-oriented psychological control typically attempt to encourage their children to maintain a certain dependency on them (Soenens et al., 2010). This type of control would particularly impede adolescents in their individuation process and their ability to be in-touch with their personal desires. Indeed, as the present results suggest, dependency-oriented control seems to especially hamper adolescents' exploration of appropriate identity alternatives, leaving them in a process of continuous self-doubt and reconsideration. In terms of achievement-oriented psychological control, this type of control may be experienced by teenagers as something relatively normative, given the constant pressure they receive from numerous sources (i.e. parents, school, society, etc.) to achieve (Currie et al., 2009; Gilliéron Giroud, 2012) and may become of greater importance during emerging adulthood (Ingoglia et al., 2017). However, these results do not suggest that achievement-oriented psychological control has no effect on adolescents, but rather may be associated with other outcomes, such as internalizing difficulties (Ingoglia et al., 2017).

Overall, our findings suggest two potential pathways relating coparenting with adolescents' personal identity processes: an adaptive and a maladaptive pathway (Cordeiro, Paixao, Lens, Lacante, & Luyckx, 2018). In the adaptive pathway, coparental cooperation promotes autonomy-supportive parenting, which ultimately encourages adolescents to engage in healthy identity formation (i.e., commitment making, identification with commitment, exploration in breadth, and exploration in depth) as well as less ruminative exploration. Thus, when parents are able to work cooperatively creating a feeling of collaboration within the family, parents are better able to support their adolescents volitional functioning, which then ultimately

results in healthier psychological development. Conversely, in the maladaptive pathway, coparental triangulation is carried over and expressed via the use of dependency-oriented psychological control with parents ultimately undermining adolescents' identity formation, and these adolescents then rely on the maladaptive identity processes of ruminative exploration and reconsideration of commitment. Coparents who seek to pull their child into a coalition against the other parent, intrude on their child's intrapsychic development through the use of techniques such as psychological control. These two pathways are in line with Bowen's (1978) postulations and highlight the importance of not only considering families as being composed of the unique parent-child relationship, but also the importance of taking into account the triadic coparental subsystem and the intricacies of interaction between these subsystems on adolescent development. The way in which coparents collaborate in their role of the raising of their child has important consequences on the intrapsychic development of their child. This association between coparenting and adolescent identity formation appears to act via the parenting relationship each parent has with their child.

Limitations and Future Research

Although the results of this study aid in the elucidation of the role of coparenting in identity formation, a number of shortcomings and potential directions for future work must be considered. First, the present study used a single-informant self-report methodology. While self-report has been deemed the most appropriate for the gathering of information concerning internal and subjective processes such as identity, in regards to parenting and coparenting, a multi-informant design may provide a more complete comprehension as to these external processes. Furthermore, the use of a multi-method approach, for example a combination of observational and self-report data, could provide additional information in regards to participant bias.

Second, in our assessment of perceived parenting and coparenting, we did not differentiate between mothers and fathers, but instead instructed adolescents to respond in regards to their mother and/or father in an attempt to get at the general parenting relationship. Authors of previous studies have, however, reported differential effects of mothers and fathers in regards to the relation between parenting and adolescent identity formation (Benson, Harris, & Rogers, 1992; Beyers & Goossens, 2008). Further, although we did not obtain evidence for moderation by gender, some researchers suggest that mothers and fathers potentially have a differential effect on daughters and sons (Beyers & Goossens, 2008). For this reason, future research should have adolescents respond in regard to their mother and father separately.

Another area of future work would be to explore the longitudinal relationship between coparenting and adolescent personal identity processes. Given the cross-sectional nature of the present study, "causal" conclusions cannot be drawn, however, longitudinal examination of these relationships, would permit an examination of these dynamics over time as well a further exploration into the potential bidirectional influences. That is, certain identity processes also may elicit certain parenting and coparenting behaviors (Beyers & Goossens, 2008; Luyckx, Soenens, Goossens, et al., 2007; Luyckx, Soenens, Vansteenkiste, et al., 2007). For instance, more commitment may elicit more parental support (Beyers & Goossens, 2008).

Future research may also focus on specific types of family constellations, such as single-parent or step-parent families. Our sample consisted of mostly two-parent biological families, therefore, one should be cautious about making inferences about other family constellations. Furthermore, families are not only made up of intergenerational relationships (i.e., parent-child), but can also include intragenerational relationships (i.e., between siblings). Exploring the importance of sibling relationships in regards to identity formation would be of great interest

given the potential modeling effect between siblings (Bandura, 1977), which thus far remains

mostly unexplored (see Crocetti et al., 2017).

