

Configurations of Autonomy and Relatedness in a Multiethnic U.S. Sample of Parent–Adolescent Dyads

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Configurations of autonomy and relatedness were explored in 232 adolescent–parent dyads. Youth (58% female) were 13–18 years old and ethnically diverse (38% Latino American, 32% European American, 30% African American). Cluster analysis was used to identify three distinct groups based on youth and parent reports of parental autonomy support and family relatedness. The three clusters differed on key demographics (e.g., parent education and income, immigrant background, ethnicity) and theoretically relevant indicators of family and individual functioning (e.g., parent and youth reports of decision making and family obligations; youth-reported attachment and minor delinquency). Findings provide empirical support for theoretical models of autonomy–relatedness (e.g., *Journal of Cross-Cultural Psychology*, 36, 2005, 403) and contribute to understanding of how autonomy and relatedness intersect to influence adolescent and family adaptation.

During adolescence, young people in most societies are expected to develop the ability to think and act for themselves while maintaining connections to parents. Scholars have debated the complexities of this developmental task. Early theories emphasized the importance of separation from parents (or independence) as a marker of autonomy, reflecting Western notions of individualism (see Steinberg & Silverberg, 1986). This view has long been challenged by theorists working from different perspectives, who view both autonomy and relatedness as basic needs that are compatible. For example, Grotevant and Cooper (1986) proposed that “autonomy with relatedness” was optimal for supporting positive development during adolescence. Similarly, cross-cultural scholars posited that parents and adolescents can simultaneously value and pursue both autonomy and relatedness (e.g., Kağitçibaşı, 2005). A considerable body of evidence supports the view that autonomy and relatedness are both central developmental needs that intersect in adolescence and contribute to individual and family adaptation (Kağitçibaşı & Yalin, 2015; Ryan & Deci, 2000). The current study extends previous literature by

examining intersections of attitudes toward autonomy and relatedness in an ethnically diverse U.S. sample of parent–adolescent dyads, then exploring how clusters characterized by various configurations of autonomy and relatedness differ on a set of theoretically derived indicators of individual and family dynamics and functioning.

Theoretical Perspectives on Autonomy–Relatedness in Adolescence

Several theoretical traditions guided the current study. The main one is cross-cultural scholars’ conceptualization of autonomy and relatedness as compatible needs that can coexist within families (e.g., Kağitçibaşı, 2007). This conceptualization is reflected in Kağitçibaşı’s model of autonomy–relatedness (2005, 2013), which was later reformulated into the theory of family change (Kağitçibaşı & Yalin, 2015). Kağitçibaşı proposed that the two constructs of autonomy and relatedness are independent (orthogonal) dimensions. This conceptualization yields four possible configurations or types that can be viewed as ideal selves (e.g., what parents want for their child) or family models (e.g., how parents and children behave toward each other). The four types reflect endorsement of agency (the spectrum between autonomy and heteronomy) and interpersonal distance (the spectrum between relatedness and separation) and reflect different cultural ideals. The *autonomous-separate self* is high on autonomy and low on

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relatedness, and it is believed to occur in “independent” families where children are raised to be self-sufficient and self-reliant. The *heteronomous-related self* is low on autonomy and high on relatedness; this form may arise within families that emphasize both interdependence and obedience (e.g., “interdependent” families in traditional, non-Western contexts). In contrast, the *autonomous-related self* is high on both autonomy and relatedness; children in this type have interdependence with parents combined with personal agency (“psychologically interdependent” families). Kağıtçıbaşı (2013) noted that the autonomous-related self has not traditionally been recognized in Western perspectives due to the belief that autonomy is established through separation from parents. Finally, the *heteronomous-separate self* is low on autonomy and high on separation; this form of self has not been observed as a cultural ideal but is thought to reflect “hierarchical neglecting” families (Kağıtçıbaşı, 2007).

Within Kağıtçıbaşı’s model, relatedness encompasses a sense of connection and mutual obligation between family members (Kağıtçıbaşı, 2005). This conceptualization reflects the notion that parents promote goals and instill values emphasizing family and community reliance, loyalty, reciprocity, and love (e.g., McShane, Hastings, Smylie, Prince, & The Tungasuvvingat Inuit Family Resource Centre, 2009). For example, a U.S. study with 240 ethnically diverse adolescents and emerging adults found that relatedness was viewed as compliance with parental wishes, with a common emphasis on interdependence and close family relationships (Phinney, Kim-Jo, Osorio, & Vilhjálmsdóttir, 2005).

A second perspective guiding our inquiry—particularly the conceptualization of autonomy—was self-determination theory (SDT; Ryan & Deci, 2000). SDT conceptualizes adolescent autonomy as beliefs and behaviors that reflect a sense of volition and truly represent a youth’s self-interests and values (Deci & Ryan, 2000). This perspective contrasts with the view that autonomy manifests itself as the separation (both physical and emotional) from parents. In SDT, the role of parents is to support volitional functioning as opposed to granting (or denying) their child’s bids for independence (e.g., Fousiani, Van Petegem, Soenens, Vansteenkiste, & Chen, 2014). In the literature review, we note how studies conceptualized autonomy support (e.g., as the promotion of volitional functioning, independence, or another construct).

Review of Empirical Literature on Intersections of Autonomy and Relatedness

Empirical support for Kağıtçıbaşı’s framework has been found in research conducted around the world. One of the few studies conducted to evaluate Kağıtçıbaşı’s theoretical framework directly was conducted with 919 mother–adolescent dyads from Germany, Turkey, and India (Mayer, Trommsdorff, Kağıtçıbaşı, & Mishra, 2012). The study used cluster analysis to identify profiles of self based on measures of individualism, collectivism, family values, and utilitarian and emotional value of children. Three profiles were identified that reflected the family models of independence (more likely in German families), psychological interdependence (more likely in Turkish families), and interdependence (more likely in Indian families). A study analyzing 27 countries found that autonomy and relatedness coexisted within clusters of families that were considered psychologically interdependent (Georgas, Berry, van de Vijver, Kağıtçıbaşı, & Poortinga, 2006). Only one study was identified that examined configurations of autonomy (in decision making) and relatedness (closeness and attachment to parents) in a U.S. sample. Three clusters were identified in a sample of 76 African American late adolescents (Smetana & Gettman, 2006): (1) moderately high levels of both autonomy and relatedness (24%); (2) high relatedness and low levels of behavioral autonomy (29%); and (3) high relatedness and moderate levels of autonomy (51%). The first two clusters fit Kağıtçıbaşı’s description of the autonomous-related and heteronomous-related self (the third cluster falls in between).

Other studies support the conceptualization of relatedness and autonomy as independent, but associated, constructs. A confirmatory factor analysis of measures completed by adolescents in Belgium (e.g., family interaction, relationship with parents, emotional autonomy) identified four distinct factors that the authors labeled connectedness, agency, separation, and detachment (Beyers, Goossens, Vansant, & Moors, 2003). These findings support the position that autonomy cannot be viewed as just separation (independence) from others. In addition, agency and connectedness were positively associated. Another study conducted in Sicily (southern Italy) with 325 adolescents and emerging adults found that parental autonomy support and relatedness were positively associated (Inguglia, Inguglia, Liga, Lo Coco, & Lo Cricchio, 2015). In a theoretical review, Tamis-LeMonda

et al. (2007) identified three patterns of autonomy and relatedness socialization: conflicting (autonomy and relatedness goals interfere with each other), additive (autonomy and relatedness are both supported but viewed as unconnected), or functionally dependent (relatedness goals are a path to achieving autonomy goals, and vice versa).

This body of work demonstrates that autonomy and relatedness can coexist within families; however, several gaps remain. Most notably, few studies have tested Kağıtçıbaşı's model using statistical approaches that allow for the identification of conceptually distinct groups based on multiple indicators of interest (i.e., a person-centered approach), instead treating each indicator in isolation as is true of a variable-level approach (Henry, Tolan, & Gorman-Smith, 2005). Second, previous studies using the SDT conceptualization of autonomy as volitional functioning have typically been cross-cultural (e.g., Chirkov, Ryan, Kim, & Kaplan, 2003); few have examined within-country variations (e.g., Soenens, Vansteenkiste, & Sierens, 2009); and (to our knowledge) none of these studies have included U.S. samples. Finally, most studies have relied on data from a single family member, limiting what can be learned about family dynamics. Accordingly, our first goal was to examine configurations of attitudes regarding autonomy support and family relatedness in U.S. parent-adolescent dyads.

