



Navigating the ups and downs: Peer and family autonomy support during personal goals and crises on identity development

Élodie C. Audet ^a, Shelby L. Levine ^a, Anne C. Holding^a, Theodore A. Powers^b and Richard Koestner^a

^aDepartment of Psychology, McGill University, Montreal, Canada; ^bDepartment of Psychology, University of Massachusetts, Dartmouth, United States

ABSTRACT

Forming an identity is a critical developmental task that is affected by important people in an individual's social environment, such as friends and family members. This investigation compared whether autonomy support from different sources (family/peer) given in distinct contexts (personal goals/crises) was associated with identity exploration and commitment in university students over an 8-month academic year. The study used a five-wave prospective longitudinal design with identity measured at baseline and termination. Participants were asked to name two individuals who supported them during personal goal pursuits and two who supported them during times of crisis. Supporters were sorted into convoys of family and peers. Results showed that perceiving autonomy support during crises from both sources was associated with an increase in identity exploration, suggesting that family members and peers may play an important role during crises and in promoting identity exploration. By contrast, only family autonomy support for goals was related to greater identity commitment, suggesting that perceiving autonomy support from family in distinct circumstances may encourage different aspects of identity development. Basic need satisfaction mediated the relation between family autonomy support for goals and identity commitment and between family (but not peer) autonomy support during crises and identity exploration.

ARTICLE HISTORY


Received 21 September 2020
Accepted 2 June 2021

KEYWORDS

Personal goals and crises;
family and peer support;
identity development; need
satisfaction; self-
determination theory

Forming an identity is an important developmental milestone that may be influenced by close others, such as family and friends. During emerging adulthood, a distinct time between 18 and 25 years of age, individuals undertake important choices about what sort of person they aspire to be (Arnett, 2000). Indeed, a core task of this period is to form a personal identity, which entails developing long-term motivational commitments to values, life projects, and goals (McAdams & Zapata-Gietl, 2015). This undertaking may be challenging because it involves exploring solid commitments in many life domains

CONTACT Élodie C. Audet  elodie.audet@mail.mcgill.ca  Clinical Psychology, Department of Psychology, McGill University, 2001 Avenue McGill College, Montréal, Québec H3A 1G1, Canada

 Supplemental data for this article can be accessed [here](#).

© 2021 Informa UK Limited, trading as Taylor & Francis Group

(Arnett, 2015). However, little is known about how specific social contexts may aid this development.

Drawing upon self-determination theory (SDT; Deci & Ryan, 2000; R. M. Ryan & Deci, 2017), the current study aimed to compare autonomy support from family and peer convoys during personal goal pursuits and crises among emerging adults, and examined whether such support influenced identity exploration and commitment. Research has demonstrated that perceiving autonomy support from close others is related to feeling like your ideal and authentic self (W. S. Ryan & Ryan, 2019). Furthermore, perceiving autonomy support from family members or peers may have a different impact on university students' growth (Audet et al., in press; Koestner et al., 2020). Comparing across convoys provides a broad perspective of social relationships and may explain why some types of relationships appear to be more helpful in distinct circumstances (Fuller, 2020).

Identity development

Having a coherent sense of identity is essential because it helps in integrating varied aspects of daily experiences and provides a sense of meaning and direction in life (Schwartz et al., 2005). Marcia (1966) extended Erikson's (1968) theory of identity and psychosocial development by proposing two distinct parts of identity achievement: exploration and commitment. Exploration can be described as the extent to which individuals engage in thinking and trying out diverse roles and life plans (Kroger & Marcia, 2011), whereas commitment can be determined by the degree to which firm choices about a way of defining the self have been made (McLean et al., 2016). The present study focuses exclusively on the identity processes of exploration and commitment, for these have frequently been studied as mechanisms of identity development (Kroger & Marcia, 2011).

Developing an identity is a repetitive process in which commitments are formed and revised over time (Crocetti, 2017), and the exploration of various life domains (e.g., education, beliefs, love, or values) is generally perceived as adaptive because it facilitates the strengthening of identity commitments (Galanaki & Sideridis, 2019; Luyckx et al., 2011). Still, prolonged exploration can be related to psychological distress (Schwartz et al., 2009). As such, healthy identity development is associated with the exploration of one's potential and committing to a set of coherent behaviors, values, and goals (La Guardia, 2009). Indeed, forming an identity is closely associated with goal pursuits (Kvasková et al., 2020; Luyckx et al., 2008; Marttinen et al., 2016). Taken together, it is important to examine the possible mechanisms promoting these developmental processes.

Family and peer convoys

Social environments influence identity development because they provide the possibility to explore, reinforce, or abandon different sets of identities (Crocetti et al., 2017). Consequently, supportive families and peers may help emerging adults' identities grow to their fullest potential. A fair amount of literature has demonstrated that family relationships are associated with identity formation (Arseth et al., 2009; Meeus et al., 2005, 2002). Furthermore, autonomy-supportive parents were found to encourage self-endorsed

commitments, such that children started to behave according to their own authentic and self-initiated values and goals (Grolnick, 2003; Soenens & Vansteenkiste, 2011).

Nevertheless, peers may likewise play a significant role in identity formation because interpersonal feedback is most valued when it comes from close others (Schwartz, 2001). As such, individuals may use their friends' perspectives when exploring their sense of identity (Sugimura & Shimizu, 2011). Not surprisingly, peers are generally those with whom emerging adults spend most of their time. Their greater proximity, availability, and similar life experiences may lead them to share their emotional problems and concerns. Indeed, peer support may be especially helpful during times of adversities (Yearwood et al., 2019). Peers may thus be a valuable and accessible source of support when facing crises.

Autonomy support

Autonomy support is defined as support that increases volition or choice in a way that encourages empathic perspective-taking, thus ensuring that the other feels understood (R. M. Ryan & Deci, 2017). It is a central component of encouragement and connection within any relationship and is a facilitator of personal growth in emerging adulthood (Koestner et al., 2020). However, autonomy support also promotes perseverance when faced with obstacles (Deci & Ryan, 2000). The current study looks at two life contexts in which people may benefit from autonomy support: when actively pursuing goals (Koestner et al., 2020; Levine et al., 2021) and when coping with life's adversities (Feeney & Collins, 2015). Research suggests that perceiving autonomy support is particularly helpful during personal goal pursuits (Koestner et al., 2012, 2015) and may act as a resilience factor through adversity (Levine et al., 2020).