Conclusion

In conclusion, the present study provides initial support for the importance of coparenting

for adolescent personal identity formation. In the present study, we found that perceived

coparental triangulation was related to ruminative exploration and reconsideration of

commitment through perceived dependency-oriented psychological control. Furthermore,

perceived coparental cooperation was positively related to commitment making, identification

with commitment, exploration in breadth, and exploration in depth and negatively related to

ruminative exploration via perceived autonomy-supportive parenting. Thus, the family

environment is made up of a number of interacting relationship, which taken together can help

elucidate the effect of the family context on adolescent development.

References

Bandura, A. (1977). *Social Learning Theory*. Englewood Cliffs, NJ: Prentice Hall.

Barber, B. K. (1996). Parental psychological control: Revisiting a neglected construct. *Child Development*, *67*(6), 3296–3319. doi:10.2307/1131780

Barber, B. K., & Harmon, E. L. (2002). Violating the self: Parental psychological control of children and adoelscents. In B. K. Barber (Ed.), *Instrusive parenting: How psychological control affects children and adolescents* (pp. 15–52). Washington, DC: APA.

Barber, B. K., Stolz, H. E., & Olsen, J. A. (2005). Parental support, psychological control, and behavioral control: Assessing relevance across time, culture, and method. *Monographs of the Society for Research in Child Development*, *70*(4), 1–147.

Baril, M. E., Crouter, A. C., & McHale, S. M. (2007). Processes linking adolescent well-being, marital love, and coparenting. *Journal of Family Psychology*, *21*(4), 645–654. doi:10.1037/0893-3200.21.4.645

Belsky, J., Crnic, K., & Gable, S. (1995). The determinants of coparenting in families with toddler boys: Spousal differences and daily hassles. *Child Development*, *66*(3), 629–642. doi:10.1111/j.1467-8624.1995.tb00894.x

Belsky, J., Putnam, S., & Crnic, K. (1996). Coparenting, parenting, and early emotional development. *New Directions for Child and Adolescent Development*, *1996*(74), 45–55. doi:10.1002/cd.23219967405

Benson, M. J., Harris, P. B., & Rogers, C. S. (1992). Identity consequences of attachment to mothers and fathers among late adolescents. *Journal of Research on Adolescence*, *2*(3), 187–204.

Beyers, W., & Goossens, L. (2008). Dynamics of perceived parenting and identity formation in late adolescence. *Journal of Adolescence*, *31*(2), 165–184.

doi:10.1016/j.adolescence.2007.04.003

Beyers, W., & Luyckx, K. (2016). Ruminative exploration and reconsideration of commitment as

    risk factors for suboptimal identity development in adolescence and emerging adulthood.

    Journal of Adolescence, *47*, 169–78. doi:10.1016/j.adolescence.2015.10.018

Blatt, S. J. (1974). Levels of object representation in anaclitic and introjective depression. *The*

    Psychoanalytic Study of the Child, *29*, 107–157.

Bonds, D. D., & Gondoli, D. M. (2007). Examining the process by which marital adjustment

    affects maternal warmth: The role of coparenting support as a mediator. *Journal of Family*

    Psychology, *21*(2), 288–296. doi:10.1037/0893-3200.21.2.288

Bowen, M. (1978). *Family therapy in clinical practice*. New York, NY: Rowman & Littlefield

    Publishers, Inc.

Bronfenbrenner, U. (2005). The bioecological theory of human development. In U.

    Bronfenbrenner (Ed.), *Making human beings human: Bioecological perspectives on human*

    development (pp. 3–15). Thousand Oaks, CA: Sage.

Buehler, C., & Welsh, D. (2009). A process model of adolescents' triangulation into parents'

    marital conflict: the role of emotional reactivity. *Journal of Family Psychology*, *23*(2), 167–

    180. doi:10.1037/a0014976

Caldera, Y. M., & Lindsey, E. W. (2006). Coparenting, mother-infant interaction, and infant-

    parent attachment relationships in two-parent families. *Journal of Family Psychology*, *20*(2),

    275–283. doi:10.1037/0893-3200.20.2.275

Cheung, G. W., & Rensvold, R. B. (2002). Evaluating goodness-of-fit indexes for testing

    measurement invariance. *Structural Equation Modeling*, *9*(2), 233–255.

