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Comparison of Parent–Child Relationships, Sense of Coherence, and Psychological Capital among First-Cycle Secondary School Female Students from Only-Child and Multi-Child Families in Khomam

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ABSTRACT

The present study examined differences in parent–child relationships, sense of coherence, and psychological capital among first-cycle secondary school female students from only-child and multi-child families in Khomam. In terms of purpose, this study was applied research, and in terms of method, it was causal-comparative (ex post facto). The statistical population consisted of 200 first-cycle secondary school female students, including 100 only-child students and 100 students from multi-child families, in the 2024–2025 academic year. Data were collected using the Fine Parent–Child Relationship Scale (PCRS), Antonovsky’s Sense of Coherence Scale (SOC-13), and the Psychological Capital Questionnaire (Luthans, 2007). Data analysis was performed using descriptive indices and inferential statistics, including the t-test and multivariate analysis of variance. The data were analyzed using SPSS version 23. The findings showed that the mean score of parent–child relationships in the multi-child group was significantly higher than that of the only-child group ($p < 0.05$). Moreover, the mean score of sense of coherence in the multi-child group was significantly higher than that of the only-child group ($p < 0.001$). In addition, a significant difference was observed between the two groups in psychological capital, including hope, resilience, and optimism, and the mean scores of psychological capital and its components were higher in the multi-child group than in the only-child group ($p < 0.001$). The analysis of variance indicated that family type had a significant effect on all dependent variables, namely parent–child relationships, sense of coherence, and psychological capital ($p < 0.001$). Overall, multi-child families had better parent–child relationships, which positively affected children’s sense of coherence and psychological capital. These results indicated a significant difference between the two groups in all three variables, namely parent–child relationships, sense of coherence, and psychological capital, and students from multi-child families performed better on these variables than only-child students. Therefore, it can be concluded that having multiple children has a positive effect on parent–child relationships, sense of coherence, and psychological capital.

Keywords: parent–child relationships, sense of coherence, psychological capital, only-child and multi-child families

1. Introduction

Adolescence is a sensitive developmental period in which biological maturation, cognitive restructuring, emotional intensification, and social role expansion occur simultaneously. During this stage, adolescents gradually move from childhood dependency toward greater autonomy, yet their psychological adjustment remains strongly embedded in the quality of family relationships, especially the emotional and communicative patterns established with parents. First-cycle secondary school students are positioned at the beginning of this transition, and girls in this age group may experience heightened sensitivity to relational support, family climate, self-definition, and social comparison. From a developmental perspective, adolescence is marked by rapid changes in self-concept, identity formation, emotional regulation, and interpersonal needs; therefore, the family environment can either facilitate adaptive psychological growth or intensify vulnerability to stress, insecurity, and maladaptive coping (Ahunovna, 2021; Berk, 2018). In this regard, examining family-related differences in core psychological variables among adolescent girls is important because the emotional and relational experiences formed during this period may influence their academic functioning, mental health, resilience, and future patterns of social adaptation.

Among the various dimensions of adolescent development, the parent-child relationship occupies a central position. Parent-child relationships are not limited to behavioral supervision or parental authority; rather, they include emotional warmth, mutual responsiveness, communication, identification, conflict management, and the adolescent's perception of parental availability. Positive parent-child relationships provide adolescents with a secure relational base through which they can explore the social world, regulate emotions, and construct a coherent sense of self. Conversely, relationships characterized by conflict, emotional distance, role confusion, or inadequate communication may weaken adolescents' psychological security and reduce their capacity for adaptive functioning. Previous research has shown that perceived parenting and parent-child relational qualities differ across fathers and mothers and can predict developmental outcomes over time, emphasizing that both maternal and paternal relationship patterns should be considered in adolescent research (Shek & Dou, 2020). Similarly, parent-child attachment has been linked to social adaptation, with school bonding functioning as an important mediating pathway, indicating that early

family relationships extend beyond the home and influence adolescents' broader social adjustment (Yin et al., 2021).

The quality of communication between parents and children is particularly important during adolescence because adolescents increasingly seek autonomy while still needing emotional validation and guidance. A balanced parent-child relationship allows adolescents to express emotions, discuss problems, negotiate boundaries, and internalize values without excessive dependence or rejection. Research conducted in educational and family contexts has shown that parent-child relationship patterns are associated with students' communication skills and self-esteem, suggesting that the family context contributes to the development of interpersonal competence and self-evaluative processes (Etesamipour et al., 2020). This is especially relevant for female students in early adolescence, whose psychological adjustment may be shaped by both the emotional climate of the family and the perceived quality of communication with parents. Accordingly, studying parent-child relationships in relation to broader psychological resources can provide a more complete understanding of adolescents' developmental functioning.

