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Constellations of Family Closeness and Adolescent Friendship Quality

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Constellations of Family Closeness and Adolescent Friendship Quality

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Abstract

Objective
This study aims to investigate the association between family relationship constellations and adolescent friendship quality in a more holistic way and disentangle gender differences on their associations.
Background
Family relationships are important for adolescent friendship, but little is known about how mother–adolescent and father–adolescent relationships work in the context of each other.

Method
Latent profile analysis was conducted in a sample of 326 ethnically diverse high schoolers (ages: 14–19 years; 60.4% female) to identify different combinations of mother– and father–adolescent closeness and their associations with friendships for adolescent boys and girls.

Results
Findings revealed five family relationship patterns: Cohesive (22%; high closeness with both parents), Alliance With Mother (9%; high mother–adolescent closeness only), Alliance With Father (10%; high father–adolescent closeness only), Disengaged (22%; low closeness with both parents), and Average (36%; average closeness with both parents) profiles. Adolescents in Cohesive families had high conflict resolution, and adolescents in alliance families had high companionship, whereas adolescents in Disengaged and Average families had the worst friendships. Adolescent boys in Disengaged families had the poorest friendships in all four domains when compared to adolescent girls in Disengaged families and adolescent boys in other family types; mother–adolescent closeness was important for adolescent boys' validation and intimate exchange. Adolescent girls' friendship quality generally was highest in Cohesive families.

Conclusion
Findings highlight the importance of simultaneously accounting for relationships with both parents from the family systems perspective.

Implications
Being close to at least one parent is critical for adolescent social–emotional and friendship development, and this is especially important for adolescent boys' friendship quality.

INTRODUCTION
High-quality friendships during adolescence have immediate and long-term benefits for individual social–emotional and academic adjustment (e.g., Demir & Urberg, 2004; Demir & Weitekamp, 2007; Swenson et al., 2008). During adolescence, friendships play an important role in satisfying fundamental social needs for support, companionship, and intimacy (Berndt & Perry, 1986; Buhrmester & Furman, 1987). Therefore, friendship quality is usually assessed by how well the relationship meets these social needs (e.g., Bukowski et al., 1994; Parker & Asher, 1993). Moreover, having the ability to resolve conflict is critical for friendship maintenance (Gao et al., 2017). These important qualities map onto four key domains: validation, companionship, intimate exchange, and conflict resolution. Validation, as an important indicator of friend support, describes the degree to which the friendship satisfies individuals' emotional needs and validates their self-worth. Companionship, as a dominant theme of adolescent social motivation, describes how often friends spend time together in an enjoyable way. Intimate exchange is characterized by the degree of self-disclosure of personal information and feelings between friends. Conflict resolution, the ability to resolve conflict and maintain friendships, reflects how effectively and fairly friends resolve their disagreements (Parker & Asher, 1993).

Family relationships and adolescent friendships
Family relationships are the earliest and most enduring context for socializing interpersonal skills and lay the foundation for developing and maintaining high-quality interpersonal relationships (e.g., Engels et al., 2002; Xia...
et al., 2018). Prior work has demonstrated a strong and long-lasting effect of family relations on adolescent friendships (e.g., Coleman, 2003; Engels et al., 2002; Shaffer et al., 2009). Close parent–adolescent relationships provide opportunities to observe and experience positive interpersonal interactions in the family (Laible et al., 2015), supporting adolescents' social–emotional and relational competence development (Boling et al., 2011; Engels et al., 2001) and facilitating their intimate and mutually responsive relationships with friends (Coleman, 2003; Schneider et al., 2001). For example, adolescents with close parent–child relationships develop greater empathy so that they are more prosocial toward friends and better able to manage friendship conflict and intimacy (Chow et al., 2013; Miklikowska et al., 2011; Padilla-Walker & Christensen, 2010). They also have greater positive emotional engagement and constructive emotional coping to facilitate positive friendship interactions (Abraham & Kerns, 2013; Smith, 2015).

Moreover, the mother–adolescent and father–adolescent relationships may offer complementary and synergistic potential for adolescent friendships (Coleman, 2003). Having a close relationship with mothers strengthens individuals' general self-concept, empathic concern, and constructive emotion coping. In turn, these strengths are associated with high-quality friendships characterized by more validation, caring, and intimacy (Abraham & Kerns, 2013; Boling et al., 2011; Coleman, 2003; Miklikowska et al., 2011). Being close with fathers fosters individual social self-efficacy and skills related to conflict resolution and reciprocity; thus, these individuals usually have more reciprocal friendships with less conflict (Coleman, 2003; Lieberman et al., 1999; Miklikowska et al. 2011; Veríssimo et al., 2011). Additionally, father–adolescent interactions are more likely to involve play and recreation than mother–adolescent interactions; these experiences with fathers may contribute to adolescents' involvement with peers in a unique way, facilitating recreation activity and having fun together (i.e., companionship; Lamb & Lewis, 2010). Taken together, mothers may make stronger contributions to validation and intimacy, and fathers may have stronger influences on conflict management and companionship in adolescents' friendships.

