

Assessing the Cross-Cultural Validity of a Parental Autonomy Granting Measure: Comparing Adolescents in the United States, China, Mexico, and India

By: Andrew J. Supple, Sharon R. Ghazarian, Gary W. Peterson, and Kevin R. Bush

[Supple, A.J., Ghazarian, S.G., Peterson, G.W., & Bush, K.R. \(2009\). Assessing the cross-cultural validity of a parental autonomy granting measure: Comparing adolescents in the U.S., China, Mexico and India. *Journal of Cross Cultural Psychology*, 5, 816-833.](#)

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Abstract:

This study investigates the cross-cultural validity of a 10-item parental autonomy granting measure with samples of adolescents from the United States, China, Mexico, and India. Multigroup confirmatory factor analysis suggested a moderately high degree of cross-cultural equivalence, particularly for the United States and China. Invariance in item loadings was found across samples, with the exception of items assessing freedom regarding career choices and encouragement to participate in family decisions. Correlations between autonomy granting and three criterion factors suggested that, across cultures, parental autonomy granting is associated with higher perceptions of parental support and greater effort exerted in school. Correlations varied in reference to associations between parental autonomy granting and reports of love withdrawal from mothers and fathers. Results also suggested that mean levels of autonomy granting from parents were highest in the U.S. sample and lowest in China. Results provide support for the universality of autonomy granting as a salient aspect of parenting across cultures but also point to areas where significant cultural differences exist.

Keywords: parent-adolescent relationships; autonomy development; parenting; cross-cultural validity

Article:

A principal tenet of developmental psychology is that children are expected to demonstrate increasing independence from parents in their behaviors, values, and decision making as they proceed through adolescence. Terms such as individuation, behavioral or psychological autonomy, and self-reliance are frequently used terms that imply a psychologically healthy outcome resulting from successful independence from parents. Based on the seminal writings of Erikson (1959), psychologists suggest that parents should allow for increased freedom of choice to promote self-sufficiency and autonomous functioning as adolescents transition into adulthood. Contemporary research supports these arguments by suggesting that adolescents whose parents promote individuation, autonomy (i.e., autonomy granting, democratic or authoritative parenting), and volitional functioning demonstrate increased positive developmental outcomes related to internalized motivation, self-reliance, self-esteem, and social competence (see Grolnick, 2003; Peterson, 2005, for reviews).

While autonomy granting is undoubtedly a key element in the promotion of psychosocial well-being for adolescents in individualistic cultures, there is debate regarding the applicability of the autonomy process to youth in cultures characterized by collectivistic cultural patterns. Given that a key issue in cross-cultural research involves the consideration of both universal and culturally specific aspects of family process (Rogoff & Angelillo, 2002), comparative research investigating the universality of the positive association between autonomy granting by parents and adolescent outcomes is needed. Prior to considering such a line of inquiry, studies are needed to assess the cross-cultural validity of measurement strategies that might be applied. A typical strategy in cross-cultural research involves the translation of measures derived via the study of White, middle-class Americans to compare family process and child outcomes with samples from diverse cultures. Results from such studies may be undermined when measures lack cross-cultural validity. To address these issues, the current study assessed cross-group item and functional equivalence, as well as construct validity of a parental autonomy granting scale with samples of adolescents from the United States, China, Mexico, and India.

Conceptualizations of Autonomy Development and Parental Support for Autonomy

The main theoretical orientation informing adolescent autonomy development derives from separation/individuation theory (Blos, 1979). Individuation refers to a process occurring during adolescence in which the nature of the parent-child relationship shifts from filial dependence upon parents to a more peer-like mutuality (Aquilino & Supple, 2001). Throughout this process of relational shift, the young person needs to separate from his or her behavioral and psychological dependence on the parent (including detaching or deidentifying) while accepting increasing responsibility for his or her actions, decisions, and self-reliance (Steinberg, 1990).

Critics of the separation/individuation approach argue that, rather than detachment and separation from parents, successful autonomy development occurs in the context of warm, connected relationships with parents (Grotevant & Cooper, 1986). Studies have suggested, for example, that when movement toward independence is accompanied by the perception that relationships with parents are becoming more distant, negative consequences for youth are more likely (Ryan & Lynch, 1989). As a result, contemporary research conceptualizes autonomy development less in terms of adolescent movement away from parental influence and more in terms of development as enhanced when parents allow and encourage age-appropriate autonomy while continuing to provide love, support, and empathy. The process of becoming autonomous is considered adaptive when adolescents develop greater connection to others (such as peers) but not necessarily at the expense of close ties with parents (Peterson, Bush, & Supple, 1999; Soenens et al., 2007). This shift in emphasis leads to a conceptual distinction between autonomy development and separation/individuation.

Within the field of motivational psychology, proponents of self-determination theory (SDT) argue that ideal adolescent functioning results when adolescent behaviors and values reflect an internally or consciously based choice that is a product of one's own free will. Furthermore, adolescents who engage in behaviors or make decisions completely independent of parental influence are not necessarily functioning in an autonomous manner when their self-reliance and behavioral autonomy are strongly influenced by others. From this perspective, adolescents may be viewed as acting autonomously even while engaging in behaviors or endorsing ideals that conform to parental values, as long as they are acting based on their own volition (Soenens et al., 2007). This latter perspective conceptualizes autonomy as being distinct from independence in the sense that independence implies acting without relying on others. In contrast, autonomy is maximally related to psychological wellbeing when young people behave in accordance with their internalized values and wishes.

