

Parenting Dimensions and Internalizing Difficulties in Italian and U.S. Emerging Adults: The Intervening Role of Autonomy and Relatedness

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Abstract The present study examined the associations between emerging adults' perceived parental psychological control and autonomy support, and their autonomy, relatedness and internalizing difficulties in Italy and the U.S. The participants included 494 Italian and 414 U.S. college students, between 18 and 28 years of age (Mean = 21.58, SD = 2.18). Our findings showed that dependency-oriented psychological control had no significant direct associations with autonomy, relatedness or internalizing difficulties. Moreover, the association between parental autonomy support and internalizing problems was fully intervened by autonomy and relatedness, whereas the association between achievement-oriented psychological control and anxiety and depressive symptoms was partially intervened by autonomy and relatedness. Finally, although parental psychological control and autonomy support had similar effects on maladjustment across the two countries, relatedness appeared to play a more central role as an intervening variable for anxiety in the Italian group than in the U.S. group. Overall, our findings highlighted the importance of examining parents' contributions to emerging adults' internalizing problems via autonomy support and psychological control across cultures.

Keywords Parental control · Culture as moderator · Emerging adulthood · Parental autonomy support · Intervening variables

Introduction

The relations between various parenting dimensions and children's internalizing difficulties during adolescence have been frequently investigated (Fousiani et al. 2014; McLeod et al. 2007; Pettit et al. 2001; Rapee 1997; Yap et al. 2014). However, there has been an increasing interest in extending the study of these topics into emerging adulthood, the developmental period approximately between 18 and 28 years of age.

Although individuals increasingly display autonomous functioning from their parents during this period, parents continue to play a significant role (Arnett 2004; Inguglia et al. 2015; Soenens and Beyers 2012; Soenens et al. 2012). As a result, the most studied parenting dimensions are psychological control and autonomy-supportive parenting (Fousiani et al. 2014; Soenens and Beyers 2012; Soenens et al. 2009), both of which have been found to be associated with internalizing problems in emerging adulthood. Specifically, the presence of internalizing difficulties tends to be associated positively with parental psychological control and negatively with parental autonomy support (Barber and Harmon 2002; Soenens et al. 2009; Soenens and Vansteenkiste 2010).

Psychological control is a parenting dimension characteristic of parents who pressure their children to comply with their own agenda through insidious and manipulative tactics, such as guilt induction, shaming, and love withdrawal (Barber and Harmon 2002; Soenens et al. 2010). Based on Blatt's theory (1974, 2004), Soenens et al. (2010)

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recently distinguished between two domain-specific expressions of psychological control. One dimension revolves around issues of the use of psychological control as a means to keep children within close physical and emotional boundaries, and is labeled dependency-oriented psychological control (DPC). The other revolves around issues of the use of psychological control to make children comply with parental standards for achievement, and is labeled achievement-oriented psychological control (APC). Through a series of factor analyses, the authors demonstrated that both domains can be reliably distinguished, even though they are positively correlated with each other (Soenens et al. 2010).

In contrast, parental autonomy support (PAS) can be defined as a parenting dimension characteristic of parents who promote the volitional functioning of their children and encourage them to act upon their true personal interests and values (Fousiani et al. 2014; Soenens et al. 2007). Soenens et al. (2007) conceptually and empirically distinguished between two different expressions of perceived autonomy support. The first, the promotion of independence (PI), refers to parental support of a self-sufficient orientation where children are encouraged to think, decide, and solve problems without support or intervention from others, particularly parents. The second, the promotion of volitional functioning (PVF), pertains to parental support of children's self-endorsed functioning through empathic behaviors, minimization of the use of control and power assertion, and encouragement to act upon children's own values and interests (Grolnick 2003; Ryan et al. 2005). Despite this distinction, researchers (e.g., Soenens et al. 2007) generally consider only PVF as uniquely important for adolescents' well-being, presumably because it promotes autonomous and self-determined functioning in children. Thus, in most studies, PAS is conceptualized as the promotion of volitional functioning.

PAS and psychological control are considered to be highly incompatible; parents who encourage their children to behave in a self-endorsed way are not likely to exert high levels of neither DPC nor APC. Indeed, these two parenting dimensions tend to be negatively correlated with each other (Soenens et al. 2009). However, recent theorizing and research suggests that it is worthwhile to consider the separate effects of autonomy supportive and psychologically controlling parenting (e.g., Vansteenkiste and Ryan 2013) for at least two reasons. First, the absence of autonomy supportive parenting practices cannot necessarily be equated with the presence of psychologically controlling practices. Second, psychologically controlling parenting has been argued to be more strongly associated with maladaptive outcomes than the lack of autonomy supportive parenting, although this conjecture has not been thoroughly tested (for exceptions, see Costa et al. 2014;

Vansteenkiste and Ryan 2013). Indirect evidence for the usefulness of examining the distinct role of autonomy support and psychological control comes also from studies in other socialization domains, including coaching (Bartholomew et al. 2011a, b) and teaching (Haerens et al. 2015).

In particular, both forms of psychological control are linked with internalizing difficulties, such as depressive symptoms and anxiety (Barber and Harmon 2002; Soenens et al. 2010). Parents who exert dependency-oriented control restrict children's attempts to obtain independence because they consider such attempts as a threat to the parent-child bond. Parents who use achievement-oriented control demand perfection and high levels of achievement from their children because they consider poor performance to be a threat to their own self-worth (Flett et al. 2002). As a result of these restrictions and demands, children tend to develop high levels of anxiety as well as low levels of sense of security and self-competence, especially during emerging adulthood, when the demands for greater autonomy is emphasized (Luyckx et al. 2007; Padilla-Walker and Nelson 2012; Urry et al. 2011).

Furthermore, PAS has been found to be negatively correlated with emerging adults' internalizing problems, including depressive symptoms (Grolnick 2003; Kins et al. 2009; Soenens and Beyers 2012; Soenens et al. 2007, 2009). Children with parents who score high on PAS tend to develop more self-determined functioning and become better able to regulate their behaviors on the basis of self-endorsed motives rather than external demands or internal pressures, which is protective against the onset of internalizing problems (Soenens et al. 2009).

Although most scholars have examined the direct associations between parental control, autonomy support and children's difficulties, findings from some studies suggest that other variables can serve an intervening role in these relations (Ahmad et al. 2013; Blatt 2004; Costa et al. 2014; Soenens et al. 2007, 2009, 2010). Inclusion of intervening variables allow for the examination of the mechanism through which parenting dimensions are related to children's internalizing problems. For instance, Soenens et al. (2010) showed that dependency and self-criticism acted as intervening variables between DPC, APC, and depressive symptoms. In another study, Soenens et al. (2007) observed that self-determination was a mediator in the association between PAS and adjustment. Moreover, Ahmad et al. (2013) found that perceived maternal psychological control and responsiveness was related to Jordanian adolescents' adjustment through the perceived satisfaction of their basic psychological needs for autonomy and competence (but not relatedness). Costa et al. (2014) also reported that the satisfaction of the needs for autonomy, relatedness and competence mediated the association between both

maternal and paternal ratings of psychological control and internalizing distress among Italian college students.

According to Self Determination Theory (SDT, Chirkov and Ryan 2001; Deci and Ryan 2000), the association between parental control, autonomy support and children's difficulties can be indirect, through their sense of autonomy, relatedness, and competence. Autonomy is defined as the sense of volition, the desire to self-organize experience and behavior, and to have activity concordant with one's integrated sense of self. Relatedness is defined as the feeling of being connected to others, of loving, caring, and being loved and cared for, and establishing high quality, satisfying and positive bonds with others (Deci and Ryan 2000; Inguglia et al. 2015). Finally, competence is considered as the experience of a sense of effectiveness in interacting with one's environment (White 1959).