In addition, autonomy support may be beneficial for identity development during emerging adulthood because external control can elicit compensatory identities, such as putting up a façade (La Guardia, 2009), or can result in concealing aspects of oneself that are believed to be devaluated by others (W. S. Ryan & Ryan, 2019). Autonomy-supportive relationships may thus play a role in identity development during times of goals and crises since people are more honest, open, and willing to turn to each other when receiving autonomy support (Ryan et al., 2005; Uysal et al., 2012; Wuyts et al., 2018).

How may autonomy support lead to greater identity exploration and commitment? There is considerable evidence that autonomy support enhances all three of the basic psychological needs of *autonomy*, *competence*, and *relatedness*, which are considered essential for individuals' health, well-being, and integrated functioning of the self (Soenens & Vansteenkiste, 2011). Many studies have established that individuals display signs of adaptive and healthy development when their three needs are satisfied (R. M. Ryan & Deci, 2017; Soenens & Vansteenkiste, 2011; Vansteenkiste et al., 2020).

Self-determination theory

SDT provides a useful framework for understanding interpersonal support, development, personality, and motivation (R. M. Ryan & Deci, 2017). It seeks to understand human flourishing and how it can be facilitated or diminished by specific social conditions. As previously mentioned, three needs are thought of as psychological "nutrients" that are

vital for an individual's development and growth (R. M. Ryan & Deci, 2017; Vansteenkiste et al., 2020). The need for *autonomy* refers to feeling ownership over behaviors and experiences (deCharms, 1968). *Relatedness* refers to the need to feel socially connected with others, to care for them, and to feel cared for in return (Baumeister & Leary, 1995). Finally, *competence* refers to the need to feel effective and capable of mastering ones' environment (Bandura, 1977; White, 1959). SDT offers a useful framework for understanding the extent to which personal goals, behaviors, and identities are endorsed and congruent with one's true self (R. M. Ryan & Deci, 2017).

Importantly, the satisfaction of all three needs influenced identity formation over time (Luyckx et al., 2009). Specifically, Luyckx et al. (2009) found that satisfaction of one's basic psychological needs helped individuals make identity choices that they fully endorsed and identified with. Furthermore, research is repeatedly confirming that need-supportive environments encourage adaptive identity formation (Soenens & Vansteenkiste, 2011). Therefore, we examined whether the relationships between perceiving autonomy support and identity development may be explained by the satisfaction of one's basic psychological needs.

Present investigation

The present study investigates whether autonomy support given in different contexts (personal goals versus crises) and from different sources (family members versus peers) were related to identity exploration and commitment. The research consists of a multi-wave, prospective longitudinal study of university students over an 8-month academic year. Based on prior research, it was hypothesized that perceiving autonomy support from both sources would influence identity development (Soenens & Vansteenkiste, 2011; Vansteenkiste et al., 2020). It was further hypothesized that autonomy support from family would have a greater influence during personal goals than similar support from peers (Audet et al., in press; Koestner et al., 2020). Because having adequate social resources aid emerging adults when they face important difficulties (Azmitia et al., 2013; Dennis et al., 2005; Milevsky, 2005), we hypothesized that autonomy support from both convoys would influence identity development during crises. Given the exploratory nature of the study, we did not formulate hypotheses regarding which sources of autonomy support or contexts would be most important for identity commitment or exploration. Finally, previous findings showed that identity development was related to need satisfaction (Luyckx et al., 2009) and that need satisfaction fosters adaptive identity construction (Soenens & Vansteenkiste, 2011). Thus, process analyses were conducted to test whether satisfaction of the three basic psychological needs mediated the association between autonomy support and identity development.¹

Method

Participants and procedure

A five-wave prospective longitudinal study was conducted across a school year (September through April) and included a total of 425 McGill University students (77% female; mean age 20.24, SD = 2.36). The ethnic background of our sample was

predominantly of European descent (70%) but included 20% Asian descent, 5% Hispanic, 3% Middle Eastern descent, and 2% African descent. Participants were recruited through online advertisements and posters placed on the university campus and were compensated CAD\$50 for completing the entire study, or partial compensation for partial completion. The study was approved by the University Research and Ethics Board.

All measures were taken through the online survey software Qualtrics. Questionnaires were administered to participants at five different times over the academic year. Surveys required approximately 15 to 45 minutes to complete and were between 18 and 85 questions long. The first survey (T1) was conducted at the beginning of the school year and participants were asked to indicate three goals they were pursuing. The present study focuses on data collected in September (T1), in the middle of October (T2), at the end of December (T3), in the middle of February (T4), and at the end of the school year in April (T5). Participants had one week to complete each survey and were sent two reminders. Retention rates were as follows: T2, 97%; T3, 92%; T4, 93%; T5, 88%.

Table 1 provides the schedule of the assessments for each variable across the five-wave longitudinal study. We only used the crisis support measure from T3 in the main analyses because we wanted to ensure it was assessed before the main outcomes.

Measures

Family socioeconomic status

Participants reported the highest education level attained by each parent as well as their occupations. Occupations were coded on a 1–5 scale of status with 1 representing unemployed, 3 representing sales or technician, and 5 representing professional positions such as medical doctor or lawyer. Educational attainment was significantly positively related to the status of occupations, $r = .48$. We standardized the education and occupation measures and calculated a mean across indicators and the two parents. The resulting composite was intended to capture the family's socioeconomic status (SES) and had a reliability of $\alpha = .74$.

Identifying supporters

University students were asked to identify their supporters during personal goals and crises. At T2, participants nominated two people who supported them in their goal pursuits. At T3, participants were asked what struggles they had experienced during the semester and to name two people who supported them in coping with these struggles. Following previous research on social support convoys (Antonucci et al., 2011) and autonomy goal support (Koestner et al., 2020), we combined parents (i.e., dad, step-mother) and siblings (i.e., sister, stepbrother) to form a single category called “family”.

Table 1. Schedule of assessments across the five-wave study.

	T1	T2	T3	T4	T5
1. Need satisfaction	X				X
2. Identity exploration	X				X
3. Identity commitment	X				X
4. Goal support		X		X	
5. Crisis support			X		X

Friends and romantic partners were combined to form a single category called “peer”. Other individuals such as coaches, teachers, or counselors were infrequent and not included in our analyses.