Cordeiro, P. M. G., Paixao, M. P., Lens, W., Lacante, M., & Luyckx, K. (2018). Parenting styles,

    identity development, and adjustment in career transitions: The mediating role of

psychological needs. *Journal of Career Development*, *45*(1), 83–97.

doi:10.1177/0894845316672742

Côté, J. E., & Levine, C. (1988). A critical examination of the ego identity status paradigm.

Developmental Review, *8*(2), 147–184. doi:10.1016/0273-2297(88)90002-0

Cox, M. J., & Paley, B. (2003). Understanding families as systems. *Current Directions in*

Psychological Science, *12*(5), 193–196.

Crocetti, E., Branje, S., Rubini, M., Koot, H. M., & Meeus, W. (2017). Identity processes and

parent-child and sibling relationships in adolescence: A five-wave multi-informant

longitudinal study. *Child Development*, *88*(1), 210–228. doi:10.1111/cdev.12547

Crocetti, E., Klimstra, T. A., Keijsers, L., & Hale, W. W. (2009). Anxiety trajectories and

identity development in adolescence: A five-wave longitudinal study. *Youth and*

Adolescence, *38*, 839–849. doi:10.1007/s10964-008-9302-y

Crocetti, E., & Meeus, W. (2015). The identity statuses: Strengths of a person-centered approach.

In K. C. McLean & M. Syed (Eds.), *The Oxford handbook of identity development* (pp. 97–

114). New York, NY: Oxford University Press.

Crocetti, E., Rubini, M., & Meeus, W. (2008). Capturing the dynamics of identity formation in

various ethnic groups: Development and validation of a three-dimensional model. *Journal of*

Adolescence, *31*, 207–222. doi:10.1016/j.adolescence.2007.09.002

Currie, C., Zanotti, C., Morgan, A., Currie, D., de Looze, M., Roberts, C., … Barnekow, V.

(2009). *Social determinants of health and well-being among young people. Health behavior*

in school-aged children (HSBC) study: Internation report from the 2009/2010 survey.

Health Policy for Children and Adolescents. Copenhagen, Denmark: WHO regional office

for Europe.

Easterbrooks, M. A., & Emde, R. N. (1988). Marital and parent-child relationship: The role of

affect in the family system. In R. A. Hinde & J. S. Hinde (Eds.), *Relationships with families: Mutual influences* (pp. 83–103). New York, NY: Oxford University Press.

Eichas, K., Meca, A., Mongomery, M. J., & Kurtines, W. M. (2015). Identity and positive youth development: Advances in developmental intervention science. In K. C. McLean & M. Syed (Eds.), *The Oxford handbook of identity development* (pp. 337–354). New York, NY: Oxford University Press.

Enders, C. K., & Bandalos, D. L. (2001). The relative performance of full information maximum likelihood estimation for missing data in structural equation models. *Structural Equation Modeling*, *8*(3), 430–457.

Erel, O., & Burman, B. (1995). Interrelatedness of marital relations and parent-child relations: A meta-analytic review. *Psychological Bulletin*, *118*(1), 108–132.

Erikson, E. H. (1968). *Identity: Youth and crisis*. New York, NY: Norton.

Erikson, E. H. (1974). *Dimensions of a new identity*. New York, NY: Norton.

Erikson, E. H. (1980). The problem of ego identity. In E. H. Erikson (Ed.), *Identity and the life cycle* (pp. 108–175). New York, NY: Norton.

Favez, N., & Frascarolo, F. (2013). Le coparentage : composants, implications et thérapie. *Devenir*, *25*(2), 73. doi:10.3917/dev.132.0073

Feinberg, M. E. (2003). The Internal Structure and Ecological Context of Coparenting: A Framework for Research and Intervention. *Parenting*, *3*(2), 95–131. doi:10.1207/S15327922PAR0302_01

Feinberg, M. E., Kan, M. L., & Hetherington, E. M. (2007). The Longitudinal Influence of Coparenting Conflict on Parental Negativity and Adolescent Maladjustment. *Journal of Marriage and Family*, *69*(3), 687–702. doi:10.1111/j.1741-3737.2007.00400.x

Gilliéron Giroud, P. (2012). La pression de l'évaluation sur les réformes scolaires et les pratiques

enseignantes- Le cas du canton de Vaud [The pressure of evaluation on school reforms and

teaching practices- The case of the canton of Vaud]. *Diversité*, *169*, 93–99.

Grolnick, W. S., Deci, E. L., & Ryan, R. M. (1997). Internalization within the family: The self-

determination theory perspective. In J. E. Grusec & L. Kuczynski (Eds.), *Parenting and

children's internalization of values: A handbook of contemporary theory* (pp. 78–99).