Autonomy and relatedness are thought to be fundamental needs linked to personal achievement and psychological adjustment, and are affected by parental dimensions related to autonomy support and psychological control (Chirkov and Ryan 2001; Deci and Ryan 2000). Generally, the more parents support children's strivings for autonomy, the more children are able to strengthen their sense of volition and to establish satisfying relationships. In contrast, the more parents behave in psychologically controlling ways, the less their children are autonomous and embedded in a network of positive relationships (Inguglia et al. 2015; Koepke and Denissen 2012). Among the three basic needs, autonomy and relatedness are most aligned with Kağıtçıbaşı's theory of the autonomous-relatedness self, which asserts that parents who refer to the family model of psychological interdependence tend to promote a strong sense of autonomy in their children along with high levels of relatedness. Thus both autonomy and relatedness are very relevant in the context of parent-child relationships, especially when dealing with parental psychological control and promotion of autonomy (Kağıtçıbaşı 1996, 2005).

There are contrasting perspectives on the cross-cultural relevance of parental use of psychological control and autonomy support, and their implications for children's poor psychological health (Pomerantz and Qian 2009; Soenens and Beyers 2012; Soenens et al. 2007). Most of the existing research focus on whether associations between parenting dimensions and mental health among emerging adults can be generalized across cultures. With regard to this issue, scholars assume a continuum from a relativistic position on one end, to a universalistic position on the other end (Soenens et al. 2012, 2015).

On an extreme level, the relativistic position argues that the effects and the meanings of psychological control as well as autonomy support are moderated by culture. Specifically, parenting styles that control and limit autonomy are likely to be endorsed and interpreted in a more

positive way by individuals who belong to relatively more interdependent-focused cultures compared to those from relatively more independent-focused cultures. Generally, cultures with a more interdependent orientation, such as some areas of China, Korea, or Japan, emphasize family and group goals above individual needs and are characterized by close family ties and strong loyalties towards family values. Cultures with a more independent orientation, such as some areas of the United States and Western Europe, emphasize more personal than group goals, and are characterized by a focus on individual needs and personal achievement. These cultural values are proposed to impact the normativeness of various parenting dimensions and their consequent effects on children's well-being.

For instance, Park et al. (2009) found that children's independence from parents is disapproved and shaming is considered an appropriate practice to enforce obedience and conformity to the family in South Korea. Thus, children of relatively more interdependent cultures are more likely to interpret psychologically controlling and autonomy suppressing parenting practices as expressions of well-meaning parental involvement and, as such, they may suffer less or even benefit from parental use of psychological control (Nelson et al. 2006). In contrast, in relatively more independent cultures where individuation from parents is valued, parenting that controls and suppresses autonomy are less frequently used and more likely to have detrimental effects on children's well-being (Soenens et al. 2012; Wu et al. 2002).

At the other extreme of the continuum, the universalistic position proposes that the positive association between autonomy suppressing parenting practices, including psychological control, predict adverse developmental outcomes consistently across cultures (Barber et al. 2005; Soenens et al. 2012). These practices lead to detrimental effects because they undermine the individual's satisfaction of needs for autonomy, competence and relatedness, which have been shown to be universally important for positive well-being and adaptation (Soenens and Vansteenkiste 2010). In this perspective, the tendency toward autonomous actions is considered a universal attribute of any member in any society regardless of their system of cultural values and practices (Chirkov et al. 2003). Several studies have provided empirical evidence for the universal cost of controlling parenting (Barber et al. 2005; Chirkov 2007; Soenens et al. 2012; Taylor and Lonsdale 2010; Vansteenkiste et al. 2006). For instance, Manzi et al. (2012) found that low parental support for autonomy was positively related to poor well-being among late adolescents in the U.S., Belgium, Italy, and China.

It should be noted that few scholars, if any, actually take extreme positions in conceptualizing the relativist-universalist position. For instance, SDT is often associated with

the universalistic position due to its claims about the universally adaptive role of parental support for autonomy as well as the negative effects of controlling parenting. However, this theory allows for cultural variation through individual differences that exist in how actual parental behavior translate into subjective experiences for offsprings (Soenens et al. 2015).

Italy and the U.S. are both considered to be individualistic cultures (Hofstede 1991). However, these cultures are different in several significant ways, especially Southern Italian culture. Generally, Italian culture is believed to place a higher value on interpersonal relationships than U.S. culture, which contribute to variations in parent–child interactions and parental practices (Bornstein et al. 1999; Senese et al. 2012). For instance, Scabini et al. (2006) showed that the Italian family is characterized by high degrees of emotional bonding and support, as well as restriction from both parents. Thus, parenting practices exerted in Italian families do not directly correspond to the independence model (Greenfield et al. 2003; Kağitçibaşı 2005), but instead emphasize emotional bonding within a strict framework of requirements, rules, and disciplinary restrictions (Claes et al. 2011). Italian families engage in practices that reflect the “autonomous relatedness” model (Kağitçibaşı 2005), in which autonomy goals are encouraged along with strong family ties and interdependence. Furthermore, these features are more pronounced in the Southern regions of Italy, where individualism is less emphasized, and the family and Catholic religion play more significant socialization roles than in the Northern regions (Jurado Guerrero and Naldini 1997).

Conversely, parenting practices in European-American families mainly correspond to the traditional independent model that values individuation and the development of initiative and independence in children, even though emotional closeness between parents and children is also valued (Barber et al. 2005). Thus, in the U.S., there is a strong emphasis on independence and individuation, and rejection of coercive control (Arnett 2002).

The overall goal of the present study was to analyze the associations between perceived parental psychological control and autonomy support, and emerging adults’ autonomy, relatedness and internalizing difficulties in Italy and the U.S. Specifically, we had three aims: (1) to examine the associations between emerging adults’ perceptions of DPC, APC, PAS, and their depressive symptoms and anxiety; (2) to test the intervening role of emerging adults’ autonomy and relatedness in the associations considered above; and (3) to assess the moderating role of culture in these patterns of associations.

Method

Participants

Participants in the Italian sample were 494 college students (56 % females), representing a 92 % participation rate. Participants’ age ranged between 18 and 28 years (mean age = 22.11 years, SD = 2.13) and lived in Sicily (south Italy). Fifty two percent of these participants had mothers with standard college or university graduate and/or graduate professional degrees, and 63 % had fathers with standard college or university graduate and/or graduate professional degrees.

Participants in the U.S. sample were 414 European-American college students (72 % females) following the academic track, representing a 96 % participation rate. Participants’ age ranged between 18 and 28 years (mean age = 21.05 years, SD = 2.23) and lived around Baltimore, Maryland. Fifty six percent of these participants had mothers with standard college or university graduate and/or graduate professional degrees, and 60 % had fathers with standard college or university graduate and/or graduate professional degrees.

Procedure

The participants were provided information regarding the project and interested students were given the link to an online survey website (<http://www.surveymonkey.com>) to complete questionnaires. The survey website allowed students to give electronic consent and participants were able to withdraw at any point. Upon completion of the survey, participants were prompted to submit their name in a cash drawing. The data provided through the website and names submitted for the drawing were not linked in order to maintain confidentiality.