Pattern-based family relationships from person-centered approach

Although studies have demonstrated mothers' and fathers' influence on adolescent friendships, little is known about how relative closeness with two parents functions in the broader family context. More nuanced research questions, such as whether being close to one parent is as good as being close to both parents and whether being close to fathers would have the same implications for friendship when children have close versus distant relationships with their mothers, cannot be answered without considering the family as a whole. Person-centered, pattern-based analyses have the capacity to simultaneously account for mother–adolescent and father–adolescent closeness and to identify different constellations of closeness and distance in these relationships. This approach not only accounts for one dyad in the context of the other but also captures essential family relationship patterns that have important implications for adolescent social–emotional development and interpersonal relationships (Sturge-Apple et al., 2010; Xia et al., 2020).

From a family systems perspective, there are at least four relationship patterns indicated by different combinations of high and low emotional closeness with two parents (Bell et al., 2001; Kerig, 1995). Cohesive families are characterized by warm, supportive, and harmonious relationships among all family members; adolescents from these families tend to be close with both parents. Conversely, family members from Disengaged families are often characterized as emotionally distant from each other; adolescents from Disengaged families tend to have less warmth and closeness in relationships with both parents (Kerig, 1995; Xia et al., 2020). Families with cross-generational alliances are characterized by imbalanced relationships in the family such that the adolescent may feel particularly close to one parent and emotionally distant from the other (Bell et al., 2001; Minuchin, 1974). We label these families Alliance With Mother families (i.e., high mother–adolescent closeness and low father–adolescent closeness) and Alliance With Father families (i.e., high father–
adolescent closeness and low mother–adolescent closeness). Without enough research on relationship patterns for families with same-sex parents, the above patterns are specific to families with heterosexual couples.

These family relationship patterns may have different implications for different aspects of adolescent friendship quality. A Cohesive family generally is viewed as a well-functioning family type that has positive influences on adolescent social–emotional development. In line with previous studies, we expect that youth from Cohesive families have better friendship quality in all four domains (validation, companionship, intimate exchange, and conflict resolution; Leidy et al., 2010; Mak et al., 2018). Conversely, adolescents from Disengaged families are less likely to have secure attachments with their parents; are less able to observe, experience, and practice constructive social interactions within the family; and are more likely to have social–emotional problems (Knutson & Woszidlo, 2014; Sturge-Apple et al., 2010). We expect that these adolescents have the worst friendship quality in all four domains.

As for adolescents who have an alliance with one parent, having an alliance with mothers versus fathers may have different implications. Considering mothers are often the source for caring and comforting, and females, in general, have higher intimacy, adolescents allied with mothers are more likely to experience and learn skills for validation and caring and for facilitating intimacy (Allen et al., 2003; Rodriguez et al., 2014). In contrast, fathers have a greater tendency to engage in play and recreation (Lamb & Lewis, 2010), so youth allied with fathers are more likely to experience and learn skills for recreation and having fun with others. Combined with previous findings that father–adolescent closeness is related to conflict management in friendships (Lieberman et al., 1999), we expect adolescents from the Alliance With Mother families to have greater validation and intimate exchange, and adolescents from the Alliance With Father families to have more companionship and conflict resolution in their friendships.

Gender differences and potential interaction effects
Gender differences in friendships have been well documented, with females having higher levels of various positive friendship features (e.g., Black, 2000; Weeks, 2013). Specifically, females have better companionship, help, intimacy, emotional security, validation, and lower conflict in their friendships (Black, 2000; Demir & Orthel, 2011; Grabill & Kerns, 2000). They also demonstrate better social–emotional competence in forming and maintaining friendships and receive more emotional support and intimate disclosure from their friends (e.g., Black, 2000; Demir & Orthel, 2011; Hall, 2011). In comparison, males usually have lower expectations for friendships and are more easily satisfied with their friendship quality (Hall, 2011; Weeks, 2013).

Beyond gender differences in friendship quality, gender may also influence family–friendship associations. The limited literature on the interaction effect between adolescent gender and family factors reveals more subtle differences than consistency. Some studies have shown that females are more relationally oriented and more engaged in family interactions; therefore, family relationships have a stronger influence on females' interpersonal relationships (Coleman, 2003). Conversely, other work has found that males are more vulnerable in disconnected families, such that males have significantly less positive conflict resolution skills in low-closeness families, whereas conflict resolution for females is stably high regardless of family closeness (Fosco et al., 2016). Some other studies suggest that adolescent boys and girls may hold differential perceptions of their families and themselves, and thus families may influence males and females differently on their friendship development (McKinney & Renk, 2008).

