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Perceived parental psychological control and adolescent depressive experiences: A cross-cultural study with Belgian and South-Korean adolescents

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A B S T R A C T

In recent research on psychologically controlling parenting, debate has arisen about the cross-cultural relevance of this construct, with some scholars arguing that the developmental outcomes of psychological control are culture-bound and others arguing that the detrimental effects of psychological control generalize across cultures. This study aimed to add to this debate by examining the relevance of a distinction between two domain-specific expressions of psychological control (i.e., dependency-oriented and achievement-oriented) in Belgian ($N = 290$) and South-Korean ($N = 321$) adolescents. Multi-group path analyses showed that associations between the domains of psychological control, depressive personality, and depressive symptoms were similar between the two samples. Overall, the findings are in line with the notion that the effects of psychological control generalize across culture.

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Abundant research has documented associations between psychologically controlling parenting and indicators of adolescent ill-being such as depressive symptoms and low self-worth (Barber & Harmon, 2002). Because most research on psychological control has been conducted with samples from Western societies, debate has arisen about whether such findings would generalize to other cultures and to societies characterized by a relatively more collectivist cultural climate in particular (Pomerantz & Wang, 2009). Whereas some scholars argue that the negative effects of perceived parental psychological control would be absent or even reversed in cultures characterized by a focus on interdependence and harmony (e.g., Chao & Aque, 2009), other scholars argue that perceived parental psychological control appeals to a universal human need for autonomy and would, as such, relate to detrimental outcomes across different cultures (e.g., Soenens & Vansteenkiste, 2010). Against the background of this debate, this study examines the relevance of two domain-specific expressions of psychological control (i.e. dependency-oriented and achievement-oriented) in two countries with a markedly different cultural climate, that is, Belgium and South-Korea.

(Types of) psychological control and adolescent depressive experiences

Parental psychological control refers to the display of a conditionally approving attitude towards children and, more specifically, involves engagement in a host of intrusive parenting tactics to make children think, behave, or feel in parentally

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approved ways. Such intrusive tactics include guilt-induction, shaming, and instilling anxiety (Barber, 1996). There is increasing evidence that perceived parental psychological control is related to maladjustment and even psychopathology in adolescents, including depressive symptoms (e.g., Barber, 1996), anxiety (e.g., Pettit, Laird, Dodge, Bates, & Criss, 2001), and low self-esteem (e.g., Soenens, Vansteenkiste, Luyten, Duriez, & Goossens, 2005).

To elucidate the processes involved in associations between perceived parental psychological control and adolescent depressive symptoms, Soenens, Vansteenkiste, and Luyten (2010) recently distinguished between two domain-specific expressions of psychological control, that is, dependency-oriented psychological control (DPC) and achievement-oriented psychological control (APC). DPC involves the use of pressure to make children remain within close physical and emotional proximity. Parents scoring high on DPC use psychologically controlling tactics when children distance themselves too much from the parents (e.g., by relying on peers for advice). In contrast, APC involves the use of pressure to push children to excel in performance-relevant situations (e.g., school or sports). Parents high on APC engage in intrusive tactics when their children do not set high standards for achievement and/or fail to achieve those standards.

Soenens et al. (2010) demonstrated, through a series of factor analyses, that both domains can be distinguished reliably and that both domains of psychological control were uniquely related to perceptions of parents as intrusive and as inhibiting autonomy. Attesting to the differential validity of DPC and APC, only APC was related negatively to parental warmth, indicating that parents high on APC are likely to be experienced as cold and distant. In contrast, parents high on DPC are not necessarily experienced as lacking in warmth, presumably because they favor and even demand parent-child closeness.

On the basis of Blatt's (1974, 2004) theory on personality vulnerability to depression, Soenens et al. (2010) argued that DPC and APC would relate to adolescent depressive symptoms through different mediating pathways, with DPC and APC being specifically related to a dependent and self-critical personality orientation, respectively. Dependency involves strong fears of separation and abandonment and a tendency to cling to others to obtain reassurance and a sense of security. A self-critical orientation involves the setting of excessively high standards for performance and a tendency to engage in harsh self-scrutiny when faced with failure. These specific pathways were empirically corroborated such that dependency and self-criticism were found to mediate at least partially the initial associations between DPC and APC and adolescent depressive symptoms.

Contrasting perspectives on the cross-cultural relevance of psychological control

Relativistic perspective

Although much insight has been gained in the developmental outcomes associated with parental psychological control, most research to date has relied on White/Caucasian samples, at the expense of research with more culturally heterogeneous samples. As a consequence, debate remains over the cross-cultural generalization of the detrimental effects of psychological control and of the two domain-specific manifestations of psychological control in particular. Scholars adopting a rather relativistic cross-cultural perspective have argued that the effects of psychological control may not generalize to relatively more collectivist cultures (e.g., Rothbaum & Trommsdorff, 2007). Three (partially overlapping) types of arguments have been forwarded, that is, (a) a *frequency* argument, (b) a *match* argument, and (c) a *perceived meaning* argument.

First, some studies show that psychologically controlling practices such as shaming and guilt-induction are used more frequently in Asian, compared to Western, societies (e.g., Wu et al., 2002). More specifically, there are reasons to believe that DPC and APC are more common in South-Korea compared to Belgium as issues of dependence and issues of achievement are particularly salient in South-Korean family climate (Park, Kim, & Shin, 2009). Belgium is a typical Western-European country in which, through socialization, children and adolescents are thought to define themselves mainly in terms of personal attributes rather than group membership. As a consequence, family life is characterized by an emphasis on independence (Goossens & Luyckx, 2006). In contrast, influenced by Confucian philosophy, South-Korean family life is characterized by close family ties and by an emphasis on loyalty towards family values (e.g., Cheah & Park, 2006). Although the impact of traditional Confucian values has waned in recent years, Koreans still value unity, filial piety, dependence, and conformity (Kim, Park, Kwon, & Koo, 2005; Park et al., 2009). Independence from parents is disapproved of and shaming is considered as an appropriate practice to enforce obedience and conformity with family values (Han, 1999; Park et al., 2009). Given such accounts of Korean family life, it can be expected that parental dependency-oriented psychological control will be heightened in the South-Korean sample compared to the Belgian sample.