Hoboken, NJ: Wiley.

Grolnick, W. S., Ryan, R. M., & Deci, E. L. (1991). Inner resources for school achievement:

Motivational mediators of children's perceptions of their parents. *Journal of Educational

Psychology*, *83*(4), 508–517.

Hambleton, R. K. (2001). The next generation of the ITC Test Translation and Adaptation

Guidelines. *European Journal of Psychological Assessment*, *17*, 164–172.

doi:10.1027//1015-5759.17.3.164

Hu, L., & Bentler, P. (1999). Cutoff criteria for fit indexes in covariance structure analysis:

Conventional criteria versus new alternatives. *Structural Equation Modeling: A

Multidisciplinary Journal*, *6*(1), 1–55. doi:http://dx.doi.org/10.1080/10705519909540118

Iacobucci, D., & Duhachek, A. (2003). Advancing alpha: Measuring reliability with confidence.

Journal of Consumer Psychology, *13*(4), 478–487.

Ingoglia, S., Inguglia, C., Liga, F., & Coco, A. L. (2017). Associations between perceived

parental psychological control and internalizing difficulties in emerging adulthood: The role

of identity. *Journal of Social and Personal Relationships*, *34*(8), 1227–1240.

doi:10.1177/0265407516670760

Jones, D. J., Shaffer, A., Forehand, R., Brody, G. H., & Armistead, L. P. (2003). Coparent

conflict in single mother-headed African American families: Do parenting skills serve as a

mediator or moderator of child psychosocial adjustment? *Behavior Therapy*, *34*(2), 259–

272. doi:10.1016/S0005-7894(03)80016-3

Kidwell, J. S., Dunham, R. M., Bacho, R. A., Pastorino, E., & Portes, P. R. (1995). Adolescent identity exploration: A test of Erikson's theory of transitional crisis. *Adolescence*, *30*(120), 785–793.

Kroger, J. (2004). *Identity in adolescence: The balance between self and other* (Second). New York, NY: Routledge.

Luyckx, K., Goossens, L., & Soenens, B. (2006). A developmental contextual perspective on identity construction in emerging adulthood: change dynamics in commitment formation and commitment evaluation. *Developmental Psychology*, *42*(2), 366–380. doi:10.1037/0012-1649.42.2.366

Luyckx, K., Goossens, L., Soenens, B., & Beyers, W. (2006). Unpacking commitment and exploration: Preliminary validation of an integrative model of late adolescent identity formation. *Journal of Adolescence*, *29*, 361–378. doi:10.1016/j.adolescence.2005.03.008

Luyckx, K., Schwartz, S. J., Berzonsky, M. D., Soenens, B., Vansteenkiste, M., Smits, I., & Goossens, L. (2008). Capturing ruminative exploration: Extending the four-dimensional model of identity formation in late adolescence. *Journal of Research in Personality*, *42*, 58–82. doi:10.1016/j.jrp.2007.04.004

Luyckx, K., Schwartz, S. J., Goossens, J., Beyers, W., & Missotten, L. (2011). Processes of personal identity formation and evaluation. In S. J. Schwartz, K. Luyckx, & V. L. Vignoles (Eds.), *Handbook of identity theory and research* (pp. 77–98). New York, NY: Springer.

Luyckx, K., Soenens, B., & Goossens, L. (2006). The personality-identity interplay in emerging adult women: Convergent findings from complementary analyses. *European Journal of Personality*, *20*, 195–215. doi:10.1002/per.579

Luyckx, K., Soenens, B., Goossens, L., & Vansteenkiste, M. (2007). Parenting, Identity

Formation, and College Adjustment: A Mediation Model with Longitudinal Data. *Identity*,

7(4), 309–330. doi:10.1080/15283480701600785

Luyckx, K., Soenens, B., Vansteenkiste, M., Goossens, L., & Berzonsky, M. D. (2007). Parental

psychological control and dimensions of identity formation in emerging adulthood. *Journal*

of Family Psychology, *21*(3), 546–550. doi:10.1037/0893-3200.21.3.546 ·

Luyckx, K., Vansteenkiste, M., & Goossens, L. (2009). Basic need satisfaction and identity

formation: Bridging self-determination theory and process-oriented identity research.

