

Patterns of Friendships among Mexican-origin Youth: Exploring the Role of
Gender, Culture and Youth Well-being

by

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ABSTRACT

During adolescence, friends are a central part of adolescents' daily lives, they serve as significant sources of emotional support and companionship (Keefe & Berndt, 1996; Way & Robinson, 2003) as well as provide opportunities to negotiate interpersonal conflicts and disagreements (Laursen & Pursell, 2009). This study was designed to examine the nature and correlates of friendships, capturing the multidimensional nature of these relationships. Specifically, three goals were proposed: (a) to use a pattern-analytic approach to identify different profiles of adolescents' friendships along three dimensions: *intimacy*, *negativity*, and *involvement*; (b) to examine linkages between profile membership and adolescents' cultural orientations and values; and (c) to explore the relation between profile membership and adolescent well-being. Participants were 246 Mexican-origin adolescents ($M = 12.50$ years; $SD = 0.58$) who participated in home interviews and a series of nightly phone calls. Adolescents reported on their friendship qualities, their cultural orientations and values, as well as their depressive symptoms, risky behaviors, and on their current grades (GPA). Adolescents' time spent with best friends was calculated from the seven nightly phone calls. Results revealed three distinct latent profiles: *Positive Engagement*, *Moderate Engagement*, and *Low Involvement*. Profile membership was not linked to adolescents' cultural orientations and values. Further, associations emerged between profile membership and adolescents' GPA, but not their risky behaviors and depressive symptoms.

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Introduction

Friends are a significant part of girls' and boys' daily lives in adolescence, a developmental period when youth expand their social networks beyond the family and spend more time with other youth (Berndt, 1996; Ladd, 2005; Rubin, Bukowski, & Parker, 1998). Friendships are multi-faceted relationships, offering emotional support and companionship (Keefe & Berndt, 1996; Way & Robinson, 2003) as well as opportunities to negotiate interpersonal conflicts and disagreements (Laursen & Pursell, 2009). The extent to which adolescents develop close and supportive relationships with their friends is linked to their overall adjustment, with higher levels of support and involvement and lower levels of negativity associated with more positive well-being among European American youth (Keefe & Berndt, 1996; Rubin, Bukowski, & Parker, 1998). A smaller body of research extends the study of friendship to ethnic minority youth and documents associations between friendship quality and youth well-being (e.g., Graham, Taylor, & Ho, 2009; Way, Cowal, Gingold, Pahl, Bissessar, 2001).

Cross-cultural research on adolescents' friendships highlights differences across cultural contexts in friendship quality (Kao & Joyner, 2004; Way & Chen, 2000; Way & Green, 2006). Way and Green (2006), for example, examined ethnic minority adolescents' perceptions of their friendship quality (i.e., as measured by adolescents' ratings of both intimacy and companionship) and found Latino and African American youth reported higher ratings of friendship quality than did Asian American youth. In addition, other research reveals that Asian American and Latino youth reported fewer activities with their friends as

compared to European American youth (Kao & Joyner, 2004). Cross-cultural differences in adolescents' friendships direct our attention to the potentially important role of the cultural context of adolescents' friendships.

The study of ethnic minority youths' friendships is timely because of demographic trends in the United States. Over the past decade, there has been substantial growth in the Latino youth population (20% increase), and at the same time, decline in the percentage of European American youth in the population (U.S. Census Bureau, 2010). Among ethnic minority youth, Latinos are the largest and fastest growing group in the United States and the majority of these youth are of Mexican heritage (66%; U.S. Census Bureau, 2010). The study of normative processes, such as friendships among ethnic minority youth, is limited (e.g., Way & Greene, 2006; Way & Pahl, 2001), and the majority of this research has used cross-cultural designs (Way & Robinson, 2003).

An important next step is to examine ethnic minority youth's friendships using an ethnic-homogenous design, which allows for a focus on a single ethnic group and the identification of variability within this group (McLoyd, 1998; Umaña-Taylor, 2009). One advantage of an ethnic-homogenous design to study Mexican-origin adolescents' friendships is that it is possible to investigate how *within-group variability* in friendship profiles is associated with variability in cultural processes among this group of youth. Such an approach provides a more *direct* test of how cultural processes are linked to friendships than is typically possible with an ethnic-comparative research design.

Adolescents' friendships are conceptualized as multi-dimensional relationships, including positive relationship qualities, such as support and emotional closeness, and negative qualities, such as conflict and hostility (e.g., Buhrmester & Furman, 1987; Chango, Boykin McElhaney & Allen, 2009; Furman & Buhrmester, 1985, Radmacher & Azmitia, 2006). The majority of existing work focuses on a single dimension of adolescents' friendships in isolation from other dimensions. In this study, my goal was to capture the multifaceted nature of Mexican-origin adolescents' friendships by using a pattern-analytic approach (Laursen & Hoff, 2006; Magnusson, 1998). Pattern-analytic approaches provide holistic perspectives of individuals' experiences by identifying profiles or patterns across different dimensions of adolescents' friendships. A handful of researchers have demonstrated the insights gained from pattern-analytic approaches to study children's and adolescents' friendships (e.g., Fletcher, Hunter, & Eanes, 2006; Hussong, 2000; Moody, 2001; Way et al., 2001).

Hussong (2000), for example, used a pattern-oriented approach to identify four different patterns of friendship quality based on different combinations of European American youth's ratings of positive (e.g., intimacy, self-disclosure) and negative (e.g., conflict, hostility) friendship qualities, and further, linked these profiles to adolescents' well-being. For example, adolescents whose friendships were characterized as *negative* (i.e., high conflict and hostility with low intimacy and self-disclosure) reported higher levels of depressive symptoms than

adolescents whose friendships were characterized as *positive* (i.e., high intimacy and self disclosure with low conflict and hostility). By using this approach the authors were able to provide insights about how different dimensions of friendship quality, *in combination*, were linked to adolescent adjustment. In this study, I extend this work to Mexican-origin adolescents.

There were three main goals for the proposed study. The first goal was to identify different profiles of Mexican-origin adolescents' friendships, using latent profile analysis and focusing on three dimensions: intimacy, negativity and involvement. The second goal, drawing on an ecological framework (Bronfenbrenner, 1979), was to examine cultural characteristics that are correlates of these patterns. From an ecological perspective, the study of adolescent friendships should be examined within the larger cultural context. The final goal was to explore the connections between adolescents' friendship profiles and their well-being to learn how these different dimensions of adolescents' friendships, in combination, were linked to well-being. The moderating role of gender was tested for all three goals given (a) gender differences in friendship quality (Ladd 2005; Rubin & Martin, 2003) that may have implications for the gender distribution across different profiles, (b) gender differences in cultural socialization (Azmitia & Brown, 2002; Raffaelli & Ontai, 2004) that may play a role in friendship profile-culture linkages, and (c) differences in friendship quality – adjustment linkages that have been noted for girls versus boys (Hussong, 2000) that may

underlie differential associations between friendship profile and adjustment as a function of adolescent gender.

Literature Review

This section begins with a review of theory and research on the role of friendships in adolescent development and well-being. Next, gender differences in adolescents' friendships are considered, followed by a discussion of the role of culture in adolescents' friendships. Finally, the associations between profiles of Mexican-origin adolescents' friendships and their well-being are considered.

The role of friendships in adolescence

Adolescence can be best described as a period of individual and contextual change. It is during this developmental stage that youth enter puberty, demand more independence and autonomy from their parents, explore their identity, and spend more time with their friends (Grotevant, 1998; Hartup, 1996; Simpkins, Park, Flyr, & Wild, 2006). Together, these developmental changes contribute to the increased salience of friendships during adolescence and the significant role that friendships play in adolescent development and well-being (Cooper & Cooper, 1992). In this section, I highlight three key dimensions of adolescents' friendships (i.e., intimacy, negativity, and involvement) and their conceptual underpinnings.

The development of *intimacy* within interpersonal relationships is one of the major tasks of adolescence according to Sullivan's theory (Muuss, 1996; Sullivan, 1953). The development of interpersonal relationships is essential for

healthy psychosocial development in adolescence (Muuss, 1996; Sullivan, 1953). Sullivan argued that individuals develop a need for interpersonal interactions that begins during infancy, with children seeking attention from their parents (Buhrmester & Furman, 1987; Muuss, 1996). In adolescence, the need for intimacy in interpersonal relationships changes to a focus on other age mates, particularly same-sex friends who share similar interests (Buhrmester & Furman, 1987; Muuss, 1996; Sullivan, 1953). Sullivan believed that the intimacy that adolescents experience within their friendships serves as a way to develop a stronger sense of self (Buhrmester & Furman, 1987; Bukowski, Motzoi, & Meyer, 2009; Muuss, 1996; Sullivan, 1953). It is during this developmental period that these close friends become confidants and provide opportunities for self-disclosure and intimacy (Muuss, 1996; Sullivan, 1953). It is in this new friendship dynamic that adolescents and friends can experience deeper interpersonal relationships that may contribute to their future relationships and psychosocial adjustment (Bukowski et al., 2009; Muuss, 1996). Further, the failure to develop an interpersonal relationship with a peer may lead to loneliness, and to anxiety later in life (Bukowski et al., 2009; Muuss, 1996). In this study, intimacy is conceptualized by adolescents' reports of emotional support with a same-sex friend.