Although Asian countries are sometimes depicted as being uniformly collectivist in nature, research shows that such a static characterization of cultures in general, and of South-Korean culture in particular, is overly simplistic (e.g., Tamis-LeMonda et al., 2008). There is growing recognition that individualistic and collectivistic values can co-occur within cultures and this seems to be particularly the case in South-Korea. Specifically, in addition to an emphasis on dependence and obedience (which can be considered relatively 'collectivistic' values), Korean parents may be more likely than Western parents to value and emphasize achievement in their child-rearing practices (which can be considered as a relatively more 'individualistic' value). In Belgium, educational attainment is high and school performance is highly valued (Goossens & Luyckx, 2006). However, the importance attached to achievement may be even more pronounced in Korea compared to Belgium. According to PISA statistics, 15-year-old Korean students are ranked near the top in many school subjects among OECD countries (Ministry of Education, Science, & Technology; Korean Institute of Curriculum & Evaluation, 2005). One explanation that has been forwarded for this is Korean parents' passion for children's education and school achievement (Han, 1999). Korean parents have high academic expectations for their children and, in addition, tend to consider their children's

failures as their own failures. As a consequence, they would use controlling parenting tactics to enforce high achievement (e.g., Yang & Rosenblatt, 2001), as expressed for instance in APC. Because of their more frequent occurrence in collectivist societies, psychologically controlling practices would be socially approved, such that children in these societies would not be affected by them negatively (e.g., Rothbaum & Trommsdorff, 2007).

Second, it has been argued that the negative effects of psychological control in general and DPC in particular – as they involve parental stifling of adolescent independence and enforcement of dependence and loyalty – would apply only to cultural contexts where independence is highly valued (i.e., North America and Western Europe) (e.g., Kagitçibasi, 1996). In contrast, in societies where dependence and loyalty are more strongly valued (Markus & Kitayama, 2003), psychological control and DPC, in particular, would be consistent with prevailing cultural values. Because of this fit or match between parenting practices and the culture at large, such practices would be less detrimental or even beneficial to adolescent well-being.

Third, children may attach a different interpretation and affective connotation to parental psychological control depending on their cultural orientation. In line with this, Chao (1994) argued that whereas psychological control would be interpreted as intrusive and hostile by children from individualistic countries, it would be interpreted as relatively more benign and appropriate by children from countries with a relatively more collectivistic cultural climate. In societies with a Confucian tradition, the meaning of parental control would be closely intertwined with the notion of *guan*, which represents a parental orientation reflecting both love and discipline. Thus, in Asian countries, like South-Korea, children would be more likely to view parental control, including psychological control, as an expression of parental involvement and care. Recent studies provide preliminary evidence for such a claim (e.g., Chao & Aque, 2009; Mason, Walker-Barnes, Tu, Simons, & Martinez-Arrue, 2004). A similar reasoning could be applied to the domains of DPC and APC. Specifically, DPC would carry a positive meaning because it teaches children to be loyal to one's family and to cooperate. Similarly, APC would indicate that parents are involved in children's school career and success. Due to their relatively more benign interpretation, children from comparatively more collectivist societies would suffer less or might even benefit from psychological control.

Universalistic perspective

Contrary to these relativistic cross-cultural perspectives, scholars have argued that at least some parenting-related developmental processes may show substantial similarity across ethnic and racial groups. For instance, in a re-analysis of several large multi-ethnic datasets, Rowe, Vazsonyi, and Flannery (1994) found that structural associations between socialization measures and adjustment outcomes (e.g., delinquency and achievement) were typically similar across ethnic groups. According to Rowe et al. (1994), such findings are in line with the notion that the fundamental developmental processes involved in important adjustment outcomes tend to be universal. Increasingly, research is showing that associations between important parenting constructs (e.g., support, conflict, and monitoring) and adolescent adjustment (e.g., anxiety, depression, alcohol use, misconduct) indeed replicate across countries and ethnic groups (e.g., Vazsonyi & Belliston, 2006; Vazsonyi, Hibbert, & Snider, 2003; Wissink, Dekovic, & Meijer, 2006).

Specifically with regard to (psychologically) controlling parenting, it has been argued from the perspective of self-determination theory (SDT; Deci & Ryan, 2000) that such a parenting style undermines the fundamental and universal need for autonomy. In SDT, autonomy is viewed as one of three basic human needs, the other ones being competence and relatedness (Deci & Ryan, 2000). According to Deci and Ryan (2000, p. 246), these needs are essential and universal nutriments for psychological growth and adjustment: "[…] the three basic psychological needs are universal and must be satisfied in all cultures for people to be optimally healthy". The need for autonomy, which is particularly relevant in the context of parental control, is defined in SDT as the experience of volition. When individuals' need for autonomy is satisfied, they experience a sense of choicefulness because their actions are self-endorsed and reflect deeply held values and preferences. Autonomy is contrasted with heteronomy, which refers to the experience of being pressured to act, think, or feel in particular ways. The frustration of this need, for instance through the use of psychologically controlling practices, would pose a risk for maladjustment. Although SDT's universalistic claims about the role of need satisfaction and need-supportive parenting are controversial, research is increasingly demonstrating that satisfaction of the three needs is related positively to adjustment across both individualistic and relatively more collectivistic societies (e.g., Chirkov & Ryan, 2001; Vansteenkiste, Lens, Soenens, & Luyckx, 2006).

Such findings contradict claims made within relativistic cross-cultural perspectives. This apparent contradiction can be explained at least partly by differences between SDT and relativistic cross-cultural perspectives in the way autonomy is defined. In SDT autonomy is not defined as independence (i.e., freedom from parental or societal regulations) but as volition (i.e., the experience of choicefulness and self-endorsement). Further, in SDT the opposite of autonomy is not dependence (i.e., reliance on parental or societal regulations) but heteronomy (i.e., the experience of pressure and coercion). It has been argued and empirically confirmed that the notion of independence (versus dependence) is largely orthogonal to the notion of volition (versus control) (e.g., Ryan, 1995; Soenens et al., 2007; Vansteenkiste, Zhou, Lens, & Soenens, 2005). People can act independently either for volitional or controlled reasons. Similarly, people can rely on advice and conform to others' prescriptions, that is, display dependent behavior, either for volitional or controlled reasons. Although cultures differ strongly in terms of their emphasis on (inter)dependence and conformity versus independence and self-reliance (e.g., Kagitçibasi, 1996), SDT predicts that the experience of autonomy, when defined as volition, versus control is equally important across cultures and research indeed supports this claim (e.g., Chirkov & Ryan, 2001).

