

Validation of the Perceived Parental Autonomy Support Scale (P-PASS)

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Using a multidimensional perspective, the Perceived Parental Autonomy Support Scale (P-PASS) assesses autonomy-supportive and controlling parenting (Grolnick & Pomerantz, 2009). Two studies document the instrument's psychometric properties (Study 1, $N = 210$, mean age = 18.8 years; Study 2, $N = 315$, mean age = 18.5 years). Exploratory factor analyses first show that the P-PASS factor structure is best described by a 2-factor solution, 1 representing perceived autonomy support and the other, controlling parenting. Cronbach's alphas confirm the internal consistency of the P-PASS scales ($\alpha > .89$), and correlation patterns with the Psychological Control Scale (Barber, 1996) and other parenting components (i.e., acceptance and monitoring) support convergent and divergent validity. Hierarchical regressions also show that perceived autonomy support predicts young adults' adjustment, above and beyond controlling parenting (Studies 1 and 2) and parental acceptance and monitoring (Study 2). Overall, these results suggest the P-PASS usefulness in studying perceived autonomy-supportive and controlling parenting.

Keywords: autonomy support, control, parenting, scale, Self-Determination Theory

Parenting researchers (e.g., Barber, Stolz, & Olsen, 2005; Maccoby, 1992; Steinberg, Elmen, & Mounts, 1989) have sought to untangle the different parenting components underlying Baumrind (1971)'s authoritative parenting style to gain more precise insight into their effects and dynamics. Three parenting components have proved useful in predicting youth outcomes: parental acceptance versus rejection, structure versus permissiveness, and autonomy support versus controlling parenting (ASvsCP). Although consensus over the importance of these components is growing, there are few psychometrically sound instruments to measure them. The goal of the present research was to document the psychometric properties of the French version of the Perceived Parental Autonomy Support Scale (P-PASS), a recently developed multidimensional measure that assesses the ASvsCP component (i.e., the presence of autonomy-supportive behaviours and the absence of pressuring, dominating and

intrusive control; Grolnick & Pomerantz, 2009).¹ Although a few studies have already used the P-PASS (or its adapted versions) successfully, no published article has specifically examined its psychometric properties. This parenting component was targeted because it has typically not been measured in the breadth with which it had been originally defined.

ASvsCP Component

In past research, the ASvsCP component has most often been operationalized using the concept of psychological control (Schaefer, 1965), which refers to parents' covert attempt to control children's psychological world (e.g., feelings, thoughts, interests, etc.). Barber (1996) further defined psychological control as the use of criticisms, guilt-inducing techniques, and threats to enlist adolescents to comply with parents' wishes. In youth reports, psychological control has been operationalized with a wide range of behaviors. For example, in the Child Report of Parent Behaviour Inventory (CRPBI; Schaefer, 1965), psychological control is measured with control via guilt, intrusiveness, hostile control, possessiveness, instilling persistent anxiety, and withdrawal of relations. In Barber (1996)'s Psychological Control Scale of the Youth Self-Report (PCS-YSR), the most extensively used measure of psychological control (and of the ASvsCP component as a whole) with adolescents and young adults, psychological control is operationalized as invalidating feelings, constraining

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¹ The English version obtained through the back-translation procedure (Vallerand, 1989) is provided and should constitute a promising preliminary instrument for studying autonomy support and controlling parenting in this language. Back-translations of validated scales have indeed proved useful to efficiently develop new ones (e.g., Gagné et al., 2010; Pelletier & Vallerand, 1990).

verbal expressions, personal attacks, and love withdrawal. Psychological control has also been studied using measures of perceived conditional regard with young adult samples (Roth, Assor, Niemiec, Deci, & Ryan, 2009).

Recently, Grolnick and Pomerantz (2009) argued that it is not so much the target of the parent's control (i.e., adolescents' thoughts or behaviors) that makes parenting controlling but whether or not parenting practices are pressuring, intrusive, and dominating. As these authors point out, it is possible for parents to be autonomy-supportive or controlling toward behaviors or thoughts. The term *controlling parenting* is thus preferred over the term *psychological control* because it encompasses psychological control while allowing for the possibility that parents may also be controlling regarding adolescents' behaviors (i.e., forcing him/her to play piano to impress guests). Controlling parenting behaviors force adolescents to think, feel or be in specified ways, regardless of their own needs and feelings (Ryan, 2005). As such, they thwart autonomy (or volitional functioning), which is defined as the experience of enacting behaviors willingly because of well-internalized values or true interests (Ryan, Deci, & Grolnick, 1995).

In the present research, controlling parenting was operationalized using three specific types of controlling behaviors toward late adolescents and young adults: (a) threats to punish, (b) guilt-inducing criticisms, and (c) performance pressures. These behaviors share the characteristics of being both directly observable and widely used strategies to reach socialization goals, in addition to being pressuring, dominating and intrusive. *Threat of punishment* was included to measure the extent to which parents instill a climate of fear and persistent anxiety to enlist young adults to comply with parental wishes (Barber, 1996; Schaefer, 1965). The use of threats has been shown to undermine the internalization of social values by reducing internal attributions for compliant behaviours (Cohen, Gelfand, & Hartmann, 1981; Lepper, 1983). *Guilt-inducing criticisms* was included to measure parents' tendency to control young adults via guilt (Barber, 1996; Schaefer, 1965). Using guilt-inducing criticisms is also one of the ways in which parents subtly withdraw their affection after misconduct, thereby questioning the stability of the emotional bond between parent and young adults (Barber, 1996). Guilt-inducing criticisms were found to be positively linked to adolescents' internalizing symptoms (McKee et al., 2014). Finally, *performance pressures* was included as one of the ways in which parents convey conditional regard (Roth et al., 2009). When parents pressure their young adults into performing better than others, they imply that their love is conditional to their performance. Experimental studies show that emphasizing peer comparisons and pressuring young adults to win thwarts their autonomy and decreases intrinsic motivation (Reeve & Deci, 1996).