A second important dimension of adolescents' friendships is *negativity*, which typically is assessed by conflicts and disagreements and/or hostile or negative affect (Adams & Laursen, 2007; Furman & Buhrmester, 1985; Furman

& Buhrmester, 1992; Laursen, 1995; Laursen & Collins, 1994). Generally, conflict is perceived as having a negative effect on relationships, but this is not necessarily the case (Laursen & Hafen, 2009; Laursen & Pursell, 2009). It has been argued that the effects of conflict might depend on the frequency with which conflict occurs and the ways that conflicts are managed in friendships (Laursen & Hafen, 2009). Piaget (1965) described the potential benefits of interpersonal conflict. He argued that an increase in cognitive development is associated with higher conflict in adolescence. It is through conflict interactions with peers that adolescents learn how to develop their arguments, discuss and negotiate their perspectives, and come to agreements with youth at similar developmental levels (Laursen & Hafen, 2009; Laursen & Pursell, 2009). Friendship negativity is measured in this study by adolescents' ratings of the frequency with which they disagree and argue with and feel angry toward their best friend.

Another integral component of adolescents' close relationships is *involvement* or time spent in shared activities with friends. As youth enter adolescence, friendships become an essential part of their social context given that adolescents tend to spend more time with peers (Berndt, 1996; Ladd, 2005; Larson & Richards, 1991; Rubin et al., 1998). An ecological model points to adolescents' daily activities and companions as key experiences that contribute to their development (Bronfenbrenner, 1979). Consistent with this perspective, we focus on adolescents' time spent in shared activities with their best friend. In a classic study of adolescents' companionship, Buhrmester and Furman (1987)

asked 8th graders to rate the frequency of interactions and the extent of companionship they perceived in their relationships with their mothers, fathers, friends and teachers. They found that adolescents described more frequent interactions with their friends than with their mothers, fathers, and teachers (Buhrmester & Furman, 1987; Furman & Buhrmester, 1985). In a longitudinal study, Larson and Richards (1991) used a time-sampling method and documented changes in the time European American youth spent with family members and friends during late childhood and mid-adolescence. Specifically, youth spent less time with family members and more time with friends over time from late childhood and mid-adolescence (Larson & Richards, 1991). In this study, involvement with friends was defined as the time adolescents spent in shared activities with their closest same-sex friend as measured through daily diary data.

Friends are influential in adolescents' lives but the majority of research focuses on single dimensions of friendship, and less is known about how *multiple* dimensions may be combined to define different types of friendships. Berndt (2002) theorized about the importance of viewing friendships from a multi-dimensional perspective. Specifically, he argued that the positive (i.e., intimacy) and negative features (i.e., conflict, rivalry) should be considered in combination to best understand the nature of youth's friendships, as each dimension captures a unique aspect of the friendship and the dimensions are weakly correlated (Berndt, 2002).

In this study, I build on Berndt's (2002) multidimensional perspective on friendships and include a third dimension of youth's friendships: *involvement*. From a developmental perspective, involvement in friendships becomes more salient in adolescence as youth have more opportunities, on average, to spend time in shared activities with their friends (Berndt, 1996; Ladd, 2005; Rubin, Bukowski, & Parker, 1998). Thus, the amount of time youth spend with friends is another source of variability in adolescents' friendships and may have implications for the types of friendships youth develop.

This study proposes to identify different subtypes of adolescents' friendships drawing from Berndt's (2002) conceptualization of youth's friendships and a developmental perspective. The three dimensions of interest here -- intimacy, negativity, and involvement -- represent key developmental features of adolescents' friendships that occur simultaneously in youth's everyday lives. With a pattern-analytic approach (Magnusson, 1998), different profiles across these three dimensions will be identified in a sample of Mexican-origin adolescents.

The number of profiles that will emerge in latent profile analysis is unknown ahead, but research on adolescents' sibling relationships and European American youth's friendships provides an empirical basis to make some predictions. First, person-oriented investigations of adolescents' sibling relationships in European American (McGuire, McHale, & Updegraff, 1996), Australian (Sheehan, Darlington, Noller, & Feeney, 2004), African American

(McHale, Whiteman, Kim, & Crouter, 2007), and Latino families (Killoren, Rodríguez, Updegraff, & McHale, 2010) and of European American youth's friendships (Hussong, 2000) reveal some consistent findings. In particular, two groups were consistent across these studies: A group labeled as *positive* was characterized by high levels of warmth and low levels of conflict, and a group labeled *negative* was described as low warmth and high conflict. In addition, three other patterns emerged in some samples but not others. For instance, among European American, Australian and African American siblings and European American friendships, there was a disengaged group defined by low warmth and conflict. Further, there was an "affect intense" group (characterized by high warmth and high conflict) that emerged in Australian sibling relationships and European American sibling relationships and friendships. Finally, only among Mexican-origin adolescents' sibling relationships a group emerged characterized by moderate warmth and conflict. Together, drawing from this previous work, I anticipated that at least two profiles would emerge: a "positive" profile characterized by high intimacy/involvement and low to moderate negativity and a "negative" profile characterized by high negativity and low intimacy/involvement. These two types of profiles have emerged consistently in research across different cultural contexts focusing on adolescents' sibling and friend relationships (Hussong, 2000; Updegraff et al., 2010). Additional profiles may emerge, as it has been observed when examining sibling relationships on Mexican-origin families (Killoren et al., 2010). In particular, I expected a

moderate group, characterized by moderate levels of intimacy, negativity and involvement, may also be emerge.

Gender differences in adolescent friendships

Friendships among girls and boys have been characterized differently and these differences have been observed in early childhood and extend through adolescence and into adulthood (Ladd 2005; Rubin & Martin, 2003). During childhood, children tend to spend most of their time interacting with same gender peers and they learn about gender-typed activities through these interactions (Edwards, 1992; Ruble & Martin, 2003). Preference for same-sex playmates has been observed as early as 3 years of age (Maccoby, 1998). Sex-segregation continues throughout early childhood: preschool-aged children have been observed to engage with same-sex playmates three times as much time as compared to opposite-sex playmates (Maccoby, 1998). It is not surprising that sex is the most important characteristic children consider when choosing a friend (Ruble & Martin, 2003). By middle childhood preference for same-sex peers are noticeable during extra-curricular activities, on playgrounds and in unstructured activities.

In adolescence, one of the most consistent gender differences in adolescent friendships is the level of emotional closeness that girls and boys describe in these relationships. Gender differences are noted in that girls tend to spend most of their time in dyadic relationships with other girls, whereas boys tend to spend the majority of their time in group activities with other males (e.g.,

sports; Maccoby, 1998; Ruble & Martin, 2003). Generally, girls report feeling that they have more emotionally supportive friends as compared to boys (Savin-Williams & Berndt, 1990). These findings are consistent across multiple methods of assessment, including adolescent self-reports (Radmacher & Azmitia, 2006; Way & Green, 2006), peer nominations (Cillessen, Jiang, West & Laszkowski, 2005) and narratives (Radmacher & Azmitia, 2006). Further, Radmacher and Azmitia (2006) found that different aspects of friendships predicted emotional closeness for girls as compared to boys. For girls, self-disclosure predicted emotional closeness with their closest friends, whereas for boys self-disclosure and shared activities were related to friendship closeness.

Gender differences in negativity in adolescents' friendships (e.g., conflict, aggression) also have been noted, but to a lesser extent than gender differences in emotional closeness (Card, Stucky, Sawalani, & Little, 2008; Peets & Kikas, 2006). Boys generally have been observed to engage in more conflict with their friends as compared to girls (Laursen & Pursell, 2009). There is evidence that suggests that physical aggression is more commonly used by males and that indirect aggression (e.g., rejection or exclusion) is used by both females and males (Card et al., 2008). Girls and boys also differ in the strategies they use to manage conflict in their relationships. In a study of Mexican-origin youth using the same data as for this study, girls were more likely than boys to use solution-orientated strategies (i.e., negotiation, compromise), whereas boys were more

likely to use control-orientated strategies (i.e., dominance) to solve conflicts with their friends (Thayer, Updegraff, & Delgado, 2008).

The majority of work on gender differences in friendship has been conducted with predominantly European American samples. One exception is work by Way and Chen (2000), which suggests that, among ethnic minority youth, Latina, African American and Asian American females reported higher levels of friendship support than did males. Gender differences in friendship qualities may be particularly salient for Mexican-origin youth, given evidence of the role of gender in shaping developmental processes (e.g., Umaña-Taylor & Guimond, 2010) and family dynamics in this cultural group (e.g., Azmitia & Brown, 2002; Raffaelli & Ontai, 2004; Valenzuela, 1999). Gender differences have been noted in girls' and boys' family roles and responsibilities and opportunities to spend time outside the home (Azmitia & Brown, 2002; Raffaelli & Ontai, 2004; Valenzuela, 1999). In general, girls have greater responsibilities in the home as compared to boys, are supervised more closely, and are more limited in their opportunities to spend time outside of the home and interact with peers. Boys and girls, therefore, may have different opportunities to spend time with friends and develop close relationships with non-familial youth.

The focus of this study on multi-dimensional profiles of adolescents' friendships may mean that girls and boys are differentially represented in the different friendship profiles given gender differences in friendship qualities. It is possible, for example, that girls will be overrepresented in friendships

characterized by high intimacy and low negativity and involvement, as a result of the greater emphasis girls place on emotional closeness in friendships (Laursen & Pursell, 2009; Savin-Williams & Berndt, 1990) and more limited opportunities of Latino girls to spend time outside of the home and with friends (Azmitia & Brown, 2002; Raffaelli & Ontai, 2004; Valenzuela, 1999). Boys, in contrast, may be overrepresented in friendships characterized by high involvement, low intimacy, and moderate negativity, as suggested by prior work emphasizing shared activities as a basis for boys' friendships (Maccoby, 1998; Ruble & Martin, 2003).