From the perspective of SDT, parental psychological control is essentially a need-thwarting and, in particular, an autonomy-thwarting parenting dimension because children who perceive their parents as psychologically controlling likely

feel that they *have* to comply with the parents' agenda (Soenens & Vansteenkiste, 2010). Specifically applied to the theme of DPC, we argue that DPC reflects a combination of (a) parental emphasis on dependence and (b) parental pressure. As such, DPC is similar to Rothbaum and Trommsdorff's (2007) concept of assurance, which is defined as an orientation of prescribed and obligatory relatedness. Rothbaum and Trommsdorff (2007) argued that assurance is a normative and healthy feature of family life in relatively collectivist societies. In contrast, on the basis of SDT we argue that a pressuring style of demanding dependence (as expressed in DPC) should yield negative well-being correlates because its pressuring nature fails to meet the need for autonomy. Similarly, to the extent that APC is used as a means to pressure a child to achieve, it would inhibit universal needs and the need for autonomy in particular. As such, both APC and DPC would have detrimental effects for adolescents' well-being across cultures. Consistent with this claim, a number of studies have shown that psychological control is related to adolescent maladjustment in a wide variety of cultures (e.g., Barber, Stolz, & Olsen, 2005; Rudy, Awong, & Lambert, 2008), not only at the cross-sectional level but also over time (e.g., Wang, Pomerantz, & Cheng, 2007).

The present study

The main aim of this study was to examine whether associations between perceived DPC and APC, dimensions of personality vulnerability to depression, and depressive symptoms would be similar or different in Korea and Belgium. On the basis of Blatt's (1974, 2004) theory, we tested a model of differential mediation, where DPC and APC would have specific associations with adolescent dependency and self-criticism, respectively. Both personality vulnerabilities would, in turn, predict independent variance in adolescent depressive symptoms. If perceived APC and DPC appeal to universal human needs, it can be anticipated that the structural associations in the hypothesized model would be similar in the two countries. If, in contrast, parental psychological control would be less detrimental or even beneficial in South-Korea, as suggested by relativistic cross-cultural researchers, and/or relate to adolescent adjustment through qualitatively different pathways in South-Korea, associations between the main study variables should be moderated by country.

Prior to examining the moderating role of cultural group in associations between psychological control and depressive experiences, we examined whether the assessment and validity of DPC and APC would be equivalent in the two cultural groups. To examine the validity of the distinction between DPC and APC we inspected associations with well-established measures of general parental autonomy-support, psychological control, and warmth. Also, it was examined whether mean scores on DPC and APC would differ between the two cultural groups. As indicated before, accounts of Korean family life indeed suggest that DPC and APC may be elevated in the perception of South-Korean adolescents.

Method

Participants and procedure

Participants in the Belgian sample were 290 Dutch-speaking high-school students (144 females; 49%) following the academic track. Participants' age ranged between 14 and 18 years (mean age = 16.1 years). Of the participants, 95% came from intact families. Mothers' and fathers' age was 46 years and 47 years respectively. On a 6-point scale, mothers' mean educational level was 3.88, indicating an average of 15 years of education. Fathers' mean educational level was 4.02, also indicating about 15 years of education. Participants in the South-Korean sample were 321 high-school students (170 females; 53%) following the academic track. Participants' age ranged between 15 and 18 years (mean age = 16.1 years). Of the participants, 95% came from intact families. Mothers' and fathers' age was 45 years and 46 years respectively. Mothers' and fathers' mean educational level was 3.58 and 4.03, respectively, both indicating an average of about 15 years of education. A comparison of the two samples showed that they did not differ significantly in terms of gender distribution [$\chi^2(1) = 0.42$, $p > .05$], age [$t(609) = 0.34$, $p > .05$], family structure [$\chi^2(1) = 1.46$, $p > .05$], maternal age [$t(609) = 1.81$, $p > .05$], paternal age [$t(609) = 0.89$, $p > .05$], and paternal educational level [$t(609) = 0.10$, $p > .05$]. The two samples only differed in terms of maternal educational level, [$t(609) = 3.35$, $p < .05$], with the South-Korean mothers being slightly higher educated than the Belgian mothers.

In both samples, we obtained passive informed consent from parents. Parents were informed about the purpose and method of the study and they could fill out a form if they did not want their child to participate in the study. Less than 2% of the parents did not allow their child to participate. It was made clear to both parents and adolescents that participation was voluntary and could be discontinued at any time. This procedure was approved by the ethics committee of the researchers' university. The data for the Belgian sample were collected by undergraduate students as part of a course requirement. Students were asked to contact two families, one with a male adolescent and one with a female adolescent. Next, students scheduled a meeting with the adolescents and administered the questionnaires during a home visit. Participants in the South-Korean sample were recruited from high schools in Seoul and its vicinities. After having received permission from the school principals, data were collected at school through the high school teachers. Students had approximately 45 min to complete the survey.

Measures

With one exception (i.e., the DAPCS) all scales in this study were originally developed and written in English. For each of the measures, a validated Dutch version was already available and these Dutch versions were administered to the Belgian

participants. Because Korean versions of the questionnaires were not available at the onset of the study, we translated all questionnaires to Korean, thereby following the recommendations of the International Test Commission (van de Vijver & Hambleton, 1996). The translation was done by the second author of this study. Next, a back translation was done by a graduate student who was fluent with English and Korean. Comparison of the original scales (in English) to the Korean translation showed strong convergence.

Perceived domain-specific expressions of psychological control

Participants were administered the Dependency-oriented (8 items) and Achievement-oriented (9 items) Psychological Control Scales (DAPCS; Soenens et al., 2010). An example item of the DPC scale is "My mother/father is only friendly with me if I rely on her/him instead of on my friends". An example item of the APC scale is "My mother/father makes 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*) for mothers and fathers separately. Soenens et al. (2010) provided validity information for the DAPCS.