The opposite pole of autonomy-thwarting is autonomy support (Deci & Ryan, 2000). To be autonomy supportive is to show consideration for young adults' distinct internal frame of reference, showing respect for their unique needs and feelings. Autonomy-supportive parents give opportunities to be active agents and feel a sense of ownership of their behaviors (Soenens et al., 2007). Autonomy support has been operationalized as (a) acknowledging the child's feelings, (b) giving a rationale for rules and demands, and (c) providing choice and opportunities for initiative taking (Joussemet, Landry, & Koestner, 2008; Koestner, Ryan, Bernieri, & Holt, 1984). The P-PASS assesses these three types of autonomy-supportive behaviors.

Empirical evidence shows that autonomy-supportive and controlling behaviors form two distinct yet negatively related factors (Skinner, Johnson, & Snyder, 2005), suggesting that these constructs should be measured separately. Vansteenkiste and Ryan (2013) have also argued that actively supporting a person's autonomy is not equivalent to refraining from being controlling and that autonomy support and controlling behaviors may have unique correlates. Autonomy-supportive and controlling behaviors are nevertheless opposite poles of a same theoretical continuum in terms of their psychological significance for young adults' autonomy. Indeed, one cannot in a given moment perceive that one's autonomy is completely supported and totally hindered at the same time. Empirical evidence confirms that perceptions of autonomy-supportive and controlling parenting are highly and negatively related ($r = -.68$; Soenens et al., 2007).

Past findings suggest that the ASvsCP component is beneficial for late adolescents and young adults. For example, controlling parenting predicts more externalized and internalized problems (Silk, Morris, Kanaya, & Steinberg, 2003; Soenens, Vansteenkiste, & Sierens, 2009), lower self-esteem (Silk et al., 2003; Soenens et al., 2009), and substance use (Herman, Dornbusch, Herron, & Herting, 1997) in late adolescence. In samples of young adults, the ASvsCP component is associated with higher well-being (Downie et al., 2007) and its components of life satisfaction (Kins, Beyers, Soenens, & Vansteenkiste, 2009; Niemiec et al., 2006), positive affect and low negative affect (Niemiec et al., 2006), in addition to being negatively related to depressive symptoms (Kins et al., 2009; Niemiec et al., 2006; Soenens et al., 2009) and externalized problems (Niemiec et al., 2006).

Limits of Current Youth Reports Measuring the ASvsCP Component

Although several youth reports exist to assess the ASvsCP component, many of them assess psychological control without assessing concrete autonomy-supportive behaviors (e.g., Herman et al., 1997). Yet, when the positive pole of the ASvsCP component is not measured, the operationalization of autonomy support is indefinite, leading researchers to interpret it in different ways. For example, although *autonomy support* refers to the promotion of volitional functioning (Soenens et al., 2007), it is often mistakenly viewed as the promotion of independence (Herman et al., 1997; Silk et al., 2003). Another problem with omitting to measure autonomy support is a loss of predictive power. Scales that only measure controlling behaviors cannot differentiate parents who simply avoid controlling strategies from those who actively support their children's autonomy. Associations between the ASvsCP component and youth outcomes are thus reduced.

Some scales do assess autonomy support but they do so by only measuring the provision of choice (e.g., involvement in family decision making; Brody, Moore, & Gleib, 1994). By reducing the meaning of autonomy support to the provision of choice, such scales give the impression that autonomy support means "to let adolescents make their own decisions." Yet, autonomy support also encompasses parenting behaviors that show respect for adolescents' autonomy in structure-related situations (i.e., providing rationales and acknowledging feelings).

Finally, other youth reports assessing the ASvsCP component are custom made or inspired by unpublished scales (e.g., Roth,

2008; Silk et al., 2003) such that very little validity information is available. To date, there are two validated scales that measure both poles of the ASvsCP component (i.e., Perceptions of parents scale for children and college students; Grolnick, Ryan, & Deci, 1991; Robbins, 1994; Parents as social context questionnaire; Skinner et al., 2005). Although useful, these scales assess autonomy-supportive and controlling parenting in a unidimensional manner, where each behavior is measured with one or two items. Using a multidimensional approach to scale development has the advantage of being more transparent because each behavior, represented by one subscale, is presented in research reports. Available scales also differ in the specific behaviors they assess. Because items are typically not reported in method sections, these differences often go unnoticed. More importantly, the proportion of items allocated to each behavior also differs within and across different scales, which arbitrarily gives more or less weight to some behaviors.

The Present Research

The goal of the present study was to document the psychometric properties of the French version of the P-PASS, a multidimensional measure of the ASvsCP component. Recent research using this instrument (the P-PASS 24-item version presented and validated therein) suggests that it has great potential in terms of predictive validity. Specifically, Bureau and Mageau (2014), using a separate sample, have shown that the P-PASS predicts adolescents' honest communication with parents as well as their identification with the honesty value and their perceptions of the costs and benefits of honesty in the parent-adolescent relationship. Despite these promising results, information concerning the P-PASS convergent and incremental predictive validity is not yet available. The present two studies document these additional psychometric properties.² Study 1 evaluated the P-PASS factor structure, internal consistency, as well as its convergent and predictive validity. Study 2 replicated the findings of Study 1 and further evaluated construct and incremental predictive validity. Barber (1996)'s PCS-YSR was used as the gold standard indicator of the ASvsCP component.

Study 1

Method

Participants and procedure. A convenience sample of 210 French-speaking young adults (50 men, 131 women, and 29 not specified) with a mean age of 18.8 years ($SD = 3.3$) participated in this study. Although the sample comprised a few adult students, most (98%) were aged 24 and younger. Participants were recruited in four junior colleges in the Montreal metropolitan area, where they completed a questionnaire in class. Participation rates (total and for men and women separately) were not recorded.