The role of culture in adolescents' friendships

The study of culture frequently has been conceptualized using an ecological framework (Bronfenbrenner, 1979). The ecological perspective enables us to examine the cultural contexts in which adolescents interact with their friends and better understand the processes of these cultural influences on adolescents' friendship development. Bronfenbrenner (1979) suggested that individuals construct bi-directional influences with their surroundings, referring to the idea that individuals can impact their milieu and the milieu can impact the individual. That is, interpersonal relationships are situated in a larger socio-cultural context, and cultural-related behaviors, beliefs, and attitudes shape everyday experiences and relationships. The focus of this study on the cultural correlates of adolescents' friendships is grounded broadly in these ideas.

Culture is multidimensional and includes adaptation in reference to the host (mainstream) and ethnic cultures in multiple domains (e.g., values, identity, self concept). *Acculturation* refers to the process of cultural and psychological changes among individuals when they interact with the host-culture (Berry, Phinney, Sam, & Vedder, 2006; Gonzales, Fabrett, & Knight, 2002; Gonzales, Knight, Morgan-Lopez, Saenz, & Sirolli, 2000). As individuals become more acculturated to the mainstream culture, they might adopt cultural beliefs, values, behaviors and language from the host culture (Gonzales et al., 2002; Gonzales et al., 2000). However, the incorporation of new cultural values and perspectives does not suggest that individuals fail to maintain their own cultural beliefs, values, and language. This integration of the ethnic culture has been generally described as *enculturation* (Gonzales et al., 2002; Gonzales et al., 2000).

As we conceptualize acculturation and enculturation as independent and multi-dimensional constructs (Schwartz, Unger, Zamboanga, & Szapocznik, 2010), it is important to move beyond measures that focus only on the host or ethnic culture or that focus exclusively on “proxy” measures of culture, such as language or nativity (Berry, 2003; Gonzales et al., 2002; Gonzales et al., 2000; Zane & Mak, 2003). Consistent with these ideas, in this study culture was measured by youths’ Mexican and Anglo cultural orientations and by their cultural values (i.e., familism values).

Anglo Cultural Orientations. Mainstream US culture is characterized by individualistic values (Markus & Kitayama, 1991). *Individualism* refers to the

idea that individuals strive to become autonomous and independent from others (Markus & Kitayama, 1991). Individuals with a strong sense of independence are more concerned with their own emotions, goals, and needs than with those of others in their social context (Markus & Kitayama, 1991; Oyserman et al., 2002). This does not suggest that independent individuals do not value their social environment; rather, they desire to find the best way to be responsive but at the same time to effectively fulfill their own needs (Markus & Kitayama, 1991). Given that in US culture, adolescence is a period when youth are more oriented toward peers and spending increasing amounts of time with youth outside the family (Berndt, 1996; Ladd, 2005; Rubin, Bukowski, & Parker, 1998), it was expected that adolescents with higher levels of Anglo cultural orientation would be more likely to have friendships characterized by a profile that included high intimacy and moderate to high involvement. However, given limited prior work, the associations between Anglo orientation and profiles of friendship quality are exploratory.

Mexican Cultural Orientations. Mexican culture has been identified as a collectivistic culture (Shkodriani & Gibbons, 1995). *Collectivism* refers to the idea that individuals perceive themselves as being part of a social context, and as part of their social role, they must carry out some obligations and censure their individual emotions for the benefit of the in-group dynamic (Markus & Kitayama, 1991; Oyserman, Coon, & Kemmelmeier, 2002). This suggests that individuals are more likely to place others' needs before their own needs (Markus &

Kitayama, 1991). In Mexican culture, the family is an important focus of individuals' collectivistic values. Youth with strong Mexican cultural values may place the needs of their family and cultural group above their own needs, and thus, spend less time with friends. Using the same sample that will be used in the proposed study, Updegraff and colleagues (2007) found that mothers' and fathers' Mexican orientations were negatively associated with the time parents spent in the company of adolescents and their peers. That is, higher levels of Mexican orientations were associated with less involvement with adolescents and their friends (Updegraff et al., 2007). In this study, it was expected that adolescents with higher levels of Mexican cultural orientations would be more likely to have friendships characterized by a profile that included low levels of intimacy, negativity, and involvement. These expectations are grounded in the idea that adolescents with higher levels of Mexican cultural orientations may rely, to a greater extent, on family support and be less likely to develop emotionally close and involved friendships with non-familial youth.

Familism Values. A core cultural value that has been characteristic of Mexican American families is familism (Sabogal, Marín, Otero-Sabogal, Vanoss Marín, & Perez-Stable, 1987). *Familism* values emphasize the importance of family support, obligations, and interdependence (Sabogal et al., 1987; Knight et al., 2010). Moreover, familism refers to the idea that individuals place their families' needs before their own needs (Schwartz et al., 2010). Also, familism highlights the importance of honoring and respecting family members. Cultural

values such as familism may play a role in adolescents' friendships (Updegraff, McHale, Whiteman, Thayer, & Crouter, 2006). Strong familism values may mean that youth are more oriented toward family members and are less likely to develop strong ties with non-familial youth. This may be particularly true for girls, who typically have more family responsibilities than boys (Azmitia & Brown, 2002; Valenzuela, 1999). Thus, I expected that stronger familism values may be associated with patterns of friendship qualities characterized by low levels of intimacy, negativity, and involvement. The association may be stronger for girls than for boys given gender differences in adolescents' family responsibilities and opportunities to spend time outside the school; thus adolescent gender was tested as a moderator of the associations between friendship profile and cultural orientations and values.

Links between friendship quality and adolescent adjustment

My final goal was to assess the associations between adolescents' patterns of friendship quality and their adjustment. The qualities of friendships and peer relationships have been associated with multiple aspects of adolescent well-being (Fuligni, Eccles, Barber & Clements, 2001; Smetana, Campione-Barr, & Metzger, 2006). Positive interactions with friends, such as high levels of support, have been linked to enhanced self-esteem among youth from a range of ethnic minority backgrounds (i.e., African American, Latino, and Asian American; Greene & Way, 2005; Way & Robinson, 2003). Interactions with friends and peers also can serve as a way for adolescents to develop social skills and understanding of other

people's emotions (Nomaguchi, 2008; Savin-Williams & Berndt, 1990; Smetana, Campione-Barr, & Metzger, 2006). There is evidence that adolescents who experience more contact with their friends tend to be more confident and tend to have higher levels of self-concept (Claes, 1992). Keefe and Berndt (1996) examined the relation of positive features (i.e., intimate self-disclosure, prosocial behavior, self-esteem support) of adolescents' friendships quality with adolescents' self-esteem over time and found that adolescents who reported more positive features within their friendships also scored higher on self-worth and peer acceptance (Keefe & Berndt, 1996). Conversely, conflict and rivalry in adolescents' friendships were associated with lower levels of self esteem in this same study. Friendship quality (i.e., validation and caring, conflict resolution, conflict and betrayal, help and guidance, and intimate exchange) also has been associated with declines in internalizing symptoms (e.g., anxiety, feelings of loneliness) over time in some studies (Gaertner, Fite, & Colder, 2010; Parker, Rubin, Erath, Wojslawowicz, & Buskirk, 2006), but not others (Adams & Laursen, 2007). There is also some evidence that engaging in high quality friendships has been related with lower rates of externalizing problems, such as antisocial behavior (Gaertner, Fite, & Colder, 2010).

Furthermore, adolescent's perceptions of friendship qualities have been associated with school climate. In a longitudinal study, Way and Pahl (2001) examined school climate as an indicator of adolescents' adjustment and found that adolescents who reported increases over time in friendship quality rated school

climate more positively. It has been found that adolescents who have friends who liked school or excelled in school had lower rates of academic problems compared to adolescents who had friends who were less academically oriented (Cook, Deng, & Morgano, 2007; Crosnoe, Cavanagh, & Elder, 2003). Less is known about how friendship qualities, *in combination*, are linked to adolescent adjustment. Work by Adams and Laursen (2007) reveals that ratings of friendship quality and conflict *interacted* to predict adolescent adjustment. Specifically, their findings showed that the links between conflict and adolescent adjustment were moderated by adolescents' perceptions of friendship negativity, but not friendship positivity. For example, the association between conflict frequency and delinquency differed as a function of relationship negativity, such that there were stronger associations between conflict frequency and delinquency when relationship negativity was low to moderate versus high (Adams & Laursen, 2007).

Furthermore, one study using a pattern-analytic approach demonstrated differences in adolescents' well-being as a function of friendship profiles. Hussong (2000) found that adolescents in friendships characterized by high levels of positive and negative friendship qualities (i.e., referred to as *Mixed Engagement* or *Affect-Intense*) reported higher levels of risky behaviors (i.e., substance abuse) compared to adolescents whose friendships were characterized as *Negative* (i.e., low positive and high negative qualities) and *Disengaged* (i.e., low levels of positive and negative qualities). In addition, gender differences

emerged in the associations between friendship patterns and adolescents' depressive symptoms. Specifically, Hussong (2000) found that girls reported higher levels of depression than boys in the *Disengaged* and *Positive* friendships (i.e., high positive and low negative friendship qualities). In addition, comparisons of only boys across the four groups revealed that boys reported more depressive symptoms in the *Negative* and *Mixed Engaged* groups as compared to the other two groups.

