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Résumé de l'article

The studies described in this paper investigated whether cultural hierarchy plays a moderating role in the association between parental autonomy support and child psychosocial adjustment, employing samples presenting a wide range of cultural variability (parents born in 71 different nations). The participants' cultural backgrounds, based on the parents' birth country, were rated in terms of emphasis on hierarchical power using Schwartz's dimensional coding system. Structural equation modelling analyses revealed no moderation effect of cultural hierarchy on the relation between parental autonomy support and child outcomes, with the exception of the relation between parental autonomy support and adolescents' autonomous self-regulation. As expected, parental autonomy support and cultural hierarchy were significantly and negatively correlated. Parental autonomy support was often associated with indicators of youth psychosocial adjustment, whereas cultural hierarchy was generally unrelated to adjustment. These results support self-determination theory's position on the universal benefits of autonomy support.

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Abstract: The studies described in this paper investigated whether cultural hierarchy plays a moderating role in the association between parental autonomy support and child psychosocial adjustment, employing samples presenting a wide range of cultural variability (parents born in 71 different nations). The participants' cultural backgrounds, based on the parents' birth country, were rated in terms of emphasis on hierarchical power using Schwartz's dimensional coding system. Structural equation modelling analyses revealed no moderation effect of cultural hierarchy on the relation between parental autonomy support and child outcomes, with the exception of the relation between parental autonomy support and adolescents' autonomous self-regulation. As expected, parental autonomy support and cultural hierarchy were significantly and negatively correlated. Parental autonomy support was often associated with indicators of youth psychosocial adjustment, whereas cultural hierarchy was generally unrelated to adjustment. These results support self-determination theory's position on the universal benefits of autonomy support.

Keywords: parental autonomy support, psychosocial adjustment, children, adolescents, cultural hierarchy, self-determination theory

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Parenting quality is among the most widely accepted predictors of child psychosocial adjustment (Holte et al., 2014; Masten & Shaffer, 2006). Parenting research suggests that what defines high-quality parenting may differ according to contextual factors (e.g., cultural beliefs), though some parenting components seem to be universally beneficial (Bornstein et al., 2021). One parenting component claimed to be universally beneficial to child psychosocial adjustment is parental autonomy support (AS). Parental AS comprises empathy towards children and adolescents (Grolnick et al., 1997; Joussemet & Grolnick, 2022), respect for their ideas (Ryan & Deci, 2017; Ryan et al., 2006), and encouragement of their active participation (Mageau et al., 2015). For instance, parents show AS when they allow their children to have a say in developmentally appropriate decisions, and use considerate, non-controlling language. When making requests, they inform children of the purpose, helping them to endorse the value underlying the required behavior (Koestner et al., 1984; Mageau & Joussemet, 2023). However, the universality without uniformity principle (Soenens et al., 2015) also suggests that prototypical AS behaviors (i.e., choices, rationales, and acknowledgment of feelings) may not be perceived as autonomy-supportive across all cultures, thereby altering their potential impact. The main goal of the present study is to examine the potential moderating role of parents' culture on the link between parental AS and child psychosocial adjustment, operationalized as psychological well-being and autonomous self-regulation.

Child psychosocial adjustment refers to children's capacity to adapt and function effectively within the social and psychological domains of their lives (Damon et al., 2018). This broad concept, which encompasses children's healthy socioemotional development and overall well-being, can be assessed with a variety of indicators. For the purposes of this study, we focused on psychological well-being and autonomous self-regulation. Psychological well-being resides in the experience of individuals. It comprises the presence of positive aspects (e.g., positive affect, life satisfaction) and the absence of negative ones (e.g., negative affect, psychological symptoms; World Health Organization, 2015). Autonomous self-regulation can be defined as the degree to which behaviors are initiated and maintained in a self-determined versus controlled manner (Deci & Ryan, 2000; Reeve et al., 2012; Ryan & Connell, 1989).

Parental Autonomy Support and Youth Psychosocial Adjustment

According to self-determination theory (SDT; Deci & Ryan, 2000; Ryan & Deci, 2017), AS represents a crucial social resource. A meta-analysis (Vasquez et al., 2016) provided strong support to this claim within parent-child relationships, revealing that parental AS was associated with greater autonomous motivation, psychological health, sense of competence, life satisfaction, and academic performance. In addition, studies have shown positive associations of parental AS with child well-being (Chirkov & Ryan, 2001) and with emotional regulation skills (Roth et al., 2009). Parental AS seems to be essential from the earliest stages of life (Joussemet & Mageau, 2023) and through all developmental periods (Ryan & Deci, 2017). For instance, studies have shown that

parental AS predicts toddlers' attachment security and executive functioning (Bernier et al., 2014; Whipple et al., 2011) as well as their rule internalization (Laurin & Joussemet, 2017) and cognitive development (Bindman et al., 2015). Parental AS has also been shown to help adolescents internalize the values, norms, and behaviors put forward by parents (Kasser et al., 2004; Marbell-Pierre & Grolnick, 2013), as well as foster autonomous engagement and the endorsement of healthy goals (Mageau et al., 2009; Lekes et al., 2010).

Basic Psychological Need for Autonomy

Parental AS is said to be beneficial because it helps satisfy (vs. thwart) children's autonomy (or self-determination), one of the three basic psychological needs that SDT posits as innate and universal, along with relatedness (social connection), and competence (efficacy; Deci & Ryan, 2000; Ryan & Deci, 2017). Autonomy refers to feelings of volition and self-endorsement (Deci & Ryan, 2000; Ryan & Deci, 2017) and a sense of an internal (vs. external) locus of causality (Ryan, 1993).

In the present study, parental AS is defined in terms of the promotion of volitional functioning rather than in terms of the promotion of independence. Autonomy thus refers to the fundamental psychological need to feel agency over one's behaviors, thoughts, and feelings. This need (and its satisfaction) is argued to be similar for all individuals of all ages and genders (Deci & Ryan, 2000; Ryan & Deci, 2017). In the context of SDT, the opposite of autonomy is not dependence but heteronomy, which is the sense of initiating or maintaining a behavior due to external influences or internal compulsions (Chirkov et al., 2003). As such, a greater sense of autonomy is associated with greater psychological well-being (Ryan & Deci, 2017; Yu et al., 2018) as well as better integration of external rules (e.g., school rules) and recommendations (e.g., medical advice; Ng et al., 2012), supported by a better understanding of one's own behaviors (Sarrazin et al., 2011).