Autonomy—Relatedness: Links to Individual and Family Factors

Our second goal was to examine whether adolescent-parent dyads characterized by distinct configurations of autonomy support and family relatedness differed in meaningful ways on (1) child and parent demographics and (2) a set of theoretically identified behavioral, attitudinal, and adjustment factors. The aim of these analyses was to characterize the clusters identified in the analyses and explore their conceptual coherence. We review the literature that guided our thinking relating to this goal, with two caveats: Studies differ in how they conceptualized and measured these constructs, and we were unable to locate studies that examined these variables across different configurations of autonomy and relatedness.

Child and parent characteristics. Child characteristics of age, gender, and ethnicity (or race) have been linked to variations in autonomy and relatedness. For example, parental promotion of both

volitional functioning and independence increases as children grow older (Fousiani et al., 2014; Koepke & Denissen, 2012), whereas relatedness decreases over time (Buhl, 2008). In terms of gender differences, findings for autonomy are mixed. Some studies have found that men tend to have more independent and less interdependent self-concepts than women (Cross & Madson, 1997), and boys report higher levels of paternal promotion of independence than girls (Fousiani et al., 2014), while others found no differences in autonomy and relatedness by gender for adolescents and emerging adults (Inguglia et al., 2015). Findings on relatedness are also mixed. A study of 76 German mother-adolescent dyads conflicts revealed that mothers reported higher connectedness (e.g., positive affect, low hostility, high receptiveness, and low rejection of mothers' arguments) with daughters than with sons; however, no gender differences were found among adolescents themselves (Pinquart & Silbereisen, 2002).

Autonomy and relatedness processes may also differ across ethnic groups due to cultural values regarding appropriate relationships between children and parents, such as expectations relating to family obligations, respect, and deference to elders (Fuligni & Yoshikawa, 2003). For example, U.S. adolescents from non-European backgrounds (including Mexicans) emphasized parental authority more, and individual autonomy less, than European Americans (Fuligni, 1998). Consistent with this finding, European American parents reported earlier age expectations regarding children's behavioral autonomy than Latino parents (Phinney et al., 2005). Among youth, European Americans had earlier autonomy expectations and behaviors than ethnic minority youth (e.g., Smetana, 2002), although Latinos did not differ from other adolescents in their desire for autonomy (Martinez, McClure, Eddy, & Wilson, 2011). A study of over 800 high school students revealed that Asian Americans and Latino Americans placed greater emphasis on family assistance, respect, and support than European Americans (Fuligni, Tseng, & Lam, 1999).

Parent characteristics potentially linked to variations in autonomy-relatedness include education, income, and immigrant background. Kağıtçıbaşı and Yalin (2015) summarized evidence from within-country studies indicating that as education and income levels increased, so did parental endorsement of autonomy goals for their child. Similarly, acculturation was associated with shifts in attitudes among immigrants; parents typically changed along the dimension of autonomy support

but placed continuing value on relatedness (i.e., a shift from a heteronomous-related to an autonomous-related model of self). In the United States, parents with young children endorsed both autonomy (e.g., independence, assertiveness) and relatedness (e.g., obedience, respect), but immigrant Chinese American parents reported less endorsement of independence than European American parents (Jose, Huntsinger, Huntsinger, & Liaw, 2000). It must be noted that in the United States, socioeconomic characteristics and immigrant background often intersect with ethnicity in ways that make it challenging to examine these variables in isolation.

Family and individual functioning. Parental autonomy support and relatedness are each associated with family and adolescent functioning, although little research has examined configurations of autonomy-relatedness. We identified theoretically relevant behavioral, attitudinal, and adjustment factors available in the dataset that have previously been associated with autonomy and relatedness and compared the emergent clusters on these variables as a way of confirming their conceptual meaning.

Decision making practices and enactment of family obligations should vary across clusters characterized by different configurations of autonomy and relatedness, and we examined both youth and parent reports of these variables. Decision making about everyday issues represents a key arena where issues of autonomy play out during adolescence (Fuligni & Eccles, 1993; Steinberg, 1990). Behavioral autonomy has been defined as freedom to perform actions on one's behalf, while recognizing the importance of maintaining connections (Ryan & Deci, 2006)—a definition in line with SDT's perspective of autonomy that is supported through promotion of volitional functioning. A study of Belgian and Greek adolescents found an interaction between different types of parental autonomy support (promotion of volitional functioning and promotion of independence) and independent decision making, supporting the SDT perspective that parents who encourage volitional autonomy help adolescents act in accordance with their own interest and values (Fousiani et al., 2014). Consistent with Kağıtçıbaşı's model, expectations and practices regarding family obligations and responsibilities should be associated with relatedness (e.g., Fuligni & Yoshikawa, 2003; Fuligni et al., 1999). Other studies have linked parental involvement with parental autonomy support

(volition) (Ratelle, Larose, Guay, & Senécal, 2005) and emotional separation with insecurity toward parents (Ryan & Lynch, 1989).

According to Kağıtçıbaşı (1996, 2007), cultural models of self reflect underlying values regarding the ideal outcome of the socialization process (i.e., socialization goals; Knafo & Schwartz, 2001). Attitudes regarding autonomy and relatedness are linked to parental socialization goals and adolescents' developmental goals. In general, individuals from cultures that value autonomy self-endorse goals that emphasize independence, whereas those from cultures that value relatedness self-endorse goals that promote interdependence with family and others (Tamis-LeMonda et al., 2007). Consistent with this view, among U.S. college students and their mothers, East Asian mothers (who were primarily immigrants) placed more importance on family-oriented goals than European American (nonimmigrant) mothers (Chang, Chen, & Kim, 2015). Accordingly, we expected endorsement of goals related to independence and interdependence to vary across different configurations of autonomy and relatedness.

Finally, configurations of autonomy and relatedness within families should be associated with youth adjustment (Grotevant & Cooper, 1986; Ryan & Deci, 2002). Among U.S. high school students, perceptions of parents as supportive of autonomy (using the SDT conceptualization of promotion of volitional functioning) were associated with lower levels of risk behaviors (e.g., risky sex, drug use; Williams, Cox, Hedberg, & Deci, 2000). Emotional autonomy (detachment) from parents was associated with psychosocial difficulties (e.g., distress and deviant behavior) among Dutch-speaking Belgium adolescents (Beyers & Goossens, 1999). In a sample of Sicilian late adolescents and young adults, a general measure of relatedness was negatively associated with adolescents' externalizing problems (Inguglia et al., 2015). Based on this work, we hypothesized that the emergent clusters would differ on youth reports of problem behaviors (the only indicator of adjustment available in the dataset).

Current Study

There is theoretical and empirical evidence that balancing autonomy and relatedness represents an important developmental task for adolescents and their parents, with implications for individual and family functioning. Integrating constructs proposed by Kağıtçıbaşı (2005; Kağıtçıbaşı & Yalin, 2015) and

SDT (Ryan & Deci, 2000), we employed an approach that acknowledged the possibility of autonomy and relatedness as nonconflicting constructs in a within-country examination of parent–adolescent dyads. The study involved a reciprocal dyadic design (Kenny, Kashy, & Cook, 2006), with parallel reports available from a matched sample of adolescents and parents. This type of design allows for an examination of how constructs of interest intersect or combine within dyads and can cast light on within-family dynamics (Wittenborn, Dolbin-MacNab, & Keiley, 2013). Two research questions were addressed:

- (1) How are autonomy support and relatedness configured within a U.S. sample of parent–adolescent dyads? We hypothesized that different configurations (clusters) would emerge based on attitudes toward autonomy and relatedness (Kağitçibaşı, 2005; Kağitçibaşı & Yalin, 2015). As discussed earlier, few studies have examined configurations of autonomy and relatedness using person-centered analyses. Mayer et al.'s (2012) study was conducted in Germany, Turkey, and India, whereas Smetana and Gettman's (2006) study was conducted in the United States with an African American sample. Both studies identified three clusters based on configurations of autonomy or independence and relatedness or interdependence. Therefore, we hypothesized that at least three clusters would emerge in the current analysis.
- (2) Do clusters characterized by varied configurations of autonomy support and relatedness differ on demographic characteristics and behavioral, attitudinal, and adjustment factors? Addressing this research question allowed us to confirm the conceptual meaning of the clusters that emerged in the analyses and explore variations between them. Given the lack of prior research examining configurations of autonomy and relatedness in U.S. samples, no hypotheses were formulated regarding potential cluster differences in age and gender. Consistent with Kağitçibaşı's model and prior scholarship, we expected clusters to differ in terms of ethnicity and immigrant background. For example, we expected that Latinos and immigrants (an intersecting category in our sample) would be overrepresented in a cluster corresponding to the heteronomous-related self (low on autonomy, high on relatedness). More significantly, we expected the clusters to differ in conceptually coherent ways on measures of family and individual functioning. For example,

a cluster characterized by endorsement of both autonomy and relatedness should endorse attitudes and behaviors supportive of both independence (e.g., decision making) and interdependence (e.g., family obligations). We also hypothesized that adolescents in a cluster that balanced autonomy and relatedness would have the most positive adjustment.