Together, these findings highlight the importance of looking at the *combination* of positive and negative friendship qualities in understanding adolescent adjustment. In this study, I examined the associations between Mexican-origin adolescents' friendship profiles and their reports of depressive symptoms, risky behaviors, and school performance. These three indicators represent a range of indices of adjustment and include internalizing symptoms, which are more pronounced among girls, and externalizing symptoms, which are more pronounced among boys (Card et al., 2008; Laursen & Pursell, 2009). Given gender differences in friendship quality and adolescent adjustment (Way & Chen, 2000; Way & Pahl, 2001), adolescent gender was explored as a moderator of the associations between friendship profile membership and well-being.

In sum, the proposed study has three main research goals. The first goal was to identify different profiles of Mexican-origin adolescents' friendships, using a pattern-oriented approach and focusing on three dimensions: intimacy, negativity, and involvement. Based on patterns identified in European American

youths' friendships (Hussong, 2000) and among adolescents' relationships with sibling relationships in European American, Australian, African American, and Latino families (for a review, see Updegraff et al., 2010), we anticipated that a minimum of two profiles would emerge: (1) a *positive* profile characterized by high intimacy/involvement and low to moderate negativity; and (2) a *negative* profile characterized by high negativity and low intimacy and involvement. Both positive and negative profiles have emerged in prior work on friendships and sibling relationships (Hussong, 2000; Updegraff et al., 2010). Thus, I expected that these patterns also may emerge in Mexican-origin adolescents' friendships. Given lack of previous research specifically on Mexican-origin youths' friendships, it is possible that other profiles will emerge as well. Further, given that girls' friendships are characterized by higher levels of intimacy than boys' (Maccoby, 1998; Ruble & Martin, 2003), I anticipated that girls may be more likely than boys to be in the positive profile.

The second goal was to examine how different profiles of adolescents' friendships were linked to their cultural orientations (i.e., Mexican and Anglo cultural orientations and familism values) and to test adolescent gender as a moderator. I anticipated that adolescents in friendship profiles characterized by high levels of intimacy/involvement may report lower levels of Mexican orientations and familism values, given the cultural emphasis on family support and obligations (Markus & Kitayama, 1991; Oyserman, Coon, & Kimmelmeier, 2002). Given gender differences in family socialization in Mexican culture (e.g.,

Azmitia & Brown, 2002; Raffaelli & Ontai, 2004; Valenzuela, 1999), gender was tested as a moderator of the associations between friendship profiles and cultural characteristics. The final goal was to explore the connections between adolescents' friendship patterns and their well-being, including depressive symptoms, risky behaviors, and school performance. I anticipated that adolescents whose friendship profiles included high levels of involvement and intimacy and moderate to low levels of negativity (i.e., the positive profile) would report the most positive adjustment.

Methods

Participants

Data for this study came from the first phase of a longitudinal study of gender, culture and family socialization processes in 246 Mexican origin families with adolescents (Updegraff, McHale, Whiteman, Thayer, & Delgado, 2005). Participants were recruited throughout school districts in and around a southwest metropolitan area. To participate, families met the following criteria: (a) a seventh grader and an older sibling under the age of 21 living in the home; (b) biological mothers of Mexican-origin living in the home; and (c) biological fathers or long-term adoptive fathers living in the home (for a minimum of 10 years); and (d) fathers working a minimum of 20 hours per week. Although it was not a requirement, 93% of the fathers also were of Mexican descent.

Letters and brochures (in Spanish and English) describing the goals of the study were sent to families with Hispanic seventh graders in public and parochial

schools to recruit families. Follow-up telephone calls were conducted by trained bilingual staff to determine each family's eligibility and interest in participating in the project. A total of 1,852 letters were sent to families of Latino origin with a seventh grader. For 438 families (24%), the contact information was incorrect and repeated attempts to find updated information were unsuccessful; an additional 148 (8%) of the potential participants refused to be screened for eligibility. Eligible families included 421 families (32% of those who were contacted and screened). Of those which were eligible, 284 families (67%) agreed to participate in the study, 95 (23%) refused, and 42 families (10%) moved before we completed the recruitment process. A total of 246 families participated in the interviews.

Families were diverse in their education and income levels, ranging from lower to upper class. The percentage of families in the sample who met criteria for federal poverty (18.3%) was similar to the county from which the sample was drawn (18.6%; U.S. Census Bureau 2000). The median family income was \$40,000 ($SD = \$45,382$, ranging from \$3,000 to over \$100,000). Parents reported approximately ten years of education ($M = 10.3$, $SD = 3.7$ for mothers; $M = 9.9$, $SD = 4.4$ for fathers). The vast majority of the parents were born in Mexico (71% of mothers and 69% of fathers), and mothers lived in the U.S. for an average of 12.4 ($SD = 8.9$) years and fathers lived in the U.S. for an average of 15.2 ($SD = 8.9$) years. The majority of the parents spoke Spanish (67% of mothers and 68% of fathers), whereas only 15% of the seventh graders spoke Spanish. The mean

age for younger siblings was (years = 12.50, $SD = .58$) and the majority of younger siblings were born in the U.S. (62.82%). The seventh graders included 125 girls and 121 boys. The present study focused on target adolescents (i.e., seventh graders) only. Data from older siblings were not used.

Procedure

Data were collected during home and phone interviews. The home interviews lasted approximately three hours for parents and two hours for adolescents. Both parents and adolescents reported on their family relationships and cultural values, and adolescents reported on their peer relationships. Interviews were conducted individually with each family member. As part of the home interviews, the interviewers read the questions to the participants and recorded their answers directly into the computer. When dealing with sensitive topics like delinquent behaviors, adolescents were asked to enter their responses into the computer themselves. In the three to four weeks following the home interviews, a series of seven phone interviews were conducted with adolescents, and four phone calls with each parent. The participants were called on 5 week days and 2 weekend days to gather information on their daily activities in the last twenty-four hours. Both the home and the phone interviews were conducted in the language that the participants preferred (e.g., English or Spanish).

Measures

The measures for the study were forward and back translated according to procedures by Foster and Martinez (1995) for the local Mexican dialect.

Specifically, one individual translated the measure to Spanish, and a second individual translated the measure back to English. The two versions were compared and discrepancies were resolved by the research team. A third bilingual individual reviewed all measures.

Background Information. Parents reported on their highest educational level, annual income, country of birth for themselves and for adolescents, and family size. Language of preference was determined based on the language (English or Spanish) that the home interview was completed in by each family member.

Adolescents reported on their characteristics of their friendships, including neighborhood status (i.e., whether their best friend lived in the same neighborhood or not), school status (i.e., whether their best friend attend the same school as they did or not), and friend's ethnicity (i.e., whether their best friend was Hispanic/Latino or not). Finally, adolescents indicated the length of the relationship in years.

Friendship Intimacy. Adolescents' intimacy with a close friend was assessed by a measure developed by Blyth and colleagues (Blyth & Foster-Clark, 1987; Blyth, Hill, & Thiel, 1982). Adolescents identified their closest same-sex friend and rated the degree of intimacy they perceived this friend. A sample item included: "How much do you go to (best friend's name) for advice or support?" The participants responded using a Likert-type scale, which ranged from (1) *not at all* to (5) *very much*. The eight items were averaged to create a scale score, with

higher scores representing more intimacy in adolescents' relationships with their closest friend. Cronbach's alpha was .84.

Friendship Negativity. Friendship negativity was measured using the Network Relationship Inventory subscale developed by Furman and Buhrmester (1985). The items tapped the extent to which adolescents disagreed, argued, and felt angry with a close friend. A sample item was: "How much do you and (best friend's name) get upset or mad at each other?" The participants responded using a Likert-type scale, ranging from (1) *not at all* to (5) *very much*. The five items were averaged to create a scale score. Higher numbers indicated more negativity in adolescents' relationship with their closest same-sex friend. Cronbach's alpha was .84.

Mexican and Anglo Cultural Orientations. Adolescents' Mexican and Anglo orientations were assessed using the Acculturation Rating Scale for Mexican Americans II (ARSMA-II; Cuéllar, Arnold, & Maldonado, 1995). Sample items include: "I associate with Mexicans and/or Mexican Americans" (Mexican orientation); and "I enjoy listening to music in English" (Anglo orientation). The participants responded using a Likert-type scale, ranging from (1) *not at all* to (5) *extremely often or almost always*. The scale score was created by averaging the 17 items for the Mexican orientation scale and the 13 items for the Anglo orientation scale. Higher scores indicated stronger adherence to Mexican and Anglo orientations, respectively. Cronbach's alphas were .90 for adolescents' Mexican orientations and .82 for adolescents' Anglo orientations.

Familism Values. Adolescents completed a 16-item familism subscale of the Mexican American Cultural Values Scale (Knight et al., 2010). This measure consisted of three conceptual domains: (1) support/closeness (e.g., “It is always important to be united as a family”), (2) family obligations (e.g., “Children should be taught that it is their duty to care for their parents when their parents get old”), and (3) family as referent (e.g., “Children should always do things to make their parents happy”). Six of the 16 items were taken from Sabogal et al., (1987) and the other items were constructed through focus-groups with Mexican American parents and adolescents. Adolescents used a 5-point scale, ranging from (1) *strongly disagree* to (5) *strongly agree*. Items were averaged to create an overall familism score with higher scores indicating higher levels of familism.

Cronbach’s alpha was .85.

Adolescents’ Involvement with their Closest Same-Sex Friend.