Universal Cultural Relevance

According to SDT, the degree to which autonomy is satisfied or frustrated has important repercussions for the socialization and well-being of all humans, no matter their culture and underlying core values. As such, parental AS should be beneficial for all children.

Autonomy. The universality of the need for autonomy has been questioned by some researchers, who suggest that it is a construct specific to Western culture (Henrich et al., 2010; Iyengar & DeVoe, 2003). They contend that Eastern collectivistic cultures prioritize conformity, social harmony, and familial interdependence, in contrast to Western individualistic cultures, which emphasize individuality, distinctiveness, and interdependence (Chao & Tseng, 2002). However, autonomy, as defined by SDT, does not refer to independence, detachment, or being free from all influence of the environment (Ryan & Deci, 2017; Ryan et al., 2006; Soenens et al., 2007). Individuals with a higher level of autonomy can have important interdependent relationships with other people or social groups (Ryan, 2005). Other research links greater autonomy with greater psychological well-being across numerous countries with widely diverse cultures (Chen et al.,

2015 [Belgium, China, Peru, United States]; Chirkov et al., 2003 [Russia, South Korea, Turkey, United States]; Chirkov et al., 2005 [Brazil, Canada]). Further, when Van Petegem et al. (2013) examined autonomy (as defined by SDT), as well as the constructs of individualism, independence, and detachment, only autonomy was found to predict well-being.

Autonomy Support. On the one hand, studies conducted in culturally diverse samples — those cited above and others — support the idea that parental AS would be beneficial for all children. For instance, parental AS was negatively related to depression and positively related to school engagement and autonomous motivation in Ghana (Marbell-Pierre & Grolnick, 2013) whereas maternal psychological control, which thwarts children's need for autonomy, was associated with more self-criticism and depression among Jordanian adolescents (Ahmad & Soenens, 2010).

On the other hand, some authors suggest that supporting children's autonomy in countries that are more hierarchical in their social relations may be detrimental to socialization goals, while the use of controlling parenting practices may be associated with better adjustment in these cultures (Dwairy, 2004; Rudy & Halgunseth, 2005). For instance, in a study involving Arab-Palestinian adolescents living in a highly hierarchical context, Dwairy (2004) did not find the expected negative link between an authoritarian parenting style and psychological adjustment, and thus suggested that the influence of parenting on child well-being would be culturally diverse rather than universal. However, it must be noted that authoritarian parenting is not synonymous with autonomy thwarting.

Such divergent results raise the possibility that AS may not be universally beneficial, but may notably depend on the degree of cultural hierarchy. The present study attempts to provide preliminary answers by examining the potential moderating role of culture on the link between parental AS and child psychosocial adjustment. To better understand the potential interplay between the role of culture and AS in child psychosocial adjustment, we anchored our research in two relevant theoretical frameworks, namely SDT and Schwartz's model of universal cultural values.

Cultural Hierarchy

One framework that may help sort out these mixed findings is Schwartz' model (1999) of universal cultural values. This author has identified 10 distinct values that are said to be crucial and present in all countries. One of the great strengths of Schwartz's theory is that it quantifies these cultural values on dimensional constructs (based on a rating system validated in over 80 countries), thereby facilitating their empirical study and promoting a better understanding of the relations between culture and important societal phenomena (Schwartz, 1994, 1999, 2008). Specifically, Schwartz's model of universal cultural values discusses three bipolar cultural dimensions. Among these, *cultural hierarchy versus egalitarianism* is particularly useful to understand the role played by cultural beliefs in hierarchical relationships, such as the parent–child relationship.

Cultural hierarchy represents the level of recognition and respect for authority and the extent to which individuals are socialized to comply with the obligations and rules attached to their roles (Schwartz, 1994). In more hierarchical cultures, the unequal distribution of power, roles, and resources is seen as more legitimate and even desirable. Values such as authority and social power are valued more highly in more hierarchical cultures (Hofstede, 2001), which also restrict the expression of individuals' personal desires and interests in favor of conformity with the social group or the community. In contrast, the values and norms of more egalitarian cultures support freedom to pursue goals related to personal satisfaction and interests.

Based on the underlying values, norms, and beliefs embedded in a culture, one may expect parent–child interactions in more hierarchical cultures to be characterized by lower parental AS than those in more egalitarian cultures (Ferguson et al., 2011). In line with this, Russian students (higher cultural hierarchy) have been found to perceive their teachers as less autonomy-supportive, compared to American students (lower cultural hierarchy; Chirkov & Ryan, 2001). Thus, one may expect parental AS to be less frequent in countries exhibiting higher cultural hierarchy.

In addition, a child's appraisal of autonomy-supportive versus controlling parenting behaviors may vary depending on whether the context is more or less egalitarian (Soenens et al., 2015). For instance, Chao and Aque (2009) showed that Asian immigrant adolescents (higher cultural hierarchy) reported less anger when confronted with controlling statements than did European American adolescents (lower cultural hierarchy). Using structured interviews, Helwig et al. (2014) showed that Chinese children (higher cultural hierarchy) presented more positive evaluations of potentially psychologically controlling practices (e.g., withdrawal of love) than Canadian children (lower cultural hierarchy).

It has been proposed that these differences in appraisals account for the differential impact of controlling behaviors across contexts and cultures (Soenens et al., 2015). For example, while high psychological control seems to be frequently associated with negative developmental outcomes (e.g., depression and withdrawal) among children in Western samples (Barber et al., 2005), findings with Asian samples have been less consistent (Fung & Lau, 2012, Cheah et al., 2019). Fung and Lau (2012) examined the relation between child behavior problems and parental psychological control (e.g., guilt induction, shaming, criticism) among European American (lower cultural hierarchy) and Chinese (higher cultural hierarchy) parents and found that psychological control was related to parental rejection in both groups, but was associated with child behavior problems only in European American children. As a result, a higher endorsement and experience of cultural hierarchy may attenuate the link between AS and psychosocial adjustment, although the relation can be expected to remain positive for all cultures, regardless of the cultural hierarchy level. The central goal of the present investigation is to examine whether parents' cultural background (in terms of cultural hierarchy) moderates the association between parental AS and child psychosocial adjustment.