Parents play a prominent role in autonomy development as the behaviors directed toward the adolescent may either encourage or restrict autonomy development. Current research suggests that parenting that allows for increased individual decision making, continued support from parents, and authoritative behavioral control is most successful in promoting healthy adolescent autonomy (Aquilino & Supple, 2001; Peterson et al., 1999; Silk, Morris, Kanaya, & Steinberg, 2003). Studies conducted in the United States also suggest that parental autonomy granting is associated with various positive outcomes for adolescents, including improved academic achievement, enhanced work orientation, positive self-concept, and higher psychosocial maturity (Herman, Dornbusch, Herron, & Herting, 1997; Silk et al., 2003). Restrictive parenting behaviors, such as psychological control, coerciveness, and punitiveness, conversely hinder the individuation process by creating excessive dependency on parents (Barber, Olsen, & Shagle, 1994; Grolnick, 2003).

Recently, Soenens et al. (2007) argued that it is possible to differentiate between two distinct (yet conceptually similar) parenting styles in reference to the promotion of autonomy development. Parental promotion of independence (PI) involves fostering a highly individualized view of how adolescents relate both to their own parents and to other adults. This individualized view is developed through encouragement of self-reliance in decision making regarding behaviors and values. Conceptualized as parental encouragement of independence as a consequence of promoting separation, PI may or may not represent a pattern of behaviors that promotes well-being among the young as self-reliance and independence may develop at the expense of continued closeness with parents. In contrast to PI, promotion of volitional functioning (PVF) involves a set of behaviors that

encourage adolescents to increasingly rely on their own decision making, that provide a sense of parental understanding regarding adolescent developmental changes, and that encourage the internalization of culturally important values. Although the developmental outcome associated with PI may be independent functioning without reliance on others, outcomes associated with PVF include decision making and values that result from internal motivations and desires (even if the behaviors or values are congruent with those valued by parents). In a series of three studies, Soenens et al. (2007) found that (a) PI was conceptually and empirically distinguishable from PVF, (b) PI was unrelated to indicators of parental coercive control, and (c) while both PI and PVF were correlated with adolescent psychological well-being, only PVF demonstrated a significant relationship when partial correlations were used. These recent studies suggest a need to clearly distinguish between parenting that promotes individualized independence versus that which promotes autonomy/connection (Chirkov & Ryan, 2001; Soenens et al., 2007).

Individualism, Collectivism, and Questions Regarding the Cross-Cultural Validity of Autonomy

Despite universality in the primacy of parenting across cultures, diverse orientations in reference to individualism versus collectivism are believed to influence what outcomes in children are valued and consequently shape the nature of parent-child relationships (Kagitcibasi, 1996; Triandis, 1989). As such, scholars who favor a perspective characterized by cultural relativity have argued that the process of becoming autonomous is rooted in cultural orientations favoring individualism and independence and is less relevant for adolescents from more collectivistic cultures (Chirkov, Ryan, & Willness, 2005; Lam, 1997; Markus & Kitayama, 1991). For example, traits such as group harmony, respect for elders, interdependence, and conformity to parental expectations are viewed as signs of successful child socialization in collectivistic cultures while parents in individualistic cultures place greater emphasis on independence, self-esteem, autonomy, and individuality (Chao & Sue, 1996; Ho, 1986; Triandis, 1995). Taken together, a perspective emphasizing cultural relativism would argue that adolescent autonomy development and parental autonomy granting lack relevance as key elements of parental socialization in more collectivistic or traditionally authoritarian cultures.

Alternative perspectives suggest that although cultural variations in valuation of specific child outcomes exist, some developmental needs are universal. Regardless of culture, individuals need to feel a sense of connection to others, a belief in their competence to act in culturally valued ways, and psychological autonomy to enact behaviors and traits that are valued by the self rather than imposed by others (Chirkov et al., 2005, Peterson, Cobas, Bush, & Supple, 2004). This more universalistic position is often articulated by proponents of SDT who argue that individuals need to make decisions regarding behaviors and beliefs on the basis of self-volition rather than having behaviors or beliefs controlled by others. If, as a result, youth in more collectivistic societies internalize values regarding filial piety and demonstrate respect toward parents in public, such behaviors may be enacted in an autonomous manner if the choice to enact such behaviors originates within the self. In reference to cross-cultural research, one expectation is that PI (encouraging children to make decisions without reliance on others) is culturally more characteristic of countries like the United States, but PVF (which encourages internalization of cultural values) may be promoted universally by parents.

Recent evidence suggests that parenting behaviors that provide warmth, support, and greater freedom to adolescents are associated with positive adolescent outcomes across samples of adolescents from the United States, Asia, Eastern Europe, and Latin America. Carson, Chowdhury, Perry, and Pati (1999), for example, found that Indian adolescents scored highest on measures of social competence in school when they experienced high levels of warmth/support, democratic decision making, and low levels of authoritarian parenting. Studies on both Chinese and Mexican adolescents also suggest that parental connection (warmth and induction), monitoring, and autonomy granting are positive predictors of adolescent self-esteem and psychological well-being (Bush, Peterson, Cobas, & Supple, 2002; Bush, Supple, & Lash, 2004; Shek, 2000). In a comparative study of Russian and U.S. adolescents, Chirkov and Ryan (2001) found that autonomy supportive behaviors from both teachers and parents were positively associated with adolescent psychological well-being. Chirkov et al. (2005) also found, in a study of college students from Brazil and Canada, that feelings of being supported and allowance for autonomy by parents (less hierarchical or authoritarian control) was associated with greater psychological well-being. Taken together, previous research suggests that across cultures,

adolescents who perceive a high degree of connection with parents, behavioral control, and support for making personal choices related to individual decision making experience improved psychosocial outcomes.