Perceived Parental Autonomy Support Scale (P-PASS). The P-PASS items were based on existing scales assessing the ASvsCP component and were first reviewed by two experts in self-determination theory. They were then submitted to a preliminary study conducted in junior colleges and university classrooms ($N = 729$; 59% female; Mean age = 21.1 years). Based on this study, a 31-item version was created and then reviewed by the same two experts. This version measured

perceptions of three autonomy-supportive behaviors (i.e., choice, five items; rationale, six items; acknowledgment of feelings, five items) and three controlling ones (i.e., threats to punish, four items; guilt-inducing criticisms, six items; performance pressures, five items) regarding each parent and was submitted to factor analyses in the first of the present two studies (one analysis per parent). Next, items with the lowest factor loadings (six items) or with cross-loadings (one item) were deleted to obtain a four-item scale per behavior, one regarding mothers and one for fathers. The resulting 24-item version is presented and validated therein. All items have high face validity and are presented in Table 1. For each item, participants are asked to indicate the extent to which they agree that their mother and father used each behavior when they were growing up using a 7-point response scale, ranging from 1 (*do not agree at all*) to 7 (*very strongly agree*) with *moderately agree* as midpoint (4).

Other measures. The questionnaire also included a unidimensional measure of psychological control, the PCS-YSR (Barber, 1996), as well as indicators of young adults' psychological adjustment (i.e., life satisfaction, self-esteem, and positive and negative affect). These indicators were chosen because they were found to be associated with the ASvsCP component (Kins et al., 2009; Niemiec et al., 2006; Soenens et al., 2009). For example, using cluster analyses, Soenens et al. (2009) showed that emerging adults who perceived their parents as more autonomy-supportive and less controlling reported higher levels of esteem, whether their parents were also perceived as promoting independence (i.e., think by oneself) or dependence (i.e., rely on parents' opinion). When needed, questionnaires were translated using the back-translation procedure (Vallerand, 1989).

PCS-YSR (Barber, 1996). The PCS-YSR is the most extensively used unidimensional measure of psychological control (see Barber, 2002, for a review). This eight-item scale includes four specific aspects of psychological control: invalidating feelings (one item, e.g., "My mother is always trying to change how I feel or think about things"), constraining verbal expressions (two items, e.g., "My mother changes the subject whenever I have something to say"), personal attacks (two items, e.g., "My mother brings up past mistakes when s/he criticizes me"), and love withdrawal (three items, e.g., "My mother will avoid looking at me when I have disappointed her"). Participants responded to each item separately for their mother and father using a 5-point Likert-type scale, ranging from 1 (*this is not like him/her*) to 5 (*this is a lot like him/her*). Factor analysis revealed the presence of one predominant factor (mothers/fathers: explained variance = 48%/46%, factor loadings = .52 to .74/.44 to .74) and internal consistency was satisfactory, mothers/fathers, $\alpha = .84$ (95% CI [.81, .87])/.83 (95% CI [.80, .86]). Items were averaged to obtain total scores for mothers and fathers.

Life satisfaction. An adapted version of the five-item Satisfaction with Life Scale (Blais, Vallerand, Pelletier, & Brière, 1989)

² Please note that the data mentioned in the present manuscript are distinct and were collected before the data presented in Bureau and Mageau (2014).

Table 1

Studies 1 and 2: Summary of Factor Loadings With Oblimin Rotation for the Perceived Parental Autonomy Support Scale (P-PASS), Eigenvalues, and Percentages of Explained Variance for Each Factor

Item	Study 1			Study 2		
	Factor loading [95% CI]		Initial communality	Factor loading [95% CI]		Initial communality
	1	2		1	2	
Choice Within Certain Limits						
4. My point of view was very important to my parents when they made important decisions concerning me. <i>Mes parents accordaient beaucoup d'importance à mon opinion lorsqu'ils prenaient des décisions importantes à mon sujet.</i>	.80 [.72, .88]	.05 [-.05, .15]	.68	.71 [.62, .80]	-.11 [-.21, .00]	.61
14. My parents hoped that I would make choices that corresponded to my interests and preferences regardless of what theirs were. <i>Mes parents souhaitaient que je fasse des choix qui correspondaient à mes intérêts et à mes préférences, peu importe quels étaient les leurs.</i>	.61 [.49, .72]	-.07 [-.20, .07]	.47	.57 [.47, .68]	-.24 [-.36, -.13]	.55
8. Within certain limits, my parents allowed me the freedom to choose my own activities. <i>À l'intérieur de certaines limites, mes parents me laissaient libre de choisir mes propres activités.</i>	.57 [.45, .69]	-.06 [-.19, .08]	.44	.51 [.39, .63]	-.12 [-.25, .01]	.38
1. My parents gave me many opportunities to make my own decisions about what I was doing. <i>Mes parents me donnaient plusieurs opportunités de prendre mes propres décisions sur ce que je faisais.</i>	.55 [.43, .66]	-.20 [-.33, -.06]	.51	.57 [.46, .68]	-.12 [-.25, .01]	.46
Rationale for Demands and Limits						
19. My parents made sure that I understood why they forbid certain things. <i>Mes parents s'assuraient que je comprenais pourquoi ils m'interdisaient certaines choses.</i>	.90 [.84, .96]	.12 [.04, .20]	.77	.70 [.60, .80]	.11 [-.00, .22]	.50
23. When I asked why I had to do, or not do, something, my parents gave me good reasons. <i>Lorsque je demandais pourquoi je devais faire ou ne pas faire quelque chose, mes parents me fournissaient de bonnes raisons.</i>	.85 [.78, .92]	.10 [.01, .19]	.72	.74 [.65, .83]	.09 [-.01, .19]	.57
9. When I was not allowed to do something, I usually knew why. <i>Lorsque je n'avais pas le droit de faire quelque chose, je savais habituellement pourquoi.</i>	.70 [.60, .79]	-.10 [-.21, .01]	.59	.67 [.57, .77]	.07 [-.05, .18]	.49
2. When my parents asked me to do something, they explained why they wanted me to do it. <i>Lorsque mes parents me demandaient de faire quelque chose, ils m'expliquaient pourquoi ils voulaient que je le fasse.</i>	.67 [.57, .77]	-.04 [-.16, .09]	.52	.67 [.57, .77]	.13 [.02, .24]	.46

Table 1 (continued)

