The association between family relationship patterns and preschoolers' social and behavioral competence in Chinese urban families

The Association Between Family Relationship Patterns and Preschoolers' Social and Behavioral Competence in Chinese Urban Families

Abstract

Guided by family systems theory, this study examined how distinct patterns of family relationships were related to child social and behavioral competence among 314 intact Chinese urban families with preschool-aged children. Four distinct patterns of family relationships were identified using latent profile analysis: *unbalanced*, *compensatory*, *moderately cohesive*, and *highly cohesive families*. In unbalanced families, mothers perceived their marital, coparenting, and parent-child relationships as low in quality, yet fathers perceived them to have moderate quality. Compensatory families exhibited poor marital and coparenting relationships but high mother-child closeness. Highly cohesive families displayed high quality across all dyadic relationships, while moderately cohesive families showed moderate relationship quality. Children from highly cohesive families had the highest social and behavioral competence. Children from moderately cohesive families exhibited better social skills and fewer problem behaviors compared to unbalanced families, but were on par with those from compensatory families. No difference in social skills was found between children from unbalanced and compensatory families, but children in the former group displayed more problem behaviors. The findings shed light on the unique family relationship configurations among Chinese urban families with preschool-aged children. They highlight the value of using individual-centered approaches to understand holistic family relationship patterns from a family systems perspective. The findings also underscore the need to develop interventions tailored to families according to their unique family relationship profiles.

Keywords: family systems theory, coparenting, marital relationship, parent-child relationship, Chinese families

Introduction

Family systems theory proposes that the family is an organized whole comprising interdependent subsystems (Cox & Paley, 2003). This theory has promoted the thinking of situating individuals in their larger family system and spurred interest in simultaneously including multiple subsystems in family research. Guided by family systems theory, many researchers explored transactions among family subsystems, among which the bidirectional relations among marital/interpartner, coparenting, and parent-child relationships were most well studied (e.g., Holland & McElwain, 2013; Peltz et al., 2018; Ronaghan et al., 2023). However, these studies often treated family subsystems as separate entities interacting with one another, and few examined the affective climate collectively shaped by family subsystems and its role in child development (Deković & Buist, 2005). Indeed, a key proposition of family systems theory is that the whole is greater than the sum of its parts (Cox & Paley, 2003). From a systems perspective, understanding the quality of the network of family relationships in relation to child development is crucial (Deković & Buist, 2005). The current study focused on Chinese urban families with preschool-aged children and attempted to capture the overall patterns of affective relations at the family level. We collected both mothers' and fathers' reports on three types of dyadic relationships (i.e., marital, coparenting, and parent-child relationship) and utilized an individual-centered approach to examine distinct family relationship patterns.

Patterns of family functioning can influence various aspects of child adjustment, among which children's social and behavioral adjustment (e.g., social skills, externalizing problems, and internalizing problems) has been most widely examined in existing research (e.g., Sturge-Apple et al., 2010, 2014). Family relationships often have a direct and immediate impact on a child's functioning in the social-behavioral domain, including changes in emotions, behaviors, and

social interactions (Newland, 2015). During early childhood, children's social and behavioral competence constitutes a critical facet of school readiness. It not only lays the foundation for future social and behavioral adjustment but also has a profound, enduring impact on cognitive and academic development (Baptista et al., 2016; Duncan et al., 2007). Therefore, in the present study, we further evaluated how these distinct patterns would relate to children's social and behavioral competence.

Distinct Family Relationship Patterns and Relations with Child Development

Family systems theory posits that the dyadic relationships between mother, father, and child are not isolated components; rather, they interact with one another and collectively form disparate configurations of familial affective atmosphere (Cox & Paley, 2003). As such, understanding a child's development from a family systems perspective requires attention to the child's collective experiences within the broader family context, which involves a consideration of the interplay among relationships and individuals in the family (Sturge-Apple et al., 2010). One promising approach to capturing such family system properties is to identify distinct patterns of family relationships through individual-centered approaches, such as cluster analysis and latent class/profile analysis (Deković & Buist, 2005). In contrast to variable-centered approaches, which aim to understand links between different variables across the entire sample, individual-centered approaches take "a holistic and dynamic view; the person is conceptualized as an integrated totality rather than as a summation of variables" (Magnusson & Allen, 1983, p. 372). From the lens of individual-centered approaches, individuals cannot be reduced to a set of variables, and these approaches focus on identifying distinct subgroups within a given population. When applied to research on family relationships, individual-centered approaches help identify conceptually meaningful profiles of family relationships across multiple

subsystems, such as interpartner, coparental, and parent-child subsystems (Sturge-Apple et al., 2014). However, there is only limited empirical evidence regarding distinct family relationship patterns derived from utilizing individual-centered approaches. We only located a few relevant studies in early childhood.

For instance, Johnson (2003) measured overall family cohesion as well as quality of the marital, father-child, and mother-child subsystems among families with kindergarten children. Based on these four indicators, Johnson employed the hierarchical agglomerate clustering method and found three clusters, including cohesive families, families with a strong father-child subsystem, and families with a strong mother-child subsystem. In another study, based on interparental dynamics, triadic dynamics, parental behaviors, and child relatedness, Sturge-Apple et al. (2010) conducted latent profile analysis (LPA) and identified three relationship patterns among families with 6-year-old children. Specifically, cohesive families had high-quality dynamics across all relationships. Enmeshed families displayed very high levels of interparental hostility and triadic competition coupled with moderate levels of parental emotional availability, child relatedness, and triadic cooperation and cohesiveness. Disengaged families tended to show high interparental withdrawal and parental intrusiveness as well as low levels of parental emotional availability, child relatedness, and triadic cooperation, competition, and cohesiveness. Children in disengaged and enmeshed families were similar in having greater increases in internalizing symptoms and emotional adjustment difficulties compared to those from cohesive families. Relative to cohesive and enmeshed families, children in disengaged families had accelerated trajectories of externalizing symptoms and difficulties in classroom engagement. The findings demonstrated the developmental utility of pattern-based approaches to family relationships.

