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Can Family Health Predict Interpersonal Problems? A Latent Profile Analysis Among Nursing Students

Buket Çam

buketcam@erciyes.edu.tr

Erciyes University

Handan Zincir

Erciyes University

Research Article

Keywords: Family health, interpersonal problems, nursing students, latent profile analysis

Posted Date: September 25th, 2026

DOI: https://doi.org/10.21203/rs.3.rs-10727167/v1

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Additional Declarations: No competing interests reported.

Abstract

Background

The role of family health among the factors shaping nursing students' interpersonal relationships has received limited attention in the literature. Previous research typically concentrates on academic and individual factors rather than directly addressing family dynamics.

Methods

The study, employing a descriptive and correlational methodology, encompassed 208 first-year students—accounting for 94% of the population—enrolled in the nursing department of a state university in Türkiye's Central Anatolia Region. The Healthy Family Scale and the Interpersonal Problems Inventory Cyclical Scale served as instruments for data collection. The data were examined employing Pearson correlation analysis, multiple linear regression analysis, and latent profile analysis.

Results

A substantial negative correlation was identified between family health and interpersonal issues ($r = -.402$, $p < .001$). In the regression analysis, the family health resources dimension emerged as the most significant predictor ($\beta = -.287$, $p < .001$). Latent profile analysis indicated that the students formed two distinct profiles (Entropy = 0.881). Students with a low problem profile (n = 138, Mean = 145.00) exhibited a significantly greater assessment of family health than those with a high problem profile (n = 63, Mean = 128.00).

Conclusions

The results demonstrate that family health is a crucial predictor of interpersonal issues among nursing students, indicating that it should be considered in nursing education.

INTRODUCTION

Nursing is a profession where human relationships are paramount, and interpersonal communication skills are as essential as clinical proficiency. Nursing students, owing to their clinical practice experiences, must participate in far more frequent and diverse interpersonal contacts with a broad spectrum of individuals than students in other programs (E. Choi & Jeon, 2022). The quality of the relationship with the patient directly influences care effectiveness; therefore, students' interpersonal compatibility must be considered not only for individual development but also as a crucial component of professional training (El-Sayed et al., 2025).

The influence of family health on the interpersonal connections of nursing students has not been adequately examined in the literature (Eustace, 2022; Meiers et al., 2018).

Interpersonal Problems Among Nursing Students

Interpersonal issues are characterized as persistent challenges that individuals face in their interactions with others and are seen as a significant psychosocial element influencing behavioral, emotional, and relational efficacy (Lee et al., 2022). For nursing students, interpersonal proficiency is a crucial prerequisite for forming therapeutic connections with patients and colleagues and for adeptly demonstrating clinical practice behaviors (Yang et al., 2025). Consequently, the interpersonal challenges encountered not only influence the student's psychological health but also directly affect the quality of care they will deliver in the future (Abraham et al., 2024; Höglander et al., 2023).

Research conducted by Zhao J. et al. (2024) indicated that nursing students frequently experience interpersonal sensitivity and symptoms of loneliness, with the connection between these two factors mostly focused on interpersonal sensitivity. Examining nursing students, Shi et al. (2024) reported that problematic internet usage and pre-sleep procrastination acted as mediators in the relationship between loneliness and interpersonal sensitivity. These results indicate that interpersonal issues among nursing students are connected not just to relational dynamics but also to everyday behaviors. Research indicates that a reduction in ego resilience among nursing students forecasts the extent of interpersonal difficulties, with aggression serving as a mediator factor in this correlation (Huai et al., 2025).

The correlation between the degree of interpersonal issues and the individual's self-relationship is also significant. A study involving health sciences students revealed that those with deficient interpersonal problem-solving abilities exhibited reduced self-compassion and authenticity (Cevik & Ceylan, 2025). Yang et al. (2025) demonstrated that communication proficiency mediates the relationship between professional identity and clinical practice behaviors among nursing students. These results suggest that the capacity to form interpersonal connections is crucial in nursing education, both mentally and professionally.

The evidence indicating that empathy and relationship dynamics among nursing students correlate with family structure reinforces the association of this trend with family-based socialization (Güneş & Arabacı, 2025; Öz et al., 2024). It has been noted that pattern-based strategies to address individual differences are becoming more prevalent among nursing students. In the research carried out by Mei et al. (2022), which included first-year nursing students, distinct student profiles were identified according to self-efficacy levels using latent profile analysis, revealing a correlation with varying degrees of professional identity development.