Measures

All scales in this study were originally developed in English. For each measure, a validated Italian version was already available and administered to the Italian participants. The measurement equivalence of the scales across the two countries was examined following recommendations by Little (1997) and Vandenberg and Lance (2000). For each scale, we examined a series of nested models in which additional constraints between the two samples (i.e., Italian and U.S.) were gradually imposed (configural, metric and scalar invariance). Detailed results of the models can be obtained upon request. The pattern of factor loadings for each scale was generally invariant across the two groups.

Perceived Parental Autonomy Support

Participants were administered a six-item scale (e.g., “My parents let me make my own plans for things I want to do”) assessing PVF, adapted by Soenens et al. (2007) from existing measures. Following Soenens et al. (2009), we deleted one item from the PVF scale because this item (“My parents insist upon doing things their way”) has to be reverse-scored to compute an index of PVF and, thus, taps controlling parenting. As it was the explicit aim of this study to examine the relation between autonomy supportive and controlling parenting, and this negative correlation between PVF and psychological control might be artificially inflated by item overlap, this item tapping control was removed. Items were rated on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). In the present study, the subscales had adequate internal consistency: Cronbach’s α was .84 for the Italian sample and .70 for the U.S. sample.

Perceived Parental Psychological Control

Participants were administered the Dependency-oriented and Achievement-oriented Psychological Control Scales (DAPCS; Soenens et al. 2010). The DPC scale (8 items) refers to the use of psychological control in the domain of parent–child closeness, where control is used as a means to keep children within close physical and emotional boundaries (e.g., “My parents are only friendly with me if I rely on them instead of on my friends”). The APC scale (9 items) refers to the use of psychological control in the domain of achievement, where psychological control is used as a means to make children comply with excessive parental standards for performance (e.g., “My parents make me feel guilty if my performance is inferior”). Items were rated on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). In the present study, the subscales had adequate internal consistency: Cronbach’s α ranged from .76 to .84 in the Italian sample and .75 to .88 in the U.S. sample.

Autonomy and Relatedness

Participants were administered the Autonomy and Positive Relations subscales from the Psychological Well-Being Scale (PWS; Ryff and Keyes 1995). Autonomy subscale (3 items, e.g., “I can make a choice easily”) refers to self-determination and self-regulation; Positive relations subscale (3 items, e.g., “People would describe me as a giving person, willing to share my time with others”) refers to having satisfying high quality relationships. Items were rated on a 7-point scale ranging from 1 (a very bad description of me) to 7 (a very good description of me). In

the present study, the subscales had good internal consistency: Cronbach’s α ranged from .75 to .82 in the Italian sample and .78 to .89 in the U.S. sample.

Anxiety State

Participants were administered the State Trait Anxiety Inventory (STAI; Spielberger et al. 1983), which consists of 20 items assessing state anxiety (e.g., “I am tense”). Participants were asked to indicate their degree of agreement with each statement on a 5-point scale (1 = a very bad description of me; 5 = a very good description of me). In the present study, the subscales had adequate internal consistency: Cronbach’s α was .84 for the Italian sample and .79 for the U.S. sample.

Depressive Symptoms

Participants were administered the Center for Epidemiologic Studies Depression Scale (CES-D; Radloff 1977) which taps into depressive symptoms such as feelings of abandonment, failure or helplessness (e.g., “I felt depressed”). Participants indicated how often they experienced the depressive symptoms during the past week by encircling items on a scale ranging from 0 (rarely or none of the time) to 3 (most or all of the time). In the present study, Cronbach’s α was .76 in the Italian sample and .77 in the U.S. sample.

Data Analyses

Data analysis proceeded in three steps. In the first step, we computed descriptive statistics for the study variables. In the second step, we assessed gender and country differences in the study variables by performing a series of 2×2 Multivariate Analysis of Variance (MANOVA). In the final step, we tested a moderated mediation model (MacKinnon et al. 2007) to examine whether the hypothesized intervening role of autonomy and relatedness (intervening variables) in the link between PAS, APC and DPC (predictors) and anxiety state and depressive symptoms (outcomes) depended on the cultural group, using a multi-group path analysis. The analyses were performed with EQS 6.1 (Bentler 2006). A significant moderated mediation is indicated when the indirect effects of predictors on outcomes through the mediating or intervening variables vary depending on the country (Italy vs. U.S.). We tested the statistical significance of the intervening variables using the Sobel test (Sobel 1982). Parameters were simultaneously estimated for two separate covariance matrices (Italian vs. U.S.) in a series of hierarchically related (nested) models.

First, in order to evaluate the relation between parenting variables (predictors) and psychological distress

(outcomes) in the absence of autonomy and relatedness (intervening variables), an Unconstrained Direct Effect model was run in which only the predictors and outcomes were specified, and parameters were freely estimated through the two groups. Second, an Equal Direct Effect model was run in which cross-group equality constraints were imposed to test the invariance of the parameters for the direct effects of predictors on outcomes. The adequacy of the equality constraints were tested using nested Chi square difference tests (Bollen 1989). Third, in order to evaluate if autonomy and relatedness intervened in the effects of predictors on outcomes, an Unconstrained Full Mediation model was run in which parenting variables had no direct associations with anxiety and depressive symptoms but only indirect effects through autonomy and relatedness, and all parameters were freely estimated through the two groups. Fourth, in order to evaluate if autonomy and relatedness partially intervened in the effects of PAS on depression and anxiety, an Unconstrained Partial Mediation model for PAS was run in which PAS had direct associations with outcomes in addition to indirect associations through autonomy and relatedness, while other parenting variables had no direct associations with outcomes, and all parameters were freely estimated through the two groups. There was evidence of a partial indirect effect of PAS if this model fitted better than the Unconstrained Full Mediation model. Fifth, in order to evaluate if autonomy and relatedness fully or partially intervened in the effects of PAS and DPC on depression and anxiety, an Unconstrained Partial Mediation model for PAS and DPC was run in which PAS and DPC had direct associations with outcomes in addition to indirect associations through autonomy and relatedness, while APC had no direct associations with outcomes. All parameters were freely estimated through the two groups. There was evidence of a partial indirect effect of DPC if this model fitted better than the Unconstrained Partial Mediation model for PAS. Sixth, in order to evaluate if autonomy and relatedness partially intervened in the effects of APC in addition to PAS and DPC on outcomes, an Unconstrained Partial Mediation model was run in which all parenting variables had direct associations with depressive symptoms and anxiety in addition to indirect associations through autonomy and relatedness. All parameters were freely estimated through the two groups. There was evidence of a partial indirect effect of APC if this model fitted better than the Unconstrained Partial Mediation for PAS and DPC model. Seventh, an Equal Partial Mediation model for direct effects was run, in which cross-group equality constraints were imposed on the direct effects of predictors on outcomes to test the invariance of these parameters. Finally, an Equal Partial Mediation model for both direct and indirect effects was run, in which cross-group equality constraints

were also imposed on the effects of intervening variables on outcomes to test the invariance of the indirect effects of predictors on outcomes through intervening variables.

Results

Means, standard deviations, skewness and kurtosis of study variables, and Pearson product-moment correlation coefficients are presented in Table 1. DPC and APC were positively associated with each other, and both DPC and APC were related negatively to PAS. DPC and APC were negatively correlated with autonomy and relatedness, while PAS was correlated positively with both autonomy and relatedness. DPC and APC were positively associated with state anxiety and depressive symptoms, while PAS, autonomy and relatedness were negatively associated with state anxiety and depressive symptoms.