Using latent class analysis with parental sensitivity and marital intimacy as indicators, Belsky and Fearon (2004) identified five typologies among families at 6 to 54 months postpartum, including consistently supportive, consistently moderate, consistently risky, poor marriage/good parenting, and good marriage/poor parenting. One interesting finding was that families with poor marriage/good parenting had children with better language, math, and cognitive skills than families with good marriage/poor parenting. Compared to consistently risky families, children in the poor marriage/good parenting group fared better in social-emotional, academic, and cognitive domains, whereas children in the good marriage/poor parenting group showed similarly poor outcomes. Another study conducted by Sturge-Apple et al. (2014) corroborated Belsky and Fearon's (2004) findings by revealing three profiles in high-risk families with 2-year-old children, including adequate functioning, spillover, and compartmentalizing families based on 10 indicators related to the interpartner and parent-child subsystems. Notably, spillover families displayed high levels of interpartner violence and conflict along with poor parenting, whereas compartmentalizing families had competent parenting despite interpartner conflict and violence. Hence, even though marital quality and parenting are often positively interrelated (Grych, 2002), some parents do compartmentalize by setting boundaries between different family relationships.

Three recent studies conducted in the Chinese context also utilized individual-centered approaches, but they all focused on older children. Gao et al. (2022) identified three latent profiles based on adolescents' perceptions of interparental conflict and family cohesion, including high interparental conflict and low family cohesion, moderate interparental conflict and moderate family cohesion, and low interparental conflict and high family cohesion. Using interparental conflict and parent-adolescent attachment as indicators, Zhang et al. (2021) found

four family profiles (i.e., cohesive, moderate, disengaged, and conflictual families). Overall, families with multiple difficult dyadic relationships had adolescent children with greater problem behaviors. By contrast, conflicts contained in the marital relationship that did not spill over to the parent-child subsystem were less dysfunctional to children. In a third study, Zhu and Dunsmore (2023) collected both maternal and paternal reports of family functioning and responses to children's negative emotions, based on which they discovered five clusters among families with 5- to 10-year-old children. Specifically, well-functioning/coaching families had children with the best emotional and behavioral outcomes, whereas poor-functioning/dismissing families had children with the least optimal outcomes. Children belonging to the engaged mothers, engaged fathers, and balanced/diffuse clusters were moderate in child functioning, but with some nuanced variations across the three clusters.

As family is a system that faces a variety of transitions and challenges throughout its lifetime, family dynamics are likely to change, resulting in changes in family relationship patterns from early childhood to later stages of development (Mortimer & Shanahan, 2007). As discussed earlier, Johnson (2003) identified three family relationship clusters among American families with kindergarten children: cohesive families, families with a strong father-child subsystem, and families with a strong mother-child subsystem. However, by the time these children reached 4th grade, the last cluster was replaced by a "separate families" cluster marked by universally low-quality family dynamics. By 9th grade, family clusters had further evolved to include cohesive, separate, and detouring families. Detouring families were characterized by a strong marital subsystem but weak family cohesion and parent-child subsystems (Johnson, 2010). Notably, significant shifts in family clusters were observed from early childhood to adolescence, which might reflect normative family adaptation to developmental change that

takes place as family members age and mature (Johnson, 2003, 2010). However, as reviewed previously, existing research on distinguishing family relationship patterns in Chinese families primarily focuses on those with older children or adolescents. Early childhood, a critical period when a child's development is predominantly influenced by the family environment, not only sets the foundation for future individual development, but also affect family dynamics through transactional processes (Crouter & Booth, 2003; Sameroff, 2009). Given the influence this stage has on both individual and familial pathways of development, it is crucial to explore family relationship patterns during early childhood within Chinese families.

Chinese Family Dynamics and Family Relationship Indicators

As reviewed in the former section, both the number and the type of indicators included in the analyses of family relationship patterns varied greatly in the literature. However, dyadic relationships between parents (e.g., marital and coparenting relationships) and those between parents and children were most commonly included, and this approach helped to reveal possible compartmentalization between the interparental and parent-child subsystems. We argue that such compartmentalization can be particularly likely in the Chinese context, as the ultimate function of marriage is to continue the family lineage and the parental role is often viewed as more important and rewarding than the spousal role in Chinese traditional culture (Liu & Wu, 2018). For example, a recent study found that Chinese fathers' perceived triangulation in coparenting was related to greater father involvement at home or in school, especially when their child had low levels of school liking (Tao & Lau, 2021), suggesting that fathers experiencing unsatisfactory dynamics with their partner might become more invested in the child.

In addition, due to the dramatic societal changes in China, gender role among parents in modern Chinese families has also undergone transformations, especially in urban settings. For

instance, contrary to the portrayal of Chinese fathers as aloof and authoritarian, fathers today show increased involvement in caregiving and are more likely to express parental warmth (Li, 2020, 2021). While mothers continue to be invested in caregiving, they are also likely to join the labor force as a provider for their families (Zhou et al., 2018). Given the shifting gender role in Chinese families, spousal expectations and perceptions of marital and coparenting relationships may differ between mothers and fathers. Thus, it is critical to include both fathers' and mothers' perceptions of family dynamics to explore family relationship patterns. Built upon existing studies, the current study collected both mothers' and fathers' reports of marital, coparenting, and parent-child relationships to better capture the interparental and parent-child subsystems. Although triadic dynamics and family cohesion were also used as indicators of family dynamic patterns in some previous studies, starting with dyadic relationships would be a crucial first step to understanding family relationship patterns and revealing possible compartmentalization between different family subsystems in Chinese families with young children.

The Present Study

The present study entails two objectives. Utilizing an individual-centered approach, we first aimed to examine distinct family relationship configurations among Chinese urban families with preschool-aged children. Three types of dyadic relationships were assessed, including marital, coparenting, and parent-child relationships. Both mothers' and fathers' perceptions of these relationships were collected. Due to the paucity of relevant literature, we did not hypothesize the specific number of different family relationship patterns. Second, we examined how these family relationship patterns would differentially relate to child social and behavioral competence. Informed by existing findings (e.g., Sturge-Apple et al., 2010, 2014; Zhu & Dunsmore, 2023), we hypothesized that family relationship patterns characterized by high

cohesion across all dyadic relationships would relate to better social and behavioral competence in children compared to patterns with low cohesion in some or all dyadic relationships. In addition, if compartmentalization between the interparental and parent-child subsystems were to be observed, we hypothesized that children from families with good parent-child relationships and poor interparental relationships would display better social and behavioral competence than those from families with good interparental but poor parent-child relationships.