Goal support

Goal support was assessed at T2 and T4. We calculated means across the two-time points and supporters to create an average perceived support score for the academic year. Autonomy goal support scales included 3 items for each goal (Koestner et al., 2012). An example of an item is “I feel that this person understands how I see things with my goals”. Each set of items had options scaling from 1 (*strongly disagree*) to 7 (*strongly agree*). Participants were reminded about their supporters and their goals over the academic year. Goal supporters had the following breakdown: 43% parents, 36% friends, 14% romantic partners, 6% siblings, and 1% other (i.e., coach, boss). The reliability of the goal autonomy support scale was $\alpha = .85$. The support at the two-time points was significantly positively related to each other, $r = .62$.

Crisis support

Crisis support was assessed at T3 and T5 but only the T3 measure was used in the analyses. Crisis support was assessed at the end of each semester for two reasons: (1) to allow more time for crises to emerge and (2) to separate the support of crises from the support of goals lest the assessment contaminates each other. Participants first entered two people who supported them through “times of struggles”. They also indicated their relationship (i.e., mother, friend) which we re-coded as family or peer. Only the T3 measure was used because the T5 measure was concurrent with the assessment of the outcome measures. At T3, a mean was calculated between the two family supporters, $r = .67$, and between the two peer supporters, $r = .57$.

Crisis support was measured with 3 items using a seven-point scale adapted from the goal support scale. The scale ranged from 1 (*strongly disagree*) to 7 (*strongly agree*). An example of autonomy support is “I feel that this person understands how I see things with respect to my problems”. Participants also indicated the area in which they had experienced struggles. 76% indicated struggle regarding academics, 50% regarding romantic relationships (or lack thereof), 39% regarding friendships, 36% regarding career, 31% regarding health, and 26% regarding family. Crisis supporters had the following breakdown: 32% parents, 38% friends, 14% romantic partners, 7% siblings, and 9% other (i.e., coach, boss).

Basic need satisfaction

The Balanced Measure of Psychological Needs scale (BMPN; Sheldon & Hilpert, 2012) was used to assess psychological need satisfaction and frustration at baseline (T1) and T5. Participants were asked to rate their agreement with a series of statements on a seven-point scale ranging from 1 (*not at all true*) to 7 (*very true*). Need satisfaction and frustration were each assessed with 9 items (3 statements for each need). For example, the item “I was free to do things my own way” was used to assess autonomy, the item “I felt close and connected with other people who are important to me” was used to assess relatedness, and the item “I experienced some kind of failure or was unable to do well at something” was used to assess competence. We reverse scored the need frustration items and

calculated a means for autonomy, relatedness, and competence. We then calculated a mean across all three needs to have a general measure of need satisfaction in participants' lives. The reliability of the BMPN scale was $\alpha = .75$.

Identity exploration and commitment

The Ego Identity Process Questionnaire (EIPQ; Balistreri et al., 1995; Luyckx et al., 2006) was assessed at baseline (T1) and T5. EIPQ separately assesses commitment and exploration in four ideological (occupation, religion, politics, and values) and four interpersonal (gender roles, friendships, family, and dating) domains. All items were answered on a six-point scale, ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). Sample items were "I have definitely decided on the occupation I want to pursue" (commitment), "I think what I look for in a friend could change in the future" (reversed coded; commitment), "I have tried to learn about different occupational fields to find the best one for me" (exploration), and "I have never questioned my views concerning what kind of friend is best for me" (reversed coded; exploration). Out of the 32 items, 20 were used due to reasons of brevity (the items relating to religion, politics, and gender roles were excluded). Means for identity exploration and commitment were calculated at T1 and T5. The commitment and exploration scales had acceptable internal reliabilities, $\alpha = .72$.

Analytic strategy

All analyses were conducted with SPSS statistics software (Version 26). Our preliminary results present the means and correlations for the key variables in the study. We also conducted paired sample *t*-tests to inform the reader about the key variables (autonomy support, identity commitment, and identity exploration). The central results present hierarchical multiple regressions in which the T5 identity measures (commitment/exploration) were regressed on (1) their baseline score, (2) the sociodemographic factors of gender, age, and SES, and (3) each of the specific forms of support (family/peer and goal/crisis support). Taking into account the relatively large sample size and small amount of missing data (6%), we handled the missing data by using the listwise deletion procedure (Graham, 2009).

If autonomy support was significantly positively related to identity development, we planned to examine how psychological need satisfaction influenced identity development at the end of the academic year. Mediation analyses would be performed to test whether need satisfaction mediated the relation between autonomy support and identity development on the associations that proved to be significant. We would use the method outlined by Hayes (2012) to test these mediation models by estimating 95% confidence intervals (CI) of the indirect effect using bootstrap resampling ($k = 10,000$) procedures.

Results

Preliminary results

First, we examined the frequency of patterns of support for the 425 participants in the study. Only 32% had a "balanced" support profile, with one family member and one peer providing both goal and crisis support. 13% of participants had all peer supporters

whereas 10% had all family supporters. 15% had mostly peer supporters (i.e., three out of four) and 13% had mostly family supporters. 10% of the sample missed either the T2 or T3 support assessments. To maximize statistical power, we conducted the analyses with one type of support at a time.

Data screening found the residuals and variables of interest to be normally distributed, making the variables suitable for regression analyses. Table 2 shows the means and standard deviations between all the key variables of the study.

Paired *t*-tests revealed that participants perceived significantly more autonomy support from family for goals than for crises, $t = 6.30, p < .001$. Participants perceived peers as giving marginally higher autonomy support for crises than for goals, $t = 1.91, p = .060$.

There was no change in the level of identity commitment over the school year, $t = -.76, p = .449$, nor in the level of identity exploration, $t = 1.62, p = .105$. Change in identity commitment over the year was significantly positively related to change in exploration, $r = .25, p < .001$. Paired *t*-tests indicated that need satisfaction was unchanged over the school year, $t = 1.14, p = .255$.