Although arguments for cultural variation in the developmental relevance of autonomy have been the predominant view in cross-cultural psychology, recent research suggests that adolescents in collectivistic cultures increasingly are in contact with value orientations from the West (Stewart, Bond, Deeds, & Chung, 1999). As a result, young people in globalized societies may be shifting their views so that independence regarding choices of clothes, music, and peer groups is perceived as both normative and desirable, even though such attitudes contradict the traditional cultural beliefs and ideals that have been passed down by parents (Esteinou, 2004; Lau & Yeung, 1996; Verma & Saraswathi, 2002). Given putative cultural shifts toward individuality in traditionally collectivistic cultures, research is needed to compare autonomy granting across societies varying along the individualism and collectivism continuum, particularly on youth in relatively Westernized areas within collectivistic cultures.

The current measure. In this study, parental autonomy granting is conceptualized as adolescent subjective perceptions of parental provision of freedom across a variety of behavioral and relational domains (choosing friends, dating partners, and clothes; Peterson, 1986). Measurement items also assess parental encouragement of independent decision making and parental communication of trust in adolescent decisions. As such, the measure is best described as assessing adolescent perceptions of how much parents allow freedom or encourage adolescent growing needs for self-reliance and behavioral autonomy. The measure captures an aspect of parenting that, although somewhat similar to PI (in that there is encouragement of independent decision making), is also conceptually distinct in that the adolescent can feel that “enough” freedom exists to choose friends, for example, but actual independence varies significantly across individuals. This measure also was designed to capture autonomy granting within the context of an overall close and supportive parent-adolescent relationship rather than through a process of separation or detachment from parents. In reference to expectations regarding the cross-cultural validity of the measure, the expectation here is that significant variation may exist in individual item loadings that compose the overall measure.

Adolescent reports of autonomy granting behaviors by parents are also expected to correlate positively with parental supportive behavior, negatively with parental psychological control, and positively with adolescents’ motivation in reference to their school behaviors. Such patterns of expected correlates suggest that the measure of autonomy used in this study may be more conceptually similar to PVF than to PI. That is, a positive association between the autonomy granting construct and parental support would indicate that autonomy supportive behaviors by parents often occur in conjunction with overall warm supportive relationships rather than “detachment” from parents (Grotevant & Cooper, 1986). Negative associations between autonomy granting and psychological control would indicate that this measure assesses parenting that is distinctively in opposition to parenting that is designed to control adolescent behaviors and values (Soenens et al., 2007). And a positive association between the autonomy granting construct and academic motivation would indicate that adolescents reporting greater autonomy supportive behaviors from parents internalize cultural values and strive to succeed in academic pursuits.

Summary and current study. The purpose of this study was to examine the cross-cultural validity of a measure of parental autonomy granting using samples of adolescents across four diverse cultures. Despite growing evidence that autonomy granting may be universally positive in reference to psychological well-being and motivation, increased research is needed across cultures that vary in terms of their orientations toward collectivism. In the current study, we include adolescents from the United States (considered highly individualistic), Mexico and India (moderately collectivistic), and China (highly collectivistic). In addition, adolescents were selected from areas of each country (outside of the U.S. sample) that are expected to be more “modernized” in terms of their urbanicity, degree of education among residents, and contact with outside cultural influences. These latter concerns are important because recent arguments suggest that autonomy granting by parents is more likely to be prevalent in populations of parents in collectivistic cultures who are more highly educated and reside in urban areas (Kagitcibasi, 2005; Stewart et al., 1999; Verma & Saraswathi,

2002). Within-sample considerations also are needed to understand how gender, age of the adolescent, and parental education might influence adolescent experiences with autonomy granting from parents. Gender considerations are important because of possible differential family roles for fathers versus mothers in collectivistic cultures. Other gender-based distinctions could result from the fact that sons may be favored in some family systems, may receive more direct socialization from both mothers and fathers, and may be granted more freedom and independence than daughters (Dhawan, Roseman, Naidu, & Rettke, 1995; Esteinou, 2004, Verma & Saraswathi, 2002).

Method

Sample

The sample for this study consisted of 1,017 adolescents between the ages of 13 and 15 from the United States ($n = 195$), China ($n = 207$), Mexico ($n = 349$), and India ($n = 266$) who completed self-report questionnaires in classrooms. Sample demographics are presented for age, gender, and parental education in Table 1 along with mean scores on the autonomy granting measure. Questionnaires were administered by classroom teachers trained by project investigators according to a standard protocol in public high schools in two Midwestern U.S. cities and state-funded secondary schools in large cities in China, Mexico, and India. The international samples for this study were selected to capture the experience of adolescents who may be relatively modernized and most comparable to samples from the United States. Each sample comprises adolescents from metropolitan areas who are currently enrolled in schools with relatively high percentages of parents who are college graduates. The Mexico and India samples were drawn from large, industrialized cities that serve as the legislative seat of their respective states (the China sample was from Beijing). The sample from the United