Method

Participants

Intact families with preschool-aged children were recruited from five preschools in Nanjing, the capital city of Jiangsu province located in eastern China. Convenient sampling was used to select the schools. To increase diversity, preschools from three districts were included, covering both central and peripheral districts of Nanjing. Next, random sampling was used to select families from the 3-4-year-old classrooms. A total of 40 to 98 families were selected from each preschool depending on the school size. A total of 317 families consented to participate, and 99.05 % of them (N = 314) completed the questionnaires. Children were on average 3.86 years old (SD = .48), and 46.25% of them were girls. On average, mothers were 32.67 (SD = 3.97) years old, and fathers were 34.11 (SD = 4.47) years of age. Most parents were employed at the time of the study. As presented in Table 1, the sample was relatively diverse in terms of families' socioeconomic backgrounds. Nevertheless, the parents had higher educational levels and household income than the general population of China (National Bureau of Statistics, 2020; Office of the Leading Group of the State Council for the Seventh National Population Census, 2022). Grandparental involvement is common in Chinese families of young children (Ko & Hank, 2014). In our sample, 17.4% of the parents were the sole caregivers; 63.3% had

grandparents (or nannies in one case) who provided supplementary support; and 19.3% had grandparents (or nannies in two families) who provided substantial support. We controlled for grandparental involvement in the analyses.

Procedures

Ethical approval for this study was obtained from [blinded for review] University. Classroom teachers helped distribute the consent forms and questionnaires to selected families. All questionnaires were in simplified Chinese. Mothers and fathers were required to independently report their perceptions of marital quality, coparenting relationship, and their relationships with the target child. Primary caregivers (72.82% mothers, 27.18% fathers) completed questionnaires on family demographics and child social and behavioral competence. Completed questionnaires were put in a sealed envelope by parents and returned to classroom teachers. The research team collected them during school visits. Families received a picture book to compensate for their time.

Measures

Marital Satisfaction. Marital relationship quality was measured using the ENRICH Marital Satisfaction Scale (EMS; Fowers & Olson, 1993). The EMS contains 10 items assessing one's satisfaction with his/her partner in various aspects, including communication, division of responsibility, and decision-making (e.g., "I am very happy with how we handle role responsibilities in our marriage"). The EMS has been validated with Chinese samples, and high internal consistency and discriminant validity were reported (Shen, 2001; Xie et al., 2017). Mothers and fathers independently rated each statement on a 5-point Likert scale (1 = *strongly disagree*, 5 = *strongly agree*). Higher scores represent greater marital satisfaction. In the current study, Cronbach's alphas were .90 and .88 for maternal and paternal reports, respectively.

Coparenting Relationships. Both mothers and fathers reported their perceived coparenting quality using the Coparenting Relationship Quality (CRQ) measure (Stright & Bales, 2003). The CRQ showed acceptable psychometric properties in studies on Chinese parents (e.g., Chen, 2023; Ren et al., 2020). It contains seven items to capture supportive coparenting (e.g., "When I tell my partner something about our child, he/she listens") and another seven items to assess undermining coparenting (e.g., "My partner doesn't help me with our child when I need it"). As coparenting quality was conceptualized as one's perception of his/her partner's contribution to coparenting (Pedro et al., 2012), a mother's rating would reflect her perception of the father's behaviors in the coparenting relationship and vice versa. Items were rated from 1 (*never*) to 5 (*always*). In the current study, Cronbach's alphas for the supportive coparenting subscale were .78 and .74 for mothers' and fathers' reports, respectively; for the undermining coparenting subscale, it was .71 for mothers' reports and .77 for fathers' reports.

Parent-Child Relationships. The Child-Parent Relationship Scale (CPRS) developed by Pianta (1992) was used to measure a parent's perceived relationship with the target child. The CPRS has been widely used in studies of Chinese families, and acceptable reliability and construct validity were reported (e.g., Li & Liu, 2020; Zhang & Chen, 2010). Fathers and mothers independently evaluated their own relationship with their child on a 5-point Likert scale (1 = *definitely does not apply*, 5 = *definitely apply*). The *Closeness* subscale includes eight items (e.g., "Your child values his/her relationship with you"), and the *Conflict* subscale contains 11 items (e.g., "My child and I always seem to be struggling with each other"). In this study, Cronbach's alphas were .74 and .75 for mother-child closeness and conflict, respectively, and the corresponding alphas were .80 and .72 for fathers' reports of father-child closeness and conflict.

Child Social and Behavioral Competence. Utilizing the Social Skills Improvement System-Rating Scales (SSIS-RS; Gresham & Elliott, 2008), parents rated children's various behaviors over the past two months (0 = *never*, 4 = *almost always*). The SSIS-RS has been validated for use among Chinese samples (Cheung et al., 2017; Wu et al., 2019). The *Social Skills* subscale includes 46 items on communication, cooperation, assertion, responsibility, engagement, and self-control (e.g., "Feels bad when others are sad"). The *Problem Behaviors* subscale consists of 33 items related to children's internalizing and externalizing problems (e.g., "Acts sad or depressed" and "Has temper tantrums"). In this study, Cronbach's alpha was .96 for the *Social Skills* subscale and .92 for the *Problem Behaviors* subscale.

Analytic Strategies

We first explored distinct patterns of family relationships using LPA, a statistical technique to identify subgroups characterized by different configural profiles of personal and/or environmental attributes (Collins & Lanza, 2009). Mother- and father-reported marital, coparenting, and parent-child relationships were included as indicators in the LPA. Using *Mplus*, we tested a series of models containing different numbers of profiles. To determine the optimal number of profiles, we relied on several model fit indices, including the Akaike information criterion (AIC), the Bayesian information criteria (BIC), the sample-size adjusted BIC (aBIC), the Vuong-Lo-Mendell-Rubin likelihood ratio test (VLMR), and entropy. For AIC, BIC, and aBIC, lower values indicate a better fit. The VLMR compares the fit between two nested models that differ by one profile. A significant *p*-value indicates that the solution with *k* profiles provides a better fit than that with *k*–1 profile(s). Entropy is a summary measure of estimated posterior class probabilities, which indicates classification accuracy. Entropy ranges from 0 to 1, and .80 is typically used as a cutoff for acceptable diagnostic probabilities (Weller et al., 2020). Overall,

the model that shows significant improvement in AIC, BIC, and aBIC, a significant VLMR, and an acceptable entropy is preferred. For the key indicator variables in the LPA, the rates of missing data ranged between .96% and 7.01%. Maximum likelihood estimation with nonnormality robust standard errors (i.e., MLR in *Mplus*) was used to handle missing data.