Table 3 presents the correlations between the support variables and the residual change scores for the identity and need satisfaction measures. The various forms of support were significantly positively related. Family goal support was significantly positively related to identity commitment. Peer crisis support was significantly positively

Table 2. Means and standard deviations among all measures.

	n	M	SD
Total of autonomy support for goals			
1. Family	325	5.52	1.06
2. Peer	304	5.88	0.89
Total of autonomy support for crisis			
1. Family	238	6.04	0.77
2. Peer	316	6.20	0.76
Dependent variables			
T1 Identity commitment	424	3.73	0.91
T5 Identity commitment	376	3.78	0.89
T1 Identity exploration	424	4.05	0.76
T5 Identity exploration	376	4.10	0.80
Mediator variables			
T1 Need satisfaction	424	4.46	0.75
T5 Need satisfaction	376	4.40	0.92

T1 = baseline assessment; T5 = end of year assessment; From $n = 425$.

Table 3. Correlations among support variables and residual change on outcomes.

Variables	1.	2.	3.	4.	5.	6.
Autonomy goal support						
1. Family	-					
2. Peer	.17**	-				
Autonomy crisis support						
3. Family	.46**	.23**	-			
4. Peer	.14*	.45**	.38**	-		
Dependent variables						
5. Identity commitment	.14*	.08	.09	.07	-	
6. Identity exploration	.02	.11	.22**	.13*	.25**	-
Mediator variables						
7. Need satisfaction	.22*	.04	.13*	.13*	.25**	.13*

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

related to identity exploration. Both family support measures (goal/crisis) were significantly positively related to need satisfaction, whereas only peer crisis support (not goal) was significantly positively related to need satisfaction. Identity commitment and exploration were significantly positively related. Need satisfaction was significantly positively associated with identity commitment and identity exploration. The results of more precise regression analyses will be presented in the main results section.

Main analyses

The results of the hierarchical multiple regression analyses for identity commitment are presented in Table 4 (baseline levels of commitment along with the sociodemographic factors were controlled for), with the specific form of support (family/peer and goal/crisis) varying in the final step. For convenience, all of the support results are presented in a single table.

Baseline identity commitment was highly related to identity commitment at the end of the academic year. None of the demographic variables were associated with identity commitment at the end of the year. Only family goal support was significantly positively related to identity commitment at the end of the year.

The results of the hierarchical multiple regression analyses for identity exploration are presented in Table 5 (baseline levels of exploration along with the sociodemographic

Table 4. Hierarchical multiple regression analyses depicting changes in identity commitment by support measures.

Variables	<i>b</i>	<i>t</i>	<i>p</i>	$R^2 \Delta$	<i>F test</i> Δ
Step 1				.35	(1,373) = 217.52***
T1 identity commitment	.57	12.52	< .001		
Step 2				.01	(3,370) = 0.15
Gender	-.01	-0.16	.872		
Age	-.03	0.03	.557		
Family SES	.01	0.27	.789		
Step 3				.02	(1,292) = 7.67**
Family goal support	.13*	2.77	.006		
Peer goal support	.09	1.82	.070		(1,267) = 1.02
Family crisis support	.07	1.41	.159		(1,232) = 2.00
Peer crisis support	.06	1.22	.225	.00	(1,311) = 1.48

T1 = baseline assessment; *** $p < .001$; ** $p < .01$; * $p < .05$.

Table 5. Hierarchical multiple regression analyses depicting changes in identity exploration by support measures.

Variables	<i>b</i>	<i>t</i>	<i>p</i>	$R^2 \Delta$	<i>F test</i> Δ
Step 1				.15	(1,373) = 66.28***
T1 identity exploration	.39	8.14	< .001		
Step 2				.01	(3,370) = 0.52
Gender	.02	.379	.705		
Age	.06	1.18	.237		
Family SES	-.01	-.21	.835		
Step 3				.00	(1,292) = 0.05
Family goal support	.01	.23	.820		(1,267) = 3.43
Peer goal support	.12	1.85	.065		(1,232) = 11.67***
Family crisis support	.20*	3.42	.001	.04	(1,311) = 4.60*
Peer crisis support	.11*	2.15	.033	.01	

T1 = baseline assessment; *** $p < .001$; * $p < .05$.

factors were controlled for). Baseline identity exploration was significantly positively associated with exploration at the end of the year. However, the strength of this association was considerably lower than what was obtained for identity commitment. The demographic factors were unrelated to exploration. Both family and peer crisis support were significantly positively associated with identity exploration over the year. However, the effect of family support was twice as strong as for peers.

Mediation results

Mediation analyses were performed on the associations which proved to be significant. Specifically, we tested the sequential indirect effects of need satisfaction with the association between (1) family autonomy support of personal goals and identity commitment, (2) family autonomy support during crises and identity exploration, and (3) peer autonomy support during crises and identity exploration. The mediation analyses used the residualized change scores from baseline (T1) to T5 for need satisfaction. Baseline identity measures were always included as a covariate.

Results from the first mediation analyses (Figure 1) showed that family autonomy support during goals was significantly positively associated with need satisfaction, $t = 3.63$, $p < .001$. Need satisfaction was significantly positively related to identity commitment at the end of the academic year, $t = 3.63$, $p < .001$. Next, we examined the total, indirect, and direct effects. The total effect of family autonomy support on identity commitment was significant at $b = .12$, $SE = .05$, $t = 2.60$, $p = .010$, 95% CI [.03, .21]. The indirect effect of family goal support on identity commitment through need satisfaction was estimated to be $b = .04$, $SE = .02$, 95% CI [.01, .07]. This is considered significant since the confidence interval does not straddle zero (Hayes, 2012). The direct effects of family autonomy support were no longer significant, $t = 1.84$, $p = .067$, suggesting full mediation.²

Next, we sought to examine whether need satisfaction would mediate the association between family support during crises and identity exploration. We performed a second mediation analysis using the bootstrap resampling procedure. Results from the mediation

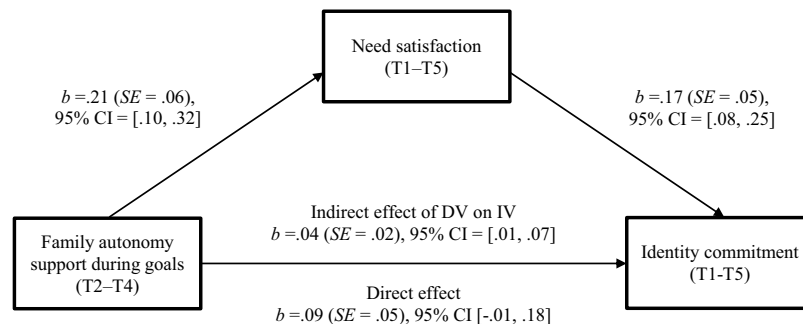


Figure 1. Direct and indirect effects of family goal support on participants' identity commitment over the academic year. Total effect of DV on IV: $b = .12$, $SE = .05$, $t = 2.60$, $p = .010$, 95% CI [.03, .21]; From $n = 298$.