Family Health, Family Functioning, and Theoretical Framework

The health and dynamics of a family significantly influence nursing students' ability to adjust to interpersonal situations (Li et al., 2024; Sabah et al., 2025). A healthy family is characterized by a framework that upholds balanced support and efficient communication among its members, fostering the development of individuals with autonomous decision-making abilities (Wentholt et al., 2025). The patterns that a person assimilates within the family are elucidated by complementary, multi-tiered theoretical frameworks such the McMaster Model, Bowen Theory, Bronfenbrenner’s Ecological Theory, and Betty Neuman’s Systems Model (Oliveira et al., 2024; Navarro & Tudge, 2023). The Bowen and McMaster frameworks emphasize emotional and communicative dynamics within familial structures; the McMaster Model particularly examines essential aspects of family operation including problem-solving, communication, roles, emotional responsiveness, and behavioral regulation (Calatrava et al., 2022). Bronfenbrenner’s ecological framework positions the individual within interconnected systems, whereas Neuman’s Systems Model characterizes the individual as a comprehensive

system that maintains equilibrium in the face of stressors and links family health to coping abilities (Eustace, 2022). Research indicates that familial composition markedly affects the extent of emotional labor nursing students exhibit in clinical settings; this observation underscores the family system's regulatory influence on students' professional conduct (Li et al., 2024). Contemporary evidence suggests that individuals' psychosocial behaviors are not uniform but can manifest in qualitatively distinct categories, which is particularly pertinent in this context (Moore & Quartiroli, 2026; Spurk et al., 2020).

The Relationship Between Family Health and Interpersonal Problems

Although direct evidence on the relationship between family health and the level of interpersonal problems is limited, indirect findings strongly suggest this relationship (Peng et al., 2023; Qi et al., 2024). In a 2014 study by Zhao M. et al. (2024) with college students, it was determined that family functioning exhibited a significant negative relationship with levels of depressive symptoms and loneliness(Zhao M. et al., 2024). Research indicates that individuals nurtured in supportive family environments cultivate accountability and effective communication skills (Demetriou, 2025). Research indicates that these abilities are intrinsically connected to the aptitude for flexibility and adaptability in social interactions (Shi et al., 2024; Yang et al., 2025). Previous studies have shown that parental bonding markedly decreases stress levels in nursing students via self-esteem. The safeguarding influence of initial familial connections on students psychological adaptation has been evidenced (Ho et al., 2026).

Current studies predominantly emphasize personal and educational factors; however, investigations specifically examining familial health conditions are scarce in both national and global scholarly works (Eustace, 2022; Meiers et al., 2018). Moreover, a nurturing familial atmosphere is recognized as a crucial protective element affecting nursing students' psychosocial adaptation and stress management abilities (Estrella-Proaño et al., 2024). The shift to collegiate life and the inaugural year signify a vital developmental phase wherein nursing students reorganize their familial connections and views on health (Gause et al., 2024). The caliber of familial assistance during this time significantly impacts students' emotional adaptation and academic preparedness (Suud et al., 2024).

Overview

The correlation between family health and interpersonal issues among nursing students has not been adequately explored in existing literature. This research investigates whether familial health is a substantial predictor of interpersonal issues among first-year nursing students and whether these students exhibit distinct latent profiles for this variable. The conceptual models outlined before regard family health as a crucial protective asset that facilitates an individual's social adjustment (Roman et al., 2025). In this framework, the research posits two hypotheses: that family health levels will substantially account for interpersonal problem scores (H1) and that students exhibiting a low-problem profile would possess a markedly superior sense of family health compared to those with a high-problem profile (H2).

METHOD

Research Design

This study was designed using a descriptive and correlational approach to examine the relationship between family health and the level of interpersonal problems among first-year nursing students.

Participants

The study was conducted during the fall semester of the 2025–2026 academic year in the Department of Nursing at the Faculty of Health Sciences of a public university located in Türkiye's Central Anatolia Region. The study population consisted of 222 first-year students enrolled in the relevant department. No sample was selected; the goal was to reach the entire population. The study sample consisted of 208 students who agreed to participate and completed the data collection forms in full (94% of the population).

The inclusion criteria for the study were: being enrolled in the relevant department and class, volunteering to participate in the study, and having no communication issues that would prevent them from completing the data collection forms. Students who did not meet the specified criteria, declined to participate, or filled out the forms incompletely were excluded from the study.

Data Collection Tools

The Sociodemographic Information Form, the Healthy Family Scale, and the Interpersonal Problems Inventory Cyclical Scale were used to collect data for the study.

Sociodemographic Information Form:

Prepared by researchers based on the relevant literature, this form comprises 10 questions designed to identify the sociodemographic characteristics and family structure of nursing students.