To better portray the emerged profiles, we conducted the analysis of variance (ANOVA) using SPSS to compare all indicator variables across the profiles. Next, we employed the analysis of covariance (ANCOVA) using SPSS to examine how the emerged profiles would differ regarding children's social and behavioral competence after controlling for covariates. Missing data on child outcome variables comprised only about 2% of the sample, and listwise deletion was used in ANCOVA. The covariates included reporter for the child outcome measure (mother vs. father), caregiving arrangement (parents as sole caregivers vs. parents taking on the major role with supplementary support from grandparents/nannies vs. grandparents/nannies providing substantial support), child gender (girl vs. boy), child age (in years), and family socioeconomic status (SES). SES was a composite variable calculated by averaging the standardized scores of the following five indicators: paternal education, maternal education, paternal occupational prestige, maternal occupational prestige, and household monthly income (see Table 1 for the specific codes of each indicator).

Results

Table 2 provides descriptive statistics of and correlations among the indicator variables in the LPA and child outcome variables. Mothers and fathers converged to some extent on their views of the marital and coparenting relationship quality, as indicated by the significant correlations between maternal and paternal reports. Mothers'/fathers' perceptions of marital and coparenting relationships were also significantly correlated with their relationships with the

child. The correlations were all small to moderate in size, providing justification for using these indicators in the LPA. In terms of child social and behavioral competence, both mother- and father-reported marital, coparenting, and parent-child relationships were significantly correlated with children's social skills and problem behaviors in expected directions with two exceptions.

Identifying Family Relationship Patterns

Table 3 presents the fit statistics of the models with one through five profiles. The AIC, BIC, and aBIC all showed a steady decrease with the increasing number of profiles, suggesting that each additional profile resulted in a better model fit. However, the 3-profile solution did not obtain an acceptable entropy. The VLMR showed that the 5-profile solution did not significantly improve the model fit compared to the 4-profile solution. Therefore, we excluded the solutions with three and five profiles. As the 4-profile model not only had a better fit than the 2-profile model according to AIC, BIC, and aBIC but also provided a more nuanced classification of family relationships, the 4-profile model was retained as the final model.

The four profiles are shown in Figure 1. To make the figure more readable, we reverse coded undermining coparenting and parent-child conflict, so that consistent with all other indicators in the figure, higher scores would indicate better relationship quality. For families in profile 1, mothers reported relatively low marital satisfaction as well as poor coparenting and mother-child relationships, while fathers reported moderate quality in marital, coparenting, and father-child relationships. Therefore, mothers and fathers had inconsistent views on the quality of different dyadic family relationships, with mothers holding more unfavorable perceptions than fathers. We labeled profile 1 as "unbalanced families" to reflect the uneven perceptions between mothers and fathers. This subgroup constituted 7.32% of the sample. Profile 2 was characterized by low-quality relationships across the board with one exception, such that mothers reported

relatively high closeness with their child. Mothers in this subgroup seemed to have strived to maintain a relatively positive relationship with their child despite the unanimous low quality of marital and coparenting relationships as well as poor father-child relationships in these families. We named this profile "compensatory families" to reflect this signature characteristic. About 21.02% of the families belonged to this profile. Profile 3 comprised of 47.45% of the sample, making the largest subgroup. Mothers and fathers both reported moderate quality across most dyadic relationships. However, mothers' perceptions of coparenting and parent-child relationships were slightly more positive than those of fathers. In addition, mother-child closeness was relatively high, and mother-child conflict was relatively low among the four profiles. Profile 3 was labeled as "moderately cohesive families." Profile 4 was termed "highly cohesive families," as both mothers and fathers provided the highest relationship quality ratings among the four subgroups. This profile consisted of 24.20% of the sample.

To better understand the similarities and dissimilarities of the four emerged profiles, we conducted ANOVAs to examine subgroup differences in the indicator variables. As the entropy of the 4-profile model reached .80, it was acceptable to use the most likely profile memberships in the following analyses (Clark & Muthén, 2009). As shown in Table 4, the four subgroups demonstrated significant differences in all indicator variables. Post-hoc Bonferroni tests provided pairwise comparisons. Mothers in unbalanced and compensatory families both showed low levels of marital satisfaction and perceived coparenting quality. However, mothers in compensatory families reported significantly better relationships with their child than mothers in unbalanced families. Compared to fathers belonging to compensatory families, those in unbalanced families perceived greater marital satisfaction and lower levels of undermining coparenting. When contrasting unbalanced and moderately cohesive families, we found that

fathers in these two subgroups had comparable perceptions on the quality of marital, coparenting, and father-child relationships, but mothers in unbalanced families held a more negative view on all relationships. Moderately cohesive families outperformed compensatory families in almost every aspect of family relationships except mother-child and father-child closeness. Highly cohesive families had the best marital, coparenting, and father-child relationships among the four subgroups. In terms of mother-child relationship, no significant difference was detected in mother-child closeness when comparing between compensatory and highly cohesive families, and there was no significant difference in mother-child conflict when contrasting between moderately cohesive and highly cohesive families.

We examined whether the four family profiles differed across various child and family demographic variables. The results of Chi-square tests indicated no significant difference in child gender (χ^2 = 3.75, p = .29), caregiving arrangement (χ^2 = 8.82, p = .18), father's work status (χ^2 = 3.45, p = .33), and mother's work status (χ^2 = .26, p = .97) across profiles. ANOVA results showed that the four profiles did not differ in child age (F = .65, p = .58), paternal age (F = .92, p = .42), or maternal age (F = .44, p = .73). However, they differed in family SES (F = .3.24, p = .02), with highly cohesive families having higher SES than compensatory families (p = .01).