Item	Study 1			Study 2		
	Factor loading [95% CI]		Initial communality	Factor loading [95% CI]		Initial communality
	1	2		1	2	
Acknowledgement of Feelings						
13. My parents were able to put themselves in my shoes and understand my feelings. <i>Mes parents étaient capables de se mettre à ma place et de comprendre mes sentiments.</i>	.81 [.74, .88]	.02 [-.08, .11]	.66	.73 [.63, .82]	.06 [-.05, .16]	.53
24. My parents listened to my opinion and point of view when I disagreed with them. <i>Mes parents écoutaient mon opinion et mon point de vue lorsque je n'étais pas d'accord avec eux.</i>	.80 [.73, .87]	-.09 [-.18, .00]	.72	.84 [.77, .90]	.00 [-.08, .09]	.69
16. My parents were open to my thoughts and feelings even when they were different from theirs. <i>Mes parents étaient ouverts à mes pensées et à mes sentiments même lorsqu'ils étaient différents des leurs.</i>	.80 [.73, .87]	-.09 [-.19, -.00]	.76	.69 [.60, .78]	-.17 [-.28, -.07]	.70
7. My parents encouraged me to be myself. <i>Mes parents m'encourageaient à être moi-même.</i>	.67 [.58, .77]	-.12 [-.24, -.00]	.60	.62 [.51, .72]	-.09 [-.21, .03]	.47
Threats to Punish						
10. I always had to do what my parents wanted me to do, if not, they would threaten to take away privileges. <i>Je devais toujours faire ce que mes parents voulaient, sinon ils menaçaient de m'enlever des privilèges.</i>	.11 [-.01, .23]	.66 [.54, .77]	.60	-.14 [-.29, .01]	.44 [.29, .59]	.57
3. When I refused to do something, my parents threatened to take away certain privileges in order to make me do it. <i>Lorsque je refusais de faire quelque chose, mes parents menaçaient de m'enlever certains privilèges pour m'obliger à le faire.</i>	.22 [.08, .36]	.52 [.38, .66]	.45	-.03 [-.19, .13]	.29 [.13, .45]	.42
20. As soon as I didn't do exactly what my parents wanted, they threatened to punish me. <i>Dès que je ne faisais pas exactement ce que mes parents souhaitaient, ils menaçaient de me punir.</i>	-.17 [-.28, -.06]	.69 [.59, .78]	.67	-.25 [-.39, -.10]	.52 [.38, .65]	.60
15. When my parents wanted me to do something, I had to obey or else I was punished. <i>Lorsque mes parents voulaient que je fasse quelque chose, je devais obéir sinon j'étais puni.</i>	.05 [-.08, .18]	.61 [.49, .73]	.49	-.17 [-.33, -.02]	.32 [.16, .48]	.49
Performance Pressures						
22. My parents insisted that I always be better than others. <i>Mes parents exigeaient que je sois toujours meilleur que les autres.</i>	-.05 [-.17, .07]	.69 [.57, .80]	.74	.06 [-.01, .13]	.85 [.79, .92]	.67
17. In order for my parents to be proud of me, I had to be the best. <i>Pour que mes parents soient fiers de moi, je devais être le meilleur.</i>	-.05 [-.18, .07]	.67 [.55, .78]	.71	.04 [-.04, .12]	.82 [.75, .89]	.66

(table continues)

Table 1 (continued)

Item	Study 1			Study 2		
	Factor loading [95% CI]		Initial communality	Factor loading [95% CI]		Initial communality
	1	2		1	2	
5. My parents refused to accept that I could want simply to have fun without trying to be the best. <i>Mes parents refusaient que je puisse vouloir simplement m'amuser sans chercher à être le meilleur.</i>	-.04 [- .19, .11]	.48 [.34, .62]	.43	-.02 [- .15, .12]	.51 [.39, .64]	.32
11. My parents believed that, in order to succeed, I always had to be the best at what I did. <i>Mes parents croyaient que pour réussir, il fallait que je sois toujours le meilleur dans ce que je faisais.</i>	-.05 [- .20, .10]	.48 [.33, .63]	.61	.04 [- .05, .14]	.74 [.65, .83]	.55
Guilt-Inducing Criticisms						
12. My parents made me feel guilty for anything and everything. <i>Mes parents me faisaient sentir coupable pour tout et pour rien.</i>	-.10 [- .23, .02]	.62 [.50, .73]	.57	-.34 [- .47, -.22]	.48 [.36, .60]	.57
6. When my parents wanted me to do something differently, they made me feel guilty. <i>Lorsque mes parents voulaient que je fasse quelque chose différemment, ils me faisaient sentir coupable.</i>	-.03 [- .15, .10]	.66 [.55, .77]	.55	-.06 [- .21, .08]	.53 [.40, .67]	.45
18. When my parents wanted me to act differently, they made me feel ashamed in order to make me change. <i>Lorsque mes parents souhaitaient que j'agisse autrement, ils faisaient en sorte que j'aie honte pour m'obliger à changer.</i>	.10 [- .01, .20]	.74 [.65, .83]	.54	-.16 [- .30, -.02]	.51 [.38, .64]	.42
21. My parents used guilt to control me. <i>Mes parents utilisaient la culpabilité pour me contrôler.</i>	-.06 [- .16, .04]	.77 [.69, .86]	.69	-.22 [- .36, -.08]	.46 [.32, .60]	.55
Eigenvalue	9.47	3.40		9.28	2.43	
% of Variance	39	14		39	10	

Note. The French version of the instrument was validated. All items were translated from French to English using the back-translation procedure (Vallerand, 1989), and they were then reviewed by a native English speaker. Original French items are italicized.

was used to measure life satisfaction in four major social roles (i.e., child, student, employee, and friend; five items each). A sample item in the employee role is "If I could change anything in my work I would change practically nothing." Each item was rated on a 7-point Likert-type response scale, ranging from 1 (*do not agree at all*) to 7 (*strongly agree*). Cronbach's alphas were high, ranging from .84 (95% CI [.81, .87]) to .92 (95% CI [.90, .93]) across the four roles. Factor analysis also showed that items in each role formed one factor which explained 63% of the variance or more (all factor loadings were above .40). Correlations among satisfaction in each role were significant and above .19, except for the relation between satisfaction in school and at work ($r = .09, p = .23$). Factor analyses also showed that satisfaction in the four roles formed one factor which explained 40% of the variance (all loadings above .36).³ Mean levels of life satisfaction in each role were averaged to yield a global life satisfaction composite score.

Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988). The PANAS is a 20-item instrument designed to assess positive (e.g., enthusiastic, interested or deter-

mined) and negative (e.g., distressed, upset or frustrated) affect. Participants were asked to indicate the extent to which they experienced different emotions in the past few weeks using a 5-point response scale, ranging from 1 (*very slightly or not at all*) to 5 (*extremely*). The scree test in factor analysis revealed the presence of two predominant factors, explaining 30% and 16% of the variance respectively. All factor loadings were above .43, except for one positive affect item (i.e., alert), which had a low factor loading on both factors. This item was thus deleted for subsequent analyses. Positive and negative affect items (excluding the alert item) were averaged to create total scores of positive and negative affect respectively. Cronbach's alphas were satisfactory, positive/negative affect: $\alpha = .84, 95\% \text{ CI } [.80, .87]/.89, 95\% \text{ CI } [.87, .91]$.

³ Although this loading is below the recommended threshold of .40, Stevens (2002) suggests that with sample size above 200, loadings of .36 may be considered significant and thus acceptable. In addition, data in Study 2 replicate these results with all loadings above .40 and all correlations among the four roles above .20 ($p < .001$).

Global self-esteem. The Rosenberg's (1965) Self-Esteem Scale was used to measure participants' perception of their self-worth and self-acceptance. A sample item is "I feel that I am a person of worth, at least on an equal basis with others." Participants indicated their level of agreement with each item using a 7-point Likert-type response scale, ranging from 1 (*do not agree at all*) to 7 (*very strongly agree*). This 10-item scale demonstrated high internal consistency, $\alpha = .89$, 95% CI [.87, .91]. The scree test in factor analysis revealed the presence of one predominant factor explaining 53% of the variance (all factor loadings above .58).

Results and Discussion

Factor structure. An exploratory factor analysis using maximum likelihood and oblimin rotation was performed to evaluate the factorial structure of the P-PASS separately for mothers' and fathers' parenting. Given that results are the same for perceptions of mothers and fathers, we present the factor structure with the means of mothers' and fathers' scores. The scree test revealed that the six subscales did not form six separate factors (the six first eigenvalues in descending order were 9.47, 3.40, 1.72, 1.19, .82, .78). Rather, there were two predominant factors explaining 54% of the variance. The first factor represented the autonomy-supportive behaviors items, while the second factor accounted for the controlling behaviors items. The two factors were negatively related, $r = -.46$, and each item loaded on its respective factor with a loading above .48. All cross-loadings were below .22, which is well below the recommended threshold of .40 (Stevens, 2002). Results are presented in Table 1. This two-factor solution suggests that although the six subscales can be distinguished theoretically, autonomy-supportive behaviors strongly covary in young adults' perceptions of their parents' behaviors and the same is observed for controlling behaviors. Relevant items were averaged to create global scores of autonomy support and controlling parenting, omitting Items 3 and 15. Items 3 and 15 were omitted because their loadings did not replicate in Study 2, as shown in Table 1.

Internal consistency and descriptive statistics. Cronbach's alphas supported the internal consistency of the P-PASS scales for both mothers and fathers with coefficients ranging from .89, 95% CI [.87, .91] to .94, 95% CI [.92, .95]. Repeated-measures multi-

variate analysis of variance (MANOVA) showed that perceptions of mothers' and fathers' autonomy support and controlling parenting did not vary as a function of participants' gender. However, differences emerged in participants' perceptions of their mothers compared to their fathers, Wilks' $\Lambda = .89$, $F_{\text{exact}}(2, 166) = 10.52$, $p < .001$, $\tau^2 = .11$. Specifically, repeated-measures analyses of variance showed that both male and female participants perceived their mothers ($M = 5.2$, $SD = 1.3$) as more autonomy supportive than their fathers ($M = 4.9$, $SD = 1.3$), $F(1, 194) = 18.91$, $p < .001$, $\eta^2 = .09$. However, when fathers' mean is interpreted in light of the response scale where a score of 5 represents that young adults mostly agree that their parent engage in autonomy-supportive behaviors, fathers in this sample are still perceived as relatively autonomy supportive. In addition, it appears that mothers ($M = 2.4$, $SD = 1.3$) are not perceived as less controlling than fathers ($M = 2.4$, $SD = 1.3$), $p = .54$, $\eta^2 = .00$.

Convergent validity. Given the similarity of the factor structure and the internal consistency for the perceptions of mothers and fathers, mothers' and fathers' scores were averaged in all subsequent analyses. The internal consistency of these averaged scores were satisfactory for both scales ($\alpha = .94$, 95% CI [.93, .95] for autonomy support; $\alpha = .89$, 95% CI [.87, .91] for controlling parenting). Correlations among the P-PASS scales and the PCS-YSR confirmed their convergent validity (see Table 2). The P-PASS perceived autonomy support scale was strongly negatively related to the PCS-YSC, whereas the P-PASS perceived controlling parenting scale was strongly positively linked to the PCS-YSR.

Predictive validity. To verify the added value of measuring perceptions of autonomy-supportive behaviors in addition to controlling ones, we verified that perceived autonomy support predicts youth outcomes above and beyond what can be accounted for by controlling parenting. In four hierarchical regressions, young adults' indicators of psychological adjustment were predicted by the P-PASS perceived autonomy support scale (Step 2) when controlling for the P-PASS perceived controlling parenting scale (Step 1). Results showed that controlling parenting and autonomy support are joint significant predictors of life satisfaction, standardized regression coefficients = $-.20$ and $.45$, respectively. Also, consistent with the correlations shown in Table 2, only perceived autonomy support predicts self-esteem and positive af-

Table 2
Studies 1 and 2: Correlations Among All Variables

Variable	1	2	3	4	5	6	7	8
1. Autonomy support	—	-.48***	-.57***	.56***	.29***	.30***	-.19**	—
2. Controlling parenting	-.62***	—	.75***	-.41***	-.09	-.09	.26***	—
3. PCS-YSR	-.65***	.68***	—	-.49***	-.19**	-.19**	.36***	—
4. Life satisfaction	.57***	-.39***	-.41***	—	.34***	.41***	-.30***	—
5. Self-esteem	.33***	-.24***	-.26***	.46***	—	.47***	-.42***	—
6. Positive affect	.30***	-.13*	-.21***	.52***	.62***	—	-.33***	—
7. Negative affect	-.22***	.18**	.32***	-.35***	-.52***	-.35***	—	—
8. Acceptance	.74***	-.54***	-.59***	.55***	.31***	.30***	-.22***	—
9. Monitoring	.36***	-.23***	-.23***	.35***	.16**	.20***	-.12*	.51***

Note. Study 1 correlations are presented in the upper quadrant ($n = 195$) and Study 2 correlations are displayed in the lower quadrant ($n = 287$). No missing data estimation procedure was performed. PCS-YSR = Psychological Control Scale (eight items) from the Youth Self-Report.