Means and standard deviations of study variables by gender and country are reported in Table 2. With regard to the parenting domains, the 2 (gender) x 2 (country) MANOVA revealed a significant multivariate effect for country only [Wilks' $\lambda = .91$, $F(3, 904) = 25.35$, $p < .001$, $\eta^2 = .08$]. Univariate ANOVAs revealed significant effects for PAS [$F(1, 906) = 7.82$, $p < .01$, $\eta^2 = .01$] and APC [$F(1, 906) = 16.46$, $p < .001$, $\eta^2 = .02$]. U.S. emerging adults reported higher levels of APC and lower levels of PAS than their Italian counterparts. With regard to autonomy and relatedness, there was a significant multivariate effect of country [Wilks' $\lambda = .95$, $F(2, 908) = 22.45$, $p < .001$, $\eta^2 = .05$], gender [Wilks' $\lambda = .96$, $F(2, 908) = 16.28$, $p < .001$, $\eta^2 = .03$], and the interaction term [Wilks' $\lambda = .98$, $F(2, 908) = 9.33$, $p < .001$, $\eta^2 = .02$]. Univariate ANOVAs revealed significant effects of the interaction term for both autonomy [$F(1, 909) = 8.01$, $p < .01$, $\eta^2 = .01$] and relatedness [$F(1, 909) = 15.44$, $p < .001$, $\eta^2 = .02$]. Analyses of simple effects showed that U.S. males reported significantly lower levels of both autonomy and relatedness than Italian males. With regard to psychological distress domains, there was a significant multivariate effect of country [Wilks' $\lambda = .98$, $F(2, 783) = 7.13$, $p < .001$, $\eta^2 = .015$] and gender [Wilks' $\lambda = .98$, $F(2, 783) = 7.20$, $p < .001$, $\eta^2 = .015$]. Univariate ANOVAs revealed significant effects of gender for both anxiety state [$F(1, 774) = 14.20$, $p < .001$, $\eta^2 = .01$] and depressive symptoms [$F(1, 774) = 5.73$, $p < .05$, $\eta^2 = .01$], and of country for depressive symptoms [$F(1, 774) = 4.78$, $p < .05$, $\eta^2 = .01$]. Females reported higher levels of anxiety and depressive symptoms than males. Moreover, U.S. emerging adults reported lower levels of depressive symptoms than their Italian peers.

We conducted a multi-sample path analysis comparing the Italian and U.S. groups with respect to the direct effects of

Table 1 Means, standard deviations, skewness and kurtosis of study variables, and correlation coefficients

	1	2	3	4	5	6	7	8
M	3.96	1.93	1.84	5.14	5.43	2.09	1.88	1.51
SD	.64	.62	.64	1.02	1.05	.59	.50	.50
Skewness	-.91	.70	1.02	-.17	-.48	.35	.74	-.05
Kurtosis	1.17	.42	1.30	-.37	-.31	-.45	.30	-2.00
1. PAS	-	-.46***	-.51***	.24**	.26**	-.18*	-.22**	.03
2. DPC	-.58***	-	.73***	-.16*	-.25**	.17*	.23**	.04
3. APC	-.58***	.91***	-	-.24**	-.28**	.24**	.30***	-.01
4. Autonomy	.42***	-.31***	-.29**	-	.22**	-.44***	-.37***	-.15*
5. Relatedness	.37***	-.30***	-.31***	.34***	-	-.39***	-.31***	.03
6. Anxiety state	-.32***	.34***	.32***	-.41***	-.35***	-	.65***	.20**
7. Depressive	-.33***	.35***	.32***	-.37***	-.39***	.72***	-	.16*
8. Gender	.11	-.09	-.10	.03	.25	.03	.00	-
M	3.87	1.86	2.01	4.94	5.06	2.13	1.78	1.72
SD	.72	.71	.80	1.00	1.25	.57	.51	.45
Skewness	-.42	.73	.45	-.07	-.28	.37	.82	-1.07
Kurtosis	-.25	-.43	-.88	-.45	-.76	-.46	.19	-.97

Lower diagonal: descriptive statistics and correlation matrix of the U.S. data; upper diagonal: descriptive statistics and correlation matrix of the Italian data. *PAS* Promotion of volitional functioning, *DPC* dependency-oriented psychological control, *APC* achievement-oriented psychological control. Gender was coded as 1 = male, 2 = female

*** $p < .001$; ** $p < .01$; * $p < .05$

Table 2 Means and standard deviations of study variables by country and gender

	U.S.				Italy			
	Male		Female		Male		Female	
	M	SD	M	SD	M	SD	M	SD
PAS	3.74	.67	3.92	.73	3.94	.62	3.98	.66
DPC	1.96	.73	1.82	.70	1.90	.61	1.95	.63
APC	2.14	.78	1.96	.80	1.85	.62	1.84	.67
Autonomy	4.88	.97	4.97	1.02	5.30	.99	4.99	1.03
Relatedness	4.56	1.26	5.25	1.19	5.39	1.09	5.46	1.00
Anxiety state	2.09	.51	2.14	.59	1.98	.58	2.18	.59
Depressive symptoms	1.77	.48	1.78	.52	1.79	.43	1.91	.50

PAS promotion of volitional functioning, *DPC* dependency-oriented psychological control, *APC* achievement-oriented psychological control

perceived parenting variables (PAS, DPC and DPC) on internalizing behavioral problems as well as indirect effects of parenting variables that are intervened by autonomy and relatedness. First, the Unconstrained Direct Effect model was run, in which only the predictors and outcomes were specified (gender was included as a control variable). All parameters were freely estimated through the two groups. The model fitted the data well: $\chi^2(6) = 9.92, p = .13, SB\chi^2(6) = 10.22, p = .13, CFI = .998, RMSEA = .039$. Second, the Equal Direct Effect model was run with cross-group equality constraints imposed on the direct effects of parenting variables on anxiety and depressive symptoms to test the invariance of these parameters. This model fitted the data equally well to the

former [$\chi^2(14) = 23.67, p = .05, SB\chi^2(14) = 10.22, p = .05, \chi^2(8) = 13.39$ ns, $CFI = .995, RMSEA = .039$], showing that the invariance is reasonable. Results showed that for both samples APC was associated positively with both anxiety (.20) and depressive symptoms (.21); PAS was associated negatively with both anxiety (-.15) and depressive symptoms (-.15); DPC was not significantly associated with the outcomes. Third, in order to evaluate if autonomy and relatedness intervened in the effects of parenting variables on anxiety and depressive symptoms, the Unconstrained Full Mediation model was run in which parenting variables had no direct associations with anxiety and depressive symptoms but only indirect effects through autonomy and relatedness and all