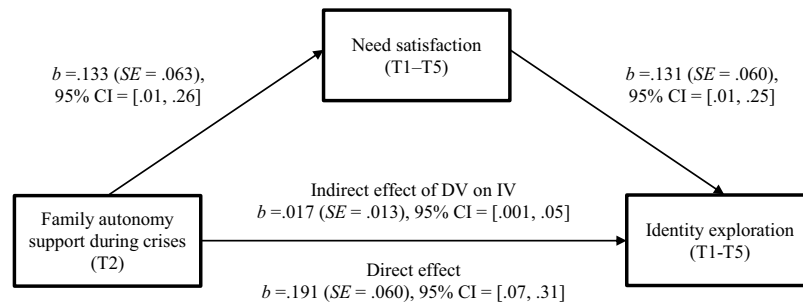


Figure 2. Direct and indirect effects of family crisis support on participants' identity exploration over the academic year. Total effect of DV on IV: $b = .21$, $SE = .06$, $t = 3.46$, $p < .001$, 95% CI [.09, .33]; From $n = 238$.

analyses (Figure 2) showed that family support during crises was significantly positively associated with need satisfaction, $t = 2.06$, $p = .040$. Furthermore, need satisfaction was significantly positively related to identity exploration, $t = 2.16$, $p = .032$. Next, we examined the total, indirect, and direct effects. The total effect of family autonomy support during crises on identity exploration was significant at $b = .21$, $SE = .06$, $t = 3.46$, $p < .001$, 95% CI [.09, .33]. The indirect effect of family crisis support on identity exploration through need satisfaction was estimated to be $b = .02$, $SE = .01$, 95% CI [.001, .05]. This is considered significant since the confidence interval does not straddle zero (Hayes, 2012). The direct effects of family autonomy support during crises were still significant, $t = 3.17$, $p = .002$, suggesting partial mediation.³

We also examine the relationship between autonomy support from peers during crises and identity exploration ($n = 316$). Results from the mediation analyses showed that peer support during crises was significantly positively associated with need satisfaction, $b = .14$, $SE = .06$, $t = 2.26$, $p = .025$, 95% CI [.02, .26]. However, need satisfaction was unrelated with identity exploration, $b = .08$, $SE = .05$, $t = 1.45$, $p = .147$, 95% CI [-0.3, .18]. Thus, there is no evidence for a mediational pathway between peer crisis support and identity exploration that involved need satisfaction as the mediator.⁴

Discussion

The current research proposed that family and peer support may aid emerging adults on their self-discovery journey. Results showed that perceiving autonomy support from both convoys during crises was associated with identity exploration. By contrast, only family autonomy support for personal goal pursuits was related to identity commitment, suggesting that perceiving autonomy support from family during distinct contexts may encourage different aspects of identity development. Furthermore, it seems that perceiving autonomy support during goal pursuits promotes identity commitment, whereas perceiving autonomy support during crises promotes identity exploration. The variety of these relationships between support measures and identity development may point toward the usefulness of distinguishing the source and context of support that emerging adults receive as they navigate through an academic year.

Autonomy support during crises and identity exploration

Interestingly, perceiving autonomy support from families and peers during crises appeared to promote identity exploration over the year. Exploration is generally seen as the degree to which individuals pursue different possibilities regarding their values and goals (Kroger & Marcia, 2011) and may be an adaptive process during times of hardship. During the academic year, students generally experience a myriad of stress-inducing events such as exams, deadlines for papers, competition in admission to selective programs or scholarships, while at the same time trying to balance their social life and employment. Juggling between these responsibilities may lead to setbacks and disappointments (imagine the university student who struggles with their grades in their chosen major). During these times of adversity, perceiving autonomy support from both convoys may be helpful in terms of exploring new ideas, such as finding novel ways of studying or a more meaningful program.

Since autonomy support is associated with openness and honesty (La Guardia, 2009; W. S. Ryan & Ryan, 2019), perceiving such support during times of crisis may provide a sense of closeness and security, allowing individuals to confront broader experiences before taking long-lasting responsibilities.

Autonomy support during goals and identity commitment

The finding that goal support from family members appeared to be more helpful than similar support from peers is consistent with recent research (Audet et al., in press; Koestner et al., 2020). These studies hypothesized that because autonomy support from family members seemed to be more common for challenging goals, emerging adults may turn to their family to help them maintain the self-regulation needed to keep on pursuing their goals. This kind of adaptive out-sourcing of self-regulatory demands happens in helpful and supportive relationships (Fitzsimons Gráinne & Finkel, 2011).

Furthermore, our results proposed that identity commitment may be influenced by autonomy support from family during personal goal pursuits. Many studies have demonstrated that forming an identity is closely associated with personal goals (Kvasková et al., 2020; Luyckx et al., 2008; Marttinen et al., 2016). Indeed, the construct of commitment can even be defined as the coherence and strength of plans, decisions, and goals (Luyckx et al., 2011, 2008). Thus, perceiving autonomy support from family members during goal pursuits may have provided positive identity-related feedback reaffirming decisions already made, which in turn may have resulted in an ideal environment to consolidate ones' identity.

Basic psychological need satisfaction

Basic psychological need satisfaction mediated the relation between perceiving autonomy support from family during personal goals and identity commitment, and between perceiving autonomy support from family during crises and identity exploration. Within SDT, it is assumed that when individuals' basic needs are satisfied, they are more prone to endorse their identity in an integrated and personally meaningful way (Deci & Ryan, 2000; Soenens & Vansteenkiste, 2011). Indeed, prior studies indicate that environments

satisfying ones' basic psychological needs are related to positive developmental outcomes (Laporte et al., 2021; Vansteenkiste et al., 2020). Our results suggest that social contexts may promote or diminish emerging adults' identity development, depending on the degree to which relationships are need satisfying and autonomy supportive.