Regarding the direct associations between culture and mental health, a review conducted by Heim and colleagues (2019) identified four studies measuring Schwartz's cultural hierarchy among heterogeneous cultural groups of adults; none found a consistent correlational pattern with common mental disorders. To our knowledge, no author has used Schwartz's culture measures to explore these links among younger participants.

In sum, SDT postulates that the need for autonomy and the benefits of its support are universal, while other theories such as Schwartz's values model (1999) suggest that the impacts of autonomy may be culturally specific. Given the importance of the parent–child relationship and the potential benefits of parental AS, it seems theoretically and practically relevant to examine whether and how the association between youth psychosocial adjustment and parental AS varies according to cultural hierarchy. From a practical perspective, if parental AS does not promote child adjustments in families where cultural hierarchy is higher, it would be important to consider this and offer culturally sensitive recommendations to parents. From a theoretical perspective, a finding that parental AS is positively associated with psychosocial adjustment regardless of cultural hierarchy levels would support the idea that parental AS is universally beneficial.

Present Studies

We examined the associations between parental AS, parental cultural emphasis on hierarchy, and youth psychosocial adjustment. Specifically, in addition to assessing the relations among these three variables, we aimed to examine whether cultural hierarchy moderated the relations between parental AS and child psychosocial adjustment. Child psychological adjustment was operationalized as psychological well-being and autonomous self-regulation.

First, based on SDT, we hypothesized that parental AS would be positively related to child psychosocial adjustment. Second, based on prior studies (Chirkov & Ryan, 2001; Downie et al. 2006; Wu et al., 2002), we expected that parents born in more hierarchical countries would show less parental AS. Given past studies' mixed findings regarding the links between cultural hierarchy and child psychosocial adjustment, we did not have any specific hypothesis. Nonetheless, we did expect that cultural hierarchy would moderate the strength of the association between parental AS and youth psychosocial adjustment. More specifically, we predicted that parental AS would be positively related to psychosocial adjustment for all youths, but that the strengths of these links would be stronger in families where parents were born in more egalitarian countries. According to Chirkov et al. (2010), a contrast between parental AS and valued practices and habits could limit the benefits of AS in more hierarchical cultures.

We pursued these goals in two studies with multicultural youth recruited from the public schools in the pluricultural city of Montreal, Quebec. According to the 2011 National Household Survey (Gouvernement du Québec, 2014), Montreal is home to over 120 cultural communities from five continents. One out of three Montrealers is an immigrant; 50% of the population is bilingual and 20% are trilingual. Participants of Study 1 were adolescents (14 to 22 years); for

Study 2, data from parents of school-aged children (5 to 12 years) was used. In both studies, we measured parental AS (child or parent reports), imputed family cultural hierarchy based on Schwartz's (2008) rating system, and assessed relevant psychosocial adjustment indicators (e.g., well-being, autonomous self-regulation, psychological symptoms). We also assessed relevant sociodemographic and parenting variables: youth age and gender, parent gender, and parental structure — the extent to which parental practices make the environment predictable for children through family rules, clear communication, and exercising authority (Bartley, 2016; Grolnick & Pomerantz, 2009; Ryan & Deci, 2017). Parental structure helps children understand how their actions are related to outcomes, which contributes to their self-regulation and functioning (Grolnick et al., 2014). Structure is an important covariate to include in the present studies given that the authority dimension is also found in the cultural hierarchy construct.

Study 1: Method

Participants

The sample (52.7% female) consisted of 442 French-speaking high school (9th to 11th grade) and CEGEP[1] students living with their parents in Montreal. The participants were part of a larger study on parenting and as such, also took part in Robichaud and colleagues' 2021 study. Students were aged between 14 and 22 (M = 15.98, SD = 1.34). The majority were high school students (79.9%); the remainder were CEGEP students (20.1%). All interested students were allowed to take part in the study, as long as they still lived with their parents or a primary caregiver. The participants' parents came from a variety of cultural backgrounds: 40.1% of them were born in Canada, while others were born elsewhere — the Maghreb (western and central North Africa; 15.1%), Europe (12.2%), Latin America (9.9%), or one of more than 30 countries not in those regions. Approximately half of the participants' parents had a university diploma (53.6%), 22.3% of parents had a post-secondary certification, and the remainder had a high school diploma as their highest certification (20.1%) or had not finished high school (4.0%).

Procedure

After obtaining ethics approval from the University of Montreal's ethics committee, and participating high schools and CEGEPs, participants were recruited in their classes by a research assistant. At that first meeting, the objectives and procedure of the study were explained, and a letter informing parents of their youth's participation in the study was distributed. The participants were met a second time in their classes so that they could complete a questionnaire in paper-and-pencil format on-site, without a time limit. Adolescents answered the questions after specifying the parent with whom they interacted most.

[1] Quebec's education system is unique. It provides for a step between high school and university: CEGEP. "Cégep" is a French acronym that stands for *Collège d'enseignement général et professionnel,* known in English as a general and vocational college.

Measures

Autonomy Support. Adolescents completed the Perceived Parental Autonomy Support scale (P-PASS; Mageau et al., 2015). This validated questionnaire investigates three aspects of AS: volition encouraged (within defined limits), rationales provided for rules, and validated emotions and perspective. An average of its 12 items was computed to obtain a global score of perceived parental AS. Its underlying reliability coefficient was excellent (α = .93). We do not focus on the subscales in this investigation.

Cultural hierarchy: Adolescents reported on their parents' ethnicity by answering the question: "What is your parent's ethnicity?". This information was used to code parent cultural hierarchy, using Schwartz's (1999, 2008) dimensional coding system[2], which provides cultural hierarchy scores for 80 different nations around the globe.

For 61.1% of our sample (29 different nations), cultural hierarchy scores were available from Schwartz's list. For the remaining ethnicity data, we developed a systematic procedure allowing us to assess the cultural hierarchy of nations that had not yet been evaluated by Schwartz (36% of this sample; 30 different nations to assess). Based on Downie et al. (2004, 2007) and Wong et al. (2008), we assigned to these nations the score (or average of scores) that was the most similar to an already-coded similar nations or nations, using the same criteria as those used in Schwartz's coding system (1994, 1999, 2008). These include geographical location, spoken language, and religious affiliation. Though Schwartz also used a shared history criterion (i.e., history of colonization), we did not use this criterion because of its high redundancy with the language and religious ones. We provide detailed scoring examples in Table 1. All scores of assessed nations can be found in the Appendix.