Table 1
Descriptive Statistics by Sample

	United States			China			Mexico			India		
	<i>M</i>	<i>SD</i>	%	<i>M</i>	<i>SD</i>	%	<i>M</i>	<i>SD</i>	%	<i>M</i>	<i>SD</i>	%
Age	14.06	0.87		13.82	0.75		13.79	0.78		14.02	0.74	
Female			53			48			58			47
Father education												
College graduate			18			29			28			63
Secondary school/ high school/ technical school only			58			24			29			18
Primary or elementary school only			14			46			45			6
Mother education												
College graduate			23			16			13			41
Secondary school/ high school/ technical school only			58			23			32			42
Primary or elementary school only			9			61			54			17

States was drawn from areas surrounding a large Midwestern city and included roughly 10% ethnic minority students (predominantly African American). Preliminary analyses suggested a high degree of measurement equivalence across ethnicity, and as a result, ethnic minority adolescents were retained in the final U.S. sample.

To maximize comparability across samples, questionnaire items were subjected to back-translation and evaluated by experts from each country. Recommended alterations by local colleagues helped to minimize differences in dialect, grammar usage, and general comprehension. Questionnaire items are designed to assess

adolescent perceptions of parenting behaviors separately for mothers and fathers and to assess a variety of adolescent outcomes. All items included in this study were specifically designed by the authors of the questionnaire and have been translated for use in 14 countries.

Measures

Autonomy granting. Adolescents responded to 10 items from the Parent Behavior Measure (PBM; Bush et al., 2002) assessing the extent to which parents allow independent decision making and self-reliance. Sample items included the following: “This parent allows me to decide what clothes I should wear without interfering too much,” and “This parent lets me be my own person in enough situations” (see Table 2 for item wording). Response options ranged from 1 (strongly disagree) to 4 (strongly agree). Adolescents responded to items to assess autonomy granting from mothers and fathers separately. Cronbach’s alphas for this study ranged from .76 to .79 in the China, Mexico, and India samples and were .84 and .87 for mother and father data, respectively, in the United States.

Criterion variables. Subscales of the PBM indexed parental support (4 items) and love withdrawal (6 items). A five-item measure was also included to assess academic orientation. These measures were included to assess criterion validity of the parental autonomy granting measure. The support measure was designed to capture adolescent perceptions of parental love and whether parents act as a source of emotional support. Love withdrawal items assessed perceptions that parents use psychologically coercive statements or actions as a means to control the child’s behavior (“This parent tells me that if I loved her, I would do what she wants me to do”). Items assessing academic orientation indicate adolescent efforts and views that school success is important (“I try hard in school”). Response choices ranged from 1 (strongly disagree) to 4 (strongly agree) for each scale. Adolescent reports of parental support and love withdrawal were assessed for both mothers and fathers. Each of the criterion constructs were modeled as latent factors indicated by their constituent items.

Results

Analysis Strategy

Using confirmatory factor analysis, we examined (a) single-group baseline models to assess the factorial structure and model fit to the data for each sample, (b) multigroup comparisons to assess invariance among factor loadings across the four samples (measurement equivalence), (c) multigroup comparisons to assess invariance in correlations between autonomy granting from both mothers and fathers and the criterion variables across samples (functional equivalence), and (d) age, gender, and education associations with autonomy granting within cultures and variation in these associations across samples.

Baseline Models

The first set of analyses evaluated baseline models separately by sample and by sex of the parent to examine factor structure, item loadings, and model fit (mother and father models in each sample). Results suggested that a model specifying all 10 autonomy granting items loading onto a single factor provided an adequate fit to the data in each sample. Factor loadings were higher overall in the United States than in the other samples and the model provided a better fit to the data (factor loadings ranged from .45 to .75, comparative fit index [CFI] > .96, root mean square error approximation [RMSEA] < .05 in both mother and father models; see Table 2 for item loadings). Model fit for the Mexico data was acceptable for mother (CFI = .93, RMSEA = .06) and father models (CFI = .91, RMSEA = .07), while the item loadings were smaller overall compared to the U.S. sample (ranging from .29 to .63). Similar results were found in the China sample, as factor loadings ranged from .42 to .69 in mother data (CFI = .92, RMSEA = .06) and .36 to .65 in father models (CFI = .93, RMSEA = .06). For the India sample, results also demonstrated an acceptable fit (CFI = .92, RMSEA = .07 for mother models; CFI = .91, RMSEA = .07 for father

Table 2
Item Loadings by Country: Mother and Father Models

Item	Mother Models				Father Models			
	U.S.	China	Mexico	India	U.S.	China	Mexico	India
I feel that this parent gives me enough freedom (<i>freedom</i>).	.60	.59	.52	.52	.70	.65	.54	.44
This parent allows me to choose my own friends without interfering too much (<i>friends</i>).	.63	.64	.56	.50	.67	.65	.57	.44
This parent allows me to decide what is right and wrong without interfering too much (<i>right and wrong</i>).	.68	.60	.48	.54	.71	.53	.59	.54
This parent allows me to decide what clothes I should wear without interfering too much (<i>clothes</i>).	.48	.45	.57	.59	.50	.46	.54	.50
This parent allows me to choose my own dating partner without interfering too much (<i>dating</i>).	.52	.46	.46	.44	.47	.41	.50	.45
This parent has confidence in my ability to make my own decisions (<i>confidence</i>).	.63	.69	.63	.63	.75	.65	.53	.64
This parent encourages me to help in making decisions about family matters (<i>encouragement of decision making</i>).	.62	.38	.47	.34	.65	.43	.29	.24
This parent allows me to make my own decisions about career goals without interfering too much (<i>career</i>).	.53	.42	.32	.47	.67	.43	.32	.50
This parent allows me to make my own decisions about educational goals without interfering too much (<i>education</i>).	.45	.44	.41	.38	.61	.36	.44	.44
This parent lets me be my own person in enough situations (<i>person</i>).	.65	.44	.63	.53	.67	.47	.60	.58