METHOD

Participants

The analytic sample consisted of 232 adolescent–parent dyads. Youth (58.6% female) were 13–18 years old at Time 1 ($M = 15.83$ years). Youth were ethnically diverse (38.4% Latino; 31.9% European American or White; 29.7% African American or Black) and the majority had been born in the United States. The parent sample ranged in age from 21 to 71 ($M = 43.28$ years); most were mothers (80.0%) and birthparents (92.1%), but the sample included fathers, grandparents, and guardians (e.g., siblings). Parents averaged 13.7 years of education (range 0–24) and reported the family's annual income as a little over \$40,000.

Procedures

Data were from a larger study conducted in 14 project-based youth development programs. To obtain geographic diversity, programs were recruited in three Midwestern locations (Chicago, central Illinois, and Minneapolis/Saint Paul). Reflecting the larger study's goals, seven programs served primarily Latino/a adolescents; the others served primarily European American and African American youth. The larger study followed youth, parents, and program leaders across a single program cycle; the current analysis used parent–child data from the first data collection point (Time 1).

All study procedures were approved by Institutional Review Boards at the investigators' home institutions. At each program, a research team member presented information about the study to youth and gave interested youth a parent information letter (in English and Spanish) that included instructions for opting out of the study. At the first data collection session, youth provided written assent. Youth provided parental contact information, and (with their permission) one of their parents was invited to participate. Youth completed structured questionnaires administered on small laptop computers at the program site (see Raffaelli

et al., 2016 for details). Parents completed self-report questionnaires. Parental data collection was coordinated by a designated "family liaison" at each site and included various strategies (e.g., group data collection sessions, mailing of questionnaire packets with phone call or email reminders). Adolescents and parents each received \$10 for completing questionnaires.

Most eligible youth (355 of 376; 94.4%) participated in the larger study (3 were "opted out" by parents, 7 declined to participate, and 11 did not participate for unknown reasons). Thirty-eight parents did not receive invitations to participate; a subset of youth ($n = 18$) were at a program where parents were not recruited due to funding constraints; 3 youth asked that their parents not be contacted; and 17 parents were not contacted for other reasons (e.g., youth dropped out of program before parent data collection occurred). Of the 317 parents who received invitations to participate, 258 (81.4%) completed the Time 1 questionnaire. The analytic sample ($N = 232$) excluded youth if they (1) did not have matching parent data; (2) were outside the age range of 13–18 years; or (3) reported their ethnicity as "multi-ethnic" or "other."

Measures

Demographics. Parents and adolescents self-reported their age, sex, and ethnicity. Parents reported years of school completed and the family's gross annual income on a scale from 1 = *Less than \$10,000* to 12 = *\$60,000 or more*. Adolescents reported whether they had been born in the United States or another country (and if so, where) and parents completed these questions for themselves and (if relevant) their spouse or partner. This information was used to create a dichotomous indicator of immigrant family status. An immigrant family was defined as one where one or both parents had been born outside the United States (Child Trends, 2014). Based on these criteria, 89.5% of Latino families, 8.1% of Black families, and 8.3% of White families were considered immigrant families.

Autonomy support. Parents and adolescents completed a 4-item version of Soenens et al.'s (2007) measure of parental autonomy support. Parents indicated how well each statement described their attitudes and behavior toward their child (e.g., "I let my child plan things s/he wants to do") on a scale from 1 = *strongly disagree* to 5 = *strongly agree* ($\alpha = .79$). Youth completed child-

report versions of the same items (e.g., "My parents are willing to consider things from my point of view") using the same rating scale ($\alpha = .82$). Overall scores were computed by averaging; higher scores indicated higher levels of parental autonomy support.

Family relatedness. Parents and adolescents completed a 3-item version of Phinney et al.'s (2005) measure of family interdependence, which was developed as a youth report measure of "the value that adolescents place on close, interdependent relationships with their parents" (p. 17). Parallel items were adapted for use with parents. Parents reported on the perceived importance of their child's interdependence (e.g., doing what parents want even when youth disagree, showing respect; $\alpha = .65$). Each item was rated from 1 = *not at all* to 5 = *very much*. The child-report version of the measure assessed the perceived importance youth placed on interdependence with parent(s) using the same response scale ($\alpha = .69$). Overall scores were computed by averaging, with higher scores indicating higher levels of family relatedness.

Adolescent decision making. An adapted version of Dornbusch, Ritter, Mont-Reynaud, and Chen's (1990) measure was used to assess parents' and adolescents' perspectives of the youth's behavioral autonomy. Eleven items assessing decision making about various matters (e.g., romantic relationships, curfew) were rated on a 5-point scale, with 1 indicating adolescents made their own decisions (e.g., *My parent(s) leave the decision making entirely up to me*) and 5 indicating parents made decisions without consulting the adolescent. Scores were recoded and averaged so that higher scores reflect more adolescent independence in decision making (parent $\alpha = .81$; youth $\alpha = .78$).

Goals. Parents and adolescents rated two life goals administered as part of a measure created for the larger study. A list of possible life goals was developed based on prior research (e.g., Borden et al., 2006; Kasser & Ryan, 1993; Knafo & Assor, 2007) and piloted with several groups of youth and parents to identify the most relevant goals and establish a response scale. The final measure consisted of six life goals; for the current analysis, we selected two goals relevant to autonomy (*to be an independent person*) and relatedness (*to follow family traditions or heritage*). Adolescents indicated "How important is this goal to you" and parents

indicated "How important it is to you that your child achieve this goal" from 1 = *Least* to 5 = *Most*.

Family obligations. Parents and youth completed a 6-item measure of behavioral obligations adapted from Fuligni et al.'s (1999) measure of attitudes toward family obligations. Parents reported how often their child helped at home (e.g., running errands, helping with siblings) or spent time with the family (e.g., attending family gatherings, eating family meals), and youth reported how often they engaged in these behaviors. Items were rated from 1 = *Never or rarely* to 5 = *Every day*. Overall scores were computed by averaging with higher scores indicating greater enactment of family obligations (parent $\alpha = .69$; youth $\alpha = .63$).

Parent-child closeness. Youth completed a shortened version of the parent subscale from the Inventory of Parent and Peer Attachment (Armsden & Greenberg, 1987). Six items (two from each of the original domains of trust, communication, and alienation) were selected based on secondary analysis of two datasets (Laible, Carlo, & Raffaelli, 2000; unpublished data from the Quality of Life Study [G. Carlo & M. Raffaelli, co-P.I.]). The six items assessed parent-child closeness (e.g., "I tell my parents about my problems and troubles"). Items were rated from 1 = *Almost never or never true* to 5 = *Almost always or always true*. Negatively worded items were reverse-coded before computing an overall score, with higher scores reflecting higher levels of closeness ($\alpha = .82$).

Problem behaviors. Youth completed a 6-item measure of minor delinquency. Five items were from the National Longitudinal Survey of Youth (Moore, Halle, Vandivere, & Mariner, 2002), and one item was from the National Longitudinal Survey of Adolescent Health (Add Health; Demuth & Brown, 2004). Youth reported how often they had engaged in various problem behaviors in the last two months (e.g., skipped school, got drunk, lied to parents) on a scale of 1 = *Never* to 5 = *More than once a week*. Because of low base rates, each item was recoded with scores ranging from 1.00 through 1.49 = 0 (youth did not commit the act in the previous two months) and 1.50 through 5.00 = 1 (youth committed the act at least once within the last two months), and a composite score was computed by summing.