CURRENT STUDY
This study aimed to apply a person-centered approach to identify family relationship patterns by using indicators of mother–adolescent closeness and father–adolescent closeness. Guided by family systems theory, we hypothesized that (H1) there would be four profiles of family relationship patterns: (a) Cohesive families,
characterized by high closeness with both parents; (b) Disengaged families, characterized by low closeness with both parents; (c) Alliance With Mother families, characterized by high mother–adolescent closeness and low father–adolescent closeness; and (d) Alliance With Father families, characterized by high father–adolescent closeness and low mother–adolescent closeness.

Second, we examined the predictive effects of family relationship profiles and adolescent gender on adolescent friendship quality while controlling for other demographic variables. We expected that there would be differences among the identified family relationship patterns, and between boys and girls, in their associations with friendship outcomes. Specifically, (H2a) adolescents in Cohesive families would have the highest level of validation, companionship, intimate exchange, and conflict resolution; (H2b) adolescents in Disengaged families would have the lowest level of validation, companionship, intimate exchange, and conflict resolution; (H2c) adolescents in Alliance With Mother families would experience high levels of validation and intimate exchange; (H2d) adolescents in Alliance With Father families would experience high levels of companionship and conflict resolution in their friendships; and (H2e) adolescent girls would experience higher levels of friendships in all four domains than boys.

Finally, we evaluated gender differences in the association between family relationship patterns and adolescent friendship outcomes. With limited and inconsistent findings in the literature, we did not have a specific hypothesis about the nature of adolescent gender differences on the association between family relationship patterns and adolescent friendships.

**METHOD**

Participants and procedures
This study received Marquette University Institutional Review Board approval. Participants were recruited in an urban public high school with a large, ethnically diverse population in Milwaukee, Wisconsin. Letters explaining the study and consent forms were sent home to parents of students who were enrolled in social studies classes; 80% of parents gave permission for their children to participate. Adolescents who obtained parents' informed consent were invited to participate, and approximately 75% of those students were present on the day of the collection and agreed to complete the survey packet.

Data were collected during a 90-minute social studies class in the middle of a fall semester in the academic year 2000 – 2001; students who had not obtained parental consent participated in an alternative activity in a different location. We chose social studies classes because they were required for all students and the principal thought that it would be valuable for social studies students to see how research is conducted. After signed consent was obtained from the participating students in the class, surveys were distributed with the instructions to complete them quietly and independently. Two researchers administered and answered questions individually and then collected the completed surveys. This resulted in a total sample of 326 9th-grade to 12th-grade students.

Adolescents in this sample were 60.4% female and ranged in age from 14 to 19 years (M = 16.32, SD = 1.17). Adolescents identified their race as White (56.7%), African American (12.3%), Biracial (2.1%), Latino/Hispanic (19.6%), Asian/Pacific (4.3%), Native American (1.8%); 3.1% chose a different category. Just under half (46.7%) of the adolescents came from divorced families. No information on family socioeconomic status was collected.

Measures
Parent–adolescent closeness
Adolescents completed 28 items of the Inventory of Parent and Peer Relationships (IPPA; Armsden & Greenberg, 1987) for their closeness with mother and father, respectively. Items were rated on a 5-point Likert
scale ranging from 1 (almost never or never true) to 5 (almost always or always true). IPPA assessed three facets of emotional closeness in parent–child relationships: trust (10 items), communication (10 items), and alienation (8 items). An example item in each subscale included: “I trust my mother/father” (trust), “My mother/father encourages me to talk about my difficulties” (communication), and “I get upset a lot more than my mother/father knows about” (alienation). Items in each subscale for each parent were averaged to create a single score to represent their level on the construct. Finally, six scores (i.e., mother–adolescent trust, mother–adolescent communication, mother–adolescent alienation, father–adolescent trust, father–adolescent communication, and father–adolescent alienation) were obtained; the higher values indicated more trust/communication/alienation in the respective dyadic relationships (α in mother–adolescent dyad: .84 to .92; α in father–adolescent dyad: .84 to .91).

Friendship quality
Participants completed 23 items from four subscales (validation, companionship, intimate exchange, and conflict resolution) of the Friendship Quality Questionnaire (FQQ; Parker & Asher, 1993). Adolescents rated items on a 5-point Likert scale ranging from 0 (not at all true) to 4 (really true) to reflect their experiences with their best friend. Example items in four subscales included: “S/he tells me I am good at things” (validation), “We do fun things together a lot” (companionship), “We always tell each other our problems” (intimate exchange), and “We talk about how to get over being mad at each other” (conflict resolution). Items in each subscale were averaged to create a single score to represent their level on the respective aspect of friendship quality; the higher values indicated better friendship quality in the given aspect. All four subscales exhibited acceptable reliabilities in the original study (α: .73 to .90) and in this sample (α: .64 to .89).

Demographics
To account for the potential influence of participants' demographic characteristics, the following three variables were accounted for in the analytic models: participants' age; participants' gender, coded as 1 (female) or 0 (male); and marital status of parents, coded as 1 (divorced) or 0 (married).