Journal of Counseling, *56*(2), 276–288. doi:10.1037/a0015349

Mantzouranis, G., Zimmermann, G., Biermann Mahaim, E., & Favez, N. (2012). A further

examination of the distinction between dependency-oriented and achievement-oriented

parental psychological control: Psychometric properties of the. *Journal of Child and Family*

Studies, *21*(5), 726–733. doi:10.1007/s10826-011-9525-5

Marcia, J. E. (1966). Development and validation of ego-identity status. *Journal of Personality*

and Social Psychology, *3*(5), 551–558.

Margolin, G., Gordis, E. B., & John, R. S. (2001). Coparenting: A link between marital conflict

and parenting in two-parent families. *Journal of Family Psychology*, *15*(1), 3–21.

doi:10.1037//0893-3200.15.1.3

Marsh, H. W., Hau, K. T., & Wen, Z. (2004). In search of golden rules: Comment on hypothesis-

testing approaches to setting cutoff values for fit indexes and dangers in overgeneralizing Hu

and Bentler's (1999) findings. *Structural Equation Modeling*, *11*(1), 320–341.

McHale, J. P. (1997). Coparenting: A conceptual and clinical examination of family systems.

Family Process, *36*, 183–201.

McHale, J. P. (2007). *Charting the bumpy road of coparenthood: Understanding the challenges*

of family life. Washington, DC: Zero to Three.

McHale, J. P., & Rasmussen, J. L. (1998). Coparental and family group-level dynamics during infancy: Early family precursors of child and family functioning during preschool. *Development and*, *10*, 39–59.

Minuchin, P. (1985). Families and individual development: Provocations from the field of family therapy. *Child Development*, *56*, 289–302.

Minuchin, S. (1974). *Families and family therapy*. Cambridge, MA: Harvard University Press.

Muthén, L. K., & Muthén, B. O. (2012). *Mplus User's Guide (7th edn)*. Los Angeles, CA: Muthén & Muthén.

Perosa, L. M., Perosa, S. L., & Tam, H. P. (2002). Intergenerational systems theory and identity development in young adult women. *Journal of Adolescent Research*, *17*(3), 235–259. doi:10.1177/0743558402173002

Pettit, G. S., Laird, R. D., Dodge, K. A., & Bates, J. E. (2001). Antecedents and behavior-problem outcomes of parental monitoring and psychological control in early adolescence. *Child*, *72*(2), 583–598.

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, *55*(1), 68–78. doi:10.1037110003-066X.55.1.68

Sartor, C. E., & Youniss, J. (2002). The relationship between positive parental involvement and identity acheivement during adolescence. *Adolescence*, *37*(146), 221–234.

Schoppe-Sullivan, S. J., Weldon, A. H., Claire Cook, J., Davis, E. F., & Buckley, C. K. (2009). Coparenting behavior moderates longitudinal relations between effortful control and preschool children's externalizing behavior. *Journal of Child*, *50*(6), 698–706.

doi:10.1111/j.1469-7610.2008.02009.x.

Schwartz, S. J., Beyers, W., Luyckx, K., Soenens, B., Zamboanga, B. L., Forthun, L. F., …
Waterman, A. S. (2011). Examining the light and dark sides of emerging adults' identity: a
study of identity status differences in positive and negative psychosocial functioning.
Journal of Youth and Adolescence, *40*(7), 839–59. doi:10.1007/s10964-010-9606-6

Shook, S. E., Jones, D. J., Forehand, R., Dorsey, S., & Brody, G. H. (2010). The mother–coparent
relationship and youth adjustment: A study of African American single-mother families.
Journal of Family, *24*(3), 243–251. doi:10.1037/a0019630

Skhirtladze, N., Javakhishvili, N., Schwartz, S. J., Beyers, W., & Luyckx, K. (2016). Identity
processes and statuses in post-Soviet Georgia: Exploration processes operate differently.
Journal of Adolescence, *47*, 197–209. doi:10.1016/j.adolescence.2015.08.006

Smits, I., Soenens, B., Luyckx, K., Duriez, B., Berzonsky, M. D., & Goossens, L. (2008).
Perceived parenting dimensions and identity styles: Exploring the socialization of
adolescents' processing of identity-relevant information. *Journal of Adolescence*, *31*(2),
151–164. doi:10.1016/j.adolescence.2007.08.007

Soenens, B., & Vansteenkiste, M. (2010). A theoretical upgrade of the concept of parental
psychological control: Proposing new insights on the basis of self-determination theory.
Developmental Review, *30*(1), 74–99. doi:10.1016/j.dr.2009.11.001

Soenens, B., Vansteenkiste, M., Lens, W., Luyckx, K., Goossens, L., & Beyers, W. (2007).
Conceptualizing parental autonomy support: Adolescent perceptions of promotion of
independence versus promotion of volitional functioning. *Developmental Psychology*, *43*(3),
633–646. doi:10.1037/0012-1649.43.3.633

Soenens, B., Vansteenkiste, M., & Luyten, P. (2010). Toward a domain-specific approach to the
study of parental psychological control: Distinguishing between dependency-oriented and

achievement-oriented psychological control. *Journal of Personality*, *78*(1), 217–256.

doi:10.1111/j.1467-6494.2009.00614.x

Soenens, B., Vansteenkiste, M., Luyten, P., & Duriez, B. (2005). Maladaptive perfectionistic

self-representations: The mediational link between psychological control and adjustment.