parameters were freely estimated through the two groups. The model fitted the data well: $\chi^2(18) = 54.59$, $p < .001$, $SB\chi^2(18) = 52.56$, $p < .001$, $CFI = .985$, $RMSEA = .065$. Fourth, the Unconstrained Partial Mediation for PAS model was run. This model fitted the data better than the Unconstrained Full Mediation model, $\chi^2(14) = 38.46$, $p < .001$, $SB\chi^2(14) = 38.24$, $p < .001$, $\chi^2(4) = 13.98$, $p < .05$, $CFI = .990$, $RMSEA = .062$, showing a partial indirect effect of PAS. Fifth, the Unconstrained Partial Mediation model for PAS and DPC was run. This model fitted the data better than the previous one, $\chi^2(10) = 18.56$, $p = .05$, $SB\chi^2(10) = 19.11$, $p < .001$, $\chi^2(4) = 18.22$, $p < .05$, $CFI = .996$, $RMSEA = .045$. Sixth, the Unconstrained Partial Mediation model was run, in which all parenting variables had direct associations with depressive symptoms and anxiety in addition to indirect associations through autonomy and relatedness. This model fitted the data better than the previous one, $\chi^2(6) = 9.74$, $p < .001$, $SB\chi^2(6) = 10.03$, $p < .001$, $\chi^2(4) = 22.45$, $p < .05$, $CFI = .998$, $RMSEA = .039$, showing a partial indirect effect of APC. Seventh, an Equal Partial Mediation model for direct effects was run, in which cross-group equality constraints were imposed on the direct effects of predictors on outcomes to test the invariance of these parameters. This model fitted the data equally well to the Unconstrained Partial Mediation model: $\chi^2(12) = 18.37$, $p < .001$, $SB\chi^2(12) = 18.07$, $p < .001$, $\chi^2(6) = 8.13$ ns, $CFI = .997$, $RMSEA = .033$. Constraining the structural coefficients for the direct effects of parenting variables on depressive symptoms and anxiety to be invariant across the Italian and U.S. groups did not lead to a significant deterioration in model fit, suggesting that the direct effects of parenting variables on depressive and anxiety symptoms did not significantly differ across the two groups. Finally, an Equal Partial Mediation model for direct and indirect effects was run, in which cross-group equality constraints were also imposed on the direct effects of intervening variables on outcomes. The model fit comparison with the previous model indicated a significant deterioration of the fit, $\chi^2(22) = 40.94$, $p < .001$, $SB\chi^2(22) = 39.57$, $p < .001$, $\chi^2(10) = 21.37$, $p < .05$, $CFI = .992$, $RMSEA = .042$. The univariate and multivariate statistics produced by the Lagrange Multiplier test suggested the release of the equality constraint imposed on the path from relatedness to anxiety. The Partly Equal Partial Mediation model for direct and indirect effects fitted the data as well as the Equal Partial Mediation model for direct effects, $\chi^2(21) = 32.53$, $p < .001$, $SB\chi^2(21) = 31.25$, $p < .001$, $\chi^2(9) = 13.19$ ns, $CFI = .996$, $RMSEA = .033$. Therefore, the results suggested that the Partly Equal Partial Mediation model for direct and indirect effects was the best-fitting model. The standardized solution is reported in Fig. 1.

A closer examination of parameter estimates in this model revealed that for both the Italian and U.S. groups: (a) the direct effects of DPC on autonomy and relatedness

(intervening variables), anxiety and depressive symptoms (outcomes) were not significant; (b) the direct effects of PAS on autonomy and relatedness (intervening variables), were significant, but the direct effects of PAS on anxiety and depressive symptoms (outcomes) were not; (c) the direct effects of APC on both intervening variables and outcomes were significant. For both the Italian and the U.S. groups, the Sobel test indicated that: (a) the indirect effect of PAS on depressive symptoms was significant (standardized estimates were $-.08$, $Z = -4.85$, $p < .001$, and $-.09$, $Z = -4.85$, $p < .001$, for the Italian and U.S. sample, respectively); (b) the indirect effect of APC on depressive symptoms was also significant (standardized estimates were $.05$, $Z = 2.35$, $p < .01$, and $.06$, $Z = 2.35$, $p < .01$, for the Italian and U.S. sample, respectively). There was a moderating role of cultural context for the intervening role of relatedness on anxiety state. The indirect effects of PAS and APC on anxiety state were not similar for the two groups: for the U.S. group, the direct effect of relatedness on anxiety was significantly lower than for the Italian group; consequently, the indirect effect of PAS and APC on this outcome was lower for the U.S. emerging adults than for Italians. The Sobel test indicated that: (a) the indirect effect of PAS on anxiety state through relatedness was significant (standardized estimates were $-.05$, $Z = -3.24$, $p < .01$, and $-.03$, $Z = -2.87$, $p < .01$, for the Italian and U.S. group, respectively); and (b) the indirect effect of APC on anxiety state through relatedness was significant (standardized estimates were $.04$, $Z = 2.05$, $p < .05$, and $.03$, $Z = 1.96$, $p < .05$, for the U.S. and Italian sample, respectively).

Discussion

The present study aimed to analyze the associations between perceived parental psychological control, PAS, autonomy, relatedness and internalizing problems among emerging adults living in Italy and the U.S. Specifically, the study addressed three relevant questions, and our findings for each query are described below.

First, we explored the relations between perceived expressions of parental psychological control and autonomy support, and emerging adults' internalizing difficulties. DPC and APC were positively correlated with each other, and negatively associated with PAS. This result is concordant with Soenens et al. (2007, 2009) findings suggesting that parental psychological control and autonomy support are largely incompatible dimensions of parenting. In other words, parents who are perceived as psychologically controlling are less likely to be experienced by their children as encouraging of their autonomous functioning. As shown by Soenens et al. (2009) parents who exert