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

fect, and, finally, only perceived controlling parenting predicts negative affect.

Study 2 further examined these relations while controlling for two key parenting behaviors, that is, acceptance and monitoring. These parenting behaviors were chosen because they have been shown to predict outcomes independently from psychological control (e.g., Barber et al., 2005; Steinberg et al., 1989).

Study 2

Method

Participants and procedure. A convenience sample of 315 French-speaking young adults (85 males, 202 females, and 28 not specified) participated in this second study. Participants had a mean age of 18.5 years ($SD = 2.4$; 98% aged 24 and younger) and were attending one of four junior colleges of the Montreal metropolitan area. They answered a questionnaire in class. Participation rates were not recorded.

Measures. The questionnaire comprised the P-PASS and the PCS-YSR (Barber, 1996), as well as the same indicators of young adults' psychological adjustment used in Study 1. Two additional measures were included to assess perceived parental acceptance and monitoring. These questionnaires were translated using the back-translation procedure (Vallerand, 1989).

Parental acceptance. Perceived parental acceptance was measured using the 10-item acceptance/rejection subscale from the revised CRPBI (Schaefer, 1965; Schludermann & Schludermann, 1988). This scale measures the extent to which young adults feel accepted, loved, and emotionally close to their parents. Sample items are "My mother gives me a lot of care and attention" and "My father makes me feel like the most important person in his life." Participants indicated how well each item described their mother and father using a 5-point Likert-type response scale, ranging from 1 (*not like him/her*) to 5 (*a lot like him/her*). Items were averaged to obtain total scores for mothers and fathers. This scale yielded satisfactory Cronbach's alphas for mothers ($\alpha = .95$, 95% CI [.94, .96]) and fathers ($\alpha = .95$, 95% CI [.94, .96]). Factor analysis revealed the presence of one factor, which explained 69% of the variance for mothers and 68% for fathers (factor loadings $> .70$).

Monitoring. The five-item monitoring scale assesses the degree to which young adults believe that their parents know about their activities and whereabouts (Brown, Mounts, Lamborn, & Steinberg, 1993). Using a 5-point Likert-type response scale, ranging from 1 (*doesn't know*) to 5 (*knows a lot*), participants indicated how much their mother and father really knew about where they went at night, where they were most afternoons after school, how they spent their money, what they did with their free time, and who their friends were. Higher scores indicate higher levels of monitoring and supervision. Items were averaged to obtain total scores for mothers and fathers. Cronbach's alpha for this scale was .82 (95% CI [.79, .84]) for mothers and .87 (95% CI [.84, .89]) for fathers. Factor analysis showed that items formed one factor, which explained 58% of the variance for mothers and 65% for fathers (factor loadings $> .59$).

Results and Discussion

Factor structure. Exploratory factor analysis was conducted to replicate the two-factor structure observed in Study 1. Again, the scree test revealed that the six theoretically distinct subscales did not form six factors but rather merged into two predominant factors (the six first eigenvalues in descending order were 9.28, 2.43, 1.75, 1.07, 1.05, 0.78). The first factor represented perceptions of autonomy-supportive behaviors (lowest loading: .51; 95% CI = .39/.63) and the second factor accounted for perceptions of controlling behaviors (lowest loading: .44; 95% CI = .29/.59). Two controlling items (i.e., items 3 & 15 in Table 1) had low loadings (respectively .29 and .32) and these items were thus removed for all subsequent analyses. All cross-loadings were below the recommended threshold of .40 (Stevens, 2002). The two factors were negatively related ($r = -.54$) and accounted for 49% of the variance.

Internal consistency and descriptive statistics. Cronbach's alphas were satisfactory for both scales ($\alpha = .92$, 95% CI [.90, .93] for autonomy support; $\alpha = .89$, 95% CI [.87, .91] for controlling parenting), which confirms their internal consistency. As was found in Study 1, repeated measures MANOVA showed no effect of participants' gender on participants' perceptions of their mothers' and fathers' autonomy support and controlling parenting. Participants' perceptions of their mothers' behaviors differed from their perceptions of their fathers', Wilks' $\Lambda = .97$, $F_{exact}(2, 266) = 4.76$, $p < .01$, $\tau^2 = .03$. Both male and female participants perceived their mother ($M = 5.2$, $SD = 1.2$) as more autonomy supportive than their father ($M = 4.9$, $SD = 1.3$), $F(1, 296) = 14.50$, $p < .001$, $\eta^2 = .05$. In this sample, mothers ($M = 2.4$, $SD = 1.2$), were perceived as slightly less controlling than were fathers ($M = 2.5$, $SD = 1.3$), $F(1, 296) = 4.72$, $p < .05$, $\eta^2 = .02$.

Convergent and divergent validity. The construct validity of the P-PASS was evaluated by examining correlation patterns among the P-PASS perceived autonomy support and controlling parenting scales, the PSC-YSR, and two other parenting measures, that is, parental acceptance and monitoring (see Table 2). Correlations among the P-PASS scales and the PSC-YSR were similar to those found in Study 1. Results also showed that the P-PASS scales are distinct from parental monitoring, but that they are highly correlated with parental acceptance. The next section examines the P-PASS incremental predictive validity.