Personality and Individual Differences, *38*, 487–498. doi:10.1016/j.paid.2004.05.008

Steinberg, L., & Silk, J. S. (2002). Parenting adolescents. In M. H. Bornstein (Ed.), *Handbook of

Parenting 2nd Edition, Vol 1 Children and Parenting* (pp. 103–133). Mahwah, NJ: Erlbaum.

Teubert, D., & Pinquart, M. (2010). The association between coparenting and child adjustment:

A meta-analysis. *Parenting: Science and Practice*, *10*, 286–307.

doi:10.1080/15295192.2010.492040

Teubert, D., & Pinquart, M. (2011a). The Coparenting Inventory for Parents and Adolescents

(CI-PA): Reliability and validity. *European Journal of Psychological Assessment*, *27*(3),

206–215. doi:10.1027/1015-5759/a000068

Teubert, D., & Pinquart, M. (2011b). The link between coparenting, parenting, and adolescent

life satisfaction. *Family Science*, *2*(4), 221–229. doi:10.1080/19424620.2012.666655

van Hoof, A. (1999). The identity status field re-reviewed: An update of unresolved and

neglected Issues with a view on some alternative approaches. *Developmental Review*, *19*(4),

497–556. doi:10.1006/drev.1999.0484

Waterman, A. S. (2007). Doing well: The relationship of identity status to three conceptions of

well-being. *Identity: An International Journal of Theory and Research*, *7*(4), 289–307.

doi:10.1080/15283480701600769

Waterman, A. S., Schwartz, S. J., Hardy, S. A., Kim, S. Y., Lee, R. M., Armenta, B. E., …

Agocha, V. B. (2013). Good Choices, Poor Choices: Relationship Between the Quality of

Identity Commitments and Psychosocial Functioning. *Emerging Adulthood*, *1*(3), 163–174.

doi:10.1177/2167696813484004

Zimmermann, G., Lannegrand-Willems, L., Safont-Mottay, C., & Cannard, C. (2015). Testing

new identity models and processes in French-speaking adolescents and emerging adults

students. *Journal of Youth and Adolescence, 44*(1), 127–141. doi:10.1007/s10964-013-0005-

7

Table 1

Means, Standard Deviations, and Correlations Among Variables

	Mean	SD	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Cooperation	3.90	1.05										
2. Triangulation	2.19	1.11	-.38**									
3. AS	3.76	.64	.36**	-.26**								
4. DPC	2.38	.71	-.16**	.31**	-.34**							
5.APC	1.89	.86	-.27**	.30**	-.55**	.57**						
6. CM	3.80	.86	.11**	-.06*	.21**	-.04	-.08**					
7. IC	3.84	.72	.14**	-.08**	.21**	-.04	-.08**	.66**				
8. EB	3.01	.97	.07*	.07*	.13**	.03	-.02	.22**	.25**			
9. ED	3.63	.80	.13**	.02	.27**	-.03	-.13**	.40**	.40*	.34**		
10. RE	3.64	.85	-.10**	.11**	-.15**	.13**	.13**	-.50**	-.42**	.19**	-.10**	
11. RC	3.21	.90	-.03	.09**	-.04	.16**	.12**	-.02	-.02	.28**	.25**	.39**

Note. CM= commitment making; IC= identification with commitment; EB= exploration in breadth; RE= ruminative exploration; ED= exploration in depth; RC= reconsideration of commitment; AS= autonomy support; DPC= dependency oriented psychological control; APC= achievement oriented psychological control. *$p < .05$; **$p < .01$.