When participants provided ethnicity information other than a country (e.g., "Arab", "Latino"), we computed an average score of nations thought to represent these characteristics (e.g., Arab nations, Latin American nations, respectively). To assess inter-rater reliability, a second coder assigned a cultural hierarchy score to one third of the coded nations, following the same scoring procedure. Kappa/intraclass correlation revealed an excellent inter-rater reliability (IC = .92, 95% CI [0.68 to 0.98]; Koo & Li, 2016).

[2] The cultural hierarchy scores can be viewed in Schwartz's article, "The 7 Schwartz cultural value orientation scores for 80 countries" at https://www.researchgate.net/publication/304715744_The_7_Schwartz_cultural_value_orientation_scores_for_80_countries

Table 1. *Examples of the Scoring Process of Cultural Hierarchy for Moldova, Burkina Faso, and Cambodia*

Nations to assess	Moldova	Burkina Faso	Cambodia
Criterion 1 : geographical location	Geographically close to Romania (2.0) and Ukraine (2.56).	Geographically close to Ghana (2.68) and Nigeria (2.72).	Geographically close to Thailand (3.23), Malaysia (2.25), Singapore (2.82), and Indonesia (2.56).
	M score = 2.28	*M* score = 2.70	*M* score = 2.72
Criterion 2 : spoken language	• Moldovan as official language (no other nation listed by Schwartz speaks this language) • Romanian (Romania 2.0) • Russian (2.72)	• French as official language (2.21) • Several other non-official languages that have not been rated by Schwartz.	About 20 languages spoken • Khmer (official): Austronesian languages • Austronesian speaking nations listed by Schwartz: Thailand (3.23) and India (3.05). • French (2.21)
	M score = 2.36	*M* score = 2.21	*M* score = 2.83
Criterion 3 : religious affiliation	Mainly Orthodox population: Majority in Russia (2.72), Ukraine (2.56), Georgia (2.46). The Orthodox are also often present in South-Eastern Europe: Bulgaria (2.68), Serbia (1.61), Bosnia and Herzegovina (1.73), Romania (2.0), Greece (1.83) and Cyprus (1.96).	Presence of various religions, but Sunni Islam accounts for the largest proportion (25%). African nations rated by Schwartz practicing this religion: Egypt (2.20), Senegal (2.63), and Nigeria (2.72).	Mainly Buddhist population. Other nations practising Buddhism: India (3.05), China (3.49), South Korea (2.9), Japan (2.65), and Thailand (3.23).
	M score = 2.17	*M* score = 2.52	*M* score = 3.06
Total score calculation (Mean score)	*M* geographical location (2.28) + *M* spoken language (2.36) + *M* religious affiliation (2.17) / 3 criteria = 2.27	*M* geographical location (2.70) + *M* spoken language (2.21) + *M* religious affiliation (2.52) / 3 criteria = 2.48	*M* geographical location (2.72) + *M* spoken language (2.83) + *M* religious affiliation (3.06) / 3 criteria = 2.87

Positive and negative affect: We used a French translation (Gaudreau et al., 2006) of the Positive and Negative Affect Schedule (PANAS; Watson et al.,1988) to assess the affective component of well-being. This questionnaire had already been validated with adolescents by Huebner and Dew (1995) and, in our study, had good internal consistency for positive and negative emotions (α = .90 and .85). Adolescents were invited to complete the questionnaire, which consisted of an adjective checklist containing two subscales of 10 items designed to assess positive affect (e.g., determined, enthusiastic, inspired) and negative affect (e.g., afraid, ashamed, guilty). Participants indicated the extent to which they felt each of the 20 emotions, from 1 (*Very slightly or not at all*) to 5 (*Extremely*).

Satisfaction with life: The cognitive component of well-being was assessed with the French-Canadian version (Blais et al., 1989) of the Satisfaction with Life scale (e.g., "If I could live my life over, I would change almost nothing"; Diener et al., 1985). Adolescents rated its five items (α = .86) on a 7-point Likert scale ranging from 1 (*Strongly disagree*) to 7 (*Strongly agree*).

Autonomous self-regulation: We measured autonomous and controlled self-regulation of adolescents with the Self-Regulation Questionnaire (Ryan & Connell, 1989) adapted to rule-breaking contexts by Soenens et al. (2009). This questionnaire measured the reasons why adolescents comply with rules when a disagreement with a parent arises. Adolescents indicated how often their reasons for complying are autonomous (5 items; e.g., "Because I understand why these rules are important") or controlled (5 items; e.g., "Because I feel forced to do so") on a 7-point Likert scale ranging from 1 (*Almost never*) to 7 (*Almost always*). These subscales' internal consistency was good for both autonomous and controlled self-regulation (α = .90 and .80).

Structure: We assessed parental structure using the Multidimensional Structure scale (Ratelle et al., 2018), which is based on an exhaustive conceptualization of structure (Farkas & Grolnick, 2010). In this study, items from four subscales (*predictability*, *clear and consistent rules*, *opportunities to meet expectations,* and *information feedback*) were used for a total of 16 items (e.g., "My mother/father tells me when I don't respect a family rule"). Participants rated how well each item represented their relationship with their parents using a 5-point Likert scale ranging from 1 (*Never or almost never*) to 5 (*Always or almost always*). This scale was found to possess good internal consistency in this study (α = .87).

Sociodemographic information: Adolescents also provided basic sociodemographic information. They were asked to indicate their age and gender, and the highest level of education completed by their targeted parent.

Plan of Analysis

For our preliminary analyses, we examined descriptive statistics and zero-order correlations for all variables to examine predicted links and to identify covariates. We also validated our cultural hierarchy scoring process by comparing the relation between cultural hierarchy and parental AS among the entire sample with the same relation among the subsample of participants whose parents had a birth country already rated by Schwartz (2008). Any potential covariate related to at least one of our outcomes was retained for our main analyses.