models) with factor loadings somewhat lower overall, ranging from .34 to .63 for mother models and from .24 to .64 for father models. The lowest factor loadings across samples were observed for the career, education, and encouragement of decision-making items. Overall, these results suggest that the 10-item autonomy granting measure demonstrated an acceptable fit to the data in each sample, with greater internal consistency in the United States. There was relatively low internal consistency for items focusing on autonomy in reference to career, education, and encouragement to participate in family decision making across the four samples.

Cross-Cultural Item Equivalence

To assess cross-cultural item equivalence, we compared models with factor loadings constrained to equality across all four samples to models with factor loadings freely estimated. This analysis produces an overall statistical test of the difference in fit between nested models and allows for comparison of items on a sample-by-sample basis (rather than using the U.S. sample as a reference group). In cases where the imposition of constraints on the item loadings leads to a worsened model fit, it can be concluded that the items are best left freely estimated and that item loadings vary by group. Comparison of the two initial models suggested that the free model fit the data better and, as a result, that the item loadings were not similar across the four samples (χ^2 Comparison of the two initial models suggested that the free model fit the data better and, as a result, that the item loadings were not similar across the four samples (χ^2 difference = 41.48, $df = 27$, $p < .05$ for mothers; χ^2 difference = 57.62, $df = 27$, $p < .01$ for fathers). Given the finding of an overall difference between the four

groups, subsequent analyses considered item-by-item comparisons across samples to identify the source of specific statistical differences among groups (e.g., United States versus Mexico, Mexico versus China).

Results for mother models suggested that items assessing perceptions of freedom to decide what is right and wrong on one's own, freedom to make career decisions, and maternal encouragement to participate in family decision making were statistically different across samples. Specific sample differences varied for the career item when comparing item loadings in the United States and Mexico (χ^2 difference = 6.66, $df = 1$, $p < .05$) and between China and Mexico (χ^2 difference = 5.15, $df = 1$, $p < .05$). These results suggest that freedom in reference to career decisions is less salient for Mexican adolescents' perceptions of autonomy from mothers when compared to American and Chinese adolescents. In reference to deciding what is right and wrong, the source of invariance in these data occurred due to significant differences in factor loadings between the U.S. and Mexico samples (χ^2 difference = 9.92, $df = 1$, $p < .01$). There was also a significant difference between U.S. and India factor loadings on the encouragement to participate in family decision-making item (χ^2 difference = 5.74, $df = 1$, $p < .05$).

Similar analyses with the father data suggested invariance on items assessing freedom to make decisions regarding one's own career, freedom regarding education, and encouragement to participate in family decision making. Sample-by-sample comparisons revealed that item loadings on the career item were lowest in the Mexican sample and that these loadings were statistically different from the other three samples. That is, although this item seems to be invariant across three of the samples, freedom to make decisions in reference to career has less salience for autonomy granting from fathers for youth in Mexico compared to the United States (χ^2 difference = 10.56, $df = 1$, $p < .01$), China (χ^2 difference = 3.85, $df = 1$, $p < .06$; note marginally significant), and India (χ^2 difference = 8.25, $df = 1$, $p < .01$). In reference to encouragement to participate in family decisions, the lowest factor loading was observed in India, and this loading was significantly different to the comparable loading in the U.S. (χ^2 difference = 4.75, $df = 1$, $p < .05$) and China (χ^2 difference = 3.38, $df = 1$, $p < .07$; marginally different) samples. The second lowest loading was observed in the Mexico data for this item, and this was also significantly different from the U.S. (χ^2 difference = 10.38, $df = 1$, $p < .01$) and China samples (χ^2 difference = 6.49, $df = 1$, $p < .05$). Fathers' encouragement for their children's participation in family decision making appears to be less salient for the Mexican and Indian respondents compared to those in the United States and China. Item variance also was found on the item assessing father's provision of freedom to make choices regarding education. In the U.S. sample, this item demonstrated a significantly higher factor loading than in the China (χ^2 difference = 3.58, $df = 1$, $p < .06$),

Table 3
Correlations of Autonomy With Criterion Variables by Country

	U.S.		China		Mexico		India	
	Mother	Father	Mother	Father	Mother	Father	Mother	Father
Support	.58***	.59***	.32**	.23*	.55***	.50***	.40***	.35**
Love withdrawal	-.09	-.19**	-.09	-.07	-.22**	-.25**	.00	.09
Academic orientation	.14	.13	.28**	.14	.24**	.28***	.36**	.23*
Age of adolescent	.01	.01	-.06	-.09	.04	.01	-.06	-.01
Mother education	-.09		.02		.13*		.06	
Father education		-.02		.10		.17*		.20*

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

Mexico (χ^2 difference = 7.28, $df = 1$, $p < .01$), and India (χ^2 difference = 4.13, $df = 1$, $p < .05$) samples. This item was invariant across the China, Mexico, and India samples, suggesting that freedom to make choices regarding one's education has more salience to overall autonomy in the U.S. than in the other samples.