Family size is one of the contextual factors that may shape parent-child relational experiences. Only-child and multi-child families may differ in parental attention, expectations, emotional intensity, sibling interaction, conflict exposure, and opportunities for social learning within the family system. Only children may receive more concentrated parental resources, attention, and educational investment, yet they may also experience higher parental expectations, greater monitoring, limited sibling-based negotiation, and fewer everyday opportunities for role-sharing within the home. In contrast, children in multi-child families may experience more distributed parental attention, but they are also more likely to engage in sibling interaction, cooperation, conflict resolution, perspective-taking, and shared family responsibilities. The lived experiences of only children in interaction with parents suggest that the absence of siblings may shape the emotional and relational structure of the family in distinctive ways, influencing autonomy, dependence, expectations, and patterns of communication (Mortazavi et al., 2018). Moreover, comparative evidence regarding mothers with one child and mothers with two or more children indicates that family size can be associated with parenting style and maternal mental health, which may indirectly influence children's psychological and relational experiences (Souri Nejad et al., 2020).

The comparison of only-child and multi-child families becomes particularly important in societies where demographic patterns, family planning decisions, and cultural expectations regarding childbearing are changing. Changes in family size may alter not only household structure but also the psychological ecology of children's development. Family economic capital and socioeconomic conditions can influence children's psychological development by shaping access to educational opportunities, emotional resources, and family stress levels (Shi, 2024). In addition, parents' psychological capital and sense of parenting competence may be linked to socioeconomic status through social support mechanisms, suggesting that family structure, economic resources, and parental psychological resources interact in shaping developmental outcomes (Yuan et al., 2025). Therefore, when comparing adolescents from only-child and multi-child families, it is necessary to consider family size not as an isolated demographic variable but as part of a broader family context that includes relational quality, parental psychological functioning, socioeconomic conditions, and children's access to emotional and social resources.

One psychological construct that may be strongly influenced by family relational context is sense of coherence. Sense of coherence refers to a global orientation through which individuals perceive life events as comprehensible, manageable, and meaningful. Adolescents with a stronger sense of coherence are more likely to interpret challenges as structured and understandable, believe that sufficient resources are available to cope with demands, and experience life as meaningful enough to justify effort and persistence. This construct is especially relevant in adolescence because young people encounter academic pressures, social comparison, emotional fluctuations, and identity-related uncertainties. A strong sense of coherence can support adaptive coping and reduce vulnerability to stress by helping adolescents organize internal and external experiences into a more coherent psychological framework. Evidence from health-related and caregiving research has shown that sense of coherence is closely associated with stress, burden, and mental health, suggesting that it functions as a protective psychological resource across demanding life contexts (Del-Pino-Casado et al., 2019). Similarly, research among midwives indicated that sense of coherence and perceived work values were related to stress and self-reported health, further confirming its role in psychological and health-related adaptation (Gebriné et al., 2019).

In family systems, sense of coherence may be shaped through repeated relational experiences. When adolescents grow up in families where interactions are predictable, emotionally supportive, and communicatively open, they may be more likely to perceive their environment as comprehensible and manageable. Conversely, inconsistent parenting, excessive conflict, unclear roles, or emotional neglect may weaken adolescents' ability to organize experiences coherently. Family sense of coherence has also been examined in relation to caregiver stress, and recent findings have shown that psychological capital may mediate the relationship between family sense of coherence and stress among parents of children with autism spectrum disorder (Zoromba et al., 2024). Although this evidence comes from a specific caregiving context, it highlights an important theoretical connection among family coherence, psychological resources, and stress adaptation. In adolescent populations, this relationship may be reflected in the way family structure and parent-child relationships contribute to the development of students' sense of coherence.

Psychological capital is another major construct in positive psychology that has gained increasing attention in educational and developmental research. Psychological capital generally includes hope, self-efficacy, resilience, and optimism. These components reflect the individual's capacity to set goals and identify pathways to achieve them, believe in personal competence, recover from adversity, and maintain positive expectations about future outcomes. In students, psychological capital can influence academic engagement, motivation, stress management, and achievement. Earlier research among students showed that psychological capital is related to social capital, indicating that positive psychological resources are embedded in interpersonal and social contexts rather than being purely individual traits (Bahadori Khosroshahi et al., 2012). Psychological capital has also been negatively associated with stress among school students, supporting its protective role in educational settings (Kaur & Amin, 2017). In addition, psychological capital and negative feelings have been examined in relation to students' violence tendency, suggesting that positive psychological resources may buffer maladaptive emotional and behavioral tendencies (Aliyev & Karakus, 2015).

Recent studies have further emphasized the educational significance of psychological capital. Psychological capital has been shown to contribute to academic achievement through academic engagement, suggesting that students with stronger positive psychological resources are more likely to

invest effort, persist in learning, and remain behaviorally and emotionally involved in academic tasks (Amera, 2025). Similarly, psychological capital has been identified as a mediator in the relationship between academic self-efficacy, academic engagement, academic meaningfulness, and academic achievement among students, indicating that it plays a central role in transforming motivational and cognitive resources into academic outcomes (Jasem et al., 2025). Among middle school students, psychological capital has also been linked to subjective academic achievement through adolescent internalizing problems and life attitude, showing that psychological capital may reduce internalizing difficulties and support a more adaptive orientation toward life and schooling (Hu et al., 2025). These findings are particularly relevant to first-cycle secondary school students because this stage is often associated with increased academic demands and emotional vulnerability.