For our main analyses, we conducted structural equation modeling (SEM) analyses with the maximum likelihood robust (MLR) estimator to examine the role of parental AS and cultural hierarchy in youth psychosocial adjustment. In a first model, we assessed the role of parental AS and cultural hierarchy in youth subjective well-being. In a second model, we assessed the role of parental and cultural hierarchy in youth autonomous self-regulation. In each model, we first examined whether cultural hierarchy moderated the relation between parental AS and youth outcomes. When a significant interaction emerged, we examined the relation between parental AS

and youth outcomes in families with higher and lower cultural hierarchy (i.e., scoring at least 1 *SD* above and below the mean). In the absence of a significant interaction, we intended to examine the independent relations between both parental AS and cultural hierarchy and youth outcomes.

Study 1: Results

Preliminary Analyses

Missing values were limited, ranging from 0% to 6.3% missing data per variable. The means, standard deviations, and theoretical and observed intervals, as well as the number of participants providing data for each variable, are presented in Table 2. Cultural hierarchy scores, which include scores derived from our scoring process, ranged from 1.60 (score assigned to Italy) to 3.49 (score assigned to China; $M = 2.22$, $SD = .40$).

Table 2. *Descriptive Statistics of Measures for Adolescents*

				Intervals	
Continuous variables	*n*	*M*	*SD*	Theoretical	Observed
Age	431	15.98	1.34	–	14.00 – 22.00
Structure	414	5.07	0.99	1.00 – 7.00	2.27 – 7.00
Cultural hierarchy	428	2.22	0.40	1.60 – 3.49	1.60 – 3.49
Perceived parental AS	429	4.55	1.41	1.00 – 7.00	1.00 – 7.00
Positive affect	427	2.99	1.23	1.00 – 7.00	1.00 – 7.00
Negative affect	427	3.06	1.18	1.00 – 7.00	1.00 – 7.00
Satisfaction with life	412	4.82	1.31	1.00 – 7.00	1.00 – 7.00
Autonomous self-regulation	427	4.24	1.66	1.00 – 7.00	1.00 – 7.00
Controlled self-regulation	426	3.94	1.69	1.00 – 7.00	1.00 – 7.00
Categorical variables	*n*	%			
Gender - male	204	46.2			
Gender - female	233	52.7			

Zero-order correlations between all variables are shown in Table 3. There were statistically significant positive associations between parental AS and all psychosocial adjustment indicators. Cultural hierarchy, on the other hand, was significantly (and negatively) associated with life satisfaction, but not with any other indicator.

As expected, parental AS was negatively associated with cultural hierarchy, both when examining all participants and when examining only the subsample of participants whose parents had a birth country specifically rated by Schwartz (2008). Furthermore, the strength of the association was identical for both ($r = -.20$, $p < .001$). Finally, youth age, gender, and perceived parental structure were correlated with several outcomes and were thus included as covariates in our main analyses.

Table 3. *Correlations Between Variables in Adolescents*

Variables	1	2	3	4	5	6	7	8	9	10
1. Gender [a]	-									
2. Age	-.06	-								
3. Structure	-.00	-.02	-							
4. Cultural hierarchy	.11*	-.17**	-.07	-						
5. Perceived parental AS	.06	.09†	.58**	-.20**	-					
6. Positive affect	.06	.17**	.30**	-.04	.41**	-				
7. Negative affect	-.17**	-.06	-.08	-.00	-.20**	-.04	-			
8. Satisfaction with life	.05	.03	.45**	-.11*	.52**	.28**	-.20**	-		
9. Autonomous self-regulation	.07	.05	.42**	.07	.60**	.47**	-.08	.41**	-	
10. Controlled self-regulation	-.01	-.14**	-.12*	.02	-.36**	-.20**	.37**	-.16**	-.39**	-

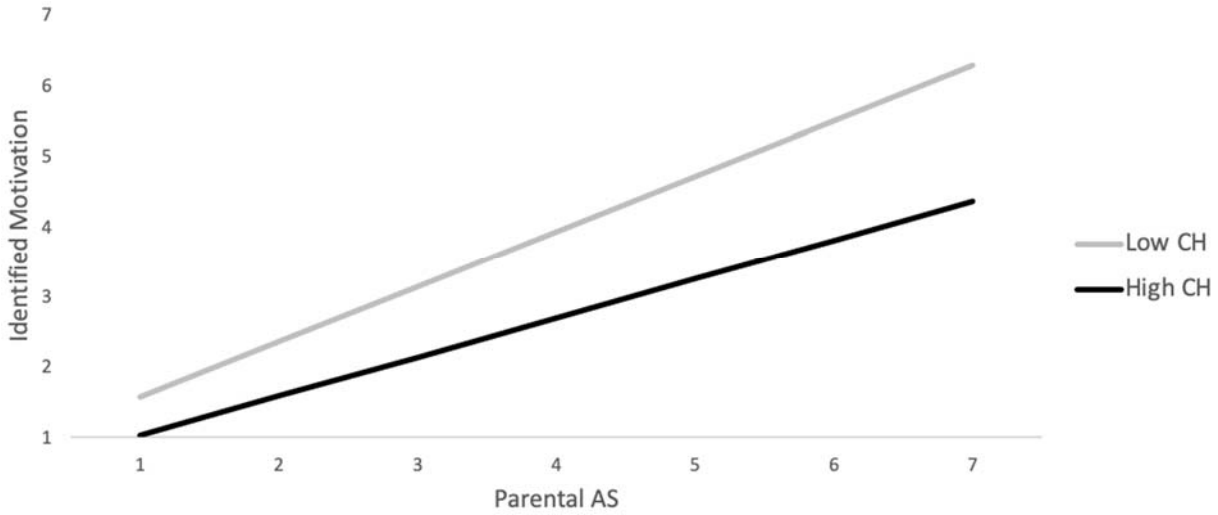
Note. $N = 442$. AS = Autonomy support.
[a] Gender: 0 = female, 1 = male.
† $p < .10$. * $p < .05$. ** $p < .01$.

Main Analyses

Our main analyses revealed no moderation effect of cultural hierarchy on the link between parental AS and well-being indicators (all p values ≥ .428). Examining the independent relations between both parental AS and cultural hierarchy on well-being indicators revealed that youths who perceived their parents as providing more AS reported experiencing more positive affect ($\beta = .35$, $p < .001$), less negative affect ($\beta = -.22$, $p < .001$), and a higher level of life satisfaction ($\beta = .39$, $p < .001$). There was no relation between cultural hierarchy and any of the well-being indicators, however (all p values ≥ .223).