Functional Measurement Equivalence Across Samples

In a third set of analyses, parental support, parental love withdrawal, and adolescent academic orientation were included as criterion variables to assess the construct validity of the autonomy granting measure within each sample and the functional equivalence across samples. Equality constraints between the four groups were specified for all correlations between autonomy and support, love withdrawal, and academic orientation. Because there were differences in autonomy item factor loadings between the samples, models were estimated twice: once with all items included in the model and once with the nonequivalent items dropped from the model. Correlations between study constructs were substantively similar in both sets of analyses, and results with the omission of items measuring career, encouragement, and right and wrong are reported for maternal models. For paternal models, the career, encouragement, and education items were omitted prior to assessing correlations for reports of fathers.

Results suggested that the autonomy granting construct appears functionally equivalent across the four samples when considering associations with maternal support and academic orientation (see Table 3 for correlations). Analyses did suggest, however, functional nonequivalence for associations between maternal autonomy granting and maternal love withdrawal ($\chi^2_{\text{drawal}} \text{ difference} = 9.77, df = 3, p < .05$). An examination of specific correlations revealed that a negative relationship with autonomy granting from mothers was only significant in the sample of adolescents from Mexico. Moreover, the correlation in Mexico was significantly different from the comparable correlation in the India and China samples.

In reference to functional equivalence using reports of fathers, results suggested that correlations between autonomy granting by fathers and academic orientation were invariant across the four samples. There was, however, significant variation in associations between autonomy granting and support ($\chi^2_{\text{autonomy granting and support}} \text{ difference} = 18.81, df = 3, p < .001$) and autonomy granting and love withdrawal ($\chi^2 \text{ difference} = 16.48, df = 3, p < .01$). The correlation between autonomy granting and support from fathers was significantly stronger in the U.S. data than in the China sample ($\chi^2_{\text{the China sample}} \text{ difference} = 6.44, df = 1, p < .05$), the Mexico sample ($\chi^2 \text{ difference} = 11.21, df = 1, p < .01$), and the India sample ($\chi^2 \text{ difference} = 16.43, df = 1, p < .001$). Based on these findings, it appears that adolescents reporting higher levels of autonomy granting from fathers also report a higher degree of support from fathers, but this association is strongest in the United States. In reference to the autonomy granting and love withdrawal, correlations were negative and statistically significant in the U.S. and Mexico samples only. Cross-group comparisons suggested that these observed associations in the U.S. and Mexico data were significantly different from the India sample ($\chi^2 \text{ difference} = 4.71$ for the U.S./India comparison and 13.43 for the Mexico/India comparison; both models $df = 1, p < .05$).

Age, Gender, and Parental Education Differences in Autonomy Granting

Additional analyses considered across-sample differences in means and within-sample differences by age, gender, and parental education. Analyses using AMOS allow for a test of significant differences in latent means for the autonomy granting measure across sample by comparing each sample in the analysis to a reference group. There are two unfortunate implications of this approach, as it is only possible to compare the China, Mexico, and India sample to the U.S. sample and it is not possible to estimate an actual mean. As a result, while the analyses using AMOS did point to a significant difference in autonomy granting from fathers and mothers (latent means were significantly higher in the U.S. sample compared to the other three samples), post hoc analyses were conducted in Statistical Package for the Social Sciences (SPSS) to generate interpretable means, standard deviations, and to assess group-by-group comparisons among the samples in this study. These analyses were based on a 7-item measure, with the nonequivalent items omitted from the measures of both mother and father autonomy granting (with possible scores ranging from 7 to 28; Cronbach's alphas for the modified scale ranged from .71 to .84).

There was a statistically significant difference in group means for the measure of both autonomy granting from mothers and autonomy granting from fathers ($F = 27.97, p < .001$, and $F = 16.99, p < .001$, respectively). Post hoc results suggested that reports of maternal autonomy granting were highest in the United States ($M = 23.26$,

$SD = 3.54$) and lowest in China ($M = 20.04$, $SD = 3.29$). Mexico ($M = 21.81$, $SD = 3.76$) and India ($M = 21.53$, $SD = 3.51$) were not significantly different from each other but were significantly lower than the U.S. sample and higher than the China sample. In reference to autonomy granting by fathers, U.S. adolescents reported higher ($M = 22.96$, $SD = 4.21$) average autonomy from fathers than did the adolescents in India ($M = 21.25$, $SD = 3.81$), Mexico ($M = 21.09$, $SD = 3.95$), and China ($M = 20.21$, $SD = 3.34$). These results pointed to higher scores of autonomy granting from both mothers and fathers in the United States compared to the other three samples and mean levels that were lowest in the China sample.