Psychological capital is also important for well-being and broader psychological functioning. Research among medical students showed that psychological capital mediated the relationship between life satisfaction and psychological well-being, indicating that students' positive psychological resources contribute to their capacity to experience well-being under demanding academic conditions (Shereda et al., 2025). In the context of gifted students, mindfulness training has been found to improve psychological capital and emotional regulation, suggesting that psychological capital is not fixed and can be strengthened through psychological and educational interventions (Sharifian Motlaq & Mohammadi, 2025). Moreover, psychological capital has been studied in relation to marriage orientation and attitudes toward premarital relationships among single students, with family ties functioning as a mediating factor, which further supports the role of family-related variables in shaping psychological capital and future relational attitudes (Gohanj & Ghazanfari, 2025). Although some studies on psychological capital have been conducted in organizational settings, they also demonstrate that positive psychological and cultural resources can influence satisfaction, commitment, and performance, reinforcing the broader functional importance of psychological resources across social contexts (Soomro & Shah, 2019).

The link between family structure and psychological capital may be explained through several pathways. In multi-child families, children may encounter more frequent opportunities for cooperation, competition, emotional negotiation, and shared responsibility, which can foster resilience, problem-solving, and optimism. Sibling

interactions may function as informal training contexts for coping with frustration, resolving conflicts, and understanding others' perspectives. These everyday interactions may support the development of self-efficacy and hope by exposing children to manageable challenges and repeated experiences of social adjustment. In only-child families, concentrated parental attention may support achievement and emotional closeness, but it may also intensify pressure, limit opportunities for sibling-based coping experiences, or increase sensitivity to parental expectations. A comparative study of only-child and multi-child final-year high school students in Rasht found differences in psychological sense of coherence, self-regulation, and hardiness, suggesting that family size may be associated with important psychological characteristics in students (Mehdizadeh Hassanabadi & Salehi, 2022). This evidence supports the need to examine whether similar differences are observable among younger female students in the first cycle of secondary education.

Despite the growing body of research on parent-child relationships, sense of coherence, psychological capital, and family functioning, several gaps remain. First, many studies have examined these variables separately, whereas fewer studies have considered them together within the same comparative family-size framework. Second, much of the evidence on psychological capital has focused on university students, gifted students, medical students, or occupational populations, while younger adolescent girls in secondary school have received less direct attention. Third, although only-child and multi-child family structures have been examined in relation to selected psychological or parenting variables, less is known about how these family types differ simultaneously in parent-child relationships, sense of coherence, and psychological capital. Fourth, the distinction between relationships with father and mother is often underexplored, even though adolescents may experience different relational patterns with each parent. Addressing these gaps is important because family-based psychological differences during early adolescence may have implications for counseling, school psychology, parental education, and preventive mental health programs.

In the context of Khomam, investigating these variables among first-cycle secondary school female students can provide valuable evidence for understanding how family structure is associated with psychological adjustment in a specific educational and sociocultural setting. Since adolescence is a period in which emotional, relational, and motivational resources become increasingly important for

adaptation, identifying whether students from only-child and multi-child families differ in parent-child relationships, sense of coherence, and psychological capital can help educators, counselors, and parents design more appropriate support strategies. The comparison of these two groups may clarify whether multi-child family environments provide developmental advantages in relational and psychological domains or whether only-child students require targeted support in areas such as communication, resilience, coherence, and emotional adaptation. Accordingly, the present study aimed to compare parent-child relationships, sense of coherence, and psychological capital among first-cycle secondary school female students from only-child and multi-child families in Khomam.

2. Methods and Materials

2.1. Study Design and Participants

The present study was applied in terms of purpose and descriptive causal-comparative, or *ex post facto*, in terms of method. The statistical population consisted of 988 first-cycle secondary school female students in Khomam during the 2024–2025 academic year, who were categorized into two groups: only-child students and students from multi-child families. The final study sample consisted of 200 students, including 100 only-child female students and 100 female students from multi-child families. To estimate the required sample size, GPower software was used based on the effect size, alpha level, and statistical power reported in previous studies (Farahani & Roshan Chesli, 2023; Heidarian & Salehian, 2023; Kang, 2021). The initial sample size calculated by GPower was 110 participants, consisting of 55 only-child female students and 55 female students from multi-child families. However, to increase the validity of the findings and reduce the potential effects of participant attrition, the sample size was increased to 200 participants. The two groups were matched in terms of educational grade, socioeconomic status, and age range. The Parent-Child Relationship Scale, the Sense of Coherence Scale, and the Psychological Capital Questionnaire were administered to the selected participants. Sampling was conducted using a multistage cluster random sampling method. First, girls' schools in Khomam were randomly selected. Then, after coordination with the Department of Education, the list of first-cycle secondary schools was obtained. Subsequently, one class was selected from each educational grade, namely seventh, eighth, and ninth grades, based on the list of classes. In each class, according to the predetermined sample size

and the number of students, participants were selected through simple random sampling from the attendance register.