Healthy Family Scale:

The Healthy Family Scale, developed by Crandall et al. (2020), assesses the quality of familial relationships; its Turkish adaptation, along with a study on its validity and reliability, was conducted by Çağlar, Akyıl, and İme (2021). The measure comprises 32 items over 4 dimensions and employs a five-point Likert-type rating system from 1 (Strongly Disagree) to 5 (Strongly Agree). The minimum attainable score on the scale is 32, while the maximum is 160; a greater score signifies a more robust family system for the individual. The Healthy Family Scale evaluates familial health through four fundamental dimensions: "Family Social and Emotional Health Processes," "Family Health Lifestyle," "Family Health Resources," and "Family Social Support." Items 1, 5, 20, 21, 22, 23, 24, 29, 30, 31, and 32 on the scale are reverse-scored. Reliability assessments performed on the scale's initial version indicated that Cronbach's Alpha varied between 0.89 and 0.94 (Çağlar et al., 2021; Crandall et al., 2020). In this study, Cronbach's Alpha was 0.86.

Interpersonal Problems Circumplex Scales:

The Interpersonal Problems Inventory is a self-assessment tool created by Horowitz and associates in 1988, derived from the interpersonal challenges articulated by clients throughout therapy (Horowitz et al., 1988). The initial version comprises 127 elements. Alden and associates (1990) revised the scale utilizing Leary's Interpersonal Cyclical Model and created a 64-item circular format encompassing eight unique domains of

interpersonal issues (Alden et al., 1990). In the initial iteration of the scale, the internal consistency coefficient was 0.94, and the test-retest reliability was 0.98. The dependability coefficients for the subfactors ranged from 0.72 to 0.85. The Turkish adaptation of the inventory was developed by Akyunus and Gençöz (2016). The Turkish variant comprises 32 items and is evaluated on a 5-point Likert scale (1 = not at all, 2 = somewhat, 3 = moderately, 4 = considerably, 5 = extremely). The scale encompasses dominant/controlling behavior (22, 25, 28, 30), spiteful/self-centered behavior (14, 16, 17, 18), cold/distant behavior (10, 11, 13, 15), social shyness (2, 5, 9, 19), lack of self-confidence/lack of assertiveness (4, 6, 7, 12), excessive compliance (1, 8, 20, 31), self-sacrifice (23, 26, 27, 32), and intrusive-needy behavior (3, 21, 24, 29). There are no entries that are reverse-coded.

Elevated overall and subscale scores on the assessment indicate increased stress intensity and challenges in an individual's interpersonal relationships (Akyunus & Gençöz, 2016). In this research, the Cronbach's alpha coefficient was 0.84.

Data Collection Process

Data for the research were gathered via face-to-face interviews during the autumn term of the 2025–2026 academic year. Participants who provided informed consent and met the inclusion criteria were included in the study. Filling out the form required roughly 10 to 15 minutes.

Data Analysis

The data were analyzed using SPSS version 21.0. The total score on the Cyclical Scale of the Interpersonal Problems Inventory served as the dependent variable, whereas the independent variables comprised the scores from the Healthy Family Scale and the sociodemographic data collected via the Demographic Information Form. Descriptive data were exhibited as frequency, percentage, mean, and standard deviation. An independent-samples t-test was employed for two-group comparisons of scale scores by sociodemographic characteristics, while a one-way analysis of variance (ANOVA) was used for comparisons with more than two groups. The association between the scales was evaluated by Pearson correlation analysis. The impact of the Healthy Family Scale subscales on the Interpersonal Problems Inventory was analyzed using multiple linear regression.

Latent Profile Analysis (LPA) was used to identify latent subgroups of participants based on their levels of interpersonal problems. Models featuring varying quantities of profiles were evaluated. The Akaike Information Criterion (AIC), the Bayesian Information Criterion (BIC), and the entropy metric were employed to identify the optimal model. The Levene test was used to assess homogeneity of group variances when evaluating total scores for the identified profiles on the Healthy Family Scale. In instances when the homogeneity assumption was violated, Welch's one-way ANOVA was employed. In every analysis, a p-value below .05 was deemed statistically significant.

Ethical Principles

Ethical approval

(Decision No. 537, Date: October 28, 2025) was secured from the Ethics Committee for Social and Human Sciences at the pertinent university, in addition to institutional endorsement, to carry out this research. Prior to the commencement of the study, participants were apprised of its objectives and scope, and their signed informed consent was obtained on a voluntary basis.

RESULTS

A total of 208 students were included in the study. 78.8% of the participants (n = 164) were female, and 21.2% (n = 44) were male. The average age was 18.94 years with a standard deviation of 1.47 years. Upon evaluating perceived health status, 59.1% of students (n = 123) rated their health as good, 38.9% (n = 81) as fair, and 2.0% (n = 4) as poor. Regarding socioeconomic level, 76.4% of the students (n = 159) were middle class, 17.8% (n = 37) lower class, and 5.8% (n = 12) upper class.