Curiously, need satisfaction did not mediate the association between perceiving autonomy support from peers and identity exploration. Still, autonomy-supportive environments facilitate personal and interpersonal authenticity (Lynch et al., 2009; W. S. Ryan & Ryan, 2019) and encourage adaptive identity development (Soenens & Vansteenkiste, 2011; Vansteenkiste et al., 2020). Thus, because the support was perceived in an autonomy-supportive way, the increase in identity exploration may still be congruent with emerging adults' self-endorsed values and beliefs. Still, the extent to which emerging adults rely on support from family members versus peers and the extent that such support is associated with need satisfaction and growth are critical open questions.

Limitations

Several limitations are to be considered with the current research. Most importantly, this study was conducted with a university sample in which the majority was female, of European descent, and well-educated. Future research should utilize larger and more heterogeneous samples to discover whether the results can generalize across different populations. Second, it is possible that the correlations in the present study were due to confounding variables because prospective longitudinal designs do not allow for causal conclusions. Other factors such as distinct opportunities and constraints, differences in family structures, economic factors, living circumstances, or the acquisition of certain adult roles may have influenced the results. Third, participants were asked to select their supporters. This nomination procedure may have led to a selection of supporters scoring high on autonomy and may strongly restrict the variance in perceived autonomy support. Fourth, the data collected was based on self-reports. However, self-reports are commonly used in social science research and have been found to be relatively accurate (Koestner et al., 2002; Levine et al., 2019). Nonetheless, this research would be strengthened by adding reports from family and peers. Fifth, it is important to mention that the EIPQ-scores were combined across life spheres and that we did not inquire upon the religion, politics, or gender roles items. Thus, some associations may exist more strongly for some domains of identity than for others. Even though the commitment and exploration scales had acceptable internal reliabilities, this may have affected its validity. Finally, it must be acknowledged that the mediational analyses are not fully prospective, making it possible that some of the variance in need satisfaction occurred before the assessment of autonomy support.

Future directions

Identity development may vary in specific cultural contexts (Seiffge-Krenke & Weitkamp, 2020). We encourage future research to inquire within different cultural settings, for it may impact the opportunities individuals have to explore and form an identity. We also encourage future studies to look at autonomy support and if it relates to in-depth exploration, commitment-making, or identification with commitment, which were

found to relate to well-being and positive adjustments (Schwartz et al., 2013). Finally, future research is also needed to determine how to facilitate the interaction between autonomy support from convoys during personal goal pursuits and crises. More research is needed to explain how emerging adults may develop their identity in these distinct contexts. We hope that the present research will inspire additional work in this direction.

Conclusion

Identity development seem to work together with the autonomy support emerging adults receive in distinct contexts. Our results suggest that perceiving autonomy support from family and peers during crises was related to an increase in identity exploration. Only family autonomy support during personal goal pursuits, however, was associated with greater identity commitment over the academic year. This may indicate that family support during different circumstances encourages different aspects of identity development. Interestingly, basic need satisfaction mediated the relation between family autonomy support for goals and identity commitment, and between family (but not peer) autonomy support during crises and identity exploration. Taken together, on the long and winding road to adulthood, emerging adults may be able to find direction and energy by navigating alongside their autonomy-supportive family and peer convoys.

Notes

1. Measures and supplemental analyses are available on OSF: https://osf.io/ua73z/?view_only=2dcbb2e2632440a08e132aba3d99921d.
2. Autonomy and relatedness satisfaction mediated the relation between perceiving autonomy support from family during goal pursuits and identity commitment. Please see supplemental analyses on OSF for mediation analyses by individual need.
3. Mediation analyses by individual need were conducted between perceiving autonomy support from family during crises and identity exploration, but none showed to be significant. Please see supplemental analyses on OSF for mediation analyses by individual need.
4. Mediation analyses by individual need were conducted between perceiving autonomy support from peers during crises and identity exploration, but none showed to be significant. Please see supplemental analyses on OSF for mediation analyses by individual need.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

This study was supported by the Social Sciences and Humanities Research Council of Canada (1008-2020-0146).

ORCIDÉlodie C. Audet  <http://orcid.org/0000-0002-4765-7574>Shelby L. Levine  <http://orcid.org/0000-0002-2726-4925>**References**

- Antonucci, T. C., Birditt, K. S., Sherman, C. W., & Trinh, S. (2011). Stability and change in the intergenerational family: A convoy approach. *Ageing and Society*, 31(7), 1084–1106. <https://doi.org/10.1017/S0144686X1000098X>
- Arnett, J. J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. *American Psychologist*, 55(5), 469–480. <https://doi.org/10.1037//0003-066X.55.5.469>
- Arnett, J. J. (2015). *Emerging adulthood: The winding road from the late teens through the twenties (Second)*. Oxford University Press.
- Arseth, A. K., Kroger, J., Martinussen, M., & Marcia, J. E. (2009). Meta-analytic studies of identity status and the relational issues of attachment and intimacy. *Identity*, 9(1), 1–32. <https://doi.org/10.1080/15283480802579532>
- Audet, É., Levine, S., Holding, A., Koestner, R., & Powers, T. (in press). A remarkable alliance: Sibling autonomy support and goal progress in emerging adulthood. *Family Relations*. 10.1111/fare.12562
- Azmitia, M., Syed, M., & Radmacher, K. (2013). Finding your niche: Identity and emotional support in emerging adults' adjustment to the transition to college. *Journal of Research on Adolescence*, 23(4), 744–761. <https://doi.org/10.1111/jora.12037>
- Balistreri, E., Busch-Rossnagel, N. A., & Geisinger, K. F. (1995). Development and preliminary validation of the ego identity process questionnaire. *Journal of Adolescence*, 18(2), 179. <https://doi.org/10.1006/jado.1995.1012>
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191. <https://doi.org/10.1037/0033-295X.84.2.191>
- Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117(3), 497–529. <https://doi.org/10.1037/0033-2909.117.3.497>
- Crocetti, E. (2017). Identity formation in adolescence: The dynamic of forming and consolidating identity commitments. *Child Development Perspectives*, 11(2), 145–150. <https://doi.org/10.1111/cdep.12226>
- 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. <https://doi.org/10.1111/cdev.12547>
- deCharms, R. (1968). *Personal causation: The internal affective determinants of behavior*. Academic Press.
- Deci, E. L., & Ryan, R. M. (2000). The “what” and “why” of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227–268. https://doi.org/10.1207/S15327965PLI1104_01
- Dennis, J. M., Phinney, J. S., & Chuateco, L. I. (2005). The role of motivation, parental support, and peer support in the academic success of ethnic minority first-generation college students. *Journal of College Student Development*, 46(3), 223–236. <https://doi.org/10.1353/csd.2005.0023>
- Erikson, E. (1968). *Identity, youth and crisis*. Norton.
- Feeney, B. C., & Collins, N. L. (2015). A new look at social support: A theoretical perspective on thriving through relationships. *Personality and Social Psychology Review*, 19(2), 113–147. <https://doi.org/10.1177/1088868314544222>
- Fitzsimons Gráinne, M., & Finkel, E. J. (2011). Outsourcing self-regulation. *Psychological Science*, 22(3), 369–375. <https://doi.org/10.1177/0956797610397955>