We found a significant interaction between cultural hierarchy and parental AS in regard to autonomous self-regulation ($p = .002$; see Figure 1). Unpacking this interaction revealed a positive association between parental AS and autonomous self-regulation for all youths, though the strength of the association was, as expected, greater for youths whose parents' country of birth obtained a lower cultural hierarchy score ($\beta = .67$, $p < .001$), than for those whose parents' ethnicity was higher in cultural hierarchy ($\beta = .47$, $p < .001$). There was no significant interaction in regard to controlled self-regulation however ($p = .659$). Examining independent relations of both parental AS and cultural hierarchy with controlled self-regulation showed that parental AS was negatively related to adolescents' controlled self-regulation ($\beta = -.44$, $p < .001$), while cultural hierarchy was unrelated to it ($p = .101$).

Figure 1. *Moderation Effect of Cultural Hierarchy on the Relation Between Parental AS and Adolescents' Autonomous Self-Regulation*



Note. CH = Cultural hierarchy; AS = Autonomy support. Covariables: parental structure, adolescent age, gender.

Discussion

These results support the idea that effects of parental AS are universally beneficial. Indeed, parental AS was positively related to all indicators of youth psychosocial adjustment, independently of cultural hierarchy. Furthermore, cultural hierarchy only played a moderating role in the relation between parental AS and one youth outcome — autonomous self-regulation. Unpacking this interaction suggested that parental AS was positively related to autonomous self-regulation for all youths, yet this association was stronger when targeted parents were born in a country rated as less (vs. more) hierarchical, suggesting that parental AS may play a stronger role in youth's autonomous self-regulation in such countries. Conversely, autonomous self-regulation may be fostered through avenues other than, or in addition to AS in countries that value hierarchy more strongly (e.g., through respect for elders; Trommsdorff & Cole, 2011).

Our results also revealed that adolescents of parents with a lower cultural hierarchy score perceived them as being more autonomy-supportive (i.e., as providing more choices and more rationales, and as acknowledging their perspective to a greater extent). Regarding cultural hierarchy and youth psychosocial adjustment, the only significant finding was a negative association with life satisfaction. All main effects obtained in Study 1 suggest that parental AS is significantly related to youth's psychosocial adjustment, whereas cultural hierarchy is not.

Study 2: Method

Study 1 explored the way parental AS, cultural hierarchy, and youth psychosocial adjustment are related among adolescents. Study 2 expands this research by assessing middle school children and serves as a replication test with a distinct age group. Study 2 uses parental reports, thereby offering the advantage of replication with a different methodology.

Participants

For this second study, we made use of baseline data from parents participating in a larger study (Joussemet et al., 2018; Mageau et al., 2022) aiming to evaluate the impact of a parenting program (Faber & Mazlish, 2000). Parents could be included in the present study if they had at least one child between the ages of 5 and 12 attending one of the participating primary schools. The sole exclusion criterion was the inability to communicate in French. Parents who had more than one school-aged child were asked to select one of them for the scales they completed: either the child who was 8 years old or older or, if they had more than one child under or over age 8, the child closest to 9 years old.

The sample consisted of 293 parents (80.2% mothers, 19.8% fathers). The average age was 40.3 years (*SD* = 5.76). Almost three quarters had a university degree (73.1%), 20.8% had another post-secondary certification, and the remainder either had a high school diploma as their highest qualification (3.4%) or had not finished high school (1%). Their cultural backgrounds were varied: 55.8% were born in Canada, while others were from Europe (11.4%), Africa (4.9%), Asia (4%), or one of more than 15 nations outside those regions (less than 3.1% per country).

Procedure

After having obtained ethical approval from the University of Montreal's ethics committee and receiving authorization from school boards, recruitment took place in 15 grade schools. The present study used pre-intervention (baseline) data, which was collected as part of the larger research project. More specifically, parents attended an information session held in their local grade school and, after giving their consent, completed a baseline questionnaire in paper-and-pencil format, on-site.

Measures

Autonomy support: Parents' autonomy-supportive attitudes and behaviors were measured with the Parental Attitude scale (PAS; Grolnick et al., 1997). Each of the 10 items (e.g., "I encourage my child to give his/her opinion even if we might disagree"*)* was rated on a 7-point Likert scale from 1 (*Strongly disagree*) to 7 (*Strongly agree*). This scale was found to possess acceptable internal consistency in the present study (α = .71).

Cultural hierarchy: Parents answered the question "What is your ethnicity?". This information was used to code parents' cultural hierarchy, using Schwartz's (1999, 2008) scores (70.6%; 22 different nations) as well as our systematic procedure for nations without an existing code, similarly as in Study 1 (25.6%; 10 of the 30 nations coded in Study 1 and 12 new computed nation scores for the present sample). Some responses (3.8%) were too vague and could not be coded (e.g., "White" or "Caucasian").

Psychological symptoms: Parents' perceptions of children's mental health problems were measured with the internalizing and externalizing subscales (α = .75 and .66) of the Child Behavior Checklist (CBCL; Achenbach & Rescorla, 2001). Internalizing problems include emotional

difficulties such as anxiety, depression, and somatic complaints, whereas externalizing problems include aggressive, oppositional, and rule-breaking behaviors. For each of 113 items, parents rated their child on a 3-point Likert scale ranging from 0 (*Not applicable*) to 2 (*Always or often true*).

Structure: Parents also completed the laxness subscale of the Parenting scale (Arnold et al., 1993) to measure their degree of parenting laxness versus structure, which we coded such that higher scores represented parenting structure. Parents assessed how they usually behaved towards their children using nine bipolar items (structure vs. permissiveness; e.g., "I set limits on what my child can do" vs. "I let my child do whatever he or she wants"). This scale had acceptable internal consistency ($\alpha = .73$).

Sociodemographic information: Parents were asked to indicate their age and gender, and their highest level of education completed. They also reported on the age and gender of their targeted child.

Plan of Analysis

As in Study 1, the purpose of Study 2 was to examine the role of parental AS, cultural hierarchy, and their interaction in youth psychosocial adjustment, this time within a sample of grade-school children's parents. The same analytical strategy as in Study 1 was thus used.