To examine the internal structure of the DAPCS in the current samples, we performed a series of CFAs within the two samples. In each sample, a CFA was performed for maternal and paternal ratings separately. The 8 items tapping into DPC were used as indicators of DPC and the 9 items tapping into APC were used as indicators of APC. All the analyses were performed using the EQS 6.1 structural equation modeling statistical software package (Bentler, 1995). To examine model fit, we inspected the Satorra–Bentler Scaled chi-square (SBS-χ^2, Satorra & Bentler, 1994), the Standardized Root Mean Square Residual (SRMR), the Root Mean Squared Error of Approximation (RMSEA), and the Comparative Fit Index (CFI). According to Hu and Bentler (1999), the combined cut-off values of .09 for SRMR and .06 for RMSEA indicate a good model fit. For the CFI, values greater than .90 indicate acceptable fit (Kline, 2005; Little, 1997).

Fit indices of the 2-factor model distinguishing between DPC and APC can be found in Table 1. As can be seen, although the fit indices were generally acceptable, the model had a non-perfect fit for the maternal solution in the Korean sample. Closer inspection of the factor loadings and modification indices suggested that this was due to three items. Specifically, two items yielded relatively large standardized residuals (i.e., high error covariances with many of the remaining items) and one item from the APC scale showed a modest loading on its latent factor. Upon excluding these items, the fit of the maternal solution in the Korean sample was improved: SBS-χ^2 [76] = 189.91, $p < .01$, CFI = .91; SRMR = .05; RMSEA = .07, [90%-CI: .057–.082]. To be consistent, we removed these items in all subsequent analyses, thus keeping 7 items for both DPC and APC. Across the two samples and across maternal and paternal ratings, Cronbach's alphas ranged between .82 and .92.

Other perceived parenting dimensions

Three parenting style dimensions were assessed to externally validate the distinction between DPC and APC, that is, general psychological control, autonomy-support, and warmth. Items were rated on a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*) for mothers and fathers separately. *Psychological control* was assessed with the 8-item Psychological Control Scale-Youth Self Report (PCS-YSR; Barber, 1996). A sample item reads: "My mother/father is always trying to change how I feel or think about things". Cronbach's alpha for maternal and paternal ratings across both samples varied between .71 and .80. *Autonomy-support* was tapped with 7 items drawn from the 'Autonomy Support' scale of the Perceptions of Parents Scale (Grolnick, Ryan, & Deci, 1991, e.g., "My mother, whenever possible, allows me to choose what to do"). Cronbach's alpha varied between .72 and .80. *Warmth* was assessed with 7 items from the Children's Report on Parent Behavior Inventory (CRPBI; Schaefer, 1965). A sample item reads "My father/mother makes me feel better after I discussed my worries with him/her". Cronbach's alpha varied between .83 and .87. Each of these measures has been successfully used in previous cross-cultural research (e.g., Barber et al., 2005; Vansteenkiste, Simons, et al., 2005).

Dependency and self-criticism

Dependency and self-criticism were assessed using the *Depressive Experiences Questionnaire for Adolescents* (DEQ-A; Blatt, Schaffer, Bers, & Quinlan, 1992). The DEQ is a widely used and validated 66-item measure tapping into dependency, self-criticism, and efficacy. The efficacy scale was not considered relevant to our research goals and, hence, was not used in the analyses. Items are scored on a scale ranging from 1 (*totally disagree*) to 7 (*totally agree*). Example items are: "Without support from others who are close to me, I would feel helpless" (dependency) and "If I fail to live up to expectations, I feel unworthy"

Table 1
Fit Indices of the two-factor model distinguishing between DPC and APC.

Sample	N	S-Bχ^2	df	SRMR	RMSEA	RMSEA 90% CI	CFI
Full Sample							
Maternal Solution	603	378.56	118	.051	.061	.054–.067	.91
Paternal Solution	595	371.69	118	.053	.060	.053–.067	.92
Belgian Sample							
Maternal Solution	287	231.19	118	.058	.058	.047–.069	.93
Paternal Solution	286	253.71	118	.061	.064	.053–.074	.91
Korean Sample							
Maternal Solution	316	301.25	118	.061	.070	.060–.080	.86
Paternal Solution	309	249.69	118	.056	.060	.050–.070	.92

Note: DPC = Separation-Anxious Psychological Control, APC = Achievement-Oriented Psychological Control.

(self-criticism). The DEQ-A is an age-appropriate version of the DEQ for use with adolescents and has been found to yield a stable factor structure, adequate test-retest reliability, and good validity (e.g., Blatt et al., 1992). The DEQ has been used and validated in previous research with Asian samples (Yao, Fang, Zhu, & Zuroff, 2009). Scores for dependency and self-criticism were derived using the factor scoring procedure proposed by Blatt et al. (1992).

Depressive symptoms

The Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977) taps into depressive symptoms such as feelings of abandonment, failure or helplessness. In this study, we used a brief 12-item version of the original 20-item CES-D (Roberts & Sobhan, 1992). Example items are: "I felt depressed" and "I had trouble keeping my mind on what I was doing". 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*). This scale has been used in both clinical and non-clinical samples, and the validity and reliability of this scale for use with adolescents in different cultural contexts have been demonstrated (Radloff, 1977; Roberts & Sobhan, 1992). In the present study, Cronbach's alpha was .77 in the Belgian sample and .76 in the Korean sample.

To provide a more detailed picture of the distribution of depression scores in the two samples, we grouped participants into three categories according to cut-off scores recently developed by Poulin, Hand, Boudreau, and Santor (2005): (a) minimal depressive symptoms (scores 0–11), (b) somewhat elevated depressive symptoms (scores 12–20), and (c) very elevated depressive symptoms (scores 21–36). In the Belgian sample, 81% of the participants were in the 'minimal' category, 17% were in the 'somewhat elevated' category, and2% were in the 'very elevated' category. In the Korean sample, 48% of the participants were in the 'minimal' category, 43% were in the 'somewhat elevated' category, and 9% were in the 'very elevated' category. The two samples differed significantly in terms of the distribution of depression scores [χ^2 (2) = 73.11, $p < .001$], with Korean participants being more strongly represented in the 'somewhat elevated' and the 'very elevated' categories than the Belgian participants.