- Fuller, H. R. (2020). Implications of relationships with family, friends, and neighbors for changes in women's well-being in late life. *Journal of Women & Aging, 1*(16), 1–16. <https://doi.org/10.1080/08952841.2020.1847712>
- Galanaki, E., & Sideridis, G. (2019). Dimensions of emerging adulthood, criteria for adulthood, and identity development in greek studying youth: A person-centered approach. *Emerging Adulthood, 7*(6), 411–431. <https://doi.org/10.1177/2167696818777040>
- Graham, J. W. (2009). Missing data analysis: Making it work in the real world. *Annual Review of Psychology, 60*(1), 549–576. <https://doi.org/10.1146/annurev.psych.58.110405.085530>
- Grolnick, W. S. (2003). *The psychology of parental control: How well-meant parenting backfires*. L. Erlbaum Associates.
- Hayes, A. F. (2012). *PROCESS: A versatile computational tool for observed variable mediation, moderation, and conditional process modeling*.
- Koestner, R., Lekes, N., Powers, T. A., & Chicoine, E. (2002). Attaining personal goals: Self-concordance plus implementation intentions equals success. *Journal of Personality and Social Psychology, 83*(1), 231. <https://doi.org/10.1037/0022-3514.83.1.231>
- Koestner, R., Powers, T. A., Carbonneau, N., Milyavskaya, M., & Chua, S. N. (2012). Distinguishing autonomous and directive forms of goal support: Their effects on goal progress, relationship quality, and subjective well-being. *Personality & Social Psychology Bulletin, 38*(12), 1609–1620. <https://doi.org/10.1177/0146167212457075>
- Koestner, R., Powers, T. A., Holding, A., Hope, N., & Milyavskaya, M. (2020). The relation of parental support of emerging adults' goals to well-being over time: The mediating roles of goal progress and autonomy need satisfaction. *Motivation Science, 6*(4), 374–385. <https://doi.org/10.1037/mot0000169>
- Koestner, R., Powers, T. A., Milyavskaya, M., Carbonneau, N., & Hope, N. (2015). Goal internalization and persistence as a function of autonomous and directive forms of goal support. *Journal of Personality, 83*(2), 179–190. <https://doi.org/10.1111/jopy.12093>
- Kroger, J., & Marcia, J. (2011). The identity statuses: Origins, meanings, and interpretations. In S. J. Schwartz, K. Luyckx, & V. L. Vignoles (Eds.), *Handbook of identity theory and research*. Springer. 31–53. <https://doi.org/10.1007/978-1-4419-7988-9>
- Kvasková, L., Širůček, J., Ježek, S., & Macek, P. (2020). Personal goals and identity of czech university students. *Emerging Adulthood*(20200423), 216769682091781. <https://doi.org/10.1177/2167696820917813>
- La Guardia, J. G. (2009). Developing who i am: A self-determination theory approach to the establishment of healthy identities. *Educational Psychologist, 44*(2), 90–104. <https://doi.org/10.1080/00461520902832350>
- Laporte, N., Soenens, B., Brenning, K., & Vansteenkiste, M. (2021). Adolescents as active managers of their own psychological needs: The role of psychological need crafting in adolescents' mental health. *Journal of Adolescence, 88* (April 2021), 67–83. <https://doi.org/10.1016/j.adolescence.2021.02.004>
- Levine, S. L., Holding, A. C., Milyavskaya, M., Powers, T. A., & Koestner, R. (2020). Collaborative autonomy: The dynamic relations between personal goal autonomy and perceived autonomy support in emerging adulthood results in positive affect and goal progress. *Motivation Science* (20201109). <https://doi.org/10.1037/mot0000209>
- Levine, S. L., Milyavskaya, M., Powers, T. A., Holding, A. C., & Koestner, R. (2021). Autonomous motivation and support flourishes for individuals higher in collaborative personality factors: Agreeableness, assisted autonomy striving, and secure attachment. *Journal of Personality* (20210310). <https://doi.org/10.1111/jopy.12622>
- Levine, S. L., Milyavskaya, M., & Zuroff, D. C. (2019). Perfectionism in the transition to university: Comparing diathesis-stress and downward spiral models of depressive symptoms. *Clinical Psychological Science, 8*(1), 52–64. <https://doi.org/10.1177/2167702619865966>
- Luyckx, K., Schwartz, S. J., Goossens, S. L., Beyers, W., Missotten, L., & Schwartz, S. J. (2011). Processes of personal identity formation and evaluation. In S. J. Schwartz, K. Luyckx, & V. L. Vignoles (Eds.), *Handbook of identity theory and research: Structure and processes* (pp. 77–98). Springer. <https://doi.org/10.1007/978-1-4419-7988-9>