Plan of Analysis

Missing data analysis using Little's completely at random (MCAR) test was not significant. The data

were therefore treated as MCAR, and missing values were imputed using SPSS (Enders, 2010). Fifty imputed datasets were generated then aggregated to create a single dataset that was used in subsequent analyses. Preliminary analyses included screening data for normality and assessing potential multicollinearity and nonindependence among study variables (detailed results available upon request). These analyses informed the main analyses.

To address the first research question, cluster analysis was conducted to identify groups of similar parent-child dyads based on endorsement of autonomy support and relatedness (Maguire, 1999). Cluster analysis is a useful method of identifying groups (clusters) with similar characteristics (Kaufman & Rousseeuw, 2009) and is appropriate for exploratory studies (B. Ogolsky, personal communication, July 27, 2016; Whiteman & Loken, 2006). To validate the clusters, we followed the approach of using multiple clustering and profiling techniques, referred to as confirmatory cluster analysis (Fisher & Ransom, 1995; Henry et al., 2005). The cluster and profile analyses were conducted using parent and child reports of autonomy support and relatedness (4 variables), and the four measures all used a similar 5-point scale. We implemented this multistep analytic method by using a hierarchical clustering method (Ward's method), nonhierarchical clustering method (k-means), and latent profile analysis (LPA). Hierarchical and k-means clustering was performed using SPSS, and LPA was done using R and the *mclust* package. First, an agglomerative hierarchical method using Ward's (1963) minimum variance technique was utilized to determine the ideal number of clusters in the data. With this method, objects are merged in a manner that minimizes within-cluster variance to create distinct groupings (Mooi & Sarstedt, 2011). The determination of the number of clusters was based on examination of the dendrogram and coherence of the clusters. To check the validity of the initial solution, the k-means method and LPA were used. K-means utilizes the within-cluster variation to form homogenous clusters and requires that the researcher determine the number of solutions a priori (Mooi & Sarstedt, 2011). Unlike the heuristic-based approaches of hierarchical and k-means clustering, LPA provides fit indexes such as Bayesian information criterion (BIC) that allow for comparisons of model fit for selection of the number of clusters observed, with lower BIC values considered more likely to represent true models (Dziak, Coffman, Lanza, & Li, 2012). To confirm and test

the replicability of the hierarchical cluster analyses, we set the expected number of clusters in the *k*-means to match the results from Ward's technique (three) and for the LPA to range between a solution of two to four profiles. One-way ANOVAs were performed to examine cluster differences on the cluster variables.

To address the second research question, we compared the clusters on demographic and attitudinal, behavioral, and adjustment factors. One-way ANCOVAs controlling for family income were performed for continuous variables (e.g., decision making, goals). Parental reports of years of education were not used a covariate due to concerns about multicollinearity with the income variable, $r(232) = .48, p < .001$. Welch's ANOVAs were used in comparisons where data violated assumptions of homogeneity of variance. Chi-squares tests were used to examine cluster differences in categorical variables (e.g., race/ethnicity).

RESULTS

Configurations of Autonomy–Relatedness: Identification of Groups

The exploratory hierarchical Ward's cluster analysis revealed a three-cluster solution based on examination of the agglomeration schedule and dendrogram. Figure 1 displays group means on the clustering variables; scores were standardized to illustrate each group's standing relative to the overall sample. As shown in Figure 1, the first cluster ($n = 126; 54%$) consisted of dyads with average-to-moderate parent and youth reports of autonomy support and relatedness (all scores between 0.13

and 0.57 standard deviations above the group mean). For descriptive purposes, we labeled this group "autonomous-related." The second cluster ($n = 62; 27%$) consisted of dyads where the parent reported above average autonomy support and relatedness, and youth reported below average autonomy support and markedly low relatedness relative to the overall sample. We labeled this the "low youth relatedness" group. The third cluster ($n = 44; 19%$) consisted of dyads with below average parent and youth reports of autonomy support and relatedness (particularly autonomy support, which was around 1 *SD* below the mean for both parents and adolescents). We named this the "low autonomy" group.

To examine cluster distinctiveness, the three groups were compared on the four clustering variables using ANCOVAs with pairwise follow-up tests (see Table 1). There was a significant difference on parent reports of both autonomy support and relatedness by cluster membership, and post hoc tests indicate that Cluster 1 and Cluster 2 were both significantly higher on these variables than Cluster 3. There were also significant cluster differences on youth reports of both autonomy support and relatedness, and post hoc revealed that all clusters were different from each other. Youth in Cluster 1 reported higher levels of both autonomy and relatedness than both Clusters 2 and 3. Cluster 2 had significantly higher reports of autonomy than Cluster 3, whereas the opposite pattern was seen for family relatedness.

To test the replicability of the initial results, *k*-means clustering was conducted with a three-cluster solution specified. Comparisons of cluster membership revealed that 79.3% of dyads were

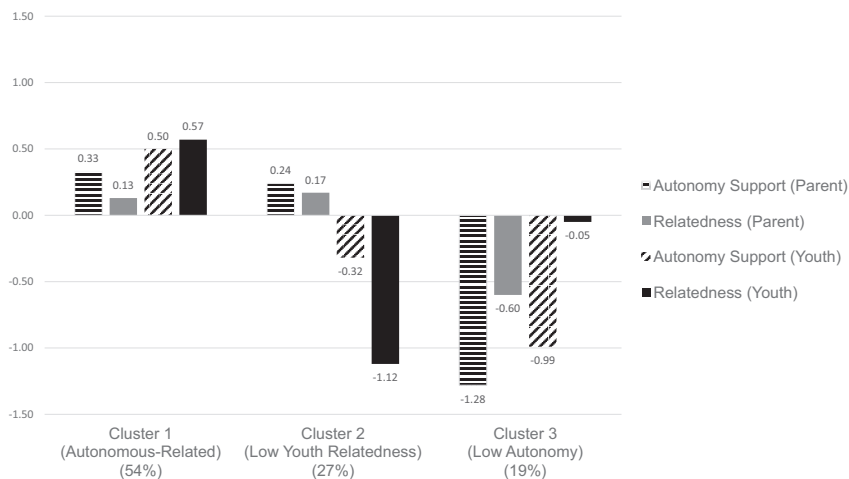


FIGURE 1 Standardized scores on autonomy and relatedness by cluster membership.

TABLE 1
Overall and Cluster Means on Parent and Youth Reports of Autonomy Support and Family Relatedness

	Overall sample (N = 232)	Cluster (hierarchical)			F statistic
		Cluster 1 (autonomous-related) (n = 126)	Cluster 2 (low youth relatedness) (n = 62)	Cluster 3 (low autonomy) (n = 44)	
Autonomy support (parent)	3.85 (0.68)	4.06 (0.54) ^a	4.02 (0.52) ^a	3.02 (0.52) ^b	64.87***
Relatedness (parent)	3.97 (0.74)	4.06 (0.63) ^a	4.09 (0.61) ^a	3.52 (1.00) ^b	10.80***
Autonomy support (youth)	3.64 (0.81)	4.05 (0.61) ^a	3.39 (0.67) ^b	2.86 (0.61) ^c	56.77***
Relatedness (youth)	3.78 (0.82)	4.25 (0.57) ^a	2.86 (0.55) ^b	3.73 (0.63) ^c	120.63***

Note. Means with different superscripts differ at $p \leq .05$.

Figures are means (standard deviations).

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

classified in the same clusters across both methods. (A study using a similar approach reported a 73% overlap between the two clustering methods, which was deemed sufficient; Fisher & Ransom, 1995.) LPA was then conducted setting the maximum possible number of clusters solutions at four. BIC values for the 2- through 4-profile solutions were, respectively, 2,150.72, 2,149.00, and 2,155.61. Although the differences between the solutions were small and not significant, the 3-profile solution had the lowest BIC, and there was a 67.2% overlap between the Ward's hierarchical clusters and the LPA.

Comparisons of the three groups on the clustering variables across the two replication analyses (k-means and LPA) yielded a similar pattern of results to those for the initial (Ward's) solution (results available from first author). Taken together, these analyses validated and confirmed the exploratory results. Therefore, all subsequent analyses utilized the three-cluster solution obtained from the Ward's (hierarchical) clusters.