When findings regarding family structure were examined, it was determined that 75.0% of the participants (n = 156) lived in a nuclear family, that a family size of five was the most common structure (35.6%, n = 74), and that 42.3% of the students (n = 88) were the first child in their family. 64.9% of mothers (n = 135) are homemakers. Regarding the occupational distribution of fathers, “worker” (26.9%, n = 56) and “retiree” (26.9%, n = 56) were the predominant occupations, occurring with identical frequency.

Table 1 **is cited here.**

Table 1
Mean Scores of the Healthy Family Scale and the Interpersonal Problems Circumplex Scales

Scales*	**Mean**	**Std**	**Scale Score (Min–Max)**
Interpersonal Problems Circumplex Scales:	66.3702	14.12718	32–160
Dominant/Controlling	6.7548	2.74037	4–20
Vindictive/Self-Centered	6.9423	2.57572	4–20
Cold/Distant	8.2067	3.15012	4–20
Socially Avoidant	8.0865	3.53071	4–20
Non-Assertive/Self-Doubting	8.3702	3.01405	4–20
Overly Accommodating	8.8606	3.12768	4–20
Self-Sacrificing	10.7692	3.49252	4–20
Intrusive/Needy	8.3798	2.99032	4–20
Healthy Family Scale	135.2308	14.38312	32–160
Family Social and Emotional Health Processes	56.6010	7.18623	13–65
Healthy Lifestyle for the Family	25.7692	3.19641	6–30
Family Health Resources	36.7308	5.88494	9–45
Social Support Outside the Family	16.1298	3.80281	4–20

*Skewness and kurtosis values range between − 2 and + 2. Scale Score: Possible scores obtainable from the scales.

The mean total score on the Interpersonal Problems Inventory’s Cyclical Scale was 66.37 ± 14.12, while the mean total score on the Healthy Family Scale was 135.23 ± 14.38 (Table 1). Among the subscales of the

Interpersonal Problems Inventory Cyclical Scale, the highest mean score was observed in the Self-Sacrifice subscale, while the lowest mean score was observed in the Dominance/Controllership subscale. Among the subdimensions of the Healthy Family Scale, the highest mean score was found in “Social and Emotional Health Processes within the Family,” while the lowest mean score was found in the “Social Supports Outside the Family” subdimension.

Depending on health status, the mean scores of both the Interpersonal Problems Inventory Cyclical Scale and the Healthy Family Scale differed significantly ($F = 5.103$, $p = .007$; $F = 4.461$, $p = .013$). While significant differences were found in the mean scores of the Healthy Family Scale based on socioeconomic status, family size, and the father’s occupation ($F = 9.586$, $p < .001$; $F = 2.590$, $p = .038$; $F = 3.288$, $p = .012$), the mean scores on the Interpersonal Problems Inventory Cyclical Scale did not show significant differences based on these variables ($p > .05$).

Table 2 **is cited here.**

Table 2
Comparison of Scale Scores According to Sociodemographic Characteristics of the Participants (n = 208)

Variable	Category	n	%	Interpersonal Problems Circumplex Scales (M ± SD)	Healthy Family Scale (M ± SD)	Test	p
Chronic Illness in the Family	Absent	134	64.4	65.14 ± 13.91	137.05 ± 13.51	F = 0.008	0.931
	Present	74	35.6	68.58 ± 14.33	131.93 ± 15.38	F = 5.930	**0.016**
Family Communication	Being supportive	12	5.8	74.50 ± 10.20	127.75 ± 14.91		
	Listening	90	43.3	65.05 ± 15.55	136.51 ± 15.28	F = 1.146	0.336
	Respecting opinions	34	16.3	69.26 ± 11.98	134.85 ± 13.74	F = 0.653	0.712
	Problem-solving	8	3.8	68.75 ± 14.75	135.12 ± 14.74		
	Inability to speak openly	31	14.9	63.61 ± 12.66	134.58 ± 12.79		
	Not spending time together	4	1.9	67.25 ± 16.43	130.75 ± 21.97		
	Being honest	1	0.5	74.00 ± –	140.00 ± –		
	Showing empathy	28	13.5	65.57 ± 13.81	136.00 ± 12.87		
Family Role Responsibility	Clear role responsibilities	176	84.6	65.56 ± 14.14	136.15 ± 13.82	F = 1.896	**0.016**
	Unclear role responsibilities	22	10.6	71.04 ± 13.54	133.27 ± 15.42	F = 4.194	**0.16**
	Mother taking all the responsibilities	10	4.8	70.30 ± 13.76	123.20 ± 17.14		
Family Problem-Solving	Healthy	172	82.7	64.72 ± 13.43	136.93 ± 13.67	F = 0.264	0.608
	Unhealthy	36	17.3	74.25 ± 14.88	127.08 ± 15.08	F = 3.167	0.077
Healthy Family / Unhealthy Family	Healthy: Communication	71	34.1	64.60 ± 13.38	137.85 ± 14.12	F = 2.073	0.058
	Healthy: Support	101	48.6	67.00 ± 13.99	134.66 ± 13.81	F = 3.678	**0.002**