Results

Data analysis proceeded in three steps. First, we examined the measurement equivalence of the DAPCS by performing a multi-group CFA comparing the factor structure of the DAPCS between the two groups. Second, using regression analyses we examined the external validity of the DAPCS scales by relating them to a number of other well-validated parenting scales. Third, we examined whether cultural group would moderate associations between the domains of psychological control, depressive personality, and depressive symptoms by means of a multi-group path analysis.

Measurement equivalence of the DAPCS

Following recommendations by Little (1997) and Vandenberg and Lance (2000), we examined a series of nested models in which additional constraints between the two samples (i.e., Belgian and Koreans) were gradually imposed (configural invariance, metric invariance, scalar invariance, and invariance of latent means). For the purpose of this article, we will only report on the results of the analyses dealing with metric invariance and invariance of latent means because these analyses deal directly with (a) the equivalence of factor loadings and (b) mean-level differences, respectively. Results of the other models, along with results of a series of exploratory factor analyses, can be obtained upon request. We examined each of the nested models with respect to their overall fit indices and with respect to the difference in comparative fit index (ΔCFI) relative to a baseline model in which no group constraints were imposed in the model parameters of the two groups. As suggested by Little (1997) and by Cheung and Rensvold (2002), the use of ΔCFI as an index of model invariance relative to the baseline model is more preferable and realistic compared to the use of difference in chi-square statistic because the latter is considered an elusive criterion especially when data are non-normally distributed. Whereas Little (1997) proposed that ΔCFI values of .05 or less indicate model invariance, Cheung and Rensvold (2002) proposed a more conservative criterion of ΔCFI values less or around the .01 level.

First, we performed a test of metric invariance to check whether the values of the factor loadings of each variable on the respective latent factors are similar between the two samples. To do so, we set up a model in which we constrained to equality the factor loadings of the items across the two groups for the APC and DPC scales and we compared these models to the baseline model in which no constraints were imposed. The results of these tests are presented in Table 2. With respect to the models in which the factor loadings were constrained to equality, it was found that these models yielded only a small decrease in model fit compared to the respective baseline models (ΔCFI = .010 for the maternal scale; ΔCFI = .016 for the paternal scale). Follow-up analyses, where the equivalence of the factor loadings was inspected for each individual item, showed that both in the maternal and in the paternal solution there was only one item with a factor loading that differed between the groups. Although in both cases these items ("My mother is only friendly with me if I excel in everything I do" and "My father only respects me if I am the best at everything") had more pronounced loadings in the Korean sample ($\beta = .82$ and $\beta = .81$, respectively) than in the Belgian sample ($\beta = .63$ and $\beta = .74$, respectively), the item loadings were substantial and highly significant in the two groups. Considered together with the small differences in CFI, it can be concluded that the pattern of factor loadings of the DAPCS was generally invariant across the two groups.

Table 2
Test of factorial equivalence of the two-factor solution (DPC & APC) between the Belgian and Korean sample.

	S-Bχ^2	df	*p*	CFI	SRMR	RMSEA	RMSEA 90% CI	Model comparisons	ΔCFI
Maternal Model									
Model 1: Configural, without constraints (baseline model)	330.61	152	< .01	.918	.053	.062	.053–.071	–	–
Model 2: Factor loadings invariant	363.03	164	< .01	.908	.070	.063	.055–.072	2 vs. 1	.010
Model 3: Factor loading; intercepts; factor means invariant	429.54	176	< .01	.906	.070	.066	.057–.074	3 vs. 1	.012
Paternal Model									
Model 1: Configural, without constraints (baseline model)	342.94	152	< .01	.924	.058	.065	.056–.074	–	–
Model 2: Factor loadings invariant	394.29	164	< .01	.908	.080	.069	.060–.077	2 vs. 1	.016
Model 3: Factor loading; intercepts; factor means invariant	528.72	176	< .01	.910	.083	.073	.065–.082	3 vs. 1	.014

Second, a test of equivalence of factor means was conducted to examine whether the two latent means differed significantly between the Belgian and the Korean sample (see Model 3 in Table 2). No significant differences were found in the latent means of DPC ($z = .88$, $p > .05$) and APC ($z = .25$, $p > .05$) for the maternal scale suggesting that Belgians and Koreans experienced to a similar degree DPC and APC from their mothers. However, the test of equivalence of factor means for the paternal scale showed significant difference in the latent means of the DPC scale ($z = 7.03$, $p < .01$) with Koreans scoring higher relative to Belgians on this latent factor, although the latent means of the APC scale did not significantly differ ($z = 1.36$, $p > .05$).

External validity of the distinction between DPC and APC

To examine the external validity of both scales, we computed correlations with well-validated measures of perceived parental warmth, autonomy-support, and general psychological control. As shown in Table 3, in both countries DPC and APC were negatively related to warmth and autonomy-support and were positively related to general psychological control, except for a non-significant correlation between paternal DPC and warmth in the Belgian sample. To control for the variance shared between DPC and APC and to formally test whether associations with the validation variables are moderated by country, we performed a series of regression analyses. In each regression analysis, one of the validation variables was regressed on (a) DPC and APC, (b) country, and (c) interaction terms between country and the domains of psychological control. Both the country variable and the scores for APC and DPC were standardized and interaction terms were computed by calculating product terms of country by the domains of psychological control. Testifying to the convergent validity of DPC and APC, both DPC and APC were found to have unique and similar associations with autonomy-support (for DPC, $\beta = -.27$, $p < .001$ and $\beta = -.23$, $p < .001$ for maternal and paternal ratings, respectively; for APC, $\beta = -.33$, $p < .001$ and $\beta = -.40$, $p < .001$ for maternal and paternal ratings, respectively) and general psychological control (for DPC, $\beta = .40$, $p < .001$ and $\beta = .29$, $p < .001$ for maternal and paternal ratings, respectively; for APC, $\beta = .36$, $p < .001$ and $\beta = .52$, $p < .001$ for maternal and paternal ratings, respectively). In contrast, and testifying to the divergent validity of DPC and APC, only APC had unique negative associations with perceived warmth ($\beta = -.43$, $p < .001$ and $\beta = -.45$, $p < .01$ for maternal and paternal ratings, respectively). In contrast, DPC was unrelated to warmth in the maternal ratings ($\beta = .01$, $p > .05$) and was even positively related to warmth in the paternal ratings ($\beta = .13$, $p < .01$). Importantly, the interaction terms with country did not contribute significantly to the prediction, indicating that the pattern of associations with validity measures was not moderated by country.

