

Nursing Students' Knowledge Level on Identification and Risks of Child Abuse and Neglect: A Descriptive Study

Abstract



Aim: The aim of this study was to determine the knowledge levels of nursing department final year students to diagnose the symptoms and risks of child abuse and neglect and to investigate their relationship with sociodemographic characteristics.

Methods: The study was conducted with the senior students of the nursing department of a nursing faculty in Istanbul and a faculty of health sciences in Konya. 326 students participated in the study. "Information Form" and "Scale for Diagnosing Symptoms and Risks of Child Abuse and Neglect" were used for data collection. Data were evaluated with mean, standard deviation, frequency, Student *t* test, One Way ANOVA test, Pearson Correlation, and Regression analysis.

Results: The average score of the students was 3.55 ± 0.29 . The lowest score (2.96 ± 0.38) was obtained from the sub-dimension of the Characteristics of Abuse and Neglected Children; they received the highest scores Symptoms of Neglect (3.97 ± 0.50); Physical Symptoms of Abuse and Neglect in Children (3.70 ± 0.37).

Conclusion: When the level of knowledge of abuse and neglect was compared with the maximum score of 5.0 in each subscale and total scale score, the level of knowledge of the students was not at the desired level. It may be suggested to make interventions (such as integrating into courses, opening elective courses) in the curriculum to increase the knowledge levels of students about the symptoms and risks of child abuse and neglect.

Keywords: Child, Nursing students, Neglect, Abuse

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Introduction

Child abuse and neglect are all actions and inactions, which are imposed by an adult like parent or nanny on a child, are called destructive or inappropriate by professional people and social rules and restrict or prevent the child's development.¹⁻³ The World Health Organization (WHO) defines child abuse as "children's exposure to all kinds of behaviors and attitudes negatively affecting their physical, mental, emotional or social development by an adult, society or the state, knowingly or unknowingly".⁴⁻⁷

These misconducts imposed on children have different types such as physical, emotional, sexual abuse, and neglect.⁸⁻¹³ Behaviors imposed on a child by an adult for purposes like disciplining, punishing or clearing out anger are physical abuse. Sexual abuse is an adult's utilization of children under 18 years of age to meet his/her sexual needs and desires.^{6,7,12-15} Emotional abuse is children's exposure to negative attitudes and behaviors by their legal guardians and their deprivation of attention, love, and care that they need. Neglect is the inability of parents to fulfill the responsibility of taking care of the child, securing and protecting him/her, dressing him/her, feeding him/her, meeting his/her educational needs, protecting and promoting his/her health, and providing his/her medical care support and surveillance.^{10,12,13,16} According to the summary report of a study conducted by the United Nations International Children's Emergency Fund (UNICEF) concerning child abuse and domestic violence in Turkey in 2010, it was determined that the prevalence of emotional abuse among children aged 7-18 years was 51%, the prevalence of physical abuse was 43%, and the prevalence of sexual abuse was 3%.¹⁷ According to the data of the Turkish Statistical Institute (TSI), it was determined that the number of child victims was 2,33,000 in 2018 and increased to 2,36,000 in 2019.¹⁸

Accordingly, children's abuse and neglect