Adolescents’ involvement with their closest same-sex friend was assessed by daily activity data collected during the seven phone interviews. For each call adolescents were asked to report on the duration (in minutes) and the companions in eighty-six daily activities. The number of minutes that adolescents reported spending in activities with their closest same-sex friend was aggregated across the seven nightly phone calls. Correlations between adolescents’ and their older siblings reports of shared time (i.e., $r = .90$, $p < .001$) provides evidence of the reliability of adolescents’ time estimates.

Adolescent Well-being. Adolescent well-being was assessed by adolescents' reports of their depressive symptoms, involvement in risky behaviors, and grade point average. Adolescents' *depressive symptoms* were assessed using the 20-item measure by the Center for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977). Adolescents reported on the frequency in which they experienced symptoms on three different indexes: cognitive, affective, and behavioral (e.g., "During the past month, I was bothered by things that usually don't bother me"). Items were rated on a 4-point scale ranging from (1) *rarely or none of the time* to (4) *most of the time* and then averaged. Higher scores indicate greater levels of depressive symptoms. Cronbach's alpha was .85.

Adolescents also reported on their involvement in 24 different risky or problem behaviors (e.g., "stayed out all night without your parents' permission?") using a measure developed by Eccles and Barber (1990) for ethnically diverse youth. Adolescents rated each item using a 4-point scale ranging from (1) *never* to (4) *more than ten times*. Items were averaged to create a scale score, with higher scores indicating more frequent involvement in risky behaviors. Cronbach's alpha was .91.

Finally, adolescents reported on their current grades in four main academic subjects (i.e., English, math, social studies and science). Using adolescents' reports, grade point averages (GPAs) were computed after recoding as follows: A = 4; B = 3; C = 2; D = 1; F = 0. Adolescents' self-reported grades were highly correlated with school report card grades ($r = .89, p < .001$).

Results

The goals of this study were threefold: (1) to identify different profiles of Mexican-origin adolescents' friendships based on their ratings of intimacy, negativity, and involvement with their same-sex best friends; (2) to examine how different profiles of adolescents' friendships were linked to their cultural orientations (i.e., Mexican and Anglo cultural orientations and familism values); and (3) to explore the connections between adolescents' friendship profiles and their well-being (i.e., depressive symptoms, risky behaviors, and school performance).

Preliminary Analysis

As a preliminary step, in order to examine the normality of the data, I ran descriptive statistics on the observed variables to examine normality of the data. None of the variables exceeded 2.0 for skewness and 7.00 for kurtosis, indicating that all variables were normally distributed (Curran, West, & Finch, 2006). Another fundamental assumption made when using LPA is the assumption of *local independence* (Collins & Lanza, 2010). Local independence introduces the idea that the latent profile variables and the observed variables are completely independent from each other. This suggests that “the observed variables are a function of the latent variable and error” (p. 45, Collins & Lanza, 2010), which means that the observed variables are only related through the latent variable. This assumption of local independence only applies to latent variables and does not suggest that observed variables need to be independent from each other

(Collins & Lanza, 2010). However, there is no empirical way to test for local independence on the latent variables (R. Millsap, personal communication, September 22, 2011).

Analytic Plan

To address these goals, a series of latent profile analyses (LPA) were conducted using Mplus Version 6 (Muthén & Muthén, 1998-2010). LPA is a model-based procedure that identifies categorical latent variables from observed variables and creates probabilities for subgroup membership based on the observed variables (Schwartz, Rhodes, Chan, & Herrera, 2011). This approach allows for the examination of relatively homogenous subgroups of adolescents. LPA was conducted using adolescents' reports of three dimensions of their relationships with their same-sex best friends (i.e., intimacy, negativity, and involvement).

The number of profiles that will emerge in an LPA is unknown beforehand. For this reason, LPA models proceed in a series of steps starting with the one-profile model solution, and increasing the number of profiles to find the best fitting solution for the data. To determine the best fitting model, the most reliable indicators are information criteria (IC) and likelihood ratio (LR) tests (Collins & Lanza, 2009; Nylund, Asparouhov, & Muthén, 2007; Tofighi & Enders, 2006). For the IC, the Akaike's information criterion (AIC), the Bayesian information criteria (BIC), and the adjusted Bayesian information criteria (ABIC) are recommended. Generally, it has been suggested that a decrease in these

indices, as the number of profiles increase, suggests that there is an improvement in the model fit (Lubke & Muthén, 2005; Nylund, Asparouhov, & Muthén, 2007).

The Lo-Mendell-Rubin (LMR) log likelihood test is also recommended for determining model fit. The LMR is used to determine if a model that allows a higher number of profiles fits the data significantly better compared to a simpler model with one fewer profiles (Tofighi & Enders, 2006).

Goal 1: Identifying Profiles of Adolescents' Friendships

Identifying Profiles. For *goal 1*, a series of three LPAs were run using the three observed indicators of friendship quality. All indicators were allowed to correlate, and the means, variances, and covariances were freely estimated. Table 2 presents ICs and LMR results for the one, two, and three-profile solutions. Four-profile and higher solutions were not considered because it is not appropriate to examine models with a greater number of profiles than variables used to develop the profiles (Schwartz et al., 2011). Results revealed that, from the one-profile to the two-profile solution, the AIC, BIC, and ABIC decreased, and the LMR test was marginally significant ($p = .07$). Decreases in the AIC, BIC, and ABIC also were evident from the two-profile to three-profile. The LMR test was significant ($p < .01$) for the three-profile solution. Therefore, the three-profile solution was the best fitting model. The average probabilities for most likely latent variable membership were high (see Table 3), indicating a high level of certainty in determining membership in a given profile.

Means and standard deviations are presented in Table 4 and represented in Figure 1. The first profile was labeled *Positive Engagement* ($n = 7$, 3% of total)

because it was characterized by the highest levels of friendship intimacy, friendship negativity and friendship involvement. The second profile, labeled *Moderate Engagement* ($n = 37$, 15% of total), was characterized by moderately high levels of friendship intimacy ($M = 3.58$; $SD = .67$), and low to moderate levels of friendship negativity ($M = 1.75$; $SD = .58$) and friendship involvement ($M = .14$; $SD = .03$). The final profile was labeled *Low Involvement* ($n = 195$, 82% of the total) as it was characterized by moderate levels of friendship intimacy ($M = 3.78$; $SD = .71$), low to moderate friendship negativity ($M = 1.74$; $SD = .71$) and the lowest levels of friendship involvement ($M = .02$; $SD = .02$).

Testing for Gender Equivalence. The next step was to examine the equivalence across gender by comparing unconstrained, semi-constrained, and fully constrained multiple-group latent profile analyses (MLPA) with gender as the grouping variable ($N = 122$, 51% of the total for girls; and $N = 117$, 49% of the total for boys). In the unconstrained model, the means of friendship intimacy, friendship negativity and involvement in each profile are allowed to differ for girls and boys; in addition the probability of belonging to each profile is also allowed to differ for boys and girls. In the semi-constrained model the means are constrained to be equal across girls and boys, yet the probability of belonging to each profile is allowed to differ. The model BIC and ABIC as well as a LR nested model test are used to decide whether the fully unconstrained model results in better model fit as compared to the more parsimonious, semi-constrained model. Lastly, a fully constrained model constrains the means for each profile as well as

the probabilities of belonging in a profile to be equal for boys and girls. Once again BIC, ABIC and a nested model test were used to test whether the semi-constrained model improved fit as compared to the more parsimonious fully-constrained model. The results of the MLPA revealed that the LR for the fully constrained model was better than the semi-constrained model, however, the semi-constrained model had the smallest BIC and ABIC, compared with the unconstrained and fully models (see Table 5). For this reason I chose the more parsimonious model which was the semi-constrained model. This finding suggests that, although the means for each profile were similar for boys and girls, the probability of being in a profile varied by adolescents' gender (see Table 6). For instance, it was observed that for the semi-constrained model, there were 106 girls in the second profile compared to 8 boys in the same profile, whereas for the third profile there were only 2 girls and 85 boys in this profile. It can be observed that girls were overrepresented in the second profile and underrepresented in the third profile.

Descriptive Analyses. Prior to addressing the second and third goals of the study, I tested profile differences in adolescent nativity, adolescent gender, neighborhood status (i.e., adolescent-friend pair live in the same neighborhood versus different neighborhoods), school status (i.e., adolescent-friend pair attend the same school versus different schools), friend ethnicity (i.e., Mexican versus not) and length of friendship. To examine the links between these background and friendship characteristics and profile membership, I conducted a series of chi-

squared analyses. For adolescent gender, there were more girls in the *Low Involvement* profile and more boys in the *Moderate Engagement* profile as $\chi^2(2) = 6.46, p < .05$ (see Table 7). Further, adolescents in the *Moderate Engagement* and *Positive Engaged* profiles were more likely to live in the same neighborhood as their friends as compared to adolescents in the *Low Involvement* profile, $\chi^2(2) = 11.03, p < .01$. Profile membership was not associated with adolescent nativity, school status, friend ethnicity or length of friendship.

Goal 2: Linking Profile Membership and Adolescents' Cultural Orientations

To examine the second goal (i.e., links between profile membership and adolescents' cultural orientations and familism values), adolescents' reports of their cultural orientations and values were added to the three-profile solution. That is, latent profiles were regressed on each covariate to allow these variables to influence group membership, with SES included as a control variable. Profile means based on the final model solution were used to constrain each class to the observed means. Regression analyses revealed that there were no significant differences in adolescents' Anglo and Mexican orientations and familism values across the three profiles (see Table 7).