Variations Between Clusters: Group Comparisons

Youth and family demographics. Table 2 displays the demographic characteristics of the three clusters. There was no association between cluster membership and child gender, χ^2 (2, $N = 232$) = 1.03, $p = .60$, or age, $F(2, 229) = 0.37$, $p = .69$. However, there was an association between cluster membership and ethnicity, χ^2 (2, $N = 232$) = 22.73, $p < .001$. Post hoc chi-square tests using Bonferroni adjustments showed that European Americans were overrepresented, and Latinos underrepresented, in Cluster 1, $p < .001$; in contrast, Cluster 3 had more Latinos and fewer European Americans, than expected, $p < .001$.

There was also an association between cluster membership and immigrant family status, χ^2 (2, $N = 232$) = 15.24, $p < .001$. Post hoc chi-square tests using Bonferroni adjustments revealed that Cluster 1 had fewer, and Cluster 3 more, immigrant families than expected, $p < .001$. It should be noted that ethnicity and immigrant family background were associated; for example, two-thirds of dyads in Cluster 3 were from immigrant families (65%), with the majority of these (96%) being Latinos. Cluster differences were found on parent education, $F(2, 228) = 3.99$, $p = .02$, with parents in Clusters 1 and 2 having more years of education than those in Cluster 3. Similarly, families in Clusters 1 and 2 had significantly higher annual incomes than Cluster 3, $F(2, 229) = 6.53$, $p = .002$.

TABLE 2
Descriptive Demographic Variables by Cluster

	Overall sample (N = 232)	Cluster (hierarchical)		
		Cluster 1 (autonomous-related) (n = 126)	Cluster 2 (low youth relatedness) (n = 62)	Cluster 3 (low autonomy) (n = 44)
Parent gender (female)	77.2%	81.1%	78.7%	78.0%
Child gender (female)	58.6%	60.3%	58.6%	61.4%
Race/ethnicity				
Latino/a American (LA)	38.4%	28.6% LA	40.3% LA	63.6% LA
African American (AA)	29.7%	30.2% AA	29.0% AA	29.5% AA
European American (EA)	31.9%	41.3% EA	39.7% EA	6.8% EA
Immigrant family	40.0%	31.1%	39.7%	65.1%
Child age	15.82 (1.18)	15.90 (1.20)	15.72 (1.07)	15.75 (1.27)
Parent education (years)	13.69 (4.25)	14.31 (4.03) ^a	13.18 (4.11) ^a	12.63 (4.14) ^b
Family annual income ^c	7.30 (3.88)	7.95 (3.76) ^a	7.23 (4.00) ^a	5.56 (3.57) ^b

Note. Means with different superscripts differ at $p \leq .05$ based on Bonferroni post hoc paired comparisons.

^aResponse scale: 1 = Less than \$10,000 to 12 = \$60,000 or more (M of 7.3 is equivalent to \$35,000–\$39,999).

Family and individual dynamics and functioning. As shown in Table 3, six of the 10 comparison tests for cluster differences on the theoretically identified attitudinal, behavioral, and adjustment factors were significant ($p < .05$).

Starting with variables tapping into autonomy-related behaviors and attitudes, a similar pattern was observed on three of the four comparisons. For both parental and youth reports of decision making, the overall F test was significant, and post hoc tests revealed that Clusters 1 and 2 reported higher levels of youth decision making than Cluster 3 (but did not differ from each other). Clusters also differed on parent (but not youth) ratings of the importance of the goal of the child being an independent person, with post hoc tests revealing the same pattern: parents in Clusters 1 and 2 placed higher importance on this goal than Cluster 3.

There were cluster differences in youth but not parents reports of variables tapping into relatedness. Youth in Clusters 1 and 3 reported higher levels of family obligations than youth in Cluster 2. Youth in Cluster 1 reported feeling closer to parents than their counterparts in both Clusters 2 and 3. Finally, significant cluster differences were found on the indicator of youth adjustment. Youth in Cluster 1 engaged in fewer problem behaviors than their peers in both Clusters 2 and 3.

DISCUSSION

Autonomy and relatedness are central issues for families with adolescents and have been the focus of considerable theoretical and empirical interest. This current study explored how autonomy and relatedness are configured in a diverse U.S. sample of parent–adolescent dyads. Three clusters were identified based on dyadic reports of attitudes regarding parental autonomy support and family relatedness. The three clusters differed on both demographic factors and a set of conceptually identified attitudinal, behavioral, and adjustment factors. Findings provide empirical support for theoretical models of autonomy–relatedness and contribute to understanding how autonomy and relatedness intersect to influence adolescent and family adaptation in contemporary U.S. society.

Autonomy–Relatedness Clusters in Diverse Families

Distinct clusters based on dyadic reports of autonomy support and family relatedness were identified that can be mapped onto various

TABLE 3
Overall and Cluster Differences on Functioning Variables

	Cluster (hierarchical)				F statistic
	Overall sample (N = 232)	Cluster 1 (autonomous-related) (n = 126)	Cluster 2 (low youth relatedness) (n = 62)	Cluster 3 (low autonomy) (n = 44)	
Decision making (parent)	3.28 (0.63)	3.35 (0.62) ^u	3.31 (0.68) ^u	3.05 (0.54) ^b	3.63*
Decision making (youth)	3.72 (0.65)	3.80 (0.60) ^u	3.74 (0.72) ^u	3.47 (0.62) ^b	4.24*
Independent person (parent)	4.64 (0.54)	4.77 (0.41) ^u	4.65 (0.50) ^u	4.27 (0.72) ^b	15.89***
Independent person (youth)	4.36 (0.74)	4.40 (0.73)	4.28 (0.80)	4.37 (0.70)	0.52
Family obligations (parent)	3.58 (0.72)	3.64 (0.71)	3.64 (0.76)	3.35 (0.70)	2.77
Family obligations (youth)	3.31 (0.77)	3.45 (0.79) ^u	3.06 (0.62) ^b	3.29 (0.80) ^u	5.36**
Follow family traditions (parent)	3.66 (1.54)	3.64 (1.11)	3.59 (1.35)	3.85 (0.97)	0.74
Follow family traditions (youth)	3.17 (1.10)	3.20 (1.04)	2.94 (1.20)	3.40 (1.07)	2.37
Closeness to parent (youth)	3.24 (0.94)	3.57 (0.87) ^u	2.72 (0.77) ^b	3.02 (0.96) ^b	21.32***
Problem behaviors (youth)	1.17 (1.39)	0.77 (0.96) ^u	1.69 (1.54) ^b	1.68 (1.78) ^b	14.70***

Note. Means with different superscripts differ at $p \leq .05$. Figures are means (standard deviations). * $p < .05$; ** $p < .01$; *** $p < .001$.

conceptualizations of Kağıtçıbaşı’s framework (e.g., Kağıtçıbaşı & Yalin, 2015). The “autonomous-related” cluster resembles Kağıtçıbaşı’s model of psychological interdependence, marked by both high autonomy and relatedness, and the “low autonomy” cluster aligns with the model of interdependence. The “low youth relatedness” cluster is a little more difficult to place within Kağıtçıbaşı’s framework, as it was characterized by dyads where parents reported above average autonomy support and relatedness, but youth reported below average autonomy support and markedly low relatedness. This configuration may reflect a striving for autonomy and separation on the part of youth (regardless of their parents’ actions and attitudes) and thus appears to match the family model of independence (Kağıtçıbaşı & Yalin, 2015).

The findings complement and extend work conducted in majority-world countries and Europe (Georgas et al., 2006; Mayer et al., 2012) by identifying Kağıtçıbaşı’s family models in a U.S. context. The clusters had some similarities to those reported in Smetana and Gettman’s (2006) study of African American adolescents (e.g., both studies revealed clusters where youth had moderate-to-high levels of both autonomy and relatedness). However, perhaps because our sample was more demographically diverse and included parents, our clusters aligned more closely with those proposed by Kağıtçıbaşı. It should be noted that the labels “low” and “high” reflect each group’s standing relative to the overall sample rather than to actual scores on the measures. For example, the “low youth relatedness” group’s mean on the measure of relatedness was just below the midpoint (2.86), not at the low end of the scale (1); similarly, parents and youth in the “low autonomy support” group were below the midpoint but not at the low end of the scale. Despite this caveat, our findings suggest that autonomy *with* relatedness is the predominant family type in the United States.