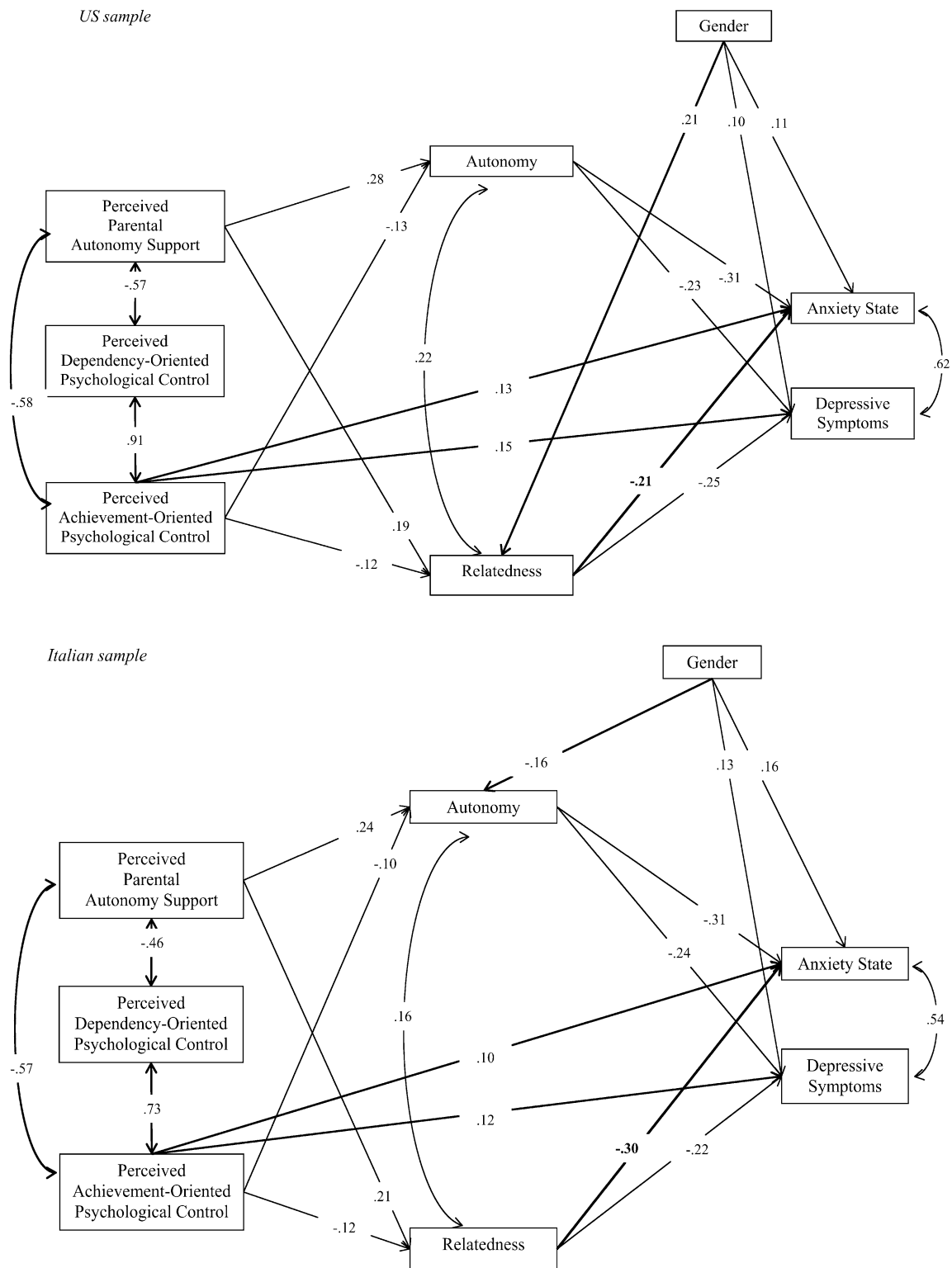


Fig. 1 Statistical model of moderated mediation. Standardized solution. *Note* Only significant paths ($p < .05$) were reported. Equality constraints were not imposed on parameter estimates represented by *bold fonts*

psychological control tend to ignore children’s opinions and to pressure them to comply with parental standards and expectations.

With regard to the relations between perceived parental psychological control, autonomy support and emerging adults’ internalizing difficulties, only APC was directly and

positively related to both internalizing difficulties: the more emerging adults perceived their parents as pushing them to excel in performance through intrusive tactics, the higher their levels of anxiety and depressive symptoms. According to Blatt's theory of personality development (2004), achievement-oriented parents promote a perfectionistic family climate characterized by exaggerated standards for achievement and criticism when standards are not met; thus, their children are likely to be excessively preoccupied with their performance and to develop a self-critical orientation that, in turn, can lead to the onset of depressive symptoms. The findings from present study support the idea that it is worthwhile to analyze the specific contribution of parental psychological control and PAS on children's adjustment separately (Soenens et al. 2009). Moreover, it offers evidence for the hypothesis that controlling parenting, particularly APC, is more strongly related to internalizing problems than PAS (e.g., Costa et al. 2014, Vansteenkiste and Ryan 2013). This finding is consistent with Vansteenkiste and Ryan's (2013) assertion that the negative effects of need thwarting parental behavior has a more pronounced association with children's maladjustment than the absence of need supportive parenting.

Our findings become more complex if we consider the intervening role of autonomy and relatedness in the interactions between perceived parental psychological control, autonomy support and internalizing difficulties. The initial prediction that autonomy and relatedness would serve as intervening variables was generally confirmed because these variables were found to intervene in the link between perceived parenting and internalizing symptoms. More specifically, our study showed an interesting path linking APC (negatively) and PAS (positively) to autonomy and connectedness, which were in turn associated with lower levels of anxiety and depressive symptoms. The association between APC and both anxiety and depressive symptoms was partially intervened by autonomy and relatedness. These results highlight that emerging adults tend to display internalizing difficulties when they perceive both high levels of parental APC and low levels of autonomy and relatedness. When parental demands for achievement and perfection lead to diminished senses of autonomy and relatedness, emerging adults are more likely to develop feelings of hopelessness, inferiority or guilt, and may express anxiety associated with the fear of failure.

Furthermore, the association of PAS with anxiety and depressive symptoms was fully intervened by autonomy and relatedness: in other words, the perception of parents as promoting their volition functioning is linked to high levels of autonomy and connection in emerging adults that are in turn protective against the onset of internalizing difficulties. When emerging adults perceive that their parents allow them to develop in a non-controlling environment in

which they can follow self-endorsed motives and, at the same time, act in an autonomous fashion, they are more likely to reach optimal levels of psychological adjustment (Soenens et al. 2007). DPC did not have any significant contributions to the intervening variables (autonomy and relatedness) or the outcomes (depressive symptoms and anxiety). This result may be explained by considering the different meanings of the two dimensions of perceived parental psychological control for emerging adults. According to Soenens et al. (2010), parents who are perceived to be high on APC are also more likely to be experienced as cold and distant. In contrast, parents who are perceived to be high on DPC are not necessarily experienced as lacking in warmth and closeness. Thus, this difference in warmth and emotional connection could be important for explaining the greater negative impact of APC on the intervening variables and outcomes in our model. Furthermore, apart from these theoretically-based considerations, it is possible that some of the effects of DPC could be suppressed due to the very high correlation between the two forms of psychological control within each sample (i.e., .73 in the Italian sample and .91 in the U.S. sample). However, further research is needed to better understand these associations.

With regard to the cross-cultural examination of the pattern in the relations among the variables in the study, our findings revealed mostly similarities between emerging adults living in Italy and in the U.S., consistent with more universalistic views. Both perceived psychological control and autonomy supportive parenting were associated with the basic human needs of autonomy and relatedness, and the contribution of these parenting variables on maladjustment was generally similar across the two groups. Specifically, parents perceived to be controlling and autonomy-suppressing undermine the satisfaction of needs that are universally important for individuals' well-being, and consequently have detrimental contribution on their functioning both in Italy and in the U.S.

Nevertheless, a few differences emerged between the two countries. The most important one concerns the presence of the moderating role of country in the intervening mechanism, where the association of relatedness with state anxiety was stronger for the Italian than the U.S. emerging adults. Specifically, both PAS and APC had stronger associations (via relatedness) on state anxiety for Italian emerging adults compared to their U.S. peers. One explanation for this cultural difference could be that in Italy, despite being perceived as similar to the U.S. culture in terms of its Western and independent focused nature, relatedness is a more valued need, which is endorsed by the family and other socialization agents (Claes et al. 2011; Manzi et al. 2012). As suggested by Manzi et al. (2012), the prevailing cultural model in Italian families, particularly in

Southern Italy where this study was conducted, is one of autonomy as identity individuation within the family of origin, in which both autonomy and relatedness are promoted at the same time. Italians strongly value their close relationships, particularly family support and emotional affection (Guarnieri and Tani 2011). In contrast, the U.S. culture is more focused on values related to independence. Thus, in the Italian context, the sense of relatedness may be more important for state anxiety than in the U.S. context.

There are several limitations to this study that are important to note. First, the cross-sectional nature of the study design precludes us from concluding the direction of the associations among these variables. Thus, it would be important to conduct future longitudinal studies following the same participants from adolescence to emerging adulthood to draw clearer conclusions about the direction of associations between these variables and about the developmental processes involved. Second, future research should perform a multi-informant replication of this study including parental reports or observations of psychological controlling and autonomy promoting practices although previous research suggested that adolescents' reports on how they perceive their parents' behavior is not inherently inferior to more objective measures (Chen et al. 1998).

Third, participants were not allowed to provide separate ratings for maternal and paternal parenting dimensions. Consequently, important gender-specific effects may have been masked. For instance, Soenens et al. (2010) showed that maternal DPC was associated more strongly with a dependent vulnerability to depression than paternal DPC. Thus, the unique role of each parent should be explored further. Fourth, although grounded in SDT, our study did not include the need for competence but focused only on the needs for autonomy and relatedness. Thus, further studies should include an assessment of the need for competence to examine the unique intervening role that this variable might play. Moreover, our measure of autonomy and relatedness was not originally constructed based on SDT theory. As such, future studies should utilize measures that are more closely aligned to this theory to more accurately capture the three basic psychological needs.