Study 2: Results

Preliminary Analyses

Missing values were limited, with percentages ranging from 0.7% to 3.8% missing data per variable. The means, standard deviations, theoretical and observed intervals, and number of participants providing data for each variable are presented in Table 4. Cultural hierarchy scores for this sample, which include the ones deriving from our scoring process, ranged from 1.60 (score assigned to Italy) to 3.49 (score assigned to China; $M = 2.07$, $SD = .33$).

Table 4. *Descriptive Statistics of Measures for School-Age Children*

				Intervals	
Continuous variable	*n*	*M*	*SD*	Theoretical	Observed
Child age	291	7.60	1.92	–	3.00 – 12.00
Structure	290	3.46	0.94	1.00 – 9.00	1.22 – 6.56
Cultural hierarchy	282	2.07	0.33	1.60 – 3.49	1.60 – 3.49
Parental AS	289	5.49	0.72	1.00 – 7.00	2.60 – 7.00
Internalizing problems	289	0.28	0.23	0.00 – 2.00	0.00 – 1.43
Externalizing problems	290	0.29	0.21	0.00 – 2.00	0.00 – 1.42
Categorical variable	*n*	%			
Parent gender - male	58	19.8			
Parent gender - female	235	80.2			

Zero-order correlations between all variables are shown in Table 5. There were statistically significant negative associations between parental AS and psychological symptoms (internalizing and externalizing problems). Cultural hierarchy was significantly (and negatively) associated with externalizing problems, but not with internalizing problems. As expected, and similarly to Study 1, parental AS was significantly negatively associated with cultural hierarchy, both when examining the entire sample and the subsample whose parents had a country of birth previously assessed by Schwartz (2008). Furthermore, the strength of the association between parental AS and cultural hierarchy was similar (*r*s = -.14 and -.20, all *p* values ≤ .048). Parental age, gender, and structure were found to correlate significantly with internalizing and externalizing problems and were thus included as covariates in the main analyses.

Table 5. *Correlations Between Variables in School-Age Children*

Variables	1	2	3	4	5	6	7
1. Child sex [a]	-						
2. Structure	.02	-					
3. Child age	-.01	.02	-				
4. Cultural hierarchy	.00	.20**	.06	-			
5. Parental AS	-.07	-.19**	-.01	-.21**	-		
6. Internalizing problems	-.05	.02	.05	-.05	-.17**	-	
7. Externalizing problems	.02	-.02	-.17*	-.15*	-.18**	.51**	-

Note. *N* = 293 parents. AS = Autonomy support.
[a] Gender: 0 = female, 1 = male.
† p < .10. *p < .05. **p < .01.

Main Analyses

SEM results showed that cultural hierarchy did not moderate the link between parental AS and any type of psychological symptom (all *p* values ≥ .142). Examining main effects revealed that parents who perceived themselves as more autonomy-supportive reported fewer internalizing problems (β = -.19, *p* < .001) as well as fewer externalizing problems (β = -.23, *p* < .001) in their children. Parents' cultural hierarchy was also negatively associated with child externalizing problems (β = -.18, *p* = .002), but not with internalizing problems (*p* = .179).

Discussion

The purpose of this study was to replicate the previous one with a sample of parents of school-aged children. The findings from this study were mainly consistent with Study 1, in that cultural hierarchy did not moderate the relation between parental AS and psychological symptoms. The direction of the main effects was in line with past research and with Study 1, with parental AS related to fewer parent-reported symptoms. Cultural hierarchy was unrelated to internalizing problems, but was linked to a lower incidence of child externalizing problems. Finally, we once again found that the higher the parents' native country ranked in degree of cultural hierarchy, the

less the parents seemed to be autonomy-supportive. As was the case in Study 1, the interpretation of the results is limited by the cross-sectional design, preventing causal inferences about the observed relations and their directions. In addition, the data on parenting and internalizing and externalizing problems were supplied by parents, which is linked to a risk of illusory correlation with other parent-reported measures (Podsakoff et al., 2003) as well as a risk of the data being influenced by social desirability.

General Discussion

Our studies paid special attention to the hierarchical dimension of cultures, as we aimed to examine the interplay between the roles of cultural hierarchy and parental AS in child psychosocial adjustment. The main goal of this paper was to evaluate the links between parental AS and indicators of child psychosocial adjustment, with a particular emphasis on exploring the potentially moderating role of cultural hierarchy in these associations. These goals were pursued among two samples of different age ranges and with a wide range of cultural variability. Participants of Study 1 were adolescents (14 to 22 years), whereas data from parents of school-aged children (5 to 12 years) was used for Study 2.

Overall, our results provided additional empirical support for the universal benefits of parental AS on child psychosocial adjustment. Indeed, when we examined whether the degree of cultural hierarchy played a moderating role in the relation between parental AS and children's psychosocial adjustment, we found no moderation by cultural hierarchy in most tests, except for youth autonomous self-regulation (Study 1 only). Unpacking this moderation and examining the main effects revealed relations between AS and all outcomes (positively with strengths, negatively with problems). The discrepancy in direction of the only, but nonetheless significant, moderation effect obtained in the present studies makes its interpretation complex. Further studies are needed to see if this result can be replicated before we can conclude whether parental AS has a culturally specific impact on child outcomes.

For now, the general lack of moderation suggests that the benefits of AS could be universal. This proposition is consistent with some previous studies. For instance, Chen et al. (2015) found that basic psychological need satisfaction had a positive association with adolescent well-being and that this association did not vary across the four cultures sampled (United States, China, Peru, and Belgium). Similar results have been found in other multicountry studies, including in countries as diverse as Brazil (Chirkov et al., 2005), Bulgaria (Deci et al., 2001), and Japan (Church et al., 2013). Relatedly, Donald et al. (2021), found no moderation of participants' geographic location for the relation between autonomy and prosocial outcomes.

A recent longitudinal study (Gao et al., 2021) conducted with Chinese children points to the role of children's interpretation of maternal AS, as children's perceptions can modulate the association between AS and child social functioning, a conclusion that is consistent with the views of many proponents of cognitive behavioral theory, and one that may partly explain the

contradictory results of our studies (Camras et al., 2017; Camras et al., 2012). Gao et al. (2021) explained that when children perceived that their parent's lack of AS was derived from benevolent intentions and concern for them, this parenting component was more strongly related to children's sociability and assertiveness skills. In addition, Marbell-Pierre et al. (2019) showed that children with self-construals that are more interdependent (i.e., whose parents play an important role in their conception of themselves) may interpret parents' AS differently from children who have more independent self-construals. Research that considers the meanings of parenting practices from the child's perspective would be particularly relevant. One way to approach it could be to measure the extent to which children identify themselves with their parent's culture of origin and with their host culture.