Associations between DPC, APC, and depressive experiences and symptoms

Table 4 shows correlations between DPC, APC, dependency, self-criticism, and depressive symptoms. Prior to testing the hypothesized model, we examined associations between the study variables and a number of background variables (i.e., age, gender, and family status) using analysis of variance (ANOVA). Whereas both age and family status were unrelated to each of the study variables in the two samples, gender was related to dependency in the Belgian sample [$F(1, 290) = 4.10$, $p < .05$,

Table 3
Correlations between DPC and APC and validation measures.

	Belgium			Korea		
	Warmth	General Psychological Control	Autonomy-Support	Warmth	General Psychological Control	Autonomy-Support
Perceptions of Mother						
DPC	−.17*	.64**	−.40**	−.34**	.62**	−.53**
APC	−.42**	.65**	−.50**	−.45**	.59**	−.50**
Perceptions of Father						
DPC	−.08	.51**	−.39**	−.19*	.63**	−.50**
APC	−.46**	.65**	−.48**	−.32**	.70**	−.57**

No *te:* DPC = Separation-Anxious Psychological Control, APC = Achievement-Oriented Psychological Control. *$p < .01$. **$p < .001$.

Table 4
Correlations between DPC, APC, dimensions of personality vulnerability, and depressive symptoms.

Variable	1	2	3	4	5	6	7
M	1.86	1.71	1.86	1.86	−.10	.27	12.61
SD	0.57	0.71	0.62	0.79	0.75	0.93	5.81
Range	1.00–5.00	1.00–4.71	1.00–4.71	1.00–5.00	−2.56–1.86	−2.55–3.57	0–31
1. Perceived Maternal DPC		.66***	.40***	.33***	.17**	.20***	.23***
2. Perceived Maternal APC	.56***		.32***	.47***	.13*	.29***	.24***
3. Perceived Paternal DPC	.51***	.37***		.65***	.17**	.17**	.16**
4. Perceived Paternal APC	.44***	.54***	.49***		.12*	.31***	.26***
5. Dependency	.20***	.09	.13*	.16**		.07	.35***
6. Self-Criticism	.25***	.37***	.22***	.29***	−.12*		.58***
7. Depressive Symptoms	.16**	.25***	.18***	.24***	.31***	.42***	
M	1.83	1.72	1.55	1.82	−0.20	−0.27	7.92
SD	0.62	0.72	0.53	0.76	0.89	0.79	4.50
Range	1.00–3.71	1.00–4.43	1.00–3.83	1.00–4.14	−3.44–2.61	−2.49–2.29	0–24

Note: Lower diagonal: descriptive statistics and correlation matrix of the Belgian data; upper diagonal: descriptive statistics and correlation matrix of the Korean data. DPC = Separation-Anxious Psychological Control, APC = Achievement-Oriented Psychological Control. $^{*}p < .05$. $^{**}p < .01$, $^{***}p < 001$.

$\eta^2 = .01$] and to depressive symptoms in the Korean sample [$F(1, 312) = 3.96$, $p < .05$, $\eta^2 = .01$]. In both cases, girls had higher scores compared to boys. Given these results, we created residualized dependency and depression scores by removing the effect of gender from these scores and we used these residualized scores in the main analyses.

To examine the hypothesized model of differential mediation and to examine whether this model is moderated by country, we performed a multi-group path analysis using structural equation modeling. Initially, we tested a constrained model where the path coefficients were set equal across the two countries. Next, we tested an unconstrained model in which the path coefficients were allowed to vary between countries. These analyses were performed for maternal and paternal ratings separately.

The initial constrained model contained paths from DPC to adolescent dependency, from APC to adolescent self-criticism, and from both dependency and self-criticism to depressive symptoms. This model had acceptable fit for both maternal ratings [SBS-χ^2 (16) = 25.674, $p < .01$; CFI = .98; SRMR = .11; RMSEA = .05, (90%-CI: .000–.076)] and paternal ratings [SBS-χ^2 (16) = 27.416, $p < .01$; CFI = .98; SRMR = .11; RMSEA = .05, (90%-CI: .012–.079)]. Next we examined the specificity of the associations between the domains of psychological control and the two dimensions of depressive personality by allowing cross-paths between DPC and self-criticism and between APC and dependency. Adding these paths did not improve model fit and both paths were not significant in both the maternal and paternal solutions. We also examined whether DPC and APC had direct associations with depressive symptoms in addition to the indirect associations through dependency and self-criticism. Adding these paths did not improve model fit and both paths were non-significant, indicating that associations between DPC and APC and depressive are fully indirect through dependency and self-criticism, respectively. A Sobel (1982) test indeed indicated that both the indirect association between DPC and depressive symptoms through dependency ($z = 4.09$, $p < .001$ and $z = 3.58$, $p < .001$ for maternal and paternal ratings, respectively) and the indirect association between APC and depressive symptoms through self-criticism ($z = 7.04$, $p < .001$ and $z = 6.77$, $p < .001$ for maternal and paternal ratings, respectively) was significant.

Next, we compared a constrained and an unconstrained version of the model including all possible structural paths (see Fig. 1), thus examining whether the structural relations would vary by country. The unconstrained model did not have a significantly better fit compared to the constrained model in both the maternal ratings (ΔSBS-χ^2 (8) = 10.513, $p > .05$, ΔCFI = .007) and the paternal ratings (ΔSBS-χ^2 (8) = 8.209, $p > .05$, ΔCFI = .008). Inspection of the path coefficients in the unconstrained models (see Fig. 1) indeed showed that associations between all study variables were virtually similar in the two groups. Together, the findings indicate that and the hypothesized model of differential mediation was equivalent in the two samples.

Discussion

There is ongoing debate about the cross-cultural relevance of parenting constructs initially developed in the West and about the relevance of the construct of parental psychological control in particular. From a relativistic cross-cultural perspective, it has been argued that the subjective meaning, prevalence, and developmental outcomes of parental psychological control may differ between cultures. In contrast, on the basis of self-determination theory, it has been argued that psychologically controlling parenting frustrates basic human needs and should, therefore, relate to maladaptive outcomes across the globe.