Variable	Category	n	%	Interpersonal Problems Circumplex Scales (M ± SD)	Healthy Family Scale (M ± SD)	Test	p
	Healthy: Solution-focused	12	5.8	58.83 ± 15.05	144.33 ± 9.45		
	Unhealthy: Problem–Conflict	15	7.2	76.06 ± 15.17	124.46 ± 16.31		
	Unhealthy: Not spending time together	3	1.4	70.33 ± 15.50	130.00 ± 15.58		
	Unhealthy: Lack of support	4	1.9	65.00 ± 13.03	120.25 ± 6.55		
	Unhealthy: Socioeconomic level	2	1.0	66.50 ± 7.77	134.50 ± 14.84		

The mean scores on the Healthy Family Scale differed significantly depending on the presence of chronic illness in the family. The mean score on the Healthy Family Scale for students without chronic illness in their families was higher than that of students with chronic illness in their families ($p = .016$). However, the mean scores on the Interpersonal Problems Inventory's Cyclical Scale did not show a significant difference based on this variable ($p > .05$).

A significant difference in mean Healthy Family Scale scores was also observed across family roles and responsibilities. In families where responsibilities were clearly defined, Healthy Family Scale scores were higher, whereas in families where the mother assumed all responsibilities, scores were lower ($p = .016$). Mean scores on the Interpersonal Problems Inventory's Cyclical Scale did not show a significant difference based on this variable ($p > .05$).

A significant difference was found in the mean scores on the Healthy Family Scale based on healthy and unhealthy family characteristics. The highest scores were among students who described their families as solution-focused, while the lowest were among students who described their families as unsupportive ($p = .002$). The difference in mean scores on the Interpersonal Problems Inventory's Cyclical Scale did not reach statistical significance ($p = .058$).

However, no significant differences were found in the mean scores of either scale across categories of family communication ($p > .05$).

Table 3 **is cited here.**

Table 3
Correlations Between the Interpersonal Problems Circumplex Scales and the Healthy Family Scale Subscale Scores

Variables		**1.**	**2.**	**3.**	**4.**	**5.**
1. CIPI Total	r =	1.0				
	p =	–				
2. HFS Total	r =	–.402**	1.0			
	p =	.000	–			
3. HFS1	r =	–.336**	.786**	1.0		
Family Social and Emotional Health Processes	p =	.000	.000	–		
4. HFS2	r =	–.305**	.624**	.508**	1.0	
Healthy Lifestyle for the Family	p =	.000	.000	.000	–	
5. HFS3	r =	–.321**	.724**	.262**	.212**	1.0
Family Health Resources	p =	.000	.000	.000	.002	–
6. HFS4	r =	–.133	.653**	.250**	.229**	.519**
Social Support Outside the Family	p =	.055	.000	.000	.001	.000

**. Correlation is significant at the 0.01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed).

IPCS total scores were significantly and negatively correlated with HFS total scores at a moderate level ($r = -.402$, $p < .001$).

Examining the relationships between IPCS total scores and HFS subscales, significant negative correlations were found with Family Social and Emotional Health Processes ($r = -.336$, $p < .001$), Healthy Lifestyle for the Family ($r = -.305$, $p < .001$), and Family Health Resources ($r = -.321$, $p < .001$). No statistically significant relationship was found between the Social Support Outside the Family subscale and IPCS total scores ($r = -.133$, $p = .055$).

Positive and highly significant relationships were found between HFS total scores and all subscales ($p < .001$).

Table 4 **is cited here.**

Table 4
Predictive Effects of the Healthy Family Scale and Its Subscales on the Interpersonal Problems Circumplex Scales

Variable	B	SE	LL	UL	t	p	R^2
Constant	126.806	8.907	109.243	144.368	14.236	.000	.162
HFS_FACTOR1	−0.401	0.147	−0.690	−0.112	−2.734	.007	
HFS_FACTOR2	−0.727	0.326	−1.369	−0.085	−2.233	.027	
HFS_FACTOR3	−0.688	0.179	−1.041	−0.335	−3.845	.000	
HFS_FACTOR4	0.388	0.277	−0.159	0.934	1.399	.163	
Dependent variable = Interpersonal Problems Circumplex Scales							

The results of the multiple linear regression analysis showed that the social and emotional health processes within the family (β = −.204, p = .007), healthy lifestyle for the family (β = −.164, p = .027), and family health resources (β = −.287, p < .001) dimensions of the Healthy Family Scale significantly and negatively predicted the total score on the Interpersonal Problems Inventory. The dimension of social support outside the family, however, was not a statistically significant predictor (β = .104, p = .163). Upon examining the standardized beta coefficients, the strongest predictor was the family health resources dimension.