The analyses revealed discrepancies between parent and child reports of autonomy and relatedness. This was particularly notable in the “low youth relatedness” cluster. Although youth and parent reports also differed in the other two clusters, the differences were smaller and responses tended to follow the same pattern (i.e., both parent and youth either above or below the mean). Incongruence in parent–child reports is commonly reported in dyadic studies of family constructs, including parental acceptance, psychological control, and behavioral control (Korelitz & Garber, 2016), family decision making (Smetana,

Campione-Barr, & Daddis, 2004), and value orientations (Roest, Dubas, Gerris, & Engels, 2009). Discrepancies have been attributed to a variety of causes, ranging from legitimate differences in perspectives between family members to informant (e.g., child age) or family (e.g., parents' marital status) characteristics (for review, see Rote & Smetana, 2016). Determining the reasons for parent-child discrepancies is beyond the scope of the current study but represents a potentially fruitful avenue for future research.

The three clusters differed on demographic factors and a set of conceptually identified attitudinal, behavioral, and adjustment factors. Starting with demographics, European American dyads were overrepresented in the "autonomous-related" cluster, which suggests that European American families may not follow the model of independence. Instead, and consistent with other scholars (Grotevant & Cooper, 1986; Larson, Pearce, Sullivan, & Jarrett, 2007), they more closely reflect Kağıtçıbaşı's model of psychological interdependence that promotes autonomy with relatedness. Latino American dyads were overrepresented in the "low autonomy" cluster, which is consistent with previous research indicating that the gaining of autonomy may be different in Latino families due to cultural values emphasizing familial respect and authority (e.g., Fuligni & Yoshikawa, 2003; Fuligni et al., 1999) and later age expectations regarding children's autonomy (Phinney et al., 2005). Immigrant status and acculturation likely play a role in these findings. The majority of Latinos in the "low autonomy" cluster were in immigrant families, and patterns of autonomy granting tend to shift as families adapt to a new culture (Zimmer-Gembeck & Collins, 2003). The "low autonomy" cluster also had fewer years of education and lower income levels than the other clusters, which is consistent with the theory of family change (Kağıtçıbaşı & Yalin, 2015), although post hoc tests indicated that cluster differences in autonomy and relatedness remained when controlling for socioeconomic status.

Of note, the clusters differed in theoretically consistent ways on patterns of family dynamics and functioning. Both parents and children from the "autonomous-related" and "low youth relatedness" clusters reported higher levels of youth decision making than the "low autonomy" cluster, which is consistent with the view of decision making as a behavioral manifestation of autonomy (e.g., Fuligni & Eccles, 1993; Steinberg, 1990) and prior studies reporting associations between parental autonomy support and youth decision-making autonomy

(Fousiani et al., 2014). The finding that the "autonomous-related" cluster had high levels of youth decision making demonstrates that high levels of behavioral autonomy can coexist with strong family relatedness (e.g., Ryan & Deci, 2000), supporting the view that autonomy and relatedness may be additive or functionally dependent (e.g., Tamis-LeMonda et al., 2007). The "autonomous-related" cluster and "low youth relatedness" cluster differed on the measure of autonomy (volitional support); however, they did not differ on decision making. Patterns of autonomy support and family relatedness aligned with family goals for independence and family traditions and obligations (Kağıtçıbaşı, 1996, 2007). The two clusters with higher parental autonomy support also had parents who placed greater importance on the goal of their children becoming independent, and the "low youth relatedness" cluster had the lowest levels of youth report of family obligations and youth report of following family traditions as an important goal. These cluster differences are largely consistent with theory and expectations (e.g., higher autonomy is associated with increased youth decision making) and provide support for perspectives that autonomy and relatedness are compatible (e.g., high youth decision making in clusters with high levels of relatedness).

Findings relating to youth reports of closeness to parents and minor delinquency are consistent with theoretical predictions that the autonomous-related self is associated with positive adjustment (Kağıtçıbaşı & Yalin, 2015) and empirical studies linking adolescent well-being to both parental autonomy support (Inguglia et al., 2015; Ratelle et al., 2005; Ryan & Deci, 2002) and relatedness (Beyers & Goossens, 1999; Ryan & Lynch, 1989). Notably, youth in the "autonomous-related" cluster had the lowest engagement in problem behaviors and the highest levels of closeness to parents. Other studies have demonstrated similar associations of autonomy and problem behavior (e.g., Brauer, 2017). The lower levels of closeness to parents, and higher levels of problem behaviors, observed in the other two clusters may reflect relationship difficulties leading to (or stemming from) mismatches between adolescents' and parents' views relating to appropriate parent-child relationships. Moreover, as discussed previously, discrepancies in parent-child reports have themselves been linked to poor adjustment in some (but not all) studies (see Korelitz & Garber, 2016); thus, some of the observed cluster differences may be due to parent-child discrepancies in perspectives

(rather than the absolute levels of the relevant variables). Taken as a whole, findings support the perspective that both autonomy and relatedness are beneficial for youths' well-being (e.g., Grotevant & Cooper, 1986).

Limitations and Future Directions

There are several limitations worth mentioning. First, there were ethnic group differences in demographic characteristics; therefore, caution must be taken when interpreting study findings relating to ethnicity. Future studies can recruit samples that have more variability in terms of SES within ethnic groups (e.g., by purposively recruiting middle or higher SES Latino and African American families). Although this is noted as a study limitation, it can also be viewed as a strength, as these sample characteristics reflect general trends within the U.S. population (U.S. Census Bureau, 2015). A second set of limitations resulted from use of an existing dataset. The measures of autonomy support and family relatedness were based on validated measures, but they were shortened to reduce respondent burden and thus may not fully capture the constructs. Moreover, SDT scholars have proposed a form of relatedness that is not necessarily the same as the conceptualization from the cross-cultural literature utilized in this study (Ryan & Deci, 2000). Finally, only one indicator of youth adjustment was available. Future research that includes additional measures of relevant constructs is needed to replicate and confirm the current findings. A third limitation is that although the dyadic cross-sectional design was suitable to the research questions, there are likely to be developmental changes in how parents and children negotiate issues of autonomy and relatedness (e.g., Steinberg, 2013). Therefore, longitudinal studies that replicate and extend the current analysis in other samples and contexts are needed.

CONCLUSION

This study contributes to the theoretical and empirical literature on contemporary U.S. adolescents and families. The identification of clusters based on dyadic reports of autonomy and relatedness supports theories and frameworks that have been proposed and observed in cross-cultural studies (e.g., Kağıtçıbaşı's model of family change). The findings also demonstrate the importance of examining how intersections of autonomy and relatedness may be linked to important issues of family functioning

(e.g., family goals and family closeness) and well-being and positive development (e.g., decreased problem behavior). The current study provides insight on the configurations of autonomy and relatedness of parents and adolescents the United States, as well as how such patterns are associated with family functioning. Future research can build upon this work to explore the replicability of these configurations in other populations and contexts and their correlates to other aspects of youth and family functioning.

REFERENCES

- Armsden, G. C., & Greenberg, M. T. (1987). The Inventory of Parent and Peer Attachment: Individual differences and their relationship to psychological well-being in adolescence. *Journal of Youth and Adolescence*, 2, 427–454. <https://doi.org/10.1007/BF02202939>
- Beyers, W., & Goossens, L. (1999). Emotional autonomy, psychosocial adjustment and parenting: Interactions, moderating and mediating effects. *Journal of Adolescence*, 22, 753–769. <https://doi.org/10.1006/jado.1999.0268>
- Beyers, W., Goossens, L., Vansant, I., & Moors, E. (2003). A structural model of autonomy in middle and late adolescence: Connectedness; separation, detachment, and agency. *Journal of Youth & Adolescence*, 32, 351–365. <https://doi.org/10.1023/A:1024922031510>
- Borden, L. M., Perkins, D. F., Villarruel, F. A., Carleton-Hug, A., Stone, M. R., & Keith, J. G. (2006). Challenges and opportunities to Latino youth development: Increasing meaningful participation in youth development programs. *Hispanic Journal of Behavioral Sciences*, 28, 187–208. <https://doi.org/10.1177/0739986306286711>
- Brauer, J. R. (2017). Cultivating conformists or raising rebels? Connecting parental control and autonomy support to adolescent delinquency? *Journal of Research on Adolescence*, 27, 452–470. <https://doi.org/10.1111/jora.12283041>
- Buhl, H. M. (2008). Development of a model describing individuated adult child–parent relationships. *International Journal of Behavioral Development*, 32, 381–389. <https://doi.org/10.1177/0165025408093656>
- Chang, E. S., Chen, C., & Kim, E. (2015). Have you set your life priorities straight? Inter-generational differences in life goals among European and East Asian Americans college students and their mothers. *Journal of Comparative Family Studies*, 46, 541–555. <https://doi.org/10.3138/jcfs.46.4.541>
- Child Trends. (2014). *Immigrant children*. Retrieved from <https://www.childtrends.org/?indicators=immigrant-children>
- Chirkov, V., Ryan, R. M., Kim, Y., & Kaplan, U. (2003). Differentiating autonomy from individualism and independence: A self-determination theory perspective