Incremental predictive validity. Incremental predictive validity was evaluated through four hierarchical regression analyses, one per outcome. In each analysis, we entered parental acceptance and monitoring in a first step, followed by the P-PASS perceived controlling parenting scale (Step 2) and the perceived autonomy support scale (Step 3). Results from Step 2 showed that controlling parenting was predictive of young adults' life satisfaction ($\Delta R^2 = .02$; $\beta = -.15$) above and beyond parental acceptance and monitoring. Contrary to expectations, perceived controlling parenting did not explain additional variance in the other outcomes. Adding the perceived autonomy support scale in Step 3 revealed that perceived autonomy support predicted young adults' self-reported life satisfaction ($\Delta R^2 = .06$; $\beta = .37$), self-esteem ($\Delta R^2 = .02$; $\beta = .19$), and positive affect ($\Delta R^2 = .02$; $\beta = .20$) above and beyond the three other parenting behaviors (see Table 3). As was the case in Study 1, parental autonomy support did not add to the prediction of negative affect but created multicollinearity problems

Table 3

Predictive Validity of the Perceived Parental Autonomy Support Scale (P-PASS) in Studies 1 and 2: Final Step of Hierarchical Regression Analyses Predicting Young Adults' Life Satisfaction, Self-Esteem, and Positive and Negative Affect

Predictor variable	Life satisfaction				Self-esteem				Positive affect				Negative affect			
	R ²	ΔR ²	β	sp ²	R ²	ΔR ²	β	sp ²	R ²	ΔR ²	β	sp ²	R ²	ΔR ²	β	sp ²
Study 1																
Final step of 2:																
Controlling parenting (entered in Step 1)			-.20*	.03*			.04	.00			.04	.00			.22*	.04*
Autonomy support (entered in Step 2)	.33*	.15*	.45*	.15*	.08*	.07*	.31*	.07*	.09*	.08*	.32*	.08*	.06*	.00	-.04	.00
Study 2																
Final step of 3:																
Acceptance			.21*	.02*			.15	.01			.17*	.01*			-.15 ^a	.01*
Monitoring (both entered in Step 1)			.10	.01			.00	.00			.06	.00			-.02	.00
Controlling parenting (entered in Step 2)			-.04	.00			-.03	.00			.10	.01			.11	.01
Autonomy Support (entered in Step 3)	.38*	.06*	.37*	.06*	.12*	.02*	.19*	.02*	.11*	.02*	.20*	.02*				

Note. Sample sizes ranged from 195 to 203 for Study 1 and from 294 to 304 for Study 2; no missing data estimation procedure was performed. Controlling parenting and autonomy support = the P-PASS controlling parenting and autonomy support scales; *sp*² = squared semipartial correlation, controlling for other predictors.

^a Due to multicollinearity between acceptance and autonomy support, autonomy support was omitted and Step 2 coefficients for this model are presented. * *p* < .05.

such that all regression coefficients at Step 3 were nonsignificant. Step 2 coefficients (without autonomy support) are thus presented for this model (see Table 3). Finally, controlling parenting no longer predicted young adults' life satisfaction when autonomy support was entered in the equation.

General Discussion

The present research supports the psychometric properties of the P-PASS to assess the ASvsCP component by showing the internal consistency of its scales, a two-factor structure, and its convergent and divergent validity. Factor analyses revealed however that two controlling items need additional work; these items yielded satisfactory loadings in Study 1 but their correlations with the controlling parenting factor were lower than recommended in Study 2. Given that both items aimed at measuring parents' use of threats, future research is needed to improve the assessment of the controlling component of threatening.

The perceived autonomy support scale had incremental predictive validity above and beyond perceived controlling parenting, but also beyond parental acceptance and monitoring, when predicting young adults' life satisfaction, self-esteem and positive affect. These results point to the importance of measuring both autonomy-supportive and controlling behaviors when assessing the ASvsCP parenting component. Measuring autonomy support seems particularly important when predicting positive outcomes, which is in line with past research showing that autonomy support may relate more strongly to adaptive outcomes than controlling parenting (Vansteenkiste & Ryan, 2013). The present findings also show that despite the strong positive correlation between the perceived autonomy support scale and parental acceptance, autonomy support and acceptance are not redundant. Overall, this study should guide

future interventions by focusing efforts on nurturing parental autonomy support, in addition to increasing acceptance and preventing controlling parenting.

Results also showed that the P-PASS perceived controlling parenting scale negatively predicts life satisfaction above and beyond parental acceptance and monitoring (Study 2). Future inquiries are nevertheless needed to further examine the specificity effects of perceived autonomy support and controlling parenting. Given that controlling parenting may be more strongly related to maladaptive outcomes (Vansteenkiste & Ryan, 2013), associations between controlling parenting and youth outcomes observed herein may have been limited by our choice of outcome measures. It would be important to pursue the investigation of the predictive validity of the P-PASS using more global measures of maladaptive outcomes (i.e., depression, anxiety).

The negative correlation between the P-PASS autonomy support and controlling parenting factors supports the proposition that young adults perceive autonomy-supportive behaviors and controlling ones as being incompatible (Grolnick, 2003; Soenens et al., 2007). It is likely that when asked to evaluate the extent to which their parents engage in autonomy-supportive behaviors, young adults interpret their parents' behaviors in light of their use of controlling strategies. The P-PASS thus has the advantage of assessing these perceptions, which ultimately determine the impact of parenting (Grusec & Goodnow, 1994; Ryan, Mims, & Koestner, 1983).

The P-PASS also yields valuable information about which behaviors parents should aim for to nurture children's sense of autonomy. Previous research has mostly studied the presence (or absence) of controlling behaviors and few beneficial alternative parental practices have been suggested. Yet, parents need to learn

positive autonomy-supportive behaviors to replace controlling ones (Grolnick, 2003). By showing strong correlations between young adult-perceived behaviors such as acknowledging feelings, providing rationales, and providing choices, the present results suggest that choice is only one of many ways in which parents can support their young adult's autonomy and that perceived autonomy support also includes perceptions of behaviors aimed at showing respect for young adults' autonomy in structure-related situations. The present research thus constitutes an additional step toward a better understanding of autonomy-supportive parenting.