Table 5 **is cited here.**

Table 5
Comparison of Healthy Family Scale Scores According to Interpersonal Problem Profiles (n = 208)

Variable	Profile	N	Mean	SD	F	p
HFS Total	Profile 1 (Low Problem)	142	145	13.2	**24.9**	**< .001**
	Profile 2 (High Problem)	66	128	14.3		

A statistically significant difference was found in total scores on the Healthy Family Scale across interpersonal problem profiles (F = 24.9, p < .001). The mean Healthy Family Scale score for students with a low problem profile was 145.00 ± 13.20, and for students with a high problem profile, 128.00 ± 14.30.

Table 6 **is cited here.**

Table 6
Latent Profile Analysis Fit Indices for Interpersonal Problems and Healthy Family Perception (N = 208)

Model	Classes	LogLik	AIC	AWE	BIC	CAIC	CLC	KIC	SABIC	ICL	Entropy
1	2	–4099	8249	8539	8332	8357	8200	8277	8253	–8355	0.843
2	2	–4067	8200	8583	8310	8343	8135	8236	8205	–8338	0.795
3	2	–3949	8005	8622	8182	8235	7901	8061	8014	–8196	0.881
6	2	–3887	7953	8990	8250	8339	7776	8045	7968	–8279	0.761

As a result of the Latent Profile Analysis (LPA) conducted using scores from the Interpersonal Problems Inventory, the two-profile model (Model 3) was the most appropriate structure based on information criteria (AIC, BIC) and classification quality. Model 3 has an entropy of 0.881, indicating high classification quality.

Figure 1 **is cited here.**

While the scores for the perception of a healthy family among individuals in Profile 1 are concentrated within a relatively narrow range, scores in Profile 2 exhibit a broader distribution, with lower values also present.

DISCUSSION

The average overall score on the Healthy Family Scale is 135.23 with a standard deviation of 14.38. The theoretical range of the scale is 32 to 160, with a midpoint of 96; thus, students typically view their families as healthy. Family health serves as an intermediary between mental health and health literacy, according to a national study conducted in China (D. Wang et al., 2023). The high perception of family health in the sample is a positive finding. The mean scores were 56.60 ± 7.18 (13–65) for social and emotional health processes within the family, 25.76 ± 3.19 (6–30) for family healthy lifestyles, 36.73 ± 5.88 (9–45), and 16.12 ± 3.80 (4–20) for external social support. Compared with the theoretical ranges, the peak level is observed in intra-family social and emotional dynamics, whereas the lowest levels are identified in family health resources and external social support. This finding indicates that students primarily find support within their families. Indeed, the fact that social support outside the family was not a significant predictor in the regression analysis also supports this conclusion. The average total score on the Interpersonal Problems Inventory Cyclical Scale is 66.37 with a standard deviation of 14.12. Given that the scale's theoretical range is 32–160 and its midpoint is 96, this average can be considered low. Within the subdimensions (4–20), self-sacrifice exhibited the highest mean (Mean = 10.77), and excessive compliance followed closely with a mean of 8.86, whereas dominance/controlling conduct recorded the lowest mean (Mean = 6.75), along with resentful/self-centeredness at a mean of 6.94. Social connections are crucial factors influencing both mental and physical well-being (Holt-Lunstad, 2022). Interpersonal sensitivity and loneliness are reportedly common among nursing students, and they adversely affect each other (Shi et al., 2024; Zhao M. et al., 2024). Familial cohesion, conversely, fosters emotional intelligence and communicative abilities by offering a stable emotional base (Jiang et al., 2025).

The distribution across the subdimensions of interpersonal problems suggests that students prefer to adapt by putting their own needs on the back burner rather than engaging in conflict in their relationships. The socialization dynamics in Türkiye and apprehension about acceptance among first-year college students may affect this inclination; it is widely recognized that the desire for belonging is a core need for these students (Tang et al., 2023). Kağıtçıbaşı's (2017) autonomous-relational self-concept framework posits that the Turkish familial configuration fosters independence while preserving emotional bonds. Safı & Erdem (2024) have shown that this self-concept framework persists in affecting intimate relationship experiences among young Turkish adults. Familial unity and adaptability correlate with emotional intelligence and interpersonal communication abilities (Gao et al., 2025). Nonetheless, the prevalence of submissive behaviors could jeopardize the development of a nursing professional identity, which requires robust communication skills (Jilili et al., 2024; Qin et al., 2024).