Goal 3: Linking Profile Membership and Adolescent Well-being

Finally, to test the third goal (i.e., associations between profile membership and adolescents' well-being) latent profiles were regressed on each adjustment indicator (i.e., depressive symptoms, GPA, and risky behaviors), with SES as a control variable. Regression analyses revealed that there were no

significant differences between profiles for adolescents' depressive symptoms and risky behaviors. However, there was a significant association between adolescents' GPA and group membership, such that coefficients differed for the *Positive Engagement* profile ($\beta = 0.69, p < .01$) compared to the *Moderate Engagement* profile ($\beta = -0.13, ns$), indicating that adolescents with higher GPAs were more likely to be in the *Positive Engagement*.

Post-Hoc Analyses

To further examine within group differences, I conducted a series of post-hoc analyses focusing on the *Low Involvement* profile. This was the largest group, and thus, it was possible to explore within group variability in this particular friendship profile. A series of ANOVAs were conducted to evaluate the differences in friendship quality within this group as a function of background characteristics (i.e., gender, nativity, neighborhood and school status, friend ethnicity, and length of friendship). Findings are described below and displayed in Table 9.

Analyses revealed a number of significant differences in intimacy within this group. First, significant gender differences in friendship intimacy emerged ($F(2, 192) = 49.26, p < .001$), such that girls in the *Low Involvement* profile reported higher levels of intimacy than did boys (see Table 9). In addition, there were significant differences in friendship intimacy as a function of neighborhood and school status, $F(2, 192) = 3.09, p < .05$, and $F(2, 192) = 3.55, p < .05$, respectively: Adolescents described more intimate friendships when their friends

lived in different neighborhoods and attended different schools as compared to when friends lived in the same neighborhoods and attended the same schools as they did. Lastly, ethnic differences in intimacy were documented, $F(2, 192) = 3.64, p < .05$, such that adolescents reported closer friendships when their friends were Latino as compared to non-Latino. Differences within the *Low Involvement* profile as a function of nativity and friendship length were non-significant.

Turning to friendship negativity, one significant difference emerged. Specifically, boys in the *Low Involvement* profile reported higher levels of negativity than did girls, $F(2, 192) = 7.26, p < .001$. No significant within-group differences emerged for the involvement dimension. Also, there were no significant differences for nativity and length of friendship across any of the three dimensions.

Discussion

This study was designed to identify different patterns of Mexican-origin adolescents' friendships along three dimensions (i.e., intimacy, negativity, involvement) and to examine the correlates of these different dimensions in terms of adolescents' cultural orientations and values and adjustment. This study contributed to research on Mexican-origin adolescents' friendships in several ways. First, to my knowledge the current study is the first to use a pattern-oriented approach to examine multiple dimensions of *Mexican-origin* adolescents' friendships. Second, this study employed an ethnic-homogenous design, which allowed for the examination of how *within-group variability* in adolescents'

friendships and cultural orientations and values were linked. Such an approach provides a direct test of the role of adolescents' cultural characteristics in their friendships.

Identifying Profiles of Mexican-origin Adolescents' Friendships

The first goal of this study was to identify potentially different profiles of adolescents' friendships as defined by their ratings of intimacy, negativity, and involvement. Prior work has only used the intimacy and negativity dimensions to examine patterns among youth relationships, given this limitation, predictions were only made based on these two dimensions and were exploratory for the involvement dimension. At least two patterns were expected based on prior work, including a *positive* group characterized by high levels of intimacy and low levels of negativity, and a *negative* group characterized by high negativity and low levels intimacy (Killoren et al., 2010; McGuire et al., 1996; McHale et al., 2007; Sheehan et al., 2004). Latent profile analyses revealed three profiles that differed somewhat from my expectations based prior work. The different profiles may be partly a result of the fact that prior work using person-oriented approaches has largely focused on positivity and negativity, but not on involvement (a dimension considered in this study), and more so on sibling relationships than friendships.

The first profile, *Positive Engagement*, was characterized by high levels of intimacy, the highest level of involvement with friends, and low to moderate negativity. In this group, friendship intimacy ratings were close to 4.0 on a 5.0 scale, ratings of negativity were below the midpoint on the scale, and youth spent

28% (almost one third of their time) outside of school in shared activities with their closest same-sex friend. This profile represented the smallest proportion of youth in the study, with only 3% of the sample being classified into this profile. Although significant group differences did not emerge in length of friendship or school status, it is notable that all youth in this group had been friends for more than one year and that all but one youth reported attended the same school as their best friend.

The second profile, *Moderate Engagement*, was characterized by moderate intimacy, negativity and involvement, and included 15% of the sample. This group is similar to a profile identified among Mexican-origin adolescents' sibling relationships, which was also characterized by moderate warmth and conflict (Killoren et al., 2010). In this group, friendship intimacy ratings were close to the midpoint on a 5.0 scale, ratings of negativity were below the midpoint of the scale, and youth spent 14% of their time outside the school in shared activities with their best friend. Youth in this profile were significantly more likely to live in the same neighborhood as their best friends as compared to youth in *Low Involvement* group.

The last profile, *Low Involvement*, was characterized by moderate intimacy, low to moderate negativity and the lowest levels of involvement. In this group, friendship intimacy ratings were higher than the midpoint on a 5.0 scale, ratings of negativity were below the midpoint on the scale, and youth spent 2% of their time outside the school engaged in activities with their best friends. This

profile represented the largest proportion of youth in the study, with 82% of the sample assigned to this profile. Youth in this profile were significantly less likely to live in the same neighborhood as their best friend compared to youth in the *Positive* and *Moderate Engagement* profiles.

It is notable that level of involvement, but not intimacy and negativity, differentiated all three profiles, and that the majority of youth in this study were classified into the *Low Involvement* profile. In this sample, the *Low Involvement* profile may represent a normative and positive pattern of friendship for youth who have strong family ties, as the *Low Involvement* profile was depicted by moderate levels of intimacy, low levels of negativity, and limited time spent with friends. In a family and cultural context that emphasizes family obligations and interdependence, youth's friendships may be most likely to be characterized by low levels of time spent in shared activities or involvement. Although Berndt (2002) argued that positive and negative dimensions are essential when studying friendship quality among youth, the current study provides evidence that there may be other important dimensions to consider when studying friendship qualities in adolescence. Grounded in the ecological perspective, the involvement dimension represents the extent to which youth's spend time on a day-to-day basis with their best friends (Bronfenbrenner, 1979). Furthermore, as this study focused on youth in early adolescence, it will be important to consider how friendship profiles may vary across the course of adolescence. It is possible that more

differentiated profiles will emerge in late adolescence to the extent that greater variability emerges in these dimensions of youth's friendships.

Profile Membership and Adolescents' Cultural Orientation and Values

The second goal of this study was to examine links between profile membership and adolescents' cultural orientations and familism values as informed by the ecological framework (Bronfenbrenner, 1979) and prior research on individualism and collectivism (Markus & Kitayama, 1991; Oyserman, Coon, & Kimmelmeier, 2002; Shkodriani & Gibbons, 1995). It was expected that adolescents with higher levels of Mexican cultural orientations and familism values would be more likely to describe their friendships as low in intimacy, negativity and involvement. In contrast, analyses linking profile membership and youth's Anglo orientations were exploratory.

Results revealed that there were no significant associations between profile membership and adolescents' cultural orientation and values. There are several possible explanations for the lack of significant findings. One explanation may pertain to the lack of variability in the friendship profiles. As noted, the majority of the sample (82%) was characterized in the *Low Involvement* profile. In addition, all three profiles were similar in their ratings of intimacy and negativity, and as such, only involvement differentiated the three groups. Thus, the limited variability may have made it difficult to identify significant associations with adolescents' cultural orientations and values. The second possibility is that other dimensions of culture are associated with Mexican-origin

adolescents' friendship profiles. For example, rather than adolescents' own cultural orientations and values, it may be that elements of the cultural context, such as the ethnic composition of their schools and neighborhoods, are important factors in the development of their friendships.

It is also important to consider that the characteristics of this sample, particularly that the majority of parents were immigrants, may have limited the number of profiles that emerged and played a role in the limited findings linking culture and profile membership. The predominantly immigrant sample also may have restricted variability in dimensions of culture that have implications for profiles of adolescents' friendship. As such, it will be important in future studies to explore adolescents' friendship profiles in samples that differ in their sociocultural characteristics (e.g., Latino subgroup, nativity, generation status).

Linking Profile Membership and Adolescents' Well-being

The third goal of this study was to examine the associations between profile membership and adolescents' well-being (i.e., depressive symptoms, risky behaviors, school performance). Prior research documents relations between friendship quality and adolescents' well-being (Fuligni et al., 2001; Smetana et al., 2006) and potentially different patterns of association for girls versus boys (Hussong, 2000). It was expected that adolescents with higher levels of intimacy and involvement and lower levels of negativity would report more positive adjustment. Friendship profile differences were found for adolescents' GPAs. Specifically, adolescents with higher GPAs were more likely to belong to the

Positive Engagement than the *Moderate Engagement* profile. Perhaps youth in the *Positive Engagement* group are more engaged in the school setting given that all but one youth in this group reported that their best friends attended the same school and that they have been friends for more than one year. Another possible explanation is that youth in the *Positive Engagement* group have friends that are more school oriented and perform better academically. Replicating these findings is an important first step, and identifying the mechanisms that link friendship profiles and school achievement is a second step.