2.2. Measures

The Parent-Child Relationship Scale (PCRS) was used to assess the quality of parent-child relationships. This questionnaire was developed by Mark A. Fine, J. R. Moreland, and Andrew Schwebel and consists of 24 items. The PCRS has two forms: one form assesses the child's relationship with the mother, and the other assesses the child's relationship with the father. The questionnaire is scored on a 7-point Likert scale. Both the father and mother forms include 24 items, and items 9, 13, and 14 are reverse-scored. The total score is obtained from the sum of the mean scores of the subscales. The highest possible score on this instrument is 168, and the lowest possible score is 24, with higher scores indicating better parent-child relationships. Fine et al. (1983) examined the reliability of this scale using Cronbach's alpha. The reliability coefficients for the father-related subscales ranged from 0.89 to 0.94, and the reliability coefficient for the total father scale was 0.96. The Cronbach's alpha coefficients for the mother-related subscales ranged from 0.61 to 0.94, and the reliability coefficient for the total mother scale was 0.96, indicating good internal consistency. In the study by Fine et al. (1983), confirmatory factor analysis was used to examine the validity of the scale, and the results indicated strong associations among the items. In an Iranian study, Shahni Yeylaq (2014) reported Cronbach's alpha coefficients of 0.89 for the conflict with father subscale and 0.92 for the conflict with mother subscale. In addition, standardized coefficients, or factor loadings, in confirmatory factor analysis ranged from 0.64 to 0.84 for the conflict with father subscale and from 0.67 to 0.78 for the conflict with mother subscale. Araghii (2008) reported reliability coefficients of 0.93 for the father form and 0.92 for the mother form, indicating good internal consistency. In the present study, the reliability coefficients of the parent-child relationship questionnaire were calculated using Cronbach's alpha. The reliability coefficients for the father-related subscales ranged from 0.69 to 0.97, and the reliability coefficient for the total father scale was 0.73. Moreover, Cronbach's alpha coefficients for the mother-related subscales ranged from 0.71 to 0.96, and the reliability coefficient for the total mother scale was 0.75, indicating acceptable internal consistency.

The Antonovsky Sense of Coherence Scale (SOC-13) was used to measure sense of coherence. Antonovsky's Sense of Coherence Scale has two versions: a 13-item form, known as SOC-13, and a 29-item form, known as SOC-29. In the present study, the 13-item version was used. This questionnaire measures three components of sense of coherence, namely manageability, comprehensibility, and meaningfulness, on a 7-point Likert scale ranging from 1, indicating the lowest level of agreement or tendency, to 7, indicating the highest level of agreement or tendency. The total score is obtained by summing the item scores; therefore, possible scores range from 13 to 91, with higher scores indicating a stronger sense of coherence. Antonovsky (1987) confirmed the construct validity of the scale and reported internal consistency reliability, based on Cronbach's alpha, ranging from 0.82 to 0.95 for the subscales. Eriksson and Lindström (2007), in a systematic review of 458 scientific articles and 13 doctoral dissertations, concluded that both the 29-item and 13-item versions of the Sense of Coherence Scale are reliable and valid instruments with cross-cultural applicability. In Iran, Mohammadzadeh et al. standardized this questionnaire and reported a Cronbach's alpha coefficient of 0.77 and a test-retest reliability coefficient of 0.66 for the total scale. In the present study, the reliability coefficients of the Sense of Coherence Scale were calculated using Cronbach's alpha. The reliability coefficients for the subscales ranged from 0.68 to 0.86, and the Cronbach's alpha coefficient for the total sense of coherence scale was 0.80. These results indicate that the Sense of Coherence Scale had acceptable reliability and could be used as a valid instrument for assessing sense of coherence in the population under study.

The Psychological Capital Questionnaire (PCQ) was used to assess psychological capital. This questionnaire was developed by Luthans (2007) and consists of 24 items and four components: hope, resilience, optimism, and self-efficacy, with each component measured by six items. To calculate the psychological capital score, the score of each subscale is first calculated, and the total psychological capital score is then obtained by summing the subscale scores. The questionnaire is scored on a 6-point Likert scale ranging from "strongly disagree" to "strongly agree" and assesses positive psychological capital through items such as "I confidently examine a long-term problem to find a solution." The validity of the questionnaire has been confirmed in various studies. Luthans (2007), using factor analysis and structural equation modeling, reported a chi-square ratio of 24.6, a comparative fit index of 0.97, and a

root mean square error of approximation of 0.08, confirming the factorial validity of the instrument. In Iran, Bahadori Khosroshahi et al. (2012) reported a Cronbach's alpha coefficient of 0.85 for the questionnaire. In the present study, the reliability coefficients of the Psychological Capital Questionnaire were calculated using internal consistency through Cronbach's alpha. The reliability coefficients for the subscales ranged from 0.69 to 0.98, and the Cronbach's alpha coefficient for the total psychological capital scale was 0.82. These findings indicate that the Psychological Capital Questionnaire had acceptable reliability and could be used as a valid instrument for measuring psychological capital in the study population.

2.3. Data Analysis

Data analysis was conducted using SPSS version 23. First, descriptive statistical indices, including frequency, percentage, mean, and standard deviation, were used to describe the demographic characteristics of the participants and the main research variables. Before conducting inferential analyses, the assumptions required for parametric statistical tests were examined, including normality of distribution, homogeneity of variances, and the absence of serious violations in the covariance structure of the dependent variables. To compare only-child students and students from multi-child families in terms of parent-child relationships, sense of coherence, and psychological capital, inferential statistical methods were used. Independent-samples t-tests were applied to compare the mean scores of the two groups on the study variables, and multivariate analysis of variance was used to examine the overall effect of family type on the set of dependent variables. The level of statistical significance was set at $p < 0.05$.