Analysis plan
Latent profile analysis (LPA) is a person-centered, pattern-based approach using the configuration of continuous manifest indicators to categorize the whole sample into mutually exclusive and exhaustive latent profiles (Lazarsfeld & Henry, 1968). Data analysis proceeded in three steps and all models were estimated in Mplus version 8.4 (Muthén & Muthén, 1998).

Step 1: using LPA to identify and describe the latent profiles of adolescent closeness with both parents (indicated by trust, communication, and alienation in both mother– and father–adolescent dyads). A series of models with a different number of profiles was estimated and models were compared. Model identification was checked with 500 initial- and final-stage starts. Model selection was based on (a) model stability, (b) statistical model fit indexes, and (c) theoretical interpretability. Statistical fit indexes included Akaike information criterion (AIC), Bayesian information criterion (BIC), sample-size-adjusted BIC (aBIC), entropy, and bootstrapped likelihood ratio test (BLRT). A better model was indicated by lower AIC, BIC, and aBIC. Higher entropy indicated better classification utility. A significant BLRT indicated the model fit was significantly better than the model with one fewer profiles. The optimal model should have included theoretically distinct and meaningful profiles, revealed by profile membership probabilities (i.e., the profile’s distribution in the whole sample) and item response means (i.e., the indicator’s profile-specific mean). These parameters were used to determine the number of profiles and profile names.

Step 2: examining whether family profile membership and adolescent’s gender were related to four aspects of adolescent friendship quality when controlling adolescent’s age and parents’ marital status. The Bolck-Croon-Hagenaars (BCH) approach (Bakk & Vermunt, 2016) was used to examine the associations between profile
memberships in Step 1 final model and four adolescent friendship outcomes while accounting for adolescent
gender, age, and family marital status. This approach used posterior probabilities to classify individuals into
latent profiles and used classification error to adjust the outcome analysis, which is currently viewed as the
optimal approach to predict continuous distal outcomes in LPA analysis (Asparouhov & Muthén, 2014). The BCH
weight data of each profile, along with demographic predictors and outcome variables in Step 1 final model,
were saved and used for BCH training in Step 2. Then each outcome variable was regressed on all demographic
predictors in the overall model of all profiles. The outcome intercept within each profile was freely estimated;
variances of all profile indicators were constrained to be equal across profiles by default to improve model
identification (Asparouhov & Muthén, 2020).

Step 3: examining the interaction effect of gender by family profiles on adolescent friendship quality. If the main
effects of gender and family profiles on outcomes were significant, we additionally examined the interaction
effect of family profiles by gender on friendship outcomes. This was done by comparing the fit of two models in
which outcome intercepts were constrained to be the same or allowed to be freely estimated in each family
profile. A likelihood ratio test (LRT), calculated by two times the difference in log-likelihood values between two
models, was distributed as chi-square with degrees of freedom equal to the difference in the number of free
parameters between two models. A significant LRT indicated a significant change in model fit owing to
parameter constraints across groups so that we would report the specific interaction effects of family profiles by
gender. If LRT was not significant, a more parsimonious model was preferred so that the main effect model in
Step 2 was the final model.

Finally, post hoc tests were conducted to (a) verify the family profiles indicated by mother– and father–
adolescent closeness in Step 1 accurately captured their respective family system features and (b) examine
whether there was a predictive effect of adolescent age on family profiles (see Supplementary Materials).
Marital status, interparental conflict, mother– and father–adolescent conflict, and adolescent age were used to
predict family profile membership. Their predictive effects were expressed as odds ratios of being in a specific
profile compared to a reference profile. Overall tests and pairwise comparisons on levels of three conflict
variables among family profiles were also conducted.

RESULTS

Model selection and final model profiles
Table 1 lists descriptive statistics for variables of interest. Table 2 shows model fit and model selection
information. Models with one to eight profiles were compared; AIC, BIC, and aBIC were not minimized, but the
reduction slowed down around the five- or six-profile model. Entropy ranged from .84 to .87, and the BLRTs
were significant in all models, indicating that all models (except for the one-profile model) were significantly
better than the model with one fewer profile. Considering AIC, BIC, aBIC, and entropy, optimal model candidates
were five- to seven-profile models.

<table>
<thead>
<tr>
<th>Category</th>
<th>Variable</th>
<th>Frequency (valid %) or mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demographic characteristics</td>
<td>Race/ethnicity</td>
<td></td>
</tr>
<tr>
<td></td>
<td>White</td>
<td>185 (56.7%)</td>
</tr>
<tr>
<td></td>
<td>African American</td>
<td>40 (12.3%)</td>
</tr>
<tr>
<td></td>
<td>Biracial</td>
<td>7 (2.1%)</td>
</tr>
<tr>
<td></td>
<td>Latino/Hispanic</td>
<td>64 (19.6%)</td>
</tr>
<tr>
<td></td>
<td>Asian/Pacific</td>
<td>14 (4.3%)</td>
</tr>
<tr>
<td></td>
<td>Native American</td>
<td>6 (1.8%)</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>10 (3.1%)</td>
</tr>
</tbody>
</table>
Table 2. Model fit information for latent profile analysis