In contrast, no differences across friendship profiles emerged in adolescents' depressive symptoms or risky behaviors. As noted, the limited differences among the groups in two of the three friendship dimensions may have partly attributed to the lack of variability across groups in depressive symptoms and risky behaviors. Scholars who study youth friendships also note that friendships are distinguished by not only the qualities of the relationship, but also by the characteristics of the friends (Berndt & Murphy, 2002; Hartup, 1993). Characteristics such as friends' engagement in deviant behaviors or friends' anxiety or depression levels may be important to consider, in combination with friendship quality, to better explain the links between profiles of friendship quality and youth adjustment. It is notable that in this study we focused on *adolescents'* ratings of their own well-being. In future work, it may be important to consider *parents'* reports of adolescents' well-being. It is possible that parents' reports of adolescent well being may be differentially related to friendship

profiles. Another potential direction is to consider other dimensions of adjustment, such as aspects of self (e.g., self esteem), that were not measured in the current study. These dimensions of adjustment may be more closely linked to friendship profiles.

Finally, it is possible that the associations between friendship profiles and youth adjustment are moderated by characteristics not measured in the current study. There is evidence, for example, that individual characteristics such as temperament are associated with the development of social skills, and in turn, may be related to the quality of children's peer relationships (Rubin et al., 1998). Among children in middle childhood, Stocker and Dunn (1990) showed that two temperamental qualities (i.e., sociability and emotionality) were associated with the qualities of children's friendships. Specifically, children that were rated as more sociable were also described as having more positive relationships with their friends compared to children that were temperamentally less sociable (Stocker & Dunn, 1990). It is also possible that individual characteristics moderate the associations between friendship quality and youth adjustment. Future research should extend work on youth's individual characteristics and friendship qualities to adolescence and should also examine the potential moderating role of youth's individual characteristics in temperament – adjustment linkages.

Role of Gender in Friendship Profiles and Adjustment

Gender differences in adolescents' friendships has been substantiated in prior work, suggesting that girls' friendships are characterized by emotional

intimacy more than boys', and that boys' friendships are based on shared activities (Card et al., 2008; Laursen & Pursell, 2009; Peets & Kikas, 2006; Savin-Williams & Berndt, 1990). Indeed, in this study, I found girls reported higher levels of intimacy and boys reported higher levels of negativity in their friendships. However, the three friendship profiles were applicable to both girls' and boys' friendships. It is possible that the multi-dimensional approach used in this study, including dimensions that are more characteristic of girls' and of boys' friendships, allowed me to identify profiles that were relevant to both girls and boys.

The role of gender as a moderator for the second and third goals of this study could not be examined as planned. Because the *Positive Engagement* profile included only seven youth (i.e., three girls, four boys), there were too few youth in this profile to test profile by gender interactions. Thus, the test of gender as a moderator of friendship profile – adjustment linkages awaits future work. With larger sample sizes and more even distribution of youth across profiles, it will be possible to examine the moderating role of gender as a next step. Research on gender socialization processes within families, including in Mexican American families (Azmitia & Brown, 2002; Raffaelli & Ontai, 2004), alert us to the possibility that girls and boys may be socialized differently via their interpersonal relationships within families. These different socialization experiences, in turn, may have implications for the development of their friendships. Thus, future work

should examine adolescents' interactions with both parents and best friends to explore similarities and differences of these two interpersonal relationships.

Limitations and Future Directions

The limitations of this study point to directions for future research on ethnic minority adolescents' friendships. First, this study was cross-sectional in design, and thus, it was not possible to examine the directions of association between friendship profiles and their correlates (i.e., culture, well-being) or to explore how friendship profiles and their correlates may shift over the course of adolescence. A second limitation was the use of self-report data from a single member of the friendship dyad. In future work, it will be important to include friends' reports about the quality of their friendships with their best friends to better represent the dyadic nature of these relationships. By including both adolescents' and friends' reports of the relationship, it may also be possible to address potential biases that result from social desirability of youth responses. In addition, the focus of the current study was on youth's involvement in a close same-sex friendship; however, it is important to consider both the quality and quantity of youth's involvement with peers. Some youth may be equally involved in several close friendships, whereas, for other youth, the quality of their relationships may be embedded within their ranks (e.g., popularity, neutral, rejected) among their peers and be represented by group-level friendship processes. Further research should consider the multi-faceted ways that youth are involved in the world of peers, reflecting both the quality and quantity of their

time with peers. Further, given that the current study focused on a specific group of Mexican-origin youth (i.e., from two-parent families in the southwestern US), it will be important to examine if similar or different friendship profiles and correlates emerge in other groups of Mexican-origin or Latino adolescents that represent diversity in family and contextual circumstances that characterize Latino youth in the US. Although there was a limited amount of significant findings using a pattern analytic approach, this approach remains a valuable tool when examining *within-group* variability. Future work should use this as a first step to understanding patterns among friendships in adolescence.

Conclusion

In conclusion, this is among the first to use a pattern-orientated approach to study multiple dimensions of Mexican-origin adolescents' friendships. With this approach, it is possible to examine *patterns* that exist across multiple dimensions of friendships, and thus, to provide a more holistic portrait of youth's relationships with their close friends. It will be important to extend this work to determine, first, whether different patterns emerge, and second, whether the correlates of these patterns differ over time and across different developmental periods.

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Table 1

Means, Standard Deviations, and Correlations among Study Variables for Girls (Above the Diagonal) and Boys (Below the Diagonal)

Variable	1	2	3	4	5	6	7	8	9
<i>Friendship</i>									
1. Intimacy	–	-.31***	.10	.28**	-.01	.33***	-.01	-.11	.17
2. Negativity	-.02	–	.16	-.06	-.06	-.19*	.24**	.13	.00
3. Involvement	.06	-.03	–	.17	-.01	-.09	.02	-.15	.10
<i>Cultural Orientation</i>									
4. Anglo Orientation	.09	.12	-.02	–	-.41***	.13	.02	-.11	.19*
5. Mexican Orientation	-.07	-.03	.03	-.26**	–	.01	.05	.06	-.15
6. Familism Values	.04	-.01	-.18	.05	.19*	–	-.26**	-.21*	.15
<i>Adolescent Well-being</i>									
7. Risky Behaviors	.20*	.21*	.11	-.04	-.15	-.10	–	.59***	-.34***
8. Depression	.06	.24**	.08	-.13	.00	-.29**	.49***	–	-.38***
9. GPA	.02	-.05	.00	.07	.04	.16	-.32***	-.26**	–
<i>Means (SD)</i>									
Boys	3.34 _a (.64)	1.88 _a (.76)	0.05 (.07)	3.93 (.61)	3.61 (.76)	4.26 (.53)	1.42 _a (.42)	15.59 (8.39)	2.54 _a (.94)
Girls	4.14 _a (.52)	1.63 _a (.60)	0.04 (.06)	4.03 (.58)	3.71 (.80)	4.26 (.50)	1.31 _a (.37)	17.25 (11.32)	2.91 _a (.89)

Note. Means that share a subscript in one column were significantly different at the $p < .05$ level. * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 2

Model Fit Indices for Latent Profile Analyses

Profiles	AIC	BIC	ABIC	Entropy	<i>p</i> LMR
1	402.343	423.202	404.184	—	—
2	291.841	326.606	294.909	0.95	0.0719†
3	216.167	264.837	220.461	0.97	0.0021**

Note. *N* = 239. AIC = Akaike information criterion; BIC = Bayesian information criterion; ABIC adjusted Bayesian information criterion; LMR = Lo-Mendell-Rubin Test; †*p* < .10, ***p* < .01. Bolded text indicates the best-fitting solution.

Table 3

Average Latent Profile Probabilities for Most Likely Latent Class Membership

(Row) by Latent Profile (Column)

	Profile 1	Profile 2	Profile 3
Profile 1	.98	.02	.00
Profile 2	.01	.97	.02
Profile 3	.00	.07	.99

Table 4

Means and Standard Deviations on Friendship Quality for Overall Sample and by Profile

Variable	Total Sample ($N = 239$)			Profiles					
	M	(SD)	Range	Positive Engagement		Moderate Engagement		Low Involvement	
$(n = 7)$				(SD)	$(n = 37)$	(SD)	$(n = 195)$	(SD)	
<i>Friendship Quality</i>									
Intimacy	3.75	(.70)	1.63 - 5.00	3.90 _a	(.70)	3.58 _a	(.67)	3.78 _a	(.71)
Negativity	1.75	(.69)	1.00 - 4.60	2.03 _a	(.80)	1.75 _a	(.58)	1.74 _a	(.71)
Involvement ¹	0.05	(.07)	0.00 - 0.35	0.28 _a	(.04)	0.14 _b	(.03)	0.02 _c	(.02)

Note. Means in the same row that do not share subscripts are significantly different from one another at $p < .05$.

*Note*¹. Involvement is measured as the proportion of adolescents' time spent with best friend divided by total time reported across the seven calls.

Table 5

Model Fit Indices for Multiple-group Latent Profile Analyses

Profile	AIC	BIC	ABIC	LR	Entropy
Unconstrained	456.288	546.676	464.263	-	.98
Semi-Constrained	538.857	538.857	544.072	.00	.90
Fully-Constrained	549.387	601.534	553.988	.00	.98

Table 6

Proportion of Girls and Boys in each Profile for Multiple-group Latent Profile Analyses

Model	Profile 1				Profile 2				Profile 3			
	Girls	%	Boys	%	Girls	%	Boys	%	Girls	%	Boys	%
Unconstrained	107	44.77	4	1.67	11	4.6	25	10.46	4	1.67	88	36.82
Semi-Constrained	14	5.86	24	10.04	106	44.35	8	3.35	2	0.84	85	36.57
Fully-Constrained	3	1.26	4	1.67	107	44.77	88	36.82	12	5.02	25	10.46

Note. Each of the models have different constrains which is the reason there are different sample sizes for each profile.