3. Findings and Results

The demographic findings showed that the age distribution of the students across the 13-, 14-, and 15-year-old age groups was relatively balanced, with each age group accounting for approximately 32% to 36% of the total sample. Regarding economic status, the highest frequency was observed in the middle socioeconomic group, which included 42% of the participants, followed by the low socioeconomic group, which included 28% of the participants. The findings also indicated that there was no statistically significant difference between the only-child and multi-child groups in terms of demographic variables ($p > .05$). Therefore, the two groups were considered

comparable with respect to the main demographic characteristics.

Table 1

Descriptive Statistics of Parent–Child Relationship with Mother, Sense of Coherence, and Psychological Capital Components in Only-Child and Multi-Child Families

Variable	Family Type	n	Mean	Standard Deviation	Minimum	Maximum
Parent–child relationship with mother	Only-child	100	133.5	18.991	62	158
Parent–child relationship with mother	Multi-child	100	140.6	14.445	80	161
Positive affect	Only-child	100	75.39	13.675	28	91
Positive affect	Multi-child	100	80.74	10.289	37	91
Hatred/role confusion	Only-child	100	9.54	3.063	4	14
Hatred/role confusion	Multi-child	100	6.89	2.936	2	13
Identification with mother	Only-child	100	14.22	3.35	3	20
Identification with mother	Multi-child	100	17.16	2.58	10	21
Communication or dialogue	Only-child	100	40.08	7.365	15	49
Communication or dialogue	Multi-child	100	43.89	5.974	18	49
Sense of coherence	Only-child	100	44.75	11.49	13	67
Sense of coherence	Multi-child	100	52.10	9.994	31	78
Manageability	Only-child	100	16.73	5.106	5	25
Manageability	Multi-child	100	20.45	6.042	8	35
Meaningfulness	Only-child	100	11.84	3.338	3	21
Meaningfulness	Multi-child	100	12.25	3.313	4	18
Comprehensibility	Only-child	100	16.18	5.739	5	32
Comprehensibility	Multi-child	100	19.40	5.408	9	31
Psychological capital	Only-child	100	96.16	15.725	51	129
Psychological capital	Multi-child	100	98.05	10.833	83	130
Self-efficacy	Only-child	100	22.75	5.448	11	34
Self-efficacy	Multi-child	100	24.37	5.008	10	36
Hope	Only-child	100	25.87	5.783	11	36
Hope	Multi-child	100	29.00	4.015	18	36
Resilience	Only-child	100	23.97	4.238	13	33
Resilience	Multi-child	100	26.67	4.401	18	36
Optimism	Only-child	100	23.57	4.112	9	32
Optimism	Multi-child	100	25.70	3.483	17	32

As shown in Table 1, the mean score of parent–child relationship with mother was higher among students from multi-child families than among only-child students. The same pattern was observed for positive affect, identification with mother, and communication or dialogue, whereas the mean score of hatred/role confusion was lower in the multi-child group, indicating a more favorable relational pattern in this group. In terms of sense of coherence, students from multi-child families obtained higher mean scores in the total

scale as well as in the components of manageability, meaningfulness, and comprehensibility. Similarly, the mean scores of psychological capital and all its components, including self-efficacy, hope, resilience, and optimism, were higher in the multi-child group than in the only-child group. The skewness and kurtosis indices for the psychological variables indicated that the data generally followed an approximately normal distribution in both groups.

Table 2

Multivariate Analysis of Variance for Parent–Child Relationships with Father and Mother, Sense of Coherence, and Psychological Capital in Only-Child and Multi-Child Groups

Variable	Family Type	Mean	Standard Deviation	F	η^2	p-value
Parent–child relationship with father	Only-child	122.8	26.73	11.64	.056	.001
Parent–child relationship with father	Multi-child	133.2	14.283			
Positive affect	Only-child	44.66	12.142	97.484	.330	< .001
Positive affect	Multi-child	56.96	2.784			
Conflict with father	Only-child	34.24	5.69	10.921	.052	.001
Conflict with father	Multi-child	31.29	6.87			
Communication and dialogue	Only-child	26.55	7.52	4.295	.021	.040
Communication and dialogue	Multi-child	28.31	3.945			
Anger	Only-child	4.02	2.034	4.277	.021	.040
Anger	Multi-child	3.48	1.635			
Parent–child relationship with mother	Only-child	133.5	18.991	8.73	.042	.004
Parent–child relationship with mother	Multi-child	140.6	14.445			
Positive affect	Only-child	75.39	13.675	9.773	.047	.002
Positive affect	Multi-child	80.74	10.289			
Role confusion	Only-child	9.54	3.06	39.000	.165	< .001
Role confusion	Multi-child	6.89	2.936			
Identification	Only-child	14.22	3.035	48.329	.196	< .001
Identification	Multi-child	17.16	2.58			
Communication or dialogue	Only-child	40.08	7.365	16.196	.076	< .001
Communication or dialogue	Multi-child	43.89	5.947			
Sense of coherence	Only-child	44.75	11.49	23.384	.106	< .001
Sense of coherence	Multi-child	52.10	9.949			
Manageability	Only-child	16.73	5.106	22.109	.100	< .001
Manageability	Multi-child	20.45	6.042			
Meaningfulness	Only-child	11.84	3.338	0.802	.004	.371
Meaningfulness	Multi-child	12.25	3.131			
Comprehensibility	Only-child	16.18	5.739	16.672	.078	< .001
Comprehensibility	Multi-child	19.40	5.791			
Psychological capital	Only-child	96.16	15.725	25.168	.113	< .001
Psychological capital	Multi-child	98.05	10.833			
Self-efficacy	Only-child	22.75	5.448	4.479	.024	.030
Self-efficacy	Multi-child	24.37	5.008			
Hope	Only-child	25.87	5.783	19.764	.091	< .001
Hope	Multi-child	29.00	4.015			
Resilience	Only-child	23.97	4.238	19.521	.090	< .001
Resilience	Multi-child	26.67	4.401			
Optimism	Only-child	23.57	4.112	15.620	.073	< .001
Optimism	Multi-child	25.70	3.483			