- on internalization of cultural orientations and well-being. *Journal of Personality and Social Psychology*, 84, 97–110. <https://doi.org/10.1037/0022-3514.84.1.97>
- Cross, S. E., & Madson, L. (1997). Models of the self: Self-construals and gender. *Psychological Bulletin*, 122, 5–37. <https://doi.org/10.1037/0033-2909.122.1.5>
- Deci, E. L., & Ryan, R. M. (2000). The “what” and “why” of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11, 319–338. https://doi.org/10.1207/s15327965pli1104_01
- Demuth, S., & Brown, S. L. (2004). Family structure, family processes, and adolescent delinquency: The significance of parental absence versus parental gender. *Journal of Research in Crime and Delinquency*, 41, 58–81. <https://doi.org/10.1177/0022427803256236>
- Dornbusch, S. M., Ritter, P. L., Mont-Reynaud, R., & Chen, Z. (1990). Family decision making and academic performance in a diverse high school population. *Journal of Adolescent Research*, 5, 143–160. <https://doi.org/10.1177/074355489052003>
- Dziak, J. J., Coffman, D. L., Lanza, S. T., & Li, R. (2012). *Sensitivity and specificity of information criteria* (Technical Report Series 12-119). Retrieved from <https://methodology.psu.edu/media/techreports/12-119.pdf>
- Enders, C. K. (2010). *Applied missing data analysis*. New York, NY: Guilford.
- Fisher, L., & Ransom, D. C. (1995). An empirically derived typology of families: I. Relationships with adult health. *Family Process*, 34(2), 161–182. <https://doi.org/10.1111/j.1545-5300.1995.00161.x>
- Fousiani, K., Van Petegem, S., Soenens, B., Vansteenkiste, M., & Chen, B. (2014). Does parental autonomy support relate to adolescent autonomy? An in-depth examination of a seemingly simple question. *Journal of Adolescent Research*, 29, 299–330. <https://doi.org/10.1177/0743558413502536>
- Fulgini, A. (1998). Authority, autonomy, and parent-adolescent conflict and cohesion: A study of adolescents from Mexican, Chinese, Filipino, and European backgrounds. *Developmental Psychology*, 34, 782–792. <https://doi.org/10.1037/0012-1649.34.4.782>
- Fulgini, A. J., & Eccles, J. S. (1993). Perceived parent-child relationships and early adolescents' orientation toward peers. *Developmental Psychology*, 29, 622–632. <https://doi.org/10.1037/0012-1649.29.4.622>
- Fulgini, A. J., Tseng, V., & Lam, M. (1999). Attitudes toward family obligations among American adolescents with Asian, Latin American, and European backgrounds. *Child Development*, 70, 1030. <https://doi.org/10.1111/1467-8624.00075>
- Fulgini, A. J., & Yoshikawa, H. (2003). Socioeconomic resources, parenting, and child development among immigrant families. In M. Bornstein, & R. Bradley (Eds.), *Socioeconomic status, parenting, and child development* (pp. 107–124). Mahwah, NJ: Erlbaum.
- Georgas, J., Berry, J. W., van de Vijver, F. J. R., Kağıtçıbaşı, C., & Poortinga, Y. H. (2006). *Families across cultures: A 30-nation psychological study*. Cambridge, UK: Cambridge University Press. <https://doi.org/10.1017/CBO9780511489822>
- Grotevant, H. D., & Cooper, C. R. (1986). Individuation in family relationships: A perspective on individual differences in the development of identity and role-taking skills in adolescence. *Human Development*, 29, 82–100. <https://doi.org/10.1159/000273025>
- Henry, D. B., Tolan, P. H., & Gorman-Smith, D. (2005). Cluster analysis in family psychology research. *Journal of Family Psychology*, 19(1), 121–132. <https://doi.org/10.1037/0893-3200.19.1.121>
- Inguglia, C., Ingoglia, S., Liga, F., Lo Coco, A., & Lo Cricchio, M. (2015). Autonomy and relatedness in adolescence and emerging adulthood: Relationships with parental support and psychological distress. *Journal of Adult Development*, 22, 1–13. <https://doi.org/10.1007/s10804-014-9196-8>
- Jose, P. E., Huntsinger, C. S., Huntsinger, P. R., & Liaw, F. (2000). Parental values and practices relevant to young children's social development in Taiwan and the United States. *Journal of Cross-Cultural Psychology*, 31, 677–702. <https://doi.org/10.1177/0022022100031006002>
- Kağıtçıbaşı, Ç. (1996). The autonomous-relational self: A new synthesis. *European Psychologist*, 1, 180–186. <https://doi.org/10.1027/1016-9040.1.3.180>
- Kağıtçıbaşı, Ç. (2005). Autonomy and relatedness in cultural context: Implications for self and family. *Journal of Cross-Cultural Psychology*, 36, 403–422. <https://doi.org/10.1177/0022022105275959>
- Kağıtçıbaşı, Ç. (2007). *Family, self, and human development across cultures: Theory and application*. Mahwah, NJ: Erlbaum.
- Kağıtçıbaşı, Ç. (2013). Adolescent autonomy-relatedness and the family in cultural context: What is optimal? *Journal of Research on Adolescence*, 23, 223–235. <https://doi.org/10.1111/jora.12041>
- Kağıtçıbaşı, Ç., & Yalin, C. (2015). Family in adolescence: Relatedness and autonomy across cultures. In L. A. Jensen (Ed.), *The Oxford handbook of human development and culture: An interdisciplinary perspective* (pp. 410–424). New York, NY: Oxford University Press.
- Kasser, T., & Ryan, R. M. (1993). A dark side of the American dream: Correlates of financial success as a central life aspiration. *Journal of Personality and Social Psychology: Personality Processes and Individual Differences*, 65, 410–422. <https://doi.org/10.1037/0022-3514.65.2.410>
- Kaufman, L., & Rousseeuw, P. J. (2009). *Finding groups in data: An introduction to cluster analysis* (Vol. 344). New York, NY: Wiley.
- Kenny, D. A., Kashy, D. A., & Cook, W. L. (2006). *Dyadic data analysis*. New York, NY: Guilford.
- Knafo, A., & Assor, A. (2007). Motivation for agreement with parental values: Desirable when autonomous, problematic when controlled. *Motivation and Emotion*, 31(3), 232–245. <https://doi.org/10.1007/s11031-007-9067-8>