<table>
<thead>
<tr>
<th>No. of profiles</th>
<th>Log-likelihood</th>
<th>No. of parameters estimated</th>
<th>AIC</th>
<th>BIC</th>
<th>aBIC</th>
<th>Entropy</th>
<th>BLRT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>−2517.15</td>
<td>12</td>
<td>5058.29</td>
<td>5103.40</td>
<td>5065.34</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>2</td>
<td>−2233.07</td>
<td>19</td>
<td>4504.15</td>
<td>4575.57</td>
<td>4515.30</td>
<td>0.86</td>
<td>.000</td>
</tr>
<tr>
<td>3</td>
<td>−2143.62</td>
<td>26</td>
<td>4339.24</td>
<td>4436.98</td>
<td>4354.51</td>
<td>0.84</td>
<td>.000</td>
</tr>
<tr>
<td>4</td>
<td>−2056.68</td>
<td>33</td>
<td>4179.35</td>
<td>4303.39</td>
<td>4198.73</td>
<td>0.85</td>
<td>.000</td>
</tr>
<tr>
<td>5</td>
<td>−1980.88</td>
<td>40</td>
<td>4041.77</td>
<td>4192.13</td>
<td>4065.25</td>
<td>0.87</td>
<td>.000</td>
</tr>
<tr>
<td>6</td>
<td>−1950.77</td>
<td>47</td>
<td>3995.54</td>
<td>4172.21</td>
<td>4023.14</td>
<td>0.84</td>
<td>.000</td>
</tr>
<tr>
<td>7</td>
<td>−1923.53</td>
<td>54</td>
<td>3955.06</td>
<td>4158.04</td>
<td>3986.76</td>
<td>0.84</td>
<td>.000</td>
</tr>
<tr>
<td>8</td>
<td>−1899.22</td>
<td>61</td>
<td>3920.44</td>
<td>4149.73</td>
<td>3956.25</td>
<td>0.85</td>
<td>.000</td>
</tr>
</tbody>
</table>

Note: AIC = Akaike information criterion; BIC = Bayesian information criterion; aBIC = sample-size-adjusted BIC; BLRT = bootstrapped likelihood ratio test. Dashes indicate criterion was not applicable; bold line indicates selected model.

When comparing the five-profile and six-profile models, the five profiles in both models were stable, but the new profile in the six-profile model presented a very similar pattern with one existing profile in the five-profile solution. This suggested that the sixth profile was redundant and that models with more than six profiles should not be considered. Therefore, the five-profile model was selected for theoretical interpretation and further analysis.

Table 3 displays parameter estimates, overall item means, and within-profile item means in the five-profile model. Profile 1 (22% of the sample) was characterized by high trust, high communication, and low alienation with both parents; it was labeled the Cohesive profile. Profile 2 (22%) was characterized by low trust, low communication, and high alienation with both parents; it was labeled the Disengaged profile. Profile 3 (9%) was characterized by high trust, high communication, and low alienation with mothers, and low trust, low communication, and high alienation with fathers; it was labeled the Alliance With Mother profile. Profile 4 (10%)
was characterized by low trust, low communication, and high alienation with mother, and high trust, high communication, and low alienation with father; it was labeled the Alliance With Father profile. Profile 5 (36%) was characterized by average levels of trust, communication, and alienation with both parents and a slightly higher level of trust with fathers than the sample mean; it was labeled the Average profile.

Post hoc tests of marital status and family conflict on the five profiles supported the accuracy of their profile names and added supplemental details about their family system features (see Tables 6 and 7 in Supplementary Materials). Compared to the Cohesive, Average, and Disengaged profiles, adolescents from divorced families were more likely to be in the Alliance With Mother and Alliance With Father profiles. Compared to the Cohesive profile, the Disengaged, Alliance With Mother, and Alliance With Father profiles had significantly higher levels of interparental conflict. The Average profile had significantly lower mother–adolescent and father–adolescent conflict than the Disengaged profile, but it had significantly higher levels of both than the Cohesive profile. Overall, the Cohesive profile was characterized by high closeness and low conflict across relationships, whereas the Disengaged profile was characterized by low closeness and high conflict across relationships. Adolescents in families with alliances reported high interparental conflict and a close relationship with one but not the other parent; divorced families were more likely to be in these two profiles. The Average profile had medium levels of closeness and conflict in both parent–adolescent dyads. In addition, adolescent age did not significantly predict family profile membership.