Family Relationship Profiles and Child Social and Behavioral Competence

As presented in Table 5, both social skills and problem behaviors demonstrated notable subgroup differences. Children in unbalanced families had poorer social skills as well as greater problem behaviors than their counterparts coming from moderately cohesive and highly cohesive families. Children in compensatory families and moderately cohesive families also exhibited poorer social skills and greater problem behaviors compared to children in highly cohesive families. In addition, children belonging to unbalanced families displayed greater problem

behaviors than those in compensatory families, but these two profiles did not significantly differ in terms of child social skills. Compensatory families and moderately cohesive families did not differ in either child social skills or problem behaviors.

Discussion

Grounded in family systems theory, the current study aimed to examine the overall quality of family affective relationships beyond individual assessments of dyadic relationships. Based on Chinese mothers' and fathers' reports of marital, coparenting, and parent-child relationships, four family relationship profiles emerged. Supporting the idea that harmony is commonly valued in Chinese families (e.g., Bond, 2010), moderately cohesive families and highly cohesive families formed the largest subgroups, constituting 47.45% and 24.20% of the sample, respectively. Two distinct patterns of poor family relationship surfaced. One was characterized by poor interparental relationships but high mother-child closeness (compensatory families), and the other was marked by low mother-perceived but moderate father-perceived relationship quality (unbalanced families). Overall, highly cohesive families had children with the highest social and behavioral competence, while unbalanced families posed the greatest risk for children's development of problem behaviors. Children in compensatory families showed comparable outcomes to those in moderately cohesive families. These findings provided support for the developmental utility of pattern-based approaches to studying family relationships.

Distinct Patterns of Family Relationships

Similar to previous studies that included both interparental and parent-child subsystems to classify family dynamics (e.g., Belsky & Fearon, 2004; Johnson, 2003; Sturge-Apple et al., 2010, 2014; Zhu & Dunsmore, 2023), we also found disparate patterns of family relationships. As a reflection of harmony (e.g., Bond, 2010), the highly cohesive profile had families with high

marital, coparenting, and parent-child relationships. The moderately cohesive profile had marital, coparenting, and father-child relationships of moderate quality, but it is worth noting that mother-child closeness was relatively high and mother-child conflict was low in these families. This finding highlighted the importance of mother-child relationship in Chinese families, which can be crucial for child development (see also Huang et al., 2021).

One of the most intriguing findings is that we did not find a subgroup with the lowest quality across all types of dyadic relationships, yet we found two different patterns of low-quality family relationships. For compensatory families, mothers and fathers experienced poor marital and coparenting relationships, and fathers also reported poor relationships with their child, yet mothers reported high mother-child closeness. In fact, combined with the moderately cohesive and highly cohesive families, over 90% of the participating families reported relatively high levels of mother-child closeness. Notably, some mothers from the compensatory families managed to build a close relationship with their child despite the problems experienced in marital and coparenting relationships, suggesting mothers' compartmentalizing or compensatory behaviors (see also Sturge-Apple et al., 2014).

An interesting contrast to note is that we did not observe an opposite pattern in which the father-child relationship was high-quality while marital and coparenting relationships were low-quality. Much research has supported the *father vulnerability hypothesis* which posits that interparental relationships, including both marital and coparenting relationships, may have a stronger impact on fathering and father-child relationships than on mothering and mother-child relationships (Cummings et al., 2010; Stroud et al., 2011; Wang et al., 2022). Because the roles of fathers are less well articulated and defined than mothers in many cultures, fathers tend to encounter increased difficulties to differentiate the stress derived from their experiences as a

parent versus as a spouse (Parke et al., 2005; Wang et al., 2022). This may partly contribute to fathers' susceptibilities to marital and coparenting relationships. In Chinese societies, although fathers' involvement in childrearing has increased over the last few decades, mothers continue to shoulder primary childrearing responsibilities (Li, 2020). Under the patriarchal system, mothers are expected to assume the role of a nurturing caregiver who maintains the household (Li & Lamb, 2013). Driven by the pressure to conform with the clearly defined maternal role, some mothers in our sample might have overcome the stress caused by poor marital and coparenting relationships and compartmentalized to build close relationships with their child. Another possible explanation is that mothers might attempt to compensate for a problematic father-child relationship by developing a close relationship with the child (Grych, 2002). It is worth noting that about 21.02% of our sample belonged to this subgroup, indicating the prevalence of this family relationship pattern in the Chinese context.

Unbalanced families were marked by low mother-perceived and moderate father-perceived relationship quality, suggesting differential perceptions of marital, coparenting, and parent-child relationships between mothers and fathers. In a meta-analytic study, gender differences on marital satisfaction were found in clinical samples, with wives in marital therapy being less satisfied than husbands with the marital relationship, but such gender differences were not found in nonclinical samples (Jackson et al., 2014). While it might be too early to conclude that parents in unbalanced families require clinical attention, the present findings did show that 7.32% of our sample had mothers who had lower marital satisfaction than fathers. Future studies are, therefore, necessary to further identify family relationship profiles between clinical versus nonclinical samples. Regarding parent-child relationships, contrary to our finding of the unbalanced family type, Zhang and Chen (2010) reported that mother-child relationships on

average were closer and less conflictual than father-child relationships among Chinese families with young children. In terms of coparenting relationships, little has been done to compare mothers' and fathers' differential perceptions of coparenting. Based on the descriptive statistics presented in two studies on Chinese families with preschool-aged children (Fan et al., 2020; Liu & Wu, 2018), no notable differences between mothers' and fathers' perceptions of coparenting quality were observed at the whole sample level, yet gender differences might surface if subgroups of families had been examined.

As for why mothers from unbalanced families perceived lower relationship quality than fathers, we offer the following speculations. First, mothers in contemporary China are likely to be invested in both caregiving and work/career to provide for their families (Zhou et al., 2018). As discussed earlier, Chinese mothers continue to be more heavily involved in caregiving than fathers, although many of them assume full-time jobs (Li, 2020). In 91.32% of the families in our sample, the mothers were employed full time. Mothers from unbalanced families might be preoccupied with fulfilling multiple roles, which could have undermined their abilities to maintain high-quality dyadic relationships with family members. Another possible explanation is that contemporary Chinese mothers often have to juggle between different roles, yet Chinese fathers mainly take on the provider role and face less pressure to balance their work and parental roles (Li, 2020). Therefore, mothers from unbalanced families might be more dissatisfied with the division of labor at home than fathers, leading to lower perceived quality of marital and coparenting relationships. More research is needed to examine why and how family relationship quality differs depending on the gender of the parent.