Another advantage of the P-PASS is that it is relatively short, such that it can easily be included in longitudinal work or administered to large samples using relatively little resources. The P-PASS also makes it easier to gather information about the contribution of fathers to youth outcomes, a topic that is too often overlooked in parenting research (Lindsey & Caldera, 2005). In the present research, fathers were perceived as less autonomy-supportive than mothers, although their mean suggests that they still used autonomy-supportive strategies. In contrast and in light of the inconsistency and small magnitude of the reported effect, mothers and fathers seemed similar in their use of controlling strategies.

Limitations and Future Research

Although the P-PASS has promising characteristics, several limitations must be mentioned. First, this research was cross-sectional and outcomes and parenting measures were reported by the same informant (i.e., young adults). Relationships were thus inflated by common variance due to shared methods. Although Bureau and Mageau (2014) show that the P-PASS predicts parents' report of their young adult's lying behaviors, future research should evaluate its predictive validity using a longitudinal design and more objective measures of child outcomes.

Second, we used Barber (1996)'s PSC-YSR to validate the P-PASS because this scale was the most commonly used indicator of the ASvsCP component. However, because the PSC-YSR does not include autonomy-supportive behaviors, we could only show that the P-PASS autonomy support scale is negatively related to controlling parenting indicators.

Another shortcoming of the present research is that our samples were young adults, living in an urban area and attending college, which limits the external validity of the present findings. To date, only one published study using the P-PASS has shown the predictive validity of the P-PASS with high school students (M age = 13.1 years old; Bureau & Mageau, 2014). Additional work is also needed to validate an adapted version of the P-PASS that would be more appropriate for primary schoolchildren. Although such a simplified version exists and has shown promising predictive validity and internal consistency ($\alpha = .70$ to $.78$; Joussemet, Mageau, & Koestner, 2014), additional work is needed to document its psychometric properties. Moreover, future research with a larger sample size is needed to test the P-PASS equivalence across male and female participants and across mothers' and fathers' ratings.

Fourth, some aspects of controlling and autonomy-supportive parenting respectively were not included in the present instrument (e.g., intrusiveness, Schaefer, 1965; impersonal feedback, Ryan et

al., 1983). In addition, although controlling have been categorized as externally and internally controlling (Soenens & Vansteenkiste, 2010) and as pertaining to achievement or interpersonal closeness (Soenens, Vansteenkiste, & Luyten, 2010), the present instrument was not developed with these distinctions in mind. For example, although the performance pressures items concern achievement-related issues, they could refer to either externally or internally controlling tactics.

Fifth, it would have been preferable to measure parental structure instead of monitoring because structure, along with parental acceptance and the ASvsCP component, better represents the parenting components underlying Baumrind (1971)'s authoritative parenting style. Kerr and Stattin (2000) note that because monitoring scales assess parents' knowledge of children's whereabouts, monitoring scores may reflect more children's willingness to disclose than parental structure. It would thus be important to replicate these findings using a more direct measure of structure. However, given that parental knowledge seems to be a better predictor of outcomes than parents' active solicitation of information (Kerr, Stattin, & Burk, 2010), controlling for parental knowledge does not necessarily constitute a less stringent test of the P-PASS validity.

Finally, little information was obtained on the participants' cultural heritage. Whereas many have suggested that parental control and autonomy support may be interpreted differently in various cultures (e.g., Iyengar & Lepper, 1999; Miller, 1997), self-determination theory (Deci & Ryan, 2000) proposes that the need for autonomy is universal and that autonomy support should be beneficial in all cultures. These different stances may originate in part from the confusion surrounding the definition of autonomy support. Whereas the promotion of independence (Silk et al., 2003) may be more positive in individualistic cultures, autonomy support, defined as the promotion of volitional functioning (Soenens et al., 2007), seems to be a universal ingredient for optimal functioning (Chirkov, Ryan, Kim, & Kaplan, 2003; Sheldon et al., 2004). Future research is needed to address these cultural issues.

In sum, the present research documents the internal consistency and validity of the P-PASS. Regarding its factor structure, a two-factor solution is suggested but additional work is needed to improve the threat to punish items. Yet, three published studies have successfully used the original 24-item version (Bureau & Mageau, 2014) or the adapted 24-item version simplified for children (Joussemet et al., 2014) or contextualized for the work domain (Moreau & Mageau, 2012).⁴ Taken together, these findings suggest that the P-PASS should prove useful in facilitating and stimulating research on perceived autonomy-supportive and controlling parenting.

⁴ Please note that data collections for the Joussemet et al. (2014)'s and Moreau and Mageau (2012)'s paper took place after data collections for the present studies.

Résumé

Dotée d'une perspective multidimensionnelle, la Perceived Parental Autonomy Support Scale (P-PASS) évalue le parentage favorisant l'autonomie et le parentage contrôlant (Grolnick & Pomerantz, 2009). Deux études documentent les propriétés psychométriques de

l'instrument (Étude 1, $N = 210$, âge moyen = 18,8 ans; Étude 2, $N = 315$, âge moyen = 18,5 ans). Des analyses exploratoires des facteurs révèlent que la structure factorielle est mieux décrite par une solution à deux facteurs, l'un représentant le soutien à l'autonomie perçue, et l'autre, le soutien parental contrôlant. Les alphas de Cronbach confirment la consistance interne des échelles de la P-PASS ($\alpha > 0,89$), et les schémas de corrélation avec la Psychological Control Scale (Barber, 1996) et d'autres éléments du parentage (l'acceptation et la surveillance) appuient sa validité convergente et divergente. Les régressions hiérarchiques révèlent aussi que le soutien à l'autonomie perçue favorise l'adaptation des jeunes adultes, bien au-delà du parentage contrôlant (Études 1 et 2) et l'acceptation et la surveillance parentales (Étude 2). Dans l'ensemble, les résultats suggèrent l'utilité de la P-PASS pour l'étude du parentage favorisant le soutien à l'autonomie et le parentage contrôlant.

Mots-clés : soutien à l'autonomie, contrôle, parentage, échelle, Théorie de l'autodétermination.

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