Within-sample analyses included an examination of correlations between autonomy granting and adolescent age, gender, and both maternal and paternal education. There were no significant gender, age, or education associations with reports of maternal autonomy granting in the U.S., China, or India samples. In the Mexico sample, however, maternal education was positively associated with reports of autonomy granting, suggesting that adolescents who have more educated mothers report greater autonomy granting from those mothers. In reference to reports of father autonomy granting, results suggested that adolescent Mexican girls reported less autonomy granting by fathers compared to boys ($M = 19.68$ for girls and $M = 21.04$ for boys). Fathers' education also was positively associated with autonomy granting by fathers in both the India and Mexico samples. In India, for example, reports of autonomy from fathers was higher when fathers had completed college ($M = 21.65$) than when fathers had only completed either secondary schooling ($M = 20.39$) or primary school ($M = 19.76$). In Mexico, parental education was related to autonomy granting by both mothers and fathers. Mothers with a college education ($M = 21.95$) were rated higher on autonomy granting than were mothers who completed secondary school ($M = 19.63$) or only primary school ($M = 20.09$). In a similar manner, Mexican fathers who completed college were rated higher ($M = 21.94$) on autonomy granting than fathers who completed secondary school ($M = 19.97$) or primary school ($M = 19.54$). Taken together, these results suggest that across the four samples, age was not associated with autonomy granting by parents, gender differences were found in the Mexico sample only, and parental education was associated in the Mexico and India samples only.

Discussion

This study considered the cross-cultural validity of a 10-item autonomy granting measure with samples of adolescents from the United States, China, Mexico, and India. Structural equation modeling analyses assessed item-level and functional equivalence across the samples, with parental support, love withdrawal, and adolescent academic orientation included as criterion variables to assist in comparing the current measure to existing measures of PI and PVF.

Results suggested a moderately high degree of internal consistency within each sample and a moderately high degree of cross-cultural equivalence in item loadings across the samples. Initial analyses of a model with 10 items loading onto an autonomy granting factor demonstrated medium to large factor loadings and a good fit to these data within each sample. Two items, "freedom to make decisions regarding one's career plans" and "encouragement from parents to participate in family decision making," demonstrated low factor loadings in the China, Mexico, and India samples and were variant across the four samples. Two additional items demonstrated significantly different loadings across samples: one for reports of mother's behaviors ("freedom to decide right and wrong") and one for father's behaviors ("freedom regarding educational plans").

Based on these findings, it appears that although the majority of items represent salient aspects of autonomy granting from parents across cultures, participation in family decision making and freedom to make decisions regarding career pursuits were more relevant to the experience of adolescents in the United States and China. One implication of these findings for cross-cultural research is that there may be relative universality surrounding adolescent expectations for freedom of choice related to "life-style" issues (dating, clothes, and music). On the other hand, issues concerning basic values (e.g., participating in family decision making, deciding right from wrong) and those having long-term consequences for adulthood (e.g., freedom related to educational or career plans) may vary across cultures and be less expected by youth in traditional or collectivistic cultures.

It was somewhat unexpected to find a high degree of cross-cultural similarity between the U.S. and China samples, as these two cultures are characterized as at extreme ends of the individualism-collectivism continuum. One possible explanation for these findings is that both strongly individualistic and strongly collectivistic cultures provide clear expectations for adult responsibilities such as participation in family and career decisions but for different reasons. Within individualistic cultures, adolescents may earn greater participation in family or career decisions by demonstrating increased competence in self-directed decisions. As a result, American adolescents who are allowed freedom to influence family decision making or chart their own career path do so with the expectation that their decisions primarily have consequences for their own lives. In contrast, adolescents in collectivistic cultures like China may increasingly participate in family decisions or make career choices as part of progressing toward a form of autonomy that is embedded within strong familistic bonds. Both family decision-making authority and career decisions are viewed in China as involving some personal choice but also as representing that one's own decisions require consideration of a responsibility for the future welfare of the family. Thus, both cultures have clear expectations regarding increased family participation and career choice (as part of gaining autonomy) but may be motivated to do so for different cultural reasons.

Mexico and India, on the other hand, may be more balanced or "transitional" in terms of individualistic-collectivistic orientations. As a result, participation in family life and career decisions is less a function of progressing toward autonomy, and these findings likely tap into cultural variations in terms of what parents (particularly fathers) in Mexico and India view as legitimate domains for adolescent decision making. Moreover, in cultures undergoing substantial social and economic change (e.g., Mexico and India), parents may continue to exert stronger influence over possible future occupations as a means to promote interdependence so that future economic gains of the child are closely tied to the economic well-being of the family.

Results suggested a high degree of functional equivalence, as similar correlations were observed across the samples between autonomy granting and academic orientation and between autonomy granting and parental support. These results suggest that regardless of culture, adolescents reporting greater autonomy granting by mothers or fathers also reported higher motivation to excel in school. It should be noted that these positive correlations were not statistically significant in the U.S. sample or for autonomy from fathers in China, perhaps due to the comparatively smaller samples. Autonomy granting was also positively correlated with adolescent reports of parental support in each sample. The autonomy granting parental support association was equivalent across the four samples except in the case of reports of fathers in the U.S. sample, where the association was stronger. The main implication for cross-cultural research is the finding that across cultures, adolescents who experience greater freedom in decision making from parents tend to report greater school-related motivation and also that parents are more warm and loving. Such conclusions may provide support for arguments that autonomy granting has relevance across diverse cultures and suggest that the developmental processes associated with autonomy granting (as suggested by PVF; i.e., that autonomy development co-occurs with parental support and that autonomy support increases motivation) are similar across diverse cultures.