- 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(3), 361–378. <https://doi.org/10.1016/j.adolescence.2005.03.008>
- Luyckx, K., Schwartz, S. J., Goossens, L., & Pollock, S. (2008). Employment, sense of coherence, and identity formation: Contextual and psychological processes on the pathway to sense of adulthood. *Journal of Adolescent Research*, 23(5), 566–591. <https://doi.org/10.1177/0743558408322146>
- Luyckx, K., Vansteenkiste, M., Goossens, L., & Duriez, B. (2009). Basic need satisfaction and identity formation: Bridging self-determination theory and process-oriented identity research. *Journal of Counseling Psychology*, 56(2), 276–288. <https://doi.org/10.1037/a0015349>
- Lynch, M. F., La Guardia, J. G., & Ryan, R. M. (2009). On being yourself in different cultures: Ideal and actual self-concept, autonomy support, and well-being in china, russia, and the united states. *The Journal of Positive Psychology*, 4(4), 290–304. <https://doi.org/10.1080/17439760902933765>
- Marcia, J. E. (1966). Development and validation of ego-identity status. *Journal of Personality and Social Psychology*, 3(5), 551–558. <https://doi.org/10.1037/h0023281>
- Marttinen, E., Dietrich, J., & Salmela-Aro, K. (2016). Dark shadows of rumination: Finnish young adults' identity profiles, personal goals and concerns. *Journal of Adolescence*, 47 (201602), 185–196. <https://doi.org/10.1016/j.adolescence.2015.10.024>
- McAdams, D. P., & Zapata-Gietl, C. (2015). Three strands of identity development across the human life course. In K. C. McLean & M. Syed (Eds.), *The Oxford handbook of identity development*. Oxford University Press, 81–97. <https://doi.org/10.1093/oxfordhb/9780199936564.013.006>
- McLean, K. C., Shucard, H., & Syed, M. (2016). Bringing identity content to the fore: Links to identity development processes. *Emerging Adulthood*, 4(5), 356–364. <https://doi.org/10.1177/2167696815626820>
- Meeus, W., Iedema, J., Maassen, G., & Engels, R. (2005). Separation-individuation revisited: On the interplay of parent-adolescent relations, identity and emotional adjustment in adolescence. *Journal of Adolescence*, 28(1), 89–106. <https://doi.org/10.1016/j.adolescence.2004.07.003>
- Meeus, W., Oosterwegel, A., & Vollebergh, W. (2002). Parental and peer attachment and identity development in adolescence. *Journal of Adolescence*, 25(1), 93–106. <https://doi.org/10.1006/jado.2001.0451>
- Milevsky, A. (2005). Compensatory patterns of sibling support in emerging adulthood: Variations in loneliness, self-esteem, depression and life satisfaction. *Journal of Social and Personal Relationships*, 22(6), 743–755. <https://doi.org/10.1177/0265407505056447>
- Ryan, R. M., & Deci, E. L. (2017). *Self-determination theory: Basic psychological needs in motivation, development, and wellness*. The Guilford Press.
- Ryan, R. M., La Guardia, J. G., Solky-Butzel, J., Chirkov, V., & Kim, Y. (2005). On the interpersonal regulation of emotions: Emotional reliance across gender, relationships, and cultures. *Personal Relationships*, 12(1), 145–163. <https://doi.org/10.1111/j.1350-4126.2005.00106.x>
- Ryan, W. S., & Ryan, R. M. (2019). Toward a social psychology of authenticity: Exploring within-person variation in autonomy, congruence, and genuineness using self-determination theory. *Review of General Psychology*, 23(1), 99–112. <https://doi.org/10.1037/gpr0000162>
- Schwartz, S. J. (2001). The evolution of Eriksonian and, neo-Eriksonian identity theory and research: A review and integration. *Identity*, 1(1), 7–58. <https://doi.org/10.1207/S1532706XSCHWARTZ>
- Schwartz, S. J., Kurtines, W. M., & Montgomery, M. J. (2005). A comparison of two approaches for facilitating identity exploration processes in emerging adults: An exploratory study. *Journal of Adolescent Research*, 20(3), 309–345. <https://doi.org/10.1177/0743558404273119>
- Schwartz, S. J., Zamboanga, B. L., Luyckx, K., Meca, A., & Ritchie, R. A. (2013). Identity in emerging adulthood: Reviewing the field and looking forward. *Emerging Adulthood*, 1(2), 96–113. <https://doi.org/10.1177/2167696813479781>
- Schwartz, S. J., Zamboanga, B. L., Weisskirch, R. S., & Rodriguez, L. (2009). The relationships of personal and ethnic identity exploration to indices of adaptive and maladaptive psychosocial functioning. *International Journal of Behavioral Development*, 33(2), 131–144. <https://doi.org/10.1177/0165025408098018>

- Seiffge-Krenke, I., & Weitkamp, K. (2020). How individual coping, mental health, and parental behavior are related to identity development in emerging adults in seven countries. *Emerging Adulthood, 8*(5), 344–360. <https://doi.org/10.1177/2167696819863504>
- Sheldon, K. M., & Hilpert, J. C. (2012). The balanced measure of psychological needs (BMPN) scale: An alternative domain general measure of need satisfaction. *Motivation and Emotion, 36*(4), 439–451. <https://doi.org/10.1007/s11031-012-9279-4>
- Soenens, B., & Vansteenkiste, M. (2011). When is identity congruent with the self? A self-determination theory perspective. In S. Schwartz, K. Luyckx, & V. Vignoles (Eds.), *Handbook of identity theory and research*. Springer, 381–402. https://doi.org/10.1007/978-1-4419-7988-9_17
- Sugimura, K., & Shimizu, N. (2011). Identity development in the learning sphere among Japanese first-year university students. *Child & Youth Care Forum: Journal of Research and Practice in Children's Services, 40*(1), 25–41. <https://doi.org/10.1007/s10566-010-9118-2>
- Uysal, A., Lin, H. L., Knee, C. R., & Bush, A. L. (2012). The association between self-concealment from one's partner and relationship well-being. *Personality & Social Psychology Bulletin, 38*(1), 39–51. <https://doi.org/10.1177/0146167211429331>
- Vansteenkiste, M., Ryan, R. M., & Soenens, B. (2020). Basic psychological need theory: Advancements, critical themes, and future directions. *Motivation and Emotion, 44*(1), 1–31. <https://doi.org/10.1007/s11031-019-09818-1>
- White, R. W. (1959). Motivation reconsidered: The concept of competence. *Psychological Review, 66*(5), 297–333. <https://doi.org/10.1037/h0040934>
- Wuyts, D., Soenens, B., Vansteenkiste, M., & Van, P. S. (2018). The role of observed autonomy support, reciprocity, and need satisfaction in adolescent disclosure about friends. *Journal of Adolescence, 65*(6), 141–154. <https://doi.org/10.1016/j.adolescence.2018.03.012>
- Yearwood, K., Vliegen, N., Chau, C., Corveleyn, J., & Luyten, P. (2019). When do peers matter? The moderating role of peer support in the relationship between environmental adversity, complex trauma, and adolescent psychopathology in socially disadvantaged adolescents. *Journal of Adolescence, 72* (201904), 14–22. <https://doi.org/10.1016/j.adolescence.2019.02.001>