Main effects of family profiles and gender on friendship quality
Table 4 presents the associations of profile membership, gender, and covariates with friendship outcomes. Gender significantly predicted four friendship outcomes, with girls experiencing higher levels of validation, companionship, intimate exchange, and conflict resolution. Other demographics—adolescent age and family marital status—did not significantly predict any friendship outcome.
### TABLE 3. Parameter estimates for five-profile model

<table>
<thead>
<tr>
<th>Profile prevalence</th>
<th>Item mean (SD)</th>
<th>Within-profile means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1. Cohesive n = 70 (.22)</td>
<td>2. Disengaged n = 71 (.22)</td>
</tr>
<tr>
<td>M-A trust</td>
<td>3.70 (0.99)</td>
<td>4.64&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>M-A communication</td>
<td>3.35 (0.97)</td>
<td>4.36&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>M-A alienation</td>
<td>2.63 (0.91)</td>
<td>1.73&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>F-A trust</td>
<td>3.42 (1.06)</td>
<td>4.49&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>F-A communication</td>
<td>2.85 (1.02)</td>
<td>3.96&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>F-A alienation</td>
<td>2.81 (0.97)</td>
<td>1.98&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

**Note:** M = mother; F = father; A = adolescent.

<sup>a</sup> Statistically significantly higher than the overall item means at \( p < .05 \).

<sup>b</sup> Statistically significantly lower than the overall item means at \( p < .05 \).
## TABLE 4. Family profile membership, gender, and friendship quality outcomes

<table>
<thead>
<tr>
<th>Control variables</th>
<th>Validation</th>
<th>Companionship</th>
<th>Intimate Exchange</th>
<th>Conflict Resolution</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B (SE)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adolescent age</td>
<td>0.01 (0.03)</td>
<td>−0.01 (0.03)</td>
<td>0.05 (0.03)</td>
<td>0.03 (0.04)</td>
</tr>
<tr>
<td>Adolescent gender</td>
<td>0.48 (0.07)</td>
<td>0.30 (0.09)</td>
<td>0.78 (0.10)</td>
<td>0.41 (0.10)</td>
</tr>
<tr>
<td>Marital status</td>
<td>−0.07 (0.07)</td>
<td>−0.03 (0.09)</td>
<td>0.01 (0.09)</td>
<td>−0.03 (0.10)</td>
</tr>
<tr>
<td>Intercept (outcome level</td>
<td>B (SE)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>in each profile)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Cohesive</td>
<td>3.00 (0.45)</td>
<td>3.08 (0.54)</td>
<td>2.13 (0.55)</td>
<td>2.61 (0.64)</td>
</tr>
<tr>
<td>2. Disengaged</td>
<td>2.71 (0.46)</td>
<td>2.92 (0.55)</td>
<td>1.79 (0.56)</td>
<td>2.22 (0.65)</td>
</tr>
<tr>
<td>3. Alliance With Mother</td>
<td>3.06 (0.45)</td>
<td>3.24 (0.54)</td>
<td>2.17 (0.56)</td>
<td>2.47 (0.67)</td>
</tr>
<tr>
<td>4. Alliance With Father</td>
<td>2.97 (0.49)</td>
<td>3.32 (0.58)</td>
<td>2.04 (0.58)</td>
<td>2.45 (0.68)</td>
</tr>
<tr>
<td>5. Average</td>
<td>2.62 (0.46)</td>
<td>2.92 (0.55)</td>
<td>1.81 (0.56)</td>
<td>2.07 (0.67)</td>
</tr>
<tr>
<td>Pairwise comparison</td>
<td>5 &lt; 2 &lt; 1, 3, 4</td>
<td>2, 5 &lt; 3, 4</td>
<td>2, 5 &lt; 1, 3</td>
<td>2, 5 &lt; 1</td>
</tr>
</tbody>
</table>

Note: Bold coefficients were statistically significant at \( p < .05 \) level. Gender (0 = male, 1 = female) reference group is male; marital status (0 = married, 1 = divorced) reference group is married. In the pairwise comparison: 1 = Cohesive, 2 = Disengaged, 3 = Alliance With Mother, 4 = Alliance With Father, 5 = Average.

Pairwise comparison showed significant differences among five family relationship profiles on each of the four friendship outcomes (detailed values; see Table 4). Overall, adolescents from Disengaged and Average families had worse friendship quality in multiple domains than adolescents who were close to at least one parent. Specifically, adolescents in Disengaged and Average families had less validation than adolescents in Cohesive, Alliance With Mother, and Alliance With Father families. They had less companionship than adolescents in Alliance With Mother and Alliance With Father families. They had less intimate exchange than adolescents in Cohesive and Alliance With Mother families. And they also had less conflict resolution than adolescents in Cohesive families.