Another important direction for future research may be to disentangle the satisfaction of emerging adults' needs from the frustration of these needs (Bartholomew et al. 2011a, b; Vansteenkiste and Ryan 2013). For instance, Vansteenkiste and Ryan (2013) found that need frustration is more predictive of maladaptive outcomes, including internalizing problems, than the absence of satisfaction. Sixth, future studies should also examine whether demographic variables, such as living alone or living with the parents, would play a moderating role in the effects of parenting dimensions on emerging adults' outcomes. Additionally, since the gender distribution differed between the two samples, some

country-related differences could be attributed not only to cultural factors but also to the gender imbalance. Hence, further studies should include samples that are more balanced for gender, and directly analyze for a possible interaction between gender and country. Finally, future research should involve emerging adulthood participants from different socioeconomic and cultural backgrounds (SES, ethnicity and educational level) and also emerging adults not in the university setting given that our study, like most in this field, comprised relatively homogeneous samples of well-educated and White emerging adults.

Despite these limitations, our study contributes meaningfully to the literature because it simultaneously examines different domains of parental autonomy support and psychological control, and extended our understanding of the specific relations between these constructs and their significance for internalizing problems during emerging adulthood. Moreover, our examination of the need for autonomy and relatedness as intervening variables advanced the literature by allowing us to identify and explicate mechanisms or processes that underlie the observed relations between parenting dimensions and internalizing difficulties. Furthermore, we were able to reveal both cultural similarities in these processes, as well as cultural variations in the significance of relatedness within the Italian and U.S. cultural context for emerging adults. Together, these findings offered a greater understanding of how these factors can contribute to adjustment during emerging adulthood.

References

- Ahmad, I., Vansteenkiste, M., & Soenens, B. (2013). The relations of Arab Jordanian adolescents' perceived maternal parenting to teacher-rated adjustment and problems: The intervening role of perceived need satisfaction. *Developmental Psychology, 49*, 177–183.
- Arnett, J. J. (2002). The psychology of globalization. *American psychologist, 57*(10), 774–783.
- Arnett, J. J. (2004). *Emerging adulthood: The winding road from the late teens through the twenties*. New York: Oxford University Press.
- Barber, B. K., & Harmon, E. L. (2002). Violating the self: Parental psychological control of children and adolescents. In B. K. Barber (Ed.), *Intrusive 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, method, and culture. *Monographs of the Society for Research in Child Development, 70*, 1–137.
- Bartholomew, K. J., Ntoumanis, N., Ryan, R. M., Bosch, J. A., & Thøgersen-Ntoumani, C. (2011a). Self-determination theory and diminished functioning: The role of interpersonal control and psychological need thwarting. *Personality and Social Psychology Bulletin, 37*, 1459–1473.
- Bartholomew, K. J., Ntoumanis, N., Ryan, R. M., & Thøgersen-Ntoumani, C. (2011b). Psychological need thwarting in the sport

- context: Assessing the darker side of athletic experience. *Journal of Sport & Exercise Psychology*, 33, 75–102.
- Bentler, P. M. (2006). *EQS 6 Structural equations program manual*. Encino: CA. Multivariate Software Inc.
- Blatt, S. J. (1974). Levels of object representation in anaclitic and introjective depression. *Psychoanalytic Study of the Child*, 29, 107–157.
- Blatt, S. J. (2004). *Experiences of depression: Theoretical, clinical, and research perspectives*. Washington, DC: APA.
- Bollen, K. A. (1989). *Structural equations with latent variables*. New York: Wiley.
- Bornstein, M. H., Haynes, O. M., Pascual, L., Painter, K. M., & Galperin, C. (1999). Play in two societies: Pervasiveness of process, specificity of structure. *Child Development*, 70, 317–331.
- Chen, C., Greenberger, E., Lester, J., Dong, Q., & Guo, M. S. (1998). A cross-cultural study of family and peer correlations of adolescent misconduct. *Developmental Psychology*, 34, 770–781.
- Chirkov, V. I. (2007). Culture, personal autonomy and individualism: Their relationships and implications for personal growth and well-being. In G. Zheng, K. Leung, & J. G. Adair (Eds.), *Perspectives and progress in contemporary cross-cultural psychology* (pp. 247–263). Beijing, China: China Light Industry Press.
- Chirkov, V. I., & Ryan, R. M. (2001). Parent and teacher autonomy-support in Russian and U.S. adolescents: Common effects on well-being and academic motivation. *Journal of Cross-Cultural Psychology*, 32, 618–635.
- Chirkov, V. I., Ryan, R. M., Kim, Y., & Kaplan, U. (2003). Differentiating autonomy from individualism and independence: A self-determination theory perspective on internalization of cultural orientations and well-being. *Journal of Personality and Social Psychology*, 84, 97–110.
- Claes, M., Percec, C., Miranda, D., Benoit, A., Bariaud, F., Lanz, M., et al. (2011). Adolescents' perceptions of parental practices: A cross-national comparison of Canada, France, and Italy. *Journal of Adolescence*, 34, 225–238.
- Costa, S., Soenens, B., Gugliandolo, M. C., Cuzzocrea, F., & Larcán, R. (2014). The mediating role of experiences of need satisfaction in associations between parental psychological control and internalizing problems: A study among Italian college students. *Journal of Child and Family Studies*. doi:10.1007/s10826-014-9919-2.
- 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, 227–268.
- Flett, G. L., Hewitt, P. L., Oliver, J. M., & MacDonald, S. (2002). Perfectionism in children and their parents. A developmental analysis. In G. L. Flett & P. L. Hewitt (Eds.), *Perfectionism: Theory, research and treatment* (pp. 89–132). Washington, DC: APA.
- Fousiani, K., Van Petegem, S., Soenens, B., Vansteenkiste, M., & Chen, B. (2014). Does parental autonomy support relate to adolescent autonomy? An in-depth examination of a seemingly simple question. *Journal of Adolescent Research*, 29, 299–330.
- Greenfield, P. M., Keller, H., Fuligni, A., & Maynard, A. (2003). Cultural pathways through universal development. *Annual Review of Psychology*, 54, 461–490.
- Grolnick, W. S. (2003). *The psychology of parental control: How well-meant parenting backfires*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Guarnieri, S., & Tani, F. (2011). Social networks and life satisfaction in emerging adulthood. *Journal of Developmental Psychology*, 99, 34–52.
- Haerens, L., Aelterman, N., Vansteenkiste, M., Soenens, B., & Van Petegem, S. (2015). Do perceived autonomy-supportive and controlling teaching relate to physical education students' motivational experiences through unique pathways? Distinguishing between the bright and dark side of motivation. *Psychology of Sport and Exercise*, 16, 26–36.
- Hofstede, G. (1991). *Cultures and organizations*. London: McGraw-Hill.
- Inguglia, C., Inguglia, S., Liga, F., Lo Coco, A., & Lo Cricchio, M. G. (2015). Autonomy and relatedness in adolescence and emerging adulthood: Relationships with parental support and psychological distress. *Journal of Adult Development*, 22, 1–13.
- Jurado Guerrero, T., & Naldini, M. (1997). Is the south so different? Italian and Spanish families in comparative perspective. In M. Rhodes (Ed.), *Southern European welfare states: Between crisis and reform* (pp. 42–66). London: Routledge.
- Kağitçibaşı, Ç. (1996). The autonomous-relational self: A new synthesis. *European Psychologist*, 1, 180–186.
- Kağitçibaşı, Ç. (2005). Autonomy and relatedness in cultural context: Implications for self and family. *Journal of Cross-Cultural Psychology*, 36, 1–20.
- Kins, E., Beyers, W., Soenens, B., & Vansteenkiste, M. (2009). Patterns of home leaving and subjective well-being in emerging adulthood: The role of motivational processes and parental autonomy support. *Developmental Psychology*, 45, 1416–1429.
- Koepke, S., & Denissen, J. J. (2012). Dynamics of identity development and separation-individuation in parent–child relationships during adolescence and emerging adulthood: A conceptual integration. *Developmental Review*, 32(1), 67–88.
- Little, T. D. (1997). Mean and covariance structures (MACS) analyses of cross-cultural data: Practical and theoretical issues. *Multivariate Behavioral Research*, 32, 53–76.
- Luyckx, K., Soenens, B., Vansteenkiste, M., Goossens, L., & Berzonsky, M. (2007). Parental psychological control and dimensions of identity formation in emerging adulthood. *Journal of Family Psychology*, 21, 546–550.
- MacKinnon, D. P., Fairchild, A. J., & Fritz, M. S. (2007). Mediation analysis. *Annual Review of Psychology*, 58, 593.
- Manzi, C., Regalia, C., Pelucchi, S., & Fincham, F. D. (2012). Documenting different domains of promotion of autonomy in families. *Journal of Adolescence*, 35, 289–298.
- McLeod, B. D., Weisz, J. R., & Wood, J. J. (2007). Examining the association between parenting and childhood depression: A meta-analysis. *Clinical Psychology Review*, 27, 986–1003.
- Nelson, D. A., Hart, C. H., Yang, C., Olsen, J. A., & Jin, S. (2006). Aversive parenting in China: Associations with child physical and relational aggression. *Child Development*, 77, 554–572.
- Padilla-Walker, L. M., & Nelson, L. J. (2012). Black hawk down?: Establishing helicopter parenting as a distinct construct from other forms of parental control during emerging adulthood. *Journal of Adolescence*, 35, 1177–1190.
- Park, Y. S., Kim, U., & Shin, Y. (2009). Filial behavior, expression, and its importance as perceived by parents of high school students: an indigenous psychological analysis. *The Korean Journal of the Human Development*, 16, 109–141.
- Pettit, G. S., Laird, R. D., Dodge, K. A., Bates, J. E., & Criss, M. M. (2001). Antecedents and behavior-problem outcomes of parental monitoring and psychological control in early adolescence. *Child Development*, 72, 583–598.
- Pomerantz, E. M., & Qian, W. (2009). The role of parental control in children's development in Western and East Asian cultures. *Current Directions in Psychological Science*, 18, 285–289.
- Radloff, L. S. (1977). The CES-D scale a self-report depression scale for research in the general population. *Applied Psychological Measurement*, 1, 385–401.