As shown in Table 2, the results of multivariate analysis of variance indicated that family type had a statistically significant effect on parent–child relationship with father and its components. Students from multi-child families had higher mean scores in overall relationship with father, positive affect, and communication and dialogue, while only-child students had higher mean scores in conflict with father and anger, indicating less favorable relational functioning in these dimensions. The largest effect size in

the father-related components was observed for positive affect ($\eta^2 = .330$). Family type also had a significant effect on parent–child relationship with mother and its components, including positive affect, role confusion, identification, and communication or dialogue. Students from multi-child families had higher scores in positive affect, identification, and communication, whereas only-child students had higher role confusion scores. Among the mother-related components, identification ($\eta^2 = .196$) and

role confusion ($\eta^2 = .165$) showed the largest effect sizes. The results further showed that family type had a significant effect on total sense of coherence, manageability, and comprehensibility, while the difference between the two groups in meaningfulness was not statistically significant ($p = .371$). In addition, family type had a significant effect on

psychological capital and all its components. Students from multi-child families obtained higher scores in psychological capital, self-efficacy, hope, resilience, and optimism, with the strongest effects observed for total psychological capital, hope, resilience, and optimism.

Table 3

Independent-Samples t-Test Results for Parent–Child Relationships with Father and Mother, Sense of Coherence, and Psychological Capital in Only-Child and Multi-Child Groups

Variable	Family Type	Mean	Standard Deviation	p-value	Mean Difference	Eta Squared
Parent–child relationship with father	Only-child	122.8	26.73	.001	-10.34	.0556
Parent–child relationship with father	Multi-child	133.2	14.283			
Parent–child relationship with mother	Only-child	133.5	18.991	.004	-7.05	.0422
Parent–child relationship with mother	Multi-child	140.6	14.445			
Sense of coherence	Only-child	44.75	11.49	< .001	-7.35	.105
Sense of coherence	Multi-child	52.10	9.94			
Psychological capital	Only-child	96.16	15.725	< .001	-1.89	.112
Psychological capital	Multi-child	98.05	10.833			

As shown in Table 3, the independent-samples t-test results indicated statistically significant differences between only-child students and students from multi-child families in parent–child relationship with father, parent–child relationship with mother, sense of coherence, and psychological capital. The mean score of parent–child relationship with father was significantly higher in the multi-child group than in the only-child group ($p = .001$), and the mean score of parent–child relationship with mother was also significantly higher in the multi-child group ($p = .004$). The negative mean differences reflect the order of subtraction, namely only-child minus multi-child, and therefore indicate higher scores among students from multi-child families. The eta squared values showed that approximately 5.56% of the variance in parent–child relationship with father and 4.22% of the variance in parent–child relationship with mother were associated with family type. The results also showed that sense of coherence was significantly higher among students from multi-child families than among only-child students ($p < .001$), with family type accounting for approximately 10.5% of the variance. Moreover, psychological capital was significantly higher in the multi-child group than in the only-child group ($p < .001$), and the eta squared value indicated that approximately 11.2% of the variance in psychological capital was associated with family type. Overall, the findings suggest that students from multi-child families had more favorable parent–child relationships, stronger sense of

coherence, and higher psychological capital than only-child students.

4. Discussion

The present study aimed to compare parent–child relationships, sense of coherence, and psychological capital among first-cycle secondary school female students from only-child and multi-child families in Khomam. The findings showed that students from multi-child families obtained significantly higher scores in parent–child relationships with both fathers and mothers compared with only-child students. More specifically, the multi-child group reported higher overall parent–child relationship scores, stronger positive affect, better communication and dialogue, and stronger identification with the mother. In contrast, only-child students showed higher scores in less favorable relational dimensions, including anger, conflict with father, and role confusion. These findings indicate that the family structure may be associated with qualitative differences in the emotional and communicative climate of parent–child relationships. In developmental terms, adolescence is a period in which emotional security, parental responsiveness, and family-based communication become highly important because adolescents simultaneously seek autonomy and continue to need parental support and guidance (Ahunovna, 2021; Berk, 2018). Therefore, the stronger parent–child relationships observed among students from multi-child families may reflect a family environment in which

interactional opportunities, shared responsibilities, and everyday negotiation among family members contribute to more adaptive relational experiences.