### Gender differences in family–friendship associations

Likelihood ratio tests showed that models examining associations between family relationship patterns and all friendship outcomes had significant model fit improvement when allowing outcome intercepts in each family profile to vary across gender, compared to constraining them to be equal by gender (validation: \( \text{LRT} = 59.74, df = 5, p < .01 \); companionship: \( \text{LRT} = 14.10, df = 5, p = .01 \); intimate exchange: \( \text{LRT} = 81.31, df = 5, p < .01 \); conflict resolution: \( \text{LRT} = 23.00, df = 5, p < .01 \)). This indicated that associations between family relationship patterns and friendship outcomes significantly differed by gender. We explored gender differences in two ways. First, we tested for differences between boys and girls within each family profile (Figure 1). Compared to girls, boys had significantly lower validation and intimate exchange in the Cohesive profile; lower validation, intimate exchange, and conflict resolution in the Average profile; and lower friendship quality in all four aspects in the Disengaged profile.
Second, we examined differences between profiles within each gender. Table 5 shows the detailed values of each friendship outcome within each family profile (after controlling for adolescent age and marital status) separately for adolescent boys and adolescent girls. Adolescent boys in Disengaged and Average families had less validation than boys in Cohesive, Alliance With Mother, and Alliance With Father families. Adolescent boys in Disengaged families had less companionship than boys in Alliance With Mother families. Adolescent boys in Average families had less intimate exchange than boys in Alliance With Mother families. Boys in Disengaged families had less intimate exchange than boys in Cohesive and Alliance With Mother families. Adolescent boys in Average families had less conflict resolution than boys in Cohesive, Alliance With Mother, and Alliance With Father families; boys in Disengaged families had less conflict resolution than boys in Cohesive families.

**TABLE 5.** The association between profiles of family closeness and friendship quality by adolescent gender

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Validation</td>
<td>2.99^b,e</td>
<td>2.60^a,c,d</td>
<td>3.17^b,e</td>
<td>3.28^b,e</td>
<td>2.47^a,c,d</td>
<td>2, 5 &lt; 1, 3, 4</td>
</tr>
<tr>
<td>Companionship</td>
<td>3.05</td>
<td>2.65^c</td>
<td>3.30^b</td>
<td>3.29</td>
<td>2.96</td>
<td>2 &lt; 3</td>
</tr>
<tr>
<td>Intimate Exchange</td>
<td>2.24^b</td>
<td>1.55^a,c</td>
<td>2.37^b,e</td>
<td>2.09</td>
<td>1.81^c</td>
<td>2 &lt; 1, 3; 5 &lt; 3</td>
</tr>
<tr>
<td>Conflict Resolution</td>
<td>2.67^b,e</td>
<td>2.03^a</td>
<td>2.63^e</td>
<td>2.68^e</td>
<td>1.99^a,c,d</td>
<td>5 &lt; 1, 3, 4; 2 &lt; 1</td>
</tr>
<tr>
<td>Validation</td>
<td>3.42^b,e</td>
<td>3.18^a</td>
<td>3.35</td>
<td>3.30</td>
<td>3.14^a</td>
<td>2, 5 &lt; 1</td>
</tr>
<tr>
<td>Companionship</td>
<td>3.35</td>
<td>3.28</td>
<td>3.41</td>
<td>3.59^e</td>
<td>3.14^d</td>
<td>5 &lt; 4</td>
</tr>
<tr>
<td>Intimate Exchange</td>
<td>2.87</td>
<td>2.70</td>
<td>2.78</td>
<td>2.83</td>
<td>2.63</td>
<td>—</td>
</tr>
<tr>
<td>Conflict Resolution</td>
<td>2.97^e</td>
<td>2.69</td>
<td>2.71</td>
<td>2.79</td>
<td>2.54^a</td>
<td>5 &lt; 1</td>
</tr>
</tbody>
</table>

**Note:** The intercept of friendship outcome in each identified profile was after controlling for adolescent age and marital status.

^a Indicates the value is significantly different from Profile 1 at p < .05.

^b indicates the value is significantly different from Profile 2 at p < .05.

^c indicates the value is significantly different from Profile 3 at p < .05.

^d indicates the value is significantly different from Profile 4 at p < .05.
Adolescent girls exhibited fewer statistically significant differences than boys. However, girls in Disengaged and Average families reported less validation in friendships than those in Cohesive families. Adolescent girls in Average families reported less companionship than girls in Alliance With Father families, and they also had less conflict resolution than girls in Cohesive families. There was no significant difference in adolescent girls' intimate exchange levels across different family relationship profiles.

In summary, adolescent girls' friendship quality generally was highest in Cohesive families and lowest in Average families, but their intimate exchange was consistently high regardless of family context. Adolescent boys in Cohesive and alliance with either parent families had better friendships than boys in Disengaged and Average families. Adolescent boys in Disengaged families had the poorest friendships in all four domains than girls in Disengaged families and boys in other family types.