- Rapee, R. M. (1997). Potential role of childrearing practices in the development of anxiety and depression. *Clinical Psychology Review, 17*, 47–67.
- Ryan, R. M., LaGuardia, J. G., Solky-Butzel, J., Chirkov, V. I., & Kim, Y. (2005). On the interpersonal regulation of emotions: Emotional reliance across gender, relationships, and cultures. *Personal Relationships, 12*, 145–163.
- Ryff, C. D., & Keyes, C. L. M. (1995). The structure of psychological well-being revisited. *Journal of Personality and Social Psychology, 69*, 719–727.
- Scabini, E., Marta, E., & Lanz, M. (2006). *The transition to adulthood and family relations: An intergenerational perspective*. New York: Psychology Press.
- Senese, V. P., Bornstein, M. H., Haynes, O. M., Rossi, G., & Venuti, P. (2012). A cross-cultural comparison of mothers' beliefs about their parenting very young children. *Infant Behavior and Development, 35*, 479–488.
- Sobel, M. E. (1982). Asymptotic confidence intervals for indirect effects in structural equation models. *Sociological Methodology, 13*, 290–312.
- Soenens, B., & Beyers, W. (2012). The cross-cultural significance of control and autonomy in parent-adolescent relationships. *Journal of Adolescence, 35*, 243–248.
- Soenens, B., Park, S., Vansteenkiste, M., & Mouratidis, A. (2012). Perceived parental psychological control and adolescent depressive experiences: A cross-cultural study with Belgian and South-Korean adolescents. *Journal of Adolescence, 35*, 261–272.
- 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*, 74–99.
- Soenens, B., Vansteenkiste, M., Lens, W., Luyckx, K., Beyers, W., Goossens, L., & Ryan, R. M. (2007). Conceptualizing parental autonomy support: Adolescent perceptions of promoting independence versus promoting volitional functioning. *Developmental Psychology, 43*, 633–646.
- 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*, 217–256.
- Soenens, B., Vansteenkiste, M., & Sierens, E. (2009). How are parental psychological control and autonomy-support related? A cluster-analytic approach. *Journal of Marriage and Family, 71*, 187–202.
- Soenens, B., Vansteenkiste, M., & Van Petegem, S. (2015). Let us not throw the baby with the bathwater: Applying the principle of universalism without uniformity to autonomy-supportive and controlling parenting. *Child Development Perspectives, 9*, 44–49.
- Spielberger, C. D., Gorsuch, R. L., Lushene, R., Vagg, P. R., & Jacobs, G. A. (1983). *Manual for the State-Trait Anxiety Inventory*. Palo Alto, CA: Consulting Psychologists Press.
- Taylor, I. M., & Lonsdale, C. (2010). Cultural differences in the relationships among autonomy support, psychological need satisfaction, subjective vitality, and effort in British and Chinese physical education. *Journal of Sport and Exercise Psychology, 32*, 655–673.
- Urry, S., Nelson, L. J., & Padilla-Walker, L. M. (2011). Mother knows best: Psychological control, child disclosure, and maternal knowledge in emerging adulthood. *Journal of Family Studies, 17*, 157–173.
- Vandenberg, R. J., & Lance, C. E. (2000). A review and synthesis of the measurement invariance literature: suggestions, practices, and recommendations for organizational research. *Organizational Research Methods, 3*, 4–70.
- Vansteenkiste, M., Lens, W., Soenens, B., & Luyckx, K. (2006). Autonomy and relatedness among Chinese sojourners and applicants: Conflictual or independent predictors of well-being and adjustment? *Motivation and Emotion, 30*, 273–282.
- Vansteenkiste, M., & Ryan, R. M. (2013). On psychological growth and vulnerability: Basic psychological need satisfaction and need frustration as a unifying principle. *Journal of Psychotherapy Integration, 23*, 263–280.
- White, R. W. (1959). Motivation reconsidered: The concept of competence. *Psychological Review, 66*, 297–333.
- Wu, P., Robinson, C. C., Yang, C., Hart, C. H., Olsen, S. F., Porter, C. L., et al. (2002). Similarities and differences in mothers' parenting of preschoolers in China and the United States. *International Journal of Behavioral Development, 26*, 481–491.
- Yap, M. B. H., Pilkington, P. D., Ryan, S. M., & Jorm, A. F. (2014). Parental factors associated with depression and anxiety in young people: A systematic review and meta-analysis. *Journal of Affective Disorders, 156*, 8–23.