Interpersonal issues and family health ratings varied markedly according to perceived health condition. Learners who perceived their health as inadequate reported more interpersonal difficulties and evaluated their families' health more unfavorably. Reports indicate that familial dysfunction adversely impacts university students' health perceptions (Shon & Lee, 2024), and that familial health correlates with health behaviors (Liu et al., 2024). A research investigation carried out at two German universities revealed that students experiencing minimal social support had increased depressed symptoms and diminished self-reported health (Tschorn et al., 2025). This similarity demonstrates that the link between perceptions of health and relational functionality is observed across different cultures; it also suggests that, because the family constitutes an autonomous and private sphere for the individual, some responses on this topic may be subject to bias or memory-related bias.

Students with a relative affected by a chronic condition had lower family health scores, although their interpersonal problem levels were the same. Chronic illness serves as a prolonged source of stress that impacts the entire family unit and activates familial coping strategies (J. Y. Choi et al., 2024). Schwind et al. (2025) has observed that although the majority of research emphasizes the strain on individual caregivers, the impact of the illness on the family unit has not been adequately explored. A meta-analysis revealed that family-centered empowerment initiatives significantly alleviate burden and stress among caregivers of individuals with chronic diseases, with further positive effects on quality of life (Lin et al., 2026).

Families that share household responsibilities exhibit markedly superior family health scores, in contrast to those where the mother assumes the entire load, which correspondingly results in lower scores ($p = .016$). Weeks & Ruppanner (2025) found that mothers primarily shoulder the cognitive labor in the household. This unequal load has been linked to depressive symptoms, stress, and burnout among mothers (Aviv et al., 2025). Research indicates that the mental well-being of both parents and children is enhanced in households where duties are distributed (An et al., 2024; Cost et al., 2023). The accumulation of responsibility on one family member poses a threat to familial welfare (Weeks & Ruppanner, 2025). In Turkish society, women take on responsibilities both at home and in the workplace. The woman's participation in the workforce does not lead to any reduction in her responsibilities at home. It can be said that this situation contributes to the woman's burnout and consequently negatively affects family health.

Students who characterized their families as robust and problem-solving achieved the highest mean family health score (Mean = 144.33). This discovery indicates that addressing issues positively significantly influences feelings of familial well-being. Conversely, students who characterized their families as lacking support and

fraught with conflict assessed family health more negatively and indicated a higher incidence of interpersonal difficulties. Adolescents' interpersonal dynamics are associated with parental situations fraught with conflict (Peng et al., 2023). A comprehensive review and meta-analysis investigating the correlation between familial relationship quality and mental health indicated that tumultuous family dynamics are linked to mental health problems, whereas the impact of positive relationships differs based on the specific outcome analyzed (Lindert et al., 2025). Collaborative family strategies are linked to improved individual adaptation in contrast to confrontational and avoidant behaviors (Bruce et al., 2024; Sitnik-Warchulska et al., 2025).

A moderate, adverse, and noteworthy correlation was identified between the overall score on the Interpersonal Problems Inventory and the total score on the Healthy Family Scale ($r = -.402$, $p < .001$). This discovery aligns with existing literature: familial connections forecast psychological distress over time in young adults (García-Mendoza et al., 2024); family cohesion inversely correlates with anxiety via self-regulation abilities (Augustine et al., 2022); and family dynamics positively influence interpersonal adaptation in college students (Wu et al., 2024). Parental affection and support for autonomy have been linked to resilience and well-being in young adults (Taşkesen et al., 2025).

The observation that non-familial social support does not substantially account for interpersonal issues ($\beta = .104$, $p = .163$) aligns with the previously discussed autonomous-relational self-concept framework. This model indicates that young adults from Turkish households frequently maintain their emotional ties even after attaining financial independence. It has been noted that in societies defined by principles, parental responsibilities and the parent-child dynamic continue to shape an individual's transition into adulthood (Camadan et al., 2025; Kyeong et al., 2025). Familial relationship patterns continue to exert their impact during young adulthood (X. Wang et al., 2024). Given that social support and familial connections mutually influence each other (X. Zhou et al., 2024) and that family bonds affect the health behaviors and social interactions of young adults (Kwon et al., 2026), this conclusion is anticipated.

In regression analysis, the extent of familial health resources serves as the most significant predictor of relational issues ($\beta = -.287$, $p < .001$). Thus, both the family's emotional atmosphere and its ability to access health information and services influence teenagers' relational dynamics. Research indicates that a family's socioeconomic standing affects the quality of relationships via parenting practices (Wu et al., 2024). Intrafamilial social and emotional well-being mechanisms ($\beta = -.204$, $p = .007$) and the healthy lifestyle aspect ($\beta = -.164$, $p = .027$) are also notable predictors. Given that parental affection forecasts adaptation in both teenagers and adult offspring (García-Mendoza et al., 2024), that a nurturing familial atmosphere promotes emotional health, while a detrimental family environment facilitates the intergenerational passage of stress (Zhou et al., 2025) and that effective conflict resolution techniques produce superior results compared to harmful and passive approaches, as evidenced in a Turkish cohort (Akan et al., 2026). The ensuing regression pattern illustrates the complex framework of family dynamics.