Table 2

Mean Differences on Study Variables, as a Function of Gender and Family Structure

	Gender			Family Structure		
	Male	Female	$F(1, 977)$	Intact	Non-Intact	$F(1,977)$
Cooperation	3.68	3.68	.01	3.24	4.12	152.61***
Triangulation	2.23	2.33	1.88	2.46	2.10	20.30***
AS	3.78	3.70	1.53	3.72	3.80	2.89
DPC	2.41	2.36	1.63	2.43	2.34	3.43
APC	1.97	1.83	6.63*	1.96	1.83	4.72*
CM	3.87	3.75	4.93*	3.79	3.83	.39
IC	3.73	3.50	20.21***	3.56	3.66	3.31
EB	3.78	3.90	7.57**	3.83	3.85	.09
ED	3.55	3.67	4.81*	3.55	3.66	3.34
RE	2.81	3.18	36.98***	3.02	2.97	.56
RC	3.04	3.35	30.98***	3.20	3.19	.07

Note. CM= commitment making; IC= identification with commitment; EB= exploration in breadth; RE= ruminative exploration; ED[a]= exploration in depth; RC= reconsideration of commitment; AS= autonomy support; DPC= dependency oriented psychological control; APC= achievement oriented psychological control. *p < .05; **p < .01; ***p < .001.
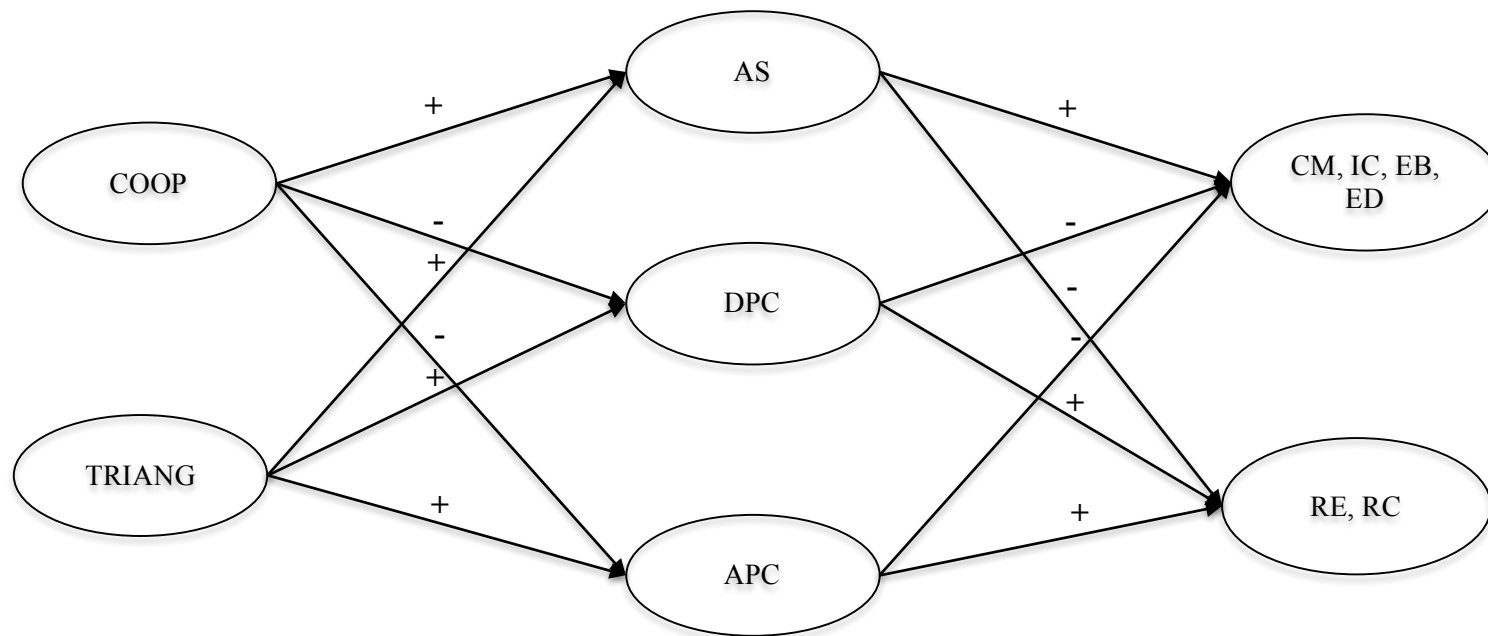