Prevalence of different types of psychological control

Although, on the basis of accounts of the Korean cultural and family climate, we had anticipated that Korean adolescents would rate their parents as significantly higher on both expressions of psychological control compared to Belgian adolescents,

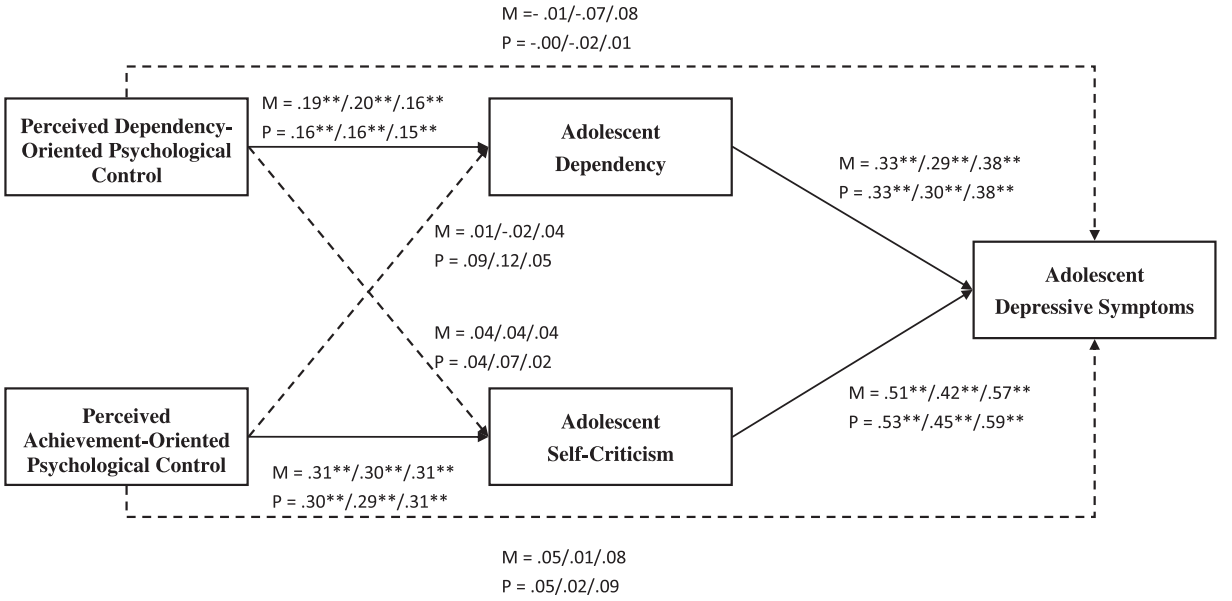

Fig. 1. Structural model of differential mediation. Coefficients shown are standardized path coefficients. The first coefficient shown is for the constrained model. The second coefficient shown is for the Belgian sample in the unconstrained model and the third coefficient shown is for the Korean sample in the unconstrained model. M = Maternal Ratings; P = Paternal Ratings. Full lines represent theoretically anticipated pathways and dotted lines represent pathways expected to be non-significant. $^{*}p < .05$. $^{**}p < .01$.

we found only few mean-level differences between both countries. Korean fathers were perceived as higher on dependency-oriented psychological control compared to Belgian fathers but no other differences emerged.

We see at least two reasons for the absence of consistent mean-level differences. First, the measure of psychological control used in this study taps into relatively harsh and severe expressions of psychological control. Given that we used non-clinical samples of adolescents drawn from the general population, it can be expected that the endorsement of these psychologically controlling tactics would be generally low and this is indeed reflected in the low mean scores on this measure. We speculate that mean-level between-country differences might be suppressed by the relatively severe and explicitly negative content of our measure. Possibly, between-country differences might be more pronounced when using measures tapping into seemingly more benign or socially accepted expressions of psychological control, such as positive conditional regard (Roth, Assor, Niemiec, Ryan, & Deci, 2009). Positive conditional regard involves a strategy where parents are perceived to provide more love and affection than usual when children perform well. Roth et al. (2009) have shown that this strategy, although it may intuitively appear to be relatively harmless, has negative ramifications for adolescents' motivation and emotion regulation.

Second, the lack of mean-level differences might be real and might reflect an increasing similarity in cultural and family climate between Western and Eastern countries. It has indeed been noted that Korea has been undergoing remarkable changes in many aspects of cultural and family life, due to rapid industrialization and globalization (Park & Cheah, 2005). One important avenue for future research is to compare a Western sample with an Eastern sample from a region less influenced by globalization (Pomerantz & Wang, 2009).

Structural relations with depressive experiences

The question whether the frequency of particular parenting practices differs between cultural groups is different from, or even orthogonal to, the question whether these parenting practices relate to adolescent adjustment in similar or dissimilar ways across cultural groups (e.g., Rowe et al., 1994; Vazsonyi et al., 2003). Whereas the first question refers to differences in group average levels, the second question is more fundamental and refers to similarity or dissimilarity in developmental processes. As such, the most important question guiding this study was whether cultural group would moderate associations between DPC, APC, personality orientations, and depressive symptoms. In line with previous findings from a Western sample (Soenens et al., 2010), we found that a perception of DPC was specifically related to dependency and that a perception of APC was specifically related to self-criticism. Dependency and self-criticism, in turn, had unique associations with depression and represented significant intervening variables in associations between perceived parenting and adolescent depressive symptoms. These findings are in line with formulations on the developmental origins of dependency and self-criticism derived from the theory of Blatt (1974, 2004; Blatt & Homann, 1992). When parents pressure children to be dependent (e.g., by withdrawing their love when children display independent behavior), children are likely to become insecure about

their ability to function as independent persons. Instead, they may become anxious about losing other people's love and approval, and engage in a clinging interpersonal style to keep other people close to them. Similarly, when parents pressure children to achieve and to live up to high standards, children are likely to develop a self-critical orientation. Such an orientation involves the rigid pursuit of self-imposed standards and the tendency to engage in self-derogation when one fails to meet those standards.