- Knafo, A., & Schwartz, S. H. (2001). Value socialization in families of Israeli-born and Soviet-born adolescents in Israel. *Journal of Cross-Cultural Psychology, 32*(2), 213–228. <https://doi.org/10.1177/0022022101032002008>
- Koepke, S., & Denissen, J. J. A. (2012). Dynamics of identity development and separation-individuation in parent-child relationships during adolescence and emerging adulthood: A conceptual integration. *Developmental Review, 32*, 67–88. <https://doi.org/10.1016/j.dv.2012.01.001>
- Korelitz, K. E., & Garber, J. (2016). Congruence of parents' and children's perceptions of parenting: A meta-analysis. *Journal of Youth and Adolescence, 45*, 1973–1995. <https://doi.org/10.1007/s10964-016-0524-0>
- Laible, D. J., Carlo, G., & Raffaelli, M. (2000). The differential relations of parent and peer attachment to adolescent adjustment. *Journal of Youth and Adolescence, 29*, 45–59. <https://doi.org/10.1023/A:1005169004882>
- Larson, R. W., Pearce, N., Sullivan, P. J., & Jarrett, R. L. (2007). Participation in youth programs as a catalyst for negotiation of family autonomy with connection. *Journal of Youth and Adolescence, 36*, 31–45. <https://doi.org/10.1007/s10964-006-9133-7>
- Maguire, M. C. (1999). Treating the dyad as the unit of analysis: A primer on three analytic approaches. *Journal of Marriage and the Family, 61*, 213–223. <https://doi.org/10.2307/353895>
- Martinez, C. R., McClure, H. H., Eddy, J. M., & Wilson, D. M. (2011). Time in U.S. residency and the social, behavioral, and emotional adjustment of Latino immigrant families. *Hispanic Journal of Behavioral Science, 33*, 323–349. <https://doi.org/10.1177/0739986311411281>
- Mayer, B., Trommsdorff, G., Kağıtçıbaşı, C., & Mishra, R. C. (2012). Family models of independence/interdependence and their intergenerational similarity in Germany, Turkey, and India. *Family Science, 3*(1), 64. <https://doi.org/10.1080/19424620.2011.671503>
- McShane, K. E., Hastings, P. D., Smylie, J. K., & Prince, C., & The Tungasuvvingat Inuit Family Resource Centre (2009). Examining evidence for autonomy and relatedness in urban Inuit parenting. *Culture & Psychology, 15*, 411–431. <https://doi.org/10.1177/1354067X09344880>
- Mooi, E., & Sarstedt, M. (2011). *A concise guide to market research: The process, data, and methods using IBM SPSS statistics*. Berlin, Germany: Springer. <https://doi.org/10.1007/978-3-642-12541-6>
- Moore, K. A., Halle, T. G., Vandivere, S., & Mariner, C. L. (2002). Scaling back survey scales: How short is too short? *Sociological Methods & Research, 30*, 530–567. <https://doi.org/10.1177/0049124102030004003>
- Phinney, J., Kim-Jo, T., Osorio, S., & Vilhjálmsdóttir, P. (2005). Autonomy and relatedness in adolescent-parent disagreements: Ethnic and developmental factors. *Journal of Adolescent Research, 20*, 8–39. <https://doi.org/10.1177/0743558404271237>
- Pinquart, M., & Silbereisen, R. K. (2002). Changes in adolescents' and mothers' autonomy and connectedness in conflict discussions: An observation study. *Journal of Adolescence, 25*, 509–522. <https://doi.org/10.1006/jado.2002.0491>
- Raffaelli, M., Armstrong, J., Tran, S. P., Griffith, A. N., Walker, K., & Gutierrez, V. (2016). Focus on Methodology: Beyond paper and pencil: Conducting computer-assisted data collection with adolescents in group settings. *Journal of Adolescence, 49*, 1–9. <https://doi.org/10.1016/j.adolescence.2016.02.002>
- Ratelle, C. F., Larose, S., Guay, F., & Sénécal, C. (2005). Perceptions of parental involvement and support as predictors of college students' persistence in a science curriculum. *Journal of Family Psychology, 19*, 286–293. <https://doi.org/10.1037/0893-3200.19.2.286>
- Roest, A. M. C., Dubas, J. S., Gerris, J. R. M., & Engels, R. C. M. E. (2009). Value similarities among fathers, mothers, and adolescents and the role of a cultural stereotype: Different measurement strategies reconsidered. *Journal of Research on Adolescence, 19*, 812–833. <https://doi.org/10.1111/j.1532-7795.2009.00621.x>
- Rote, W. M., & Smetana, J. G. (2016). Patterns and predictors of mother-adolescent discrepancies across family constructs. *Journal of Youth and Adolescence, 45*, 2064–2079. <https://doi.org/10.1007/s10964-016-0515-1>
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist, 55*, 68. <https://doi.org/10.1037/0003-066X.55.1.68>
- Ryan, R. M., & Deci, E. L. (2002). An overview of self-determination theory. In E. L. Deci, & R. M. Ryan (Eds.), *Handbook of self-determination research* (pp. 3–33). Rochester, NY: University of Rochester Press.
- Ryan, R. M., & Deci, E. L. (2006). Self-regulation and the problem of human autonomy: Does psychology need choice, self-determination, and will? *Journal of Personality, 74*, 1557–1586. <https://doi.org/10.1111/j.1467-6494.2006.00420.x>
- Ryan, R. M., & Lynch, J. (1989). Emotional autonomy versus detachment: Revisiting the vicissitudes of adolescence and young adulthood. *Child Development, 60*, 340–356. <https://doi.org/10.2307/1130981>
- Smetana, J. G. (2002). Culture, autonomy, and personal jurisdiction in adolescent-parent relationships. In R. V. Kail, & H. W. Reese (Eds.), *Advances in child development and behavior* (Vol. 29, pp. 51–87). San Diego, CA: Academic Press.
- Smetana, J. G., Campione-Barr, N., & Daddis, C. (2004). Longitudinal development of family decision making: Defining healthy behavioral autonomy for middle-class African American adolescents. *Child Development, 75*, 1418–1434. <https://doi.org/10.1111/j.1467-8624.2004.00749.x>
- Smetana, J. G., & Gettman, D. C. (2006). Autonomy and relatedness with parents and romantic development in African American adolescents. *Developmental Psychology, 42*, 1347–1351. <https://doi.org/10.1037/0012-1649.42.6.1347>

- Soenens, B., Vansteenkiste, M., Lens, W., Luyckx, K., Goossens, L., Beyers, W., & Ryan, R. M. (2007). Conceptualizing parental autonomy support: Adolescent perceptions of promotion of independence versus promotion of volitional functioning. *Developmental Psychology, 43*, 633–646. <https://doi.org/10.1037/0012-1649.43.3.633>
- Soenens, B., Vansteenkiste, M., & Sierens, E. (2009). How are parental psychological control and autonomy-support related? Naturally occurring profiles of psychological control and two types of autonomy-support. *Journal of Marriage and Family, 71*, 187–202. <https://doi.org/10.1111/j.1741-3737.2008.00589.x>
- Steinberg, L. (1990). Interdependency in the family: Autonomy, conflict, and harmony in the parent-adolescent relationship. In S. S. Feldman, & G. R. Elliot (Eds.), *At the threshold: The developing adolescent* (pp. 255–282). Cambridge, MA: Harvard University Press.
- Steinberg, L. (2013). *Adolescence*. Boston, MA: McGraw-Hill.
- Steinberg, L., & Silverberg, S. B. (1986). The vicissitudes of autonomy in early adolescence. *Child Development, 57*, 841–851. <https://doi.org/10.2307/1130361>
- Tamis-LeMonda, C. S., Way, N., Hughes, D., Yoshikawa, H., Kalman, R. K., & Niwa, E. Y. (2007). Parents' goals for children: The dynamic coexistence of individualism and collectivism in cultures and individuals. *Social Development, 17*, 183–209. <https://doi.org/10.1111/j.1467-9507.2007.00419.x>
- U.S. Census Bureau. (2015). *Educational attainment in the United States: 2015*. Retrieved from <https://www.census.gov/content/dam/Census/library/publications/2016/demo/p20-578.pdf>
- Ward, J. H. (1963). Hierarchical grouping to optimize an objective function. *Journal of the American Statistical Association, 58*, 236–244. <https://doi.org/10.1080/01621459.1963.10500845>
- Whiteman, S. D., & Loken, E. (2006). Comparing analytic techniques to classify dyadic relationships: An example using siblings. *Journal of Marriage and Family, 68*, 1370–1382. <https://doi.org/10.1111/j.1741-3737.2006.00333.x>
- Williams, G. C., Cox, E. M., Hedberg, V., & Deci, E. L. (2000). Extrinsic life goals and health risk behaviors in adolescents. *Journal of Applied Social Psychology, 30*, 1756–1771. <https://doi.org/10.1111/j.1559-1816.2000.tb02466.x>
- Wittenborn, A. K., Dolbin-MacNab, M. L., & Keiley, M. K. (2013). Dyadic research in marriage and family therapy: Methodological considerations. *Journal of Marital and Family Therapy, 39*(1), 5–16. <https://doi.org/10.1111/j.1752-0606.2012.00306.x>
- Zimmer-Gembeck, M. J., & Collins, W. A. (2003). Autonomy development during adolescence. In G. R. Adams, & M. Berzonsky (Eds.), *Blackwell handbook of adolescence* (pp. 175–204). Malden, MA: Blackwell Publishing.