Recognizing that variable-centered methodologies could obscure individual differences within a group, Latent Profile Analysis—a person-centered method—was further utilized in this study (Woo et al., 2024). AIC, BIC, and entropy measures were evaluated together. The two-profile model was considered the most suitable option based on statistical sufficiency (entropy = 0.881) and theoretical significance. Investigations into latent profiles among nursing and university students have revealed the presence of two to four unique profiles (Qin et al., 2024; Wei et al., 2021; Zhong et al., 2024). The two-profile model identified in this research corresponds with

this range. The presence of a minor but recognizable subgroup exhibiting significant interpersonal challenges suggests that students differ in their social difficulties and that this group may require additional support.

In the profile analysis, students identified in the low-problem category showed a more positive evaluation of family health, characterized by a narrower range, while those in the high-problem category displayed diminished scores with a wider spread ($F = 24.9$, $p < .001$). A supportive familial environment and parental warmth are associated with the development of social-emotional skills (Zhang et al., 2025). The considerable diversity observed within the high-problem profile sample indicates that this group does not share a uniform familial background; hence, the notable extent of interpersonal difficulties cannot be attributed solely to an adverse family environment. Individual attributes, encompassing personality qualities, influence conflict and relationship dynamics (Zhong et al., 2024). Moreover, external factors such as peer relationships and the university environment play a role in students' social behavior (Butler et al., 2022). Therefore, when assessing teenagers with significant problems, family perception should not be considered sufficient justification.

CONCLUSIONS

Nursing students seem to encounter interpersonal difficulties at a rate lower than the average; however, their inclinations for self-sacrifice and excessive compliance surpass those in other areas. This pattern may be understood not solely as a personal characteristic but as a mode of adaptation influenced by the familial context and extended into the workplace. The inverse relationship between familial well-being and the intensity of interpersonal issues, coupled with the identification of two separate student cohorts in the latent profile analysis, indicates that family dynamics could persist in affecting the transition to nursing education.

The findings indicate that student assessments ought to include both their scholastic achievements and their psychosocial conduct in their inaugural year. Furthermore, this relationship ought to be analyzed across diverse institutions, educational tiers, and professional domains.

Limitations

This study has some limitations. First, the fact that the sample consisted of individuals who voluntarily agreed to participate in the study within a classroom setting may limit the generalizability of the findings. Furthermore, the fact that the data pertain to an area—such as the family—that may be considered a private or socially taboo subject, and that the data rely on participants’ self-reports, may have led to response bias. However, the fact that the study reached 94% of the population significantly increases the representativeness of the sample and partially mitigates the impact of this limitation.

Declarations

Funding: This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Conflict of Interest: The authors declare no conflict of interest.

Ethics Approval: Ethical approval was obtained from the Social and Humanities Ethics Committee of the relevant university (Decision No: 537, Date: October 28, 2025). All procedures were conducted in accordance

with the Declaration of Helsinki. Informed written consent was obtained from all participants.

Data Availability Statement: The data that support the findings of this study are available from the corresponding author upon reasonable request.

Author Contributions: HZ: conceptualization, formal analysis, writing – review and editing, supervision. BÇ: conceptualization, data collection, formal analysis, writing – original draft. Both authors read and approved the final manuscript.

Acknowledgments: The authors thank the nursing students who participated in this study.

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Figures

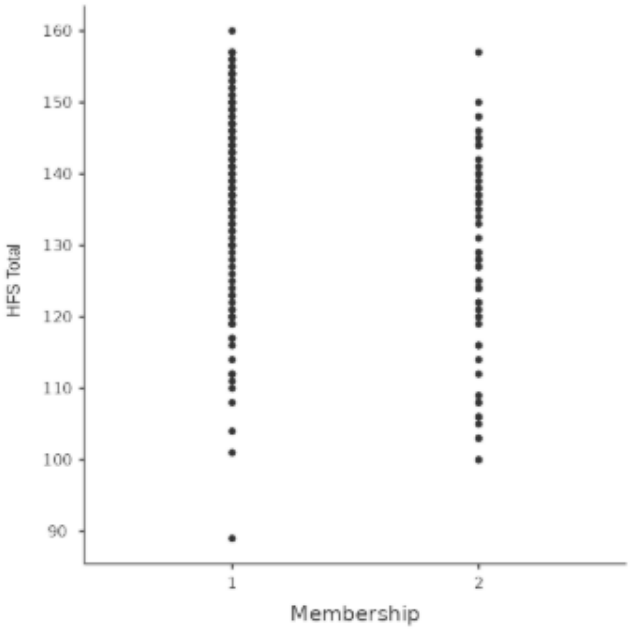


Figure 1

Distribution of healthy family perception total scores by interpersonal problem profiles