Probably the most striking finding of this study is that the hypothesized structural model was essentially similar in the two cultural groups studied. This finding (a) meshes with recent evidence that both the antecedents and outcomes of Blatt's personality dimensions generalize across cultures (e.g., Ahmad & Soenens, 2010) and (b) suggests that the mechanisms and developmental processes associated with the two expressions of psychological control operate in similar ways across cultures. More generally, these findings provide indirect evidence for the idea that psychologically controlling parenting affects basic and fundamental human needs for relatedness, competence, and autonomy (Soenens & Vansteenkiste, 2010). Blatt's dimensions of personality vulnerability might indeed be considered as instantiations of thwarted need satisfaction. Dependent individuals feel pressured to keep other people close to them because they need constant reassurance and approval to avoid feeling abandoned. As such, they appear to suffer primarily from frustrated needs for autonomy and relatedness. Self-critical individuals pressure themselves to strive for high standards. Because of their harsh self-scrutiny, however, they seldom feel like they were actually able to meet their standards. As such, they appear to experience pervasive frustration of their needs for autonomy and competence. Because Blatt's personality dimensions can only be considered indirect markers of thwarted needs, an important avenue for future research is to include more direct measures of need satisfaction and need-thwarting and to examine whether processes of need satisfaction mediate between perceived parenting (and psychological control in particular) and adolescent well-being across cultures.

Universalistic versus relativistic approaches to psychological control

Taken together, the findings of this study are primarily in line with a universalistic understanding of psychological control, which involves that the experience of parental psychological control is recognizable across the globe and that this experience undermines well-being through the thwarting of basic and universal human needs. How can these findings be reconciled with a relativistic cross-cultural perspective where it is argued the effects of psychological control are culture-bounded?

First, the relativistic approach to parenting is rooted in the notion of a match between parenting and cultural orientations. Specifically, because psychological control would stifle adolescents' independent functioning and because independence is less strongly valued in cultures with an interdependent orientation, psychological control would not be harmful in those cultures. On the basis of SDT, however, we argue that the main feature of psychological control is not its' independence-stifling nature but its' *pressuring* nature (Soenens & Vansteenkiste, 2010). This is obvious in the case of achievement-oriented psychological control, where parents do not pressure their children to be dependent but pressure their children to excel individually. But even parents high on dependency-oriented psychological control do not merely encourage dependence: they promote dependence *in a pressuring and manipulative fashion*. According to SDT, this parental pressure undermines adolescents' need for autonomy which, in SDT, is not defined as a need for independent functioning, but as a need to experience a sense of volition and self-endorsement. Because the need for autonomy, along with the needs for relatedness and competence, has been argued and shown to be essential for thriving and well-being across the globe, one would indeed expect psychological control to undermine well-being in different cultures, irrespective of whether it is aimed at dependence or achievement.

Second, it has been argued from a relativistic approach that psychological control carries a different meaning for individuals from relatively more collectivistic cultures (e.g., Chao & Aque, 2009; Mason et al., 2004; Rothbaum & Trommsdorff, 2007). For instance, Chao and Aque (2009) found that Asian adolescents feel less angry about their parents using psychological control compared to European American adolescents. Similarly, Mason et al. (2004) found that African American adolescents experience guilt-inducing maternal behavior as more reflective of maternal love and care compared to European American adolescents. Such findings seem inconsistent with our findings showing (a) that the factor structure APC and DPC was generally invariant across the Belgian and Korean samples and (b) that, in both countries, APC and DPC yielded similar associations with well-validated measures of general psychological control, autonomy-support, and warmth.

To reconcile these two seemingly divergent sets of findings, we believe it is important to make a distinction between objective (i.e., observable) parenting practices and subjective experiences of controlling or pressuring parenting. Whereas Mason et al. (2004) and Chao and Aque (2009) presented participants with objective practices related to psychological control, our study tapped into subjective experiences of the two-domain specific expressions of psychological control. We maintain that cultural orientation may play a moderating role in associations between objective practices and subjective experiences of pressure. For instance, adolescents from an Asian country may be less likely to interpret and experience an objective display of parental disappointment as pressuring compared to Western adolescents. However, we argue that as soon as adolescents, regardless of their cultural background, subjectively experience their parents as being pressuring and psychologically controlling, their psychological needs (and their need for autonomy in particular) are likely to be frustrated and their well-being is likely to plummet. This reasoning is consistent with the notion of 'felt autonomy' in SDT, which refers to the idea that it is essentially individuals' subjective experience of autonomy (rather than the presence of autonomy as measured against some objective standard) which ultimately determines well-being (Deci & Ryan, 2000). It is also consistent with research showing that, whereas the objective practice of providing choice is not necessarily the most beneficial parental

strategy in interdependent cultures, the subjective experience of choicefulness is beneficial across cultures (Bao & Lam, 2008). Future research is needed to further unravel the role of cultural orientation in associations between objective instances of psychological control, subjective experiences of parents as psychologically controlling, experiences of need support, and well-being. Ideally, such research would move beyond a correlational approach, for instance by making use of experimental research designs in which objective markers of psychological control are induced experimentally (e.g., Vansteenkiste, Simons, et al., 2005; Vansteenkiste, Zhou, et al., 2005).

Limitations

This study has a number of important limitations, including the cross-sectional research design, the reliance on self-report, and the use of relatively homogeneous and well-educated samples. The model of differential mediation tested here is essentially a process model that needs to be tested using longitudinal data. Such data would also allow to determine with greater confidence the direction of effects in associations between parenting, depressive personality, and depressive symptoms. Personality vulnerability to depression and depressive symptoms may elicit the use of psychological control by parents or may at least increase adolescents' perceptions of parents as being controlling. Some of the findings here may also be inflated because of the reliance on a single reporter for all study constructs.

To reduce shared method variance, future work on the cross-cultural relevance of the model tested in this study would do well to include parent reports or observations of psychological control. The use of two well-educated samples limits our possibilities to generalize our findings to the population and in particular to samples that are more heterogeneous in terms of SES and living area (e.g., rural versus urban).

Conclusion

This study aimed to add to extant work on the cross-cultural relevance of the construct of psychological control by comparing associations of two domain-specific expressions of psychological control with depressive experiences in Korea and Belgium. The findings suggest that the pathways through which these domain-specific expressions of psychological control are related to depressive symptoms are similar across the two cultural groups. This study is among the first to show cross-cultural similarity not only in the main effects of psychological control but also in the mediating mechanisms underlying associations between psychological control and adolescent maladjustment. Overall, our findings are comparatively more consistent with a universalistic approach to parenting than with a relativistic approach.

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