Although this conclusion may be valid, it is also possible that the means by which autonomy granting and support, for example, are associated varies across cultures. For example, in the United States, parental support may assist autonomy development by building confidence for self-directed activities or by providing a base of emotional security from which adolescents can gradually move away from family and into the larger social environment without feelings of separation (Collins & Steinberg, 2006). Support may play an important but less distinctive role in the autonomy granting process of adolescents from more collectivistic cultures such as those in China, Mexico, and India, as support occurs alongside a larger array of relationship dimensions that are components of familism (i.e., a key aspect of collectivistic cultures) and that also foster autonomy within the context of continuing connection. That is, consistent with the argument of PVF, parental supportive behaviors and autonomy granting may promote healthy autonomous functioning but with variation in the ultimate goals of that development (i.e., self-sufficiency or independence versus familistic or collectivistic attitudes and behaviors).

In reference to the association between parental autonomy granting and parental love withdrawal, the expectation from the perspective of PVF was that these two elements of parenting are incompatible with one another and thus should demonstrate a negative correlation. Such an association was only found for both reports of mothers and fathers in the Mexico sample only. That is, Mexican adolescents who reported greater autonomy granting by mothers and fathers tended to report lower love withdrawal behaviors by those same parents. The same relationship occurred in tests for relationships between autonomy granting and love withdrawal for adolescent reports about U.S. fathers but not for mothers. Taken together, these results suggest that associations between autonomy granting and love withdrawal are somewhat culturally specific and that the extent to which autonomy granting from parents is negatively related to psychologically controlling behaviors (as predicted by SDT) applies only to the sample of Mexican adolescents and for U.S. adolescents in reference to their fathers. Rather than suggesting that autonomy granting and an element of psychological control are opposite ends of a continuum of parenting, our results suggest that these two elements of parenting are relatively unrelated.

A cultural explanation for variation in the autonomy granting and love withdrawal association is that there are elements of both Mexican and U.S. culture that define love withdrawal as a problematic behavior that inhibits autonomy granting behavior. In contrast, perhaps the strongly collectivistic values of China and India may provide a different meaning to dependency-fostering behavior (i.e., love withdrawal) that diminishes the problematic implications of love withdrawal for progress toward autonomy. Some highly familistic cultures may not have such distinctively defined and contradictory meanings for autonomy granting versus dependency-fostering behavior that exists in the United States and Mexico and may view such behaviors as coexisting within a familistic context, without being in conflict. One important caveat to consider, however, is that future studies assessing different elements of controlling parenting may differ and that the modest negative correlation reported in this study may only apply to the love withdrawal construct.

The current measure of autonomy granting appears to include items that tap into an element of parenting that is conceptually similar to both PVF and PI. Items such as “this parent allows me to make my own career decisions without interfering too much,” for example, may simultaneously assess PI (“own decisions”) and PVF (“without interfering too much”). Findings that parental autonomy granting was positively correlated with perceptions of parents as supportive and with increased academic orientation also suggest that this measure is similar empirically to PVF as, according to SDT, promotion of autonomy should be associated positively with adaptive parent-adolescent relationships and with adolescent achievement motivation. Further support was provided, in limited fashion, by the negative relationships found between autonomy granting and parental love withdrawal (consistent with the predictions of SDT), though these correlations were found only for Mexico parents and in the United States for fathers. Love withdrawal appears to inhibit adaptive autonomy granting in some cultures and, as such, functions to inhibit an adaptive form of autonomy that is needed for the development of social competence by adolescents (Peterson, 2005). Combined with previous cross-cultural research on PVF, these findings indicate that, across cultures, autonomy granting behaviors (particularly those associated with warm, supportive parenting) have a high degree of cross-cultural generality regardless of whether one is considering individualistic or collectivistic cultures.

Mean levels of autonomy granting from both mothers and fathers were highest in the United States, lowest in China, and similar for the Mexican and Indian samples. This pattern of results provides further evidence of construct validity as higher levels of autonomy granting were observed in the most individualistic culture (i.e., the United States), with lower levels in the most collectivistic culture (i.e., China; Hofstede, 2001). Consistent with previous scholarship, these findings suggest that although parental autonomy granting is relevant for adolescents in collectivistic cultures, it remains more common within an individualistic culture (Kagitcibasi, 2005; Stewart et al., 1999).

Within-sample analyses suggested few age or gender differences in total scale scores. Adolescent males and females reported similar overall levels of autonomy granting from parents, with one exception being in Mexico, where girls tended to report lower autonomy from fathers than boys. Positive associations were found between father’s education and father’s autonomy granting behavior in both India and Mexico but not in the United

States or China. Mother's level of education also was associated with maternal autonomy granting only in Mexico. At least for India and Mexico, therefore, the educational level of parents may be an indirect indicator of modernity in values, which leads to greater autonomy granting behavior by less traditional parents (Verma & Saraswathi, 2002).

Overall, these results provide support for the validity and cross-cultural utility of the autonomy granting measure addressed in this investigation. Particularly in reference to the U.S. and Chinese data, this measure demonstrated strong factor loadings, item equivalence across cultures, functional equivalence, and construct validity. Questionable validity was apparent for some specific items, particularly within the Mexico and India samples. Variation also occurred across cultures, perhaps resulting from different cultural meanings (i.e., based in either individualism or collectivism) in the process whereby adolescents acquire autonomy from parents. Future research on parental autonomy granting should consider the likelihood of similarity in some domains (social relations, peer culture) and unique cultural patterns regarding participation in family decision making and future decisions in career or education.

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