The superiority of the multi-child group in parent–child relationships can be explained in light of family interaction patterns. In multi-child families, children are often exposed to more frequent interpersonal exchanges, including cooperation, compromise, emotional sharing, and conflict resolution. These experiences may indirectly strengthen communication skills and reduce emotional rigidity in relationships with parents. In contrast, only-child families may involve more concentrated parental attention, but this attention can sometimes be accompanied by higher expectations, greater monitoring, and more intense parent–child emotional dependence. The finding that only-child students reported higher anger and conflict-related indicators is consistent with the view that the absence of siblings may intensify dyadic parent–child interactions and make disagreements more emotionally salient. Previous research on the lived experiences of only children has shown that only-child status can shape parent–child interaction through distinctive patterns of dependence, parental expectations, emotional pressure, and role-related ambiguity (Mortazavi et al., 2018). Similarly, comparative evidence on mothers with one child and mothers with two or more children indicates that family size is associated with parenting style and maternal mental health, both of which may influence the emotional climate experienced by children (Souri Nejad et al., 2020). The present findings are also consistent with studies emphasizing that perceived parenting and parent–child relational quality are important predictors of adolescent adjustment over time (Shek & Dou, 2020).

The results also showed that students from multi-child families had significantly higher sense of coherence than only-child students. Among the components of sense of coherence, manageability and comprehensibility were significantly higher in the multi-child group, whereas the difference in meaningfulness was not statistically significant. This pattern suggests that students from multi-child families may perceive life demands as more understandable and more manageable, possibly because they have more opportunities to experience shared problem-solving, family cooperation, and adaptive coping within everyday family life. Sense of coherence reflects the individual's ability to perceive internal and external stimuli as structured, predictable, and explainable, to believe that resources are available to manage demands, and to

experience life challenges as worthy of engagement. The higher manageability and comprehensibility scores among students from multi-child families may therefore indicate that these students have learned to interpret family and social situations with greater cognitive organization and coping confidence. This result is aligned with prior evidence showing that sense of coherence functions as a protective psychological resource in relation to stress, burden, and mental health (Del-Pino-Casado et al., 2019). It is also consistent with research showing that sense of coherence is associated with stress and self-reported health, supporting its role as a general adaptive resource across different life contexts (Gebriné et al., 2019).

The non-significant difference between the two groups in meaningfulness deserves particular attention. Although students from multi-child families reported higher mean scores in meaningfulness, this difference was not statistically significant. This finding may indicate that meaningfulness is less directly dependent on family size than manageability and comprehensibility. Meaningfulness may be shaped more strongly by personal goals, educational aspirations, cultural values, religious or moral frameworks, and individual interpretations of life experiences. Therefore, while multi-child family environments may provide more practical opportunities for learning how to manage and understand interpersonal demands, they may not necessarily create a substantially different sense of life meaning compared with only-child families. This interpretation is compatible with the view that adolescence is a stage in which meaning, identity, and purpose are increasingly constructed through both family and extra-family contexts, including school, peers, achievement experiences, and personal values (Berk, 2018). The finding is also partially aligned with research comparing only-child and multi-child students in terms of psychological sense of coherence, self-regulation, and hardiness, which suggests that family size can be related to some psychological strengths, although not all components may be affected equally (Mehdizadeh Hassanabadi & Salehi, 2022).

Another major finding was that psychological capital and its components were significantly higher among students from multi-child families than among only-child students. The multi-child group obtained higher scores in self-efficacy, hope, resilience, and optimism. This finding suggests that the social and emotional experiences available in multi-child families may contribute to the development of positive psychological resources. Psychological capital represents a set of positive capacities that enable individuals

to pursue goals, cope with difficulties, recover from setbacks, and maintain favorable expectations about the future. In family environments with siblings, children may repeatedly encounter situations requiring patience, negotiation, comparison, adaptation, and shared responsibility. These experiences can provide natural opportunities to build resilience, strengthen problem-solving confidence, and develop hopeful pathways for dealing with challenges. This result is consistent with previous studies showing that psychological capital is associated with favorable educational and psychological outcomes among students (Bahadori Khosroshahi et al., 2012; Kaur & Amin, 2017). It also aligns with evidence that psychological capital can reduce maladaptive tendencies and strengthen students' psychological functioning by buffering the effects of negative feelings (Aliyev & Karakus, 2015).

The higher psychological capital among students from multi-child families is also consistent with recent research in educational psychology. Psychological capital has been shown to predict academic achievement through academic engagement, indicating that students with higher psychological capital are more likely to participate actively in learning and persist in academic tasks (Amera, 2025). Other evidence has shown that psychological capital mediates the relationship between academic self-efficacy, academic engagement, academic meaningfulness, and academic achievement, suggesting that it functions as a central psychological pathway through which motivational and academic resources affect student outcomes (Jasem et al., 2025). Similarly, research among middle school students has shown that psychological capital is related to subjective academic achievement through internalizing problems and life attitude, indicating that psychological capital may reduce emotional vulnerability and support a more positive orientation toward school and life (Hu et al., 2025). The present findings extend this line of evidence by suggesting that family type may be one of the contextual factors associated with the level of psychological capital among early adolescent female students.