Developmental Implications of Different Family Relationship Patterns

The different constellations of family relationships were related to child social and behavioral competence. Children in unbalanced families fared the worst, as they showed the highest levels of problem behaviors, while children in highly cohesive families exhibited the highest social skills and the lowest problem behaviors. The quality of overall family relationships may affect child social and behavioral development through their impact on parenting behaviors. Good family relationships may provide parents with instrumental and/or emotional support, enabling them to adopt optimal parenting practices, such as being sensitive and responsive to children's needs (Grych, 2002). Good parenting is critical to children's social-emotional development (Sanders & Morawska, 2018). The quality of overall family relationships may also shape the emotional climate of the family, which can impact an array of child social-emotional outcomes, such as children's physiological stress responses (Westerberg, 2015), emotion knowledge (Raikes & Thompson, 2006), emotion regulation, and aggression (Ramsden & Hubbard, 2002).

One noteworthy finding is that although compensatory and unbalanced families both represented patterns of low-quality family relationships, children in compensatory families had lower levels of problem behaviors than those in unbalanced families, and they had comparable levels of social skills. This suggests that a close mother-child relationship may be a protective factor for children's social and behavioral functioning to some extent. Relatedly, previous research indicated that children were more comfortable with discussing their feelings and receiving help from mothers than fathers (Matthewson et al., 2011). Mothers were also more elaborative and engaging than fathers when reminiscing with preschool-aged children about their past experiences (Zaman & Fivush, 2013). Therefore, in the face of challenging mother-child relationships (e.g., low closeness and high conflict), as in the unbalanced families of our study,

children would exhibit greater problem behaviors than those in compensatory families. In addition, as mothers are still the primary caregivers in most Chinese families (Li, 2020), mothers' experiences of different family relationships, particularly mother-child relationships, may be more crucial to young children's acquisition of social and behavioral competence than those of fathers.

Limitations and Future Directions

The findings should be interpreted in light of several limitations. First and foremost, LPA is a data-driven approach that classifies individuals based on the available data, which may not fully reveal existing subgroups within the population and can sometimes produce superfluous profiles (Williams & Kibowski, 2016). While the present findings had some overlaps with recent studies conducted in China (e.g., Zhang et al., 2021; Zhu & Dunsmore, 2023), validations of the emerged profiles are needed in future research. In addition, we only included three types of dyadic relationships as indicators in the LPA. Future research also needs to include other important family relationships as indicators to capture the full breadth of family relationships, such as triadic dynamics, sibling relationship, parent-grandparent relationship, and grandparent-grandchild relationship.

In addition to the analytic approach, three other limitations pertain to measurement issues. First, we only included child social and behavioral competence as outcomes of interest, and moreover, only one parent reported child outcomes. Other aspects of family and child functioning need to be included in future research, such as parents' mental health and children's emotional competence, cognitive competence, and academic performance. Also, a multi-informant and multi-method approach is preferred, in order to more objectively capture family and child outcomes. Second, information on the number of siblings was not collected and

controlled in the analyses, which should be addressed in future research. Third, although harmony was discussed in the present study, we did not have a measure on harmony or cohesion among family members. As a core value and personality trait (Bond, 2010; Cheung et al., 1996, 2001), future studies should examine family harmony or cohesion in relation to family relationships among Chinese families.

In addition, the present study adopted a cross-sectional design. To determine the stability of family relationship profiles and their predictions on child development, longitudinal studies are necessary. Furthermore, transactional relations likely exist between family relationship patterns and child social and behavioral competence. Longitudinal designs are needed to reveal such reciprocal influences between these constructs. Finally, the role of child gender was not considered, as it is beyond the scope of the current study. Future studies with a large sample size may further examine family relationship profiles across parent-child gender dyads, namely mother-son, mother-daughter, father-son, and father-daughter. Similarly, the family profiles between clinical and nonclinical samples should be further examined in a larger sample.

Implications and Conclusions

This study has significant implications for both family researchers and practitioners. Firstly, this study highlights the need to extend the focus from examining different family dyadic relationships to understanding holistic family relationship patterns using individual-centered approaches. Such approaches can be incorporated by family researchers in future investigations to advance the application of family systems theory in empirical research. Secondly, the finding of varied patterns of family relationships and their differential associations with children's social and behavioral competence suggests the need of tailored interventions for families of different profiles. For instance, in unbalanced families, mothers perceived a lower quality of relationship

across all measured dyadic interactions compared to fathers, and their children had the highest levels of problem behaviors. The development of interventions for unbalanced families requires researchers and practitioners to thoroughly examine the contributing factors to these perceptual differences between mothers and fathers regarding family dyadic relationships. Interventions should help reconcile these perceptual differences and pay special attention to enhancing mothers' perceptions of relationship quality. In compensatory families, all dyadic relationships, except the mother-child relationship, were of low quality. Although a close mother-child relationship offers some degree of protection to children's social and behavioral functioning, the weak marital and coparenting subsystems observed in these families could potentially jeopardize the mental health of both parents and the long-term wellbeing of the child. Therefore, intervention strategies for compensatory families should prioritize the improvement of marital and coparental relationships.

In conclusion, guided by family systems theory, the present study calls attention to the distinct family relationship configurations among Chinese urban families with preschool-aged children. Taken together, our findings support the utility of individual-centered approaches in charting family relationship profiles and the close linkage between family relationship patterns and children's social and behavioral competence. Though preliminary, our study also demonstrates the potential to inform interventions aimed at enhancing relationships through a whole-family approach.