The various contradictions still present in the literature highlight the dialectical tensions between the generalization of psychological constructs and the importance of adopting a culturally sensitive approach. Taking cultural dimensions into account is particularly relevant in the current global sociocultural context, where globalization and immigration are leading to several types of social reconfiguration in many countries.

Our results add to the mixed literature on the role of cultural hierarchy in child outcomes. Indeed, though cultural hierarchy has rarely been linked with psychosocial adjustment measures, statistically significant results from our studies suggested both positive and negative relations with child psychosocial adjustment. Finally, the observed relations between cultural hierarchy and parental AS also offered some relevant insights into the way culture may shape parental beliefs and resulting practices. Indeed, the fact that children of parents born in a less hierarchical country perceived their parents as more autonomy-supportive across both samples points to the idea that parenting practices are intimately related to culture. The variety of methods used by parents to teach children's values, beliefs, and behaviors seem indeed to differ according to cultural norms (Meléndez, 2005).

Limitations

Although the present studies contribute to the parental AS literature by integrating the cultural context, there are several limitations that need mentioning. First, we examined the cultural hierarchy of primary caregivers only, without considering, for example, the number of years parents and their children have lived in Canada, youths' country of birth (and immigrants' identification with their culture of origin and their host culture); nor did we consider the possibility of having multiple ethnic backgrounds. The country of birth indicator has the advantage of being objective, allowing for comparisons between studies. It is certainly a useful ethnicity indicator, but it remains incomplete. Assessing additional indicators in future studies, and considering both parents, would help provide a more nuanced picture and an even more sensitive understanding of the cultural dimension in a parenting context. Despite these limitations, we believe that it may be worth replicating the conducted analyses in subsequent studies.

One of the strengths of our research is that we estimated the cultural hierarchy level of a significant number of nations that were not initially rated by Schwartz. Based on a variety of criteria, it was possible to retain all of our sample's participants, thereby increasing the power of our analyses and reflecting a wider range of ethnic backgrounds. In addition, it has been argued that treating cultural components as dimensional rather than categorical variables is theoretically and empirically more useful (Hsu et al., 2013). Finally, one of the main strengths of the present studies is that they contribute to the growing literature on cultural sensitivity in the relations between parenting practices and child psychosocial adjustment.

Future Directions

One of the major research questions addressed in the present studies was whether parental AS is related to a better psychosocial adjustment in all children, regardless of the level of parents' cultural hierarchy. In order to gain a better understanding of the associations between these variables, it would help to investigate the direction of observed effects and potential reciprocal relations. A longitudinal design with numerous time points could provide useful insights about the stability and change of parental AS and how cultural hierarchy relates to temporal patterns, and could also take into account some reciprocal effects (e.g., changes in children's psychosocial adjustment that both precede and follow autonomy-supportive parenting).

Future studies could also deepen our understanding of the potentially moderating role of cultural hierarchy across the different components of parental AS (e.g., empathy, rationale, choices, non-controlling language). Testing this model across the different components of optimal parenting more broadly, for example by examining warm (vs. rejecting) and structuring (vs. permissive) practices in addition to autonomy-supportive (vs. controlling) ones in a single model, could also reveal some important nuances regarding the relations between parents' cultural background and parenting practices. Future research endeavors may also consider incorporating age- and gender-based analysis to enhance our understanding of potential moderation effects.

Obtaining parents' observational measures of their parenting practices when adolescents and children report on their psychological well-being would also reduce the risk of illusory or amplified associations. Alternatively, youth could report on perceived parenting whereas parents could rate their youths' psychological health. Future studies could replicate the moderation analyses conducted in the present studies with larger samples, using additional ethnicity indicators as mentioned above. Moreover, in order to foster conceptual clarity, the conceptual demarcation between self-determination and independence or detachment remains important to address. Thus it would be relevant to examine other constructs often conflated with self-determination, such as individualism, independence, and detachment, as was done by Van Petegem et al. (2013).

In conclusion, the present findings provide some insights into the role of cultural hierarchy in a parenting context. Parental AS was linked to psychosocial adjustment in all families, regardless of parents' cultural background. Furthermore, the very occasional cultural hierarchy moderation obtained when the relation between parental AS and various indicators of children's psychosocial

adjustment were studied foregrounds the idea that AS is a universally beneficial parenting practice (Ryan & Deci, 2009, 2017). However, these studies also highlight the importance of paying close attention to cultural variables when studying psychosocial phenomena, especially in regard to the exact definition of our measured constructs (e.g., autonomy as volition, or as independence). Finally, if replicated, the knowledge gained may allow for better adaptation of parenting programs, emphasizing that supporting children's autonomy may be associated with better psychological and social adjustment and that such support should be applied across diverse cultural settings while respecting each family's values and principles.

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Appendix

Table: *Scores of Additional Nations Assessed, Based on Schwartz's Dimensional Coding System*

Nations	Attributed scores
African	2.58
Albania	2.19
Algeria	2.24
Amazigh	2.29
Arab	2.28
Bangladesh	2.65
Bengal	2.90
Burkina Faso	2.48
Burundi	2.67
Cambodia	2.87
Congo Republic	2.49
Cuba	2.38
Djibouti	2.31
Dominican Republic	2.21
Ecuador	2.56
El Salvador	2.11
European	2.03
Guatemala	2.14
Guyana	2.64
Haiti	2.42
Honduras	2.20
Ivory Coast	2.60
Jamaica	2.44
Kabyle	2.24
Lebanon	2.46
Madagascar	2.51
Maghreb	2.29
Maldives	2.47
Mauritius	2.65
Moldova	2.27
Morocco	2.24
Nicaragua	2.23
Niger	2.41
Palestine	2.35
Rwanda	2.43
Scotland	2.21
Seychelles	2.44
South Asia	2.76
Sri Lanka	2.92
Togo	2.58
Tunisia	2.39

Note. Full coding process available upon request. Downie, M., Koestner, R., Horberg, E., & Haga, S. (2006). Exploring the relation of independent and interdependent self-construals to why and how people pursue personal goals. *The Journal of Social Psychology*, *146*(5), 517–531.