The results concerning psychological capital may also be interpreted in connection with well-being and emotional regulation. Studies have shown that psychological capital can mediate the relationship between life satisfaction and psychological well-being, especially in demanding academic environments (Shereda et al., 2025). Other research has demonstrated that psychological capital can be enhanced through interventions such as mindfulness training and can be associated with improved emotional regulation

(Sharifian Motlaq & Mohammadi, 2025). Therefore, the lower psychological capital observed among only-child students should not be regarded as a fixed characteristic; rather, it may reflect differences in developmental opportunities, family interaction patterns, or emotional coping experiences that can be addressed through educational and counseling interventions. Family ties may also play an important mediating role in the development of psychological capital and relational attitudes, as shown in research on marriage orientation and attitudes toward premarital relationships among students (Gohanj & Ghazanfari, 2025). In addition, the broader literature on positive psychological resources indicates that psychological capital is linked not only to student outcomes but also to performance, satisfaction, and commitment in wider organizational and social contexts (Soomro & Shah, 2019). This supports the idea that psychological capital is a transferable resource with developmental importance beyond the school setting.

Taken together, the findings suggest that multi-child family environments may provide richer interpersonal contexts for the development of relational competence, coherence, and positive psychological capacities. This does not mean that multi-child families are inherently superior in all circumstances or that only-child families are necessarily deficient. Rather, the results indicate that in the present sample, students from multi-child families reported more favorable outcomes in parent-child relationships, sense of coherence, and psychological capital. These outcomes may be due to greater exposure to sibling interaction, shared family roles, mutual support, and everyday social learning. At the same time, economic and contextual factors should also be considered. Research has shown that family economic capital can affect students' psychological development, and socioeconomic conditions may influence the quality of family interactions and access to developmental resources (Shi, 2024). Moreover, family socioeconomic status may affect parenting sense of competence through social support and psychological capital, suggesting that parental resources and family conditions interact in complex ways (Yuan et al., 2025). Therefore, the observed differences should be understood within a multidimensional family systems framework rather than attributed solely to the number of children.

5. Conclusion

The findings also highlight the interconnection between parent–child relationships, sense of coherence, and psychological capital. Positive parent–child relationships may help adolescents perceive the world as safer, more predictable, and more manageable, thereby strengthening sense of coherence. In turn, a stronger sense of coherence may support the development of resilience, hope, optimism, and self-efficacy, which are the core dimensions of psychological capital. This interpretation is supported by research showing that parent–child attachment contributes to social adaptation through school bonding, indicating that family relationships can influence adolescents' broader adjustment pathways (Yin et al., 2021). It is also consistent with evidence showing that family sense of coherence and psychological capital are interconnected in stress-related family contexts (Zoromba et al., 2024). Therefore, the present study contributes to the literature by showing that family type is meaningfully associated with several interrelated psychological and relational variables among early adolescent female students.

One limitation of the present study was its causal-comparative and cross-sectional design, which does not allow definitive causal conclusions about the effect of family type on parent–child relationships, sense of coherence, or psychological capital. The study was also conducted only among first-cycle secondary school female students in Khomam; therefore, the generalizability of the findings to male students, students in other educational levels, and adolescents from other cities or cultural contexts should be made with caution. In addition, the data were collected through self-report questionnaires, which may be influenced by social desirability, response bias, temporary emotional states, or students' subjective interpretation of family relationships. Although the two groups were matched in terms of several demographic characteristics, other potentially influential variables, such as birth order in multi-child families, number of siblings, parental education, parental employment, parenting practices, family conflict, and quality of sibling relationships, were not examined in sufficient depth.

Future research is recommended to use longitudinal designs to examine how parent–child relationships, sense of coherence, and psychological capital change over time among only-child and multi-child students. It would also be useful to conduct studies with larger and more diverse samples, including male students, mixed-gender samples,

different school levels, and participants from different geographic and sociocultural backgrounds. Future studies should examine mediating and moderating variables, such as parenting style, parental mental health, sibling relationship quality, socioeconomic status, perceived social support, academic stress, school climate, and peer relationships. Qualitative research could also provide deeper insight into the lived experiences of only-child and multi-child adolescents and clarify how they perceive parental expectations, autonomy, support, conflict, and emotional closeness within the family system.

From a practical perspective, the findings suggest the need for school-based and family-based interventions that strengthen parent–child communication, emotional warmth, and adaptive coping resources, especially among only-child students who may experience more intense parental expectations or fewer sibling-based interactional opportunities. School counselors can design programs focused on psychological capital development, including hope-building, self-efficacy enhancement, resilience training, and optimism-oriented cognitive strategies. Parent education programs can also help families create balanced communication patterns, reduce conflict, support adolescent autonomy, and provide opportunities for responsibility-taking and social interaction. For only-child families, structured peer interaction, group activities, cooperative learning, and social-emotional skills training may help compensate for the absence of sibling-based interpersonal experiences and support healthier psychological development.

Authors' Contributions

Authors equally contributed to this article.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

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Declaration of Interest

The authors report no conflict of interest.

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Ethical Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants.

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