**DISCUSSION**

This study utilized person-centered, pattern-based analyses to simultaneously assess adolescents' closeness with both their mothers and fathers and identified five family relationship patterns that have unique associations with different facets of adolescent friendship quality. Consistent with family systems theory, we found family relationship patterns representing high closeness with both parents (Cohesive; 22%), low closeness with both parents (Disengaged; 22%), and smaller groups demonstrating cross-generational alliances between adolescents and their mothers (9%) or fathers (10%). Post hoc analyses indicated that families in which adolescents had alliances with either parent had higher interparental conflict than Cohesive families, which is in line with the dynamics of cross-generational coalitions, where parents are unable to resolve their conflict and one parent seeks emotional support from the child (Kerig, 1995). These adolescents also were more likely to have divorced parents. Moreover, the Average profile (36%), characterized by moderate levels of trust, communication, and alienation in both parent–adolescent relationships, consistently appeared as a distinct profile in the series of LPA models of family relationship patterns. Considering that these families experienced higher parent–adolescent conflict than Cohesive families, adolescents in Average families may be less able to constructively resolve conflict in interpersonal interaction.

Findings on the association between family relationship constellations and friendship quality highlight the importance of being close with at least one parent for adolescent friendship development, especially for validation and caring. Cohesive families and families with alliances also had unique associations with different facets of friendship quality. Specifically, adolescents in Cohesive families reported higher friendship quality in multiple domains, with especially robust relations with conflict resolution. Family cohesion is generally viewed as a key indicator of healthy family system functioning. Cohesive families tend to be better at executing decisions together, supporting each other, and resolving conflict among family members (Minuchin, 1985; Olson, 2000). Adolescents in Cohesive families have more opportunities to learn how to develop close, validating relationships and to handle disagreement constructively. Conversely, families that lack connection and are unable to resolve conflict (i.e., Disengaged families) usually are incapable of functioning well as a system, which in turn undermines adolescent social–emotional development (Olson et al., 2019).

Adolescents allied with either parent experienced more friend companionships. These families had high levels of interparental conflict and were more likely to be divorced. Adolescents in these families may replace the role of the other parent in providing emotional support for the allied parent (“spousification”; Kerig, 2005). Although this may have costs for the adolescent's adjustment and getting their own needs met in relationships (Kerig, 2005), spending time with a parent in a peerlike way gives them an unusual ability to perceive and respond to friends' needs and feelings (Hetherington, 2003; Peris & Emery, 2005). Consistent with previous
findings on gender differences, our results showed that girls had better friendship quality in all four domains. But more importantly, family profiles had different associations with friendship by gender. Adolescent boys in Disengaged families had the poorest friendship quality, poorer quality than both girls in Disengaged families and boys in other family types. This highlights the importance of being close to at least one parent for boys' social–emotional and friendship development. In line with this, boys who were close with at least one parent reported higher validation, and those who allied with their mothers reported greater intimate exchange with friends than those in the Average and Disengaged profiles. It may be that being close with a parent provides direct socialization experience for boys to observe and practice caring and validation interactive styles, and being close with the female parent (who engages more in intimate interaction; Grabill & Kerns, 2000; Sheets & Lugar, 2005) is a unique opportunity for boys to learn how to form and maintain intimacy.

In contrast, fewer differences in friendship across profiles appeared for girls. The lack of differences across profiles may reflect the emphasis in girls' socialization on forming and maintaining relationships. Adolescent girls generally have high expectations and engagement of intimacy in their interpersonal relationships (e.g., Grabill & Kerns, 2000; Sheets & Lugar, 2005). Even when family relationships are not particularly close, girls may have ample opportunities to learn relationship skills through interactions with other adults, youth, or diverse forms of media.

The findings of this study should be considered in the context of several limitations. First, the study used adolescent self-report to assess both parent–adolescent relationships and friendship quality. Replication with friend-report relationship quality will avoid self-report bias. Second, the directionality of the family–friendship association is not clear when using cross-sectional data. Future studies with a longitudinal design are needed to inform their temporal relations. Finally, the findings' generalizability is limited to families with different-sex parents. Future studies involving diverse family structures, such as mother–mother families and father–father families, will enrich our knowledge on how family influences friendships from a broader scope and how gender plays a nuanced role in this association. Moreover, future studies with a larger sample of diverse racial and ethnic groups will enable the investigation of potential heterogeneity in the association between family and friendship from a cross-cultural perspective.

In summary, this study offers a more holistic way to examine the association between parent–adolescent relationships and adolescent friendships. By identifying family relationship patterns indicated by different combinations of mother–adolescent closeness and father–adolescent closeness, this study offers informative insights on how family processes are related to adolescent friendship quality that go beyond assessing each parent–adolescent dyad in isolation. Results are in line with our hypotheses. First, we identified Cohesive, Disengaged, Alliance With Mother, Alliance With Father, and Average profiles of families from a person-centered approach. Second, results showed significantly predictive effects of these family relationship profiles and adolescent gender on adolescent friendship quality. Finally, there was a significant interaction effect of adolescent gender by family relationship patterns on adolescent friendship outcomes. The findings emphasize the importance of having at least one close parent–child relationship for adolescent social–emotional development. For intervention implications, a family-based intervention targeting overall family cohesion has the potential to promote adolescent interpersonal conflict resolution ability, and interventions that strengthen at least one parent–adolescent connection may promote adolescent boys' social–emotional and friendship development.

References