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Table 1

Demographic Information of the Sample (N = 314)

Variables	*M* (*SD*) / %	
Child age (year)	3.86 (.48)	
Child gender		
Boys	53.75%	
Girls	46.25%	
Family caregiving arrangement		
Parents as sole caregivers	17.36%	
Grandparents/nannies providing supplementary support	63.35%	
Grandparents/nannies providing substantial support	19.29%	
Family monthly income (scored from 1 to 5)		
1. < 8,000 RMB ($1,159)	8.82%	
2. 8,001–15,000 RMB ($2,174)	26.47%	
3. 15,001–20,000 RMB ($2,899)	33.99%	
4. 20,001–50,000 RMB ($7,248)	27.45%	
5. > 50,000 RMB	3.27%	
	Mother	Father
Parental age (year)	32.67 (3.97)	34.11 (4.47)
Parental employment status		
Employed	91.32%	97.70%
Unemployed	8.68%	2.30%
Parental education (scored from 1 to 4)		
1. High school or below	12.22%	13.14%
2. Associate college degree	35.05%	29.49%
3. Bachelor's degree	44.05%	44.23%
4. Master's degree or above	8.68%	13.14%
Parental occupational prestige (scored from 1 to 5)		
1. Stay-at-home parent, unemployed, non-technical or semi-technical worker	20.50%	5.11%
2. Technical worker, small business owner	18.35%	27.37%
3. Semiprofessional or public servant	34.53%	21.17%
4. Professional or middle-level administrator	25.18%	44.16%
5. High-level professional or administrator	1.44%	2.19%

Note. The parent who filled out the family demographic questionnaire reported own as well as spouse's information. Annual disposable income per capita was 30,733 RMB ($4,455) in China (National Bureau of Statistics, 2020; see https://www.stats.gov.cn/sj/zxfb/202302/t20230203_1900640.html) and 63,472 RMB ($9,200) in Nanjing in the year of data collection (Nanjing Municipal Bureau of Statistics, 2020; see http://tjj.nanjing.gov.cn/material/njnj_2020/renmin/4-2.htm).

Table 2

Descriptive Statistics of and Correlations Among the Indicator Variables Included in the Latent Profile Analysis

	1	2	3	4	5	6	7	8	9	10	11	12
1. M-Marital satisfaction	—											
2. F-Marital satisfaction	.53***	—										
3. M-Supportive coparenting	.63***	.37***	—									
4. M-Undermining coparenting	–.54***	–.39***	–.51***	—								
5. F-Supportive coparenting	.37***	.57***	.42***	–.27***	—							
6. F-Undermining coparenting	–.33***	–.58***	–.29***	.41***	–.46***	—						
7. M-Parent-child closeness	.32***	.10	.31***	–.28***	.17**	–.06	—					
8. M-Parent-child conflict	–.30***	–.18**	–.25***	.42***	–.07	.22***	–.40***	—				
9. F-Parent-child closeness	.25***	.34***	.16**	–.10	.36***	–.16**	.23***	–.14*	—			
10. F-Parent-child conflict	–.21***	–.34***	–.16**	.18**	–.24***	.43***	–.10	.33***	–.40***	—		
11. Social skills	.33***	.30***	.23***	–.13*	.18**	–.24***	.27***	–.24***	.15**	–.15**	—	
12. Problem behaviors	–.24***	–.18**	–.10	.26***	–.16**	.16**	–.22***	.31***	–.11	.16**	–.16**	—
M	3.80	3.91	3.78	2.10	3.75	2.13	4.43	2.12	4.10	2.22	2.77	1.61
SD	.70	.67	.63	.57	.63	.63	.46	.59	.55	.62	.43	.32

Note. “F” represents father, and “M” represents mother. *$p < .05$; **$p < .01$; ***$p < .001$.

Table 3

Model Fit Indices from the Latent Profile Analysis of Family Relationship Quality

Model	AIC	BIC	aBIC	Entropy	VLMR (*p* value)	Group size *n* (%)
1 profile	5597.24	5672.23	5608.80	—	—	314 100%
2 profiles	5066.72	5182.95	5084.63	.82	552.53 ($p < .001$)	144, 170 (45.86%, 54.14%)
3 profiles	4973.52	5130.99	4997.78	.75	115.20 ($p = .809$)	75, 152, 87 (23.89%, 48.41%, 27.71%)
4 profiles	**4891.56**	**5090.28**	**4922.18**	**.80**	**103.95 ($p = .025$)**	**23, 66, 149, 76** **(7.32%, 21.02%, 47.45%, 24.20%)**
5 profiles	4847.68	5087.64	4884.65	.82	65.88 ($p = .289$)	23, 135, 58, 21, 77 (7.32%, 42.99%, 18.47%, 6.69%, 24.52%)

Note. Results of the final model were bolded.

Table 4

Descriptive Statistics and Comparisons of the Four Profiles on Each Indicator Variable

	Profile 1 (Unbalanced) *M* (*SD*)	Profile 2 (Compensatory) *M* (*SD*)	Profile 3 (Moderately cohesive) *M* (*SD*)	Profile 4 (Highly cohesive) *M* (*SD*)	*F*	Post-hoc
M-Marital satisfaction	3.16 (.56)	3.11 (.61)	3.92 (.49)	4.35 (.57)	70.01***	1 < 3, 4 2 < 3, 4 3 < 4
F-Marital satisfaction	3.78 (.50)	3.15 (.48)	3.90 (.44)	4.65 (.36)	135.24***	1 < 4 2 < 1, 3, 4 3 < 4
M-Supportive coparenting	3.16 (.74)	3.29 (.53)	3.86 (.50)	4.23 (.48)	49.41***	1 < 3, 4 2 < 3, 4 3 < 4
M-Undermining coparenting (reverse)	3.47 (.46)	3.35 (.44)	4.01 (.47)	4.25 (.50)	52.54***	1 < 3, 4 2 < 3, 4 3 < 4
F-Supportive coparenting	3.47 (.45)	3.25 (.59)	3.67 (.49)	4.39 (.39)	67.67***	1 < 4 2 < 3, 4 3 < 4
F-Undermining coparenting (reverse)	3.68 (.57)	3.20 (.53)	3.86 (.43)	4.50 (.40)	95.94***	1 < 4 2 < 1, 3, 4 3 < 4
M-Parent-child closeness	3.34 (.43)	4.48 (.34)	4.47 (.33)	4.63 (.31)	88.95***	1 < 2, 3, 4 3 < 4
M-Parent-child conflict (reverse)	3.09 (.52)	3.62 (.70)	3.98 (.46)	4.13 (.43)	31.47***	1 < 2, 3, 4 2 < 3, 4
F-Parent-child closeness	3.79 (.65)	3.91 (.53)	4.03 (.51)	4.48 (.40)	20.97***	1 < 4 2 < 4 3 < 4
F-Parent-child conflict (reverse)	3.57 (.70)	3.30 (.61)	3.81 (.52)	4.20 (.45)	33.92***	1 < 4 2 < 3, 4 3 < 4

Note. Undermining coparenting and parent-child conflict were reverse coded, so higher scores indicated lower levels of undermining coparenting and parent-child conflict (i.e., better relationship quality). "F" represents father, and "M" represents mother. We used Bonferroni post-hoc comparisons and listed pairwise comparisons that are significant at $p = .05$ in the "Post-hoc" column. $^{*}p < .05$; $^{**}p < .01$; $^{***}p < .001$.