Figure 1. The hypothesized general model relating coparenting (cooperation and triangulation), parenting (autonomy support (AS), dependency oriented psychological control (DPC), and achievement oriented psychological control (APC)), and identity dimensions (commitment making (CM), identification with commitments (IC), exploration in breadth (EB), ruminative exploration (RE), exploration in depth (ED), and reconsideration of commitment (RC)). A "+" sign denotes a hypothesized positive relationship and a "-" denotes a hypothesized negative relationship. In the interest of clarity, adaptive and maladaptive dimensions of identity have been grouped together, however, in the structural model, these relationships were tested separately.
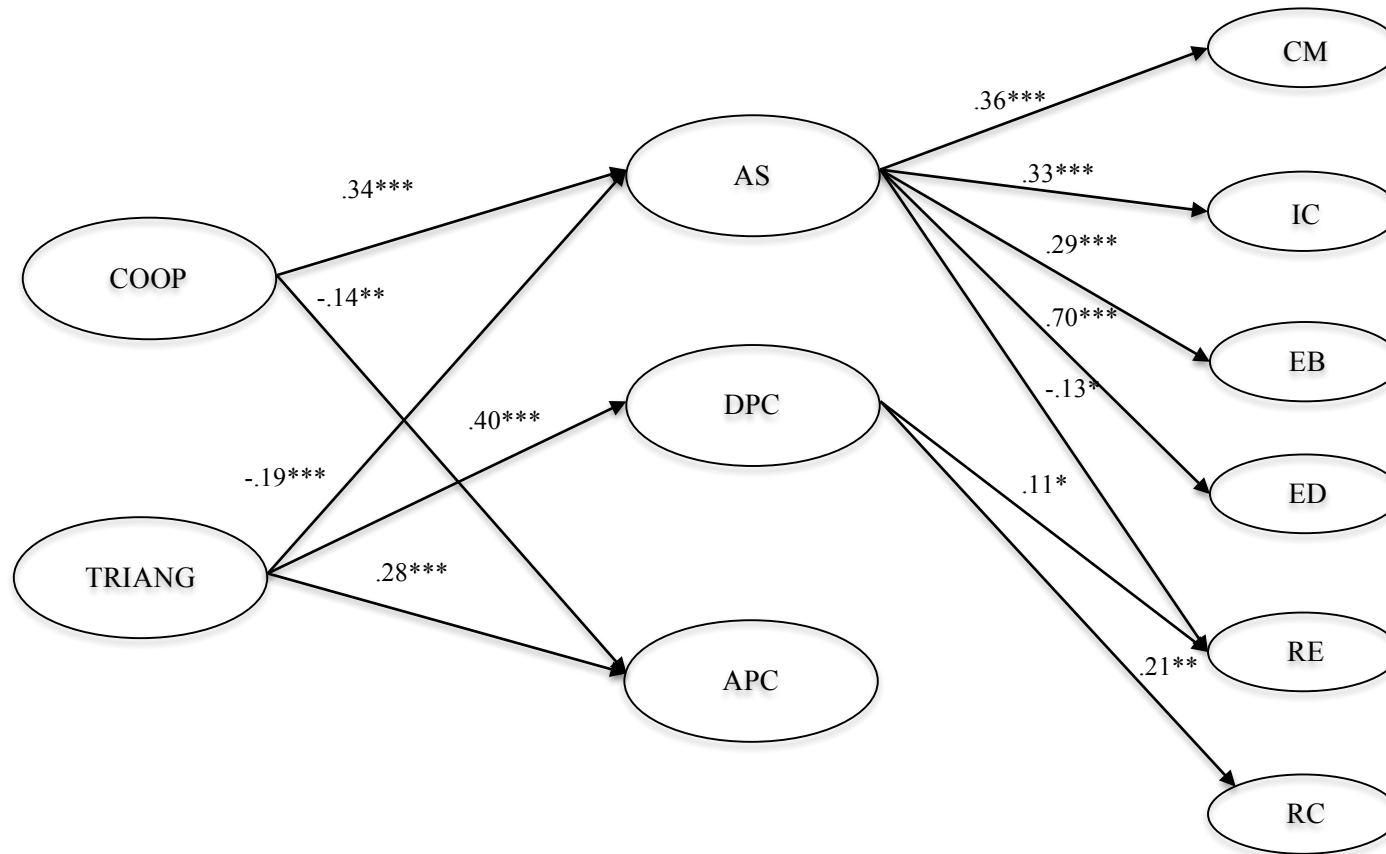
Figure 2. Structural model of the relationship between coparenting (cooperation and triangulation), parenting (autonomy support (AS), dependency oriented psychological control (DPC), and achievement oriented psychological control (APC)), and identity dimensions (commitment making (CM), identification with commitments (IC), exploration in breadth (EB), ruminative exploration (RE), exploration in depth (ED), and reconsideration of commitment (RC)). *p* < .05; **p* < .01; ***p* < .001.