Table 7

Chi-squares for Descriptive Characteristics by Profile Membership

Descriptive Characteristics	χ^2	Positive Engagement (n = 7)		Moderate Engagement (n = 37)		Low Involvement (n = 195)	
		n	%	n	%	n	%
		<i>Adolescent Nativity</i>					
U.S.	0.11	4	1.67	23	9.62	123	51.46
Mexico		3	1.26	14	5.86	72	30.13
<i>Neighborhood Status</i>							
Same	11.03**	4	1.67	23	9.62	67	28.03
Different		3	1.26	14	5.86	128	53.56
<i>School Status</i>							
Same	1.13	6	2.51	29	12.13	141	59.00
Different		1	0.42	8	3.35	54	22.59
<i>Friend Ethnicity</i>							
Hispanic/Latino	2.74	3	1.26	27	11.30	139	58.16
Other Ethnicity		4	1.67	10	4.18	56	23.43
<i>Length of Friendship</i>							
Less than 1 year	1.97	0	0	3	1.26	27	11.30
More than 1 year		7	2.93	34	14.23	168	70.29

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

Table 8

Regression Coefficients and Logit-odds Values between Covariates and Class Membership for Friendship Characteristics, Cultural Orientations and Values and Adolescent Well-being

Covariates	Positive Engagement vs.				Moderate Engagement vs.			
	Low Involvement				Low Involvement			
	β	<i>SE</i>	Z	Odds	β	<i>SE</i>	Z	Odds
<i>Cultural Orientation and Values</i>								
Anglo Orientation	0.12	(.45)	0.26	1.12	0.44	(.31)	1.39	1.55
Mexican Orientation	0.15	(.43)	0.34	1.16	0.14	(.24)	0.59	1.15
Familism Values	-0.76	(.45)	-1.68	0.47	-0.46	(.30)	-1.53	0.63
<i>Adolescent Well-being</i>								
Depression	-0.07	(.04)	-1.65	0.93	-0.01	(.02)	-0.26	1.00
GPA	0.69**	(.25)	2.75	1.99	-0.13	(.19)	-0.71	0.88
Risky Behaviors	-0.02	(.50)	-0.04	0.98	0.52	(.46)	1.14	1.69

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

Table 9

Post-Hoc Analysis for Mean Differences for the Low Involvement Profile

Descriptive Characteristics	Intimacy	Negativity	Involvement
<i>Adolescent Nativity</i>			
U.S.	3.81	1.73	0.02
Mexico	3.72	1.76	0.02
<i>Adolescent Gender</i>			
Female	4.14	1.59	0.02
Males	3.34	1.93	0.02
<i>Neighborhood Status</i>			
Same	3.74	1.84	0.02
Other	3.79	1.69	0.02
<i>School Status</i>			
Same	3.74	1.70	0.02
Other	3.87	1.86	0.02
<i>Friend's Ethnicity</i>			
Hispanic/Latino	3.78	1.74	0.02
Other Ethnicity	3.77	1.74	0.02
<i>Length of Friendship</i>			
Less than 1 year	3.71	1.66	0.02
More than 1 year	3.79	1.75	0.02

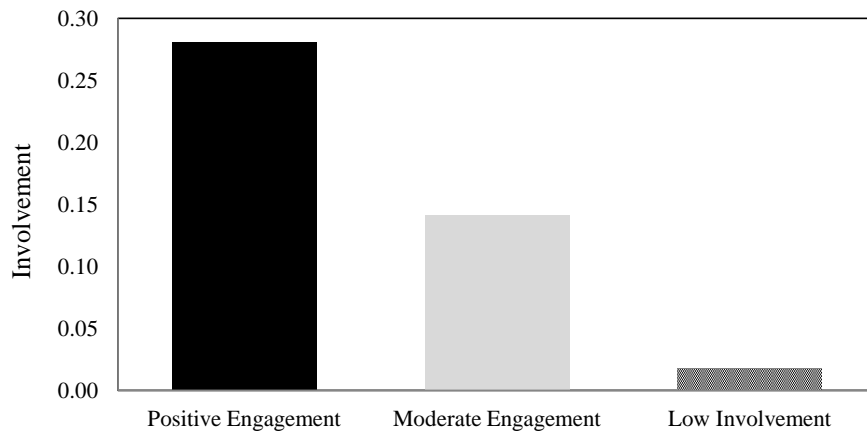
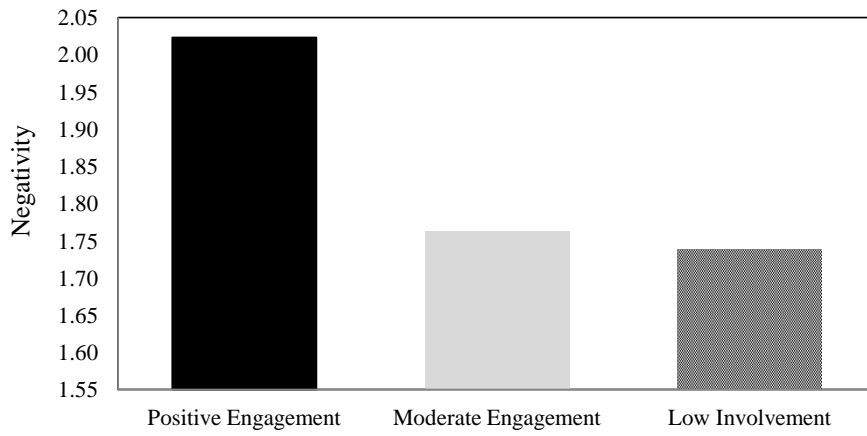
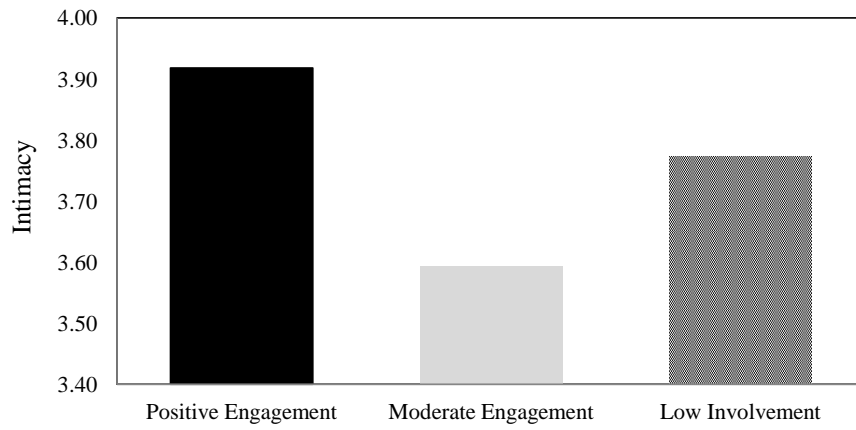


Figure 1. ($N = 239$). Latent profile means for the 3-profile solution by dimension.

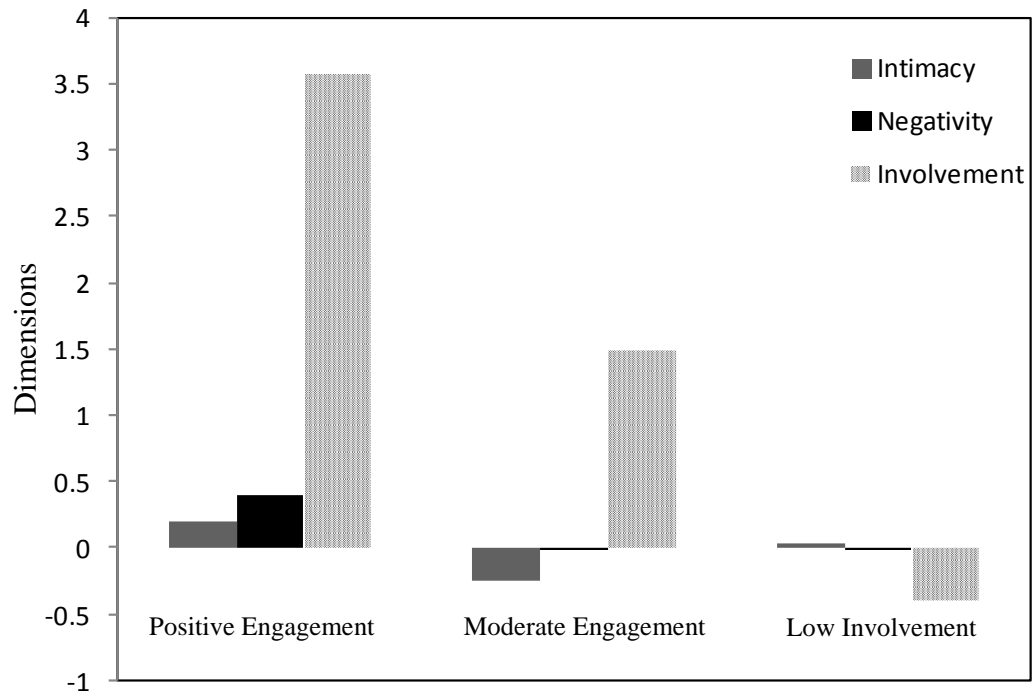


Figure 2. ($N = 239$). Standardized mean scores for latent profile for the 3-profile solution by group membership.