Table 5

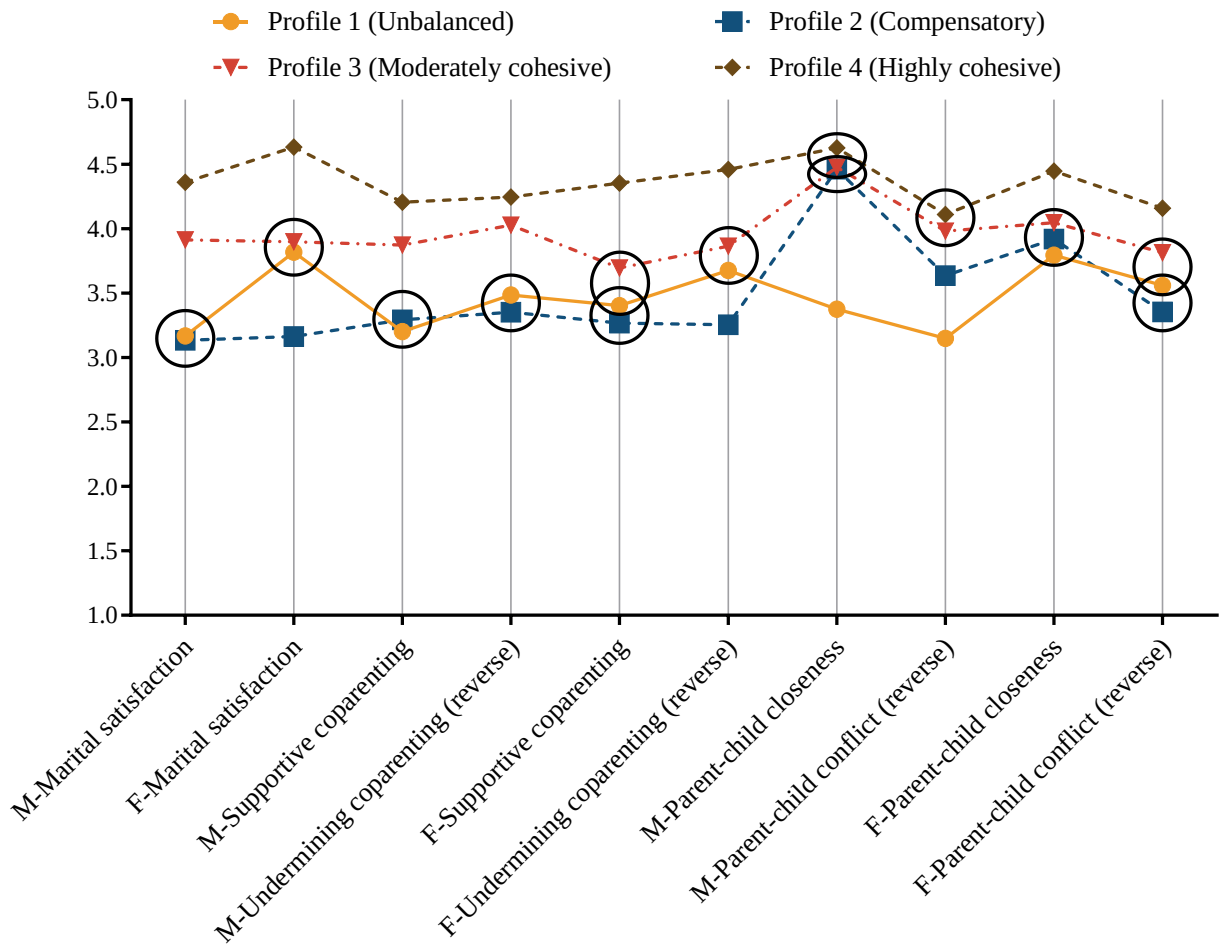
Estimated Means and Standard Errors of Child Social Skills and Problem Behaviors in the Four Emerged Profiles and Comparisons Among the Profiles

	Profile 1 (Unbalanced) *M* (*SE*)	Profile 2 (Compensatory) *M* (*SE*)	Profile 3 (Moderately cohesive) *M* (*SE*)	Profile 4 (Highly cohesive) *M* (*SE*)	*F*	Post-hoc
Social skills	2.43 (.09)	2.66 (.05)	2.74 (.03)	3.00 (.05)	13.92***	1 < 3, 4 2 < 4 3 < 4
Problem behaviors	1.94 (.07)	1.70 (.04)	1.60 (.03)	1.47 (.04)	15.19***	1 > 2, 3, 4 2 > 4 3 > 4

Note. Covariates included in the analyses were: reporter for the child social and behavioral competence measure (mother vs. father), caregiving arrangement (two dummy variables were created to distinguish the three types of arrangement, namely parents as sole caregivers vs. parents taking on the major role with supplementary support from grandparents/nannies vs. grandparents/nannies providing substantial support"), child gender (boy vs. girl), child age (in years) and family socioeconomic status (SES). SES was a composite variable calculated by averaging the standardized scores of the following five indicators: paternal education, maternal education, paternal occupational prestige, maternal occupational prestige, and household monthly income (see Table 1 for the specific codes of each indicator). Significant subgroup differences were further tested using Bonferroni post-hoc comparisons. Comparisons that were significant at $p = .05$ are noted in the "Post-hoc" column. $^{*}p < .05$; $^{**}p < .01$; $^{***}p < .001$.

Figure 1

A Depiction of the Four Emerged Family Relationship Profiles



Note. Undermining coparenting and parent-child conflict were reverse coded, so higher scores indicated lower levels of undermining coparenting and parent-child conflict (i.e., better relationship quality). "F" represents father, and "M" represents mother. Nonsignificant post-hoc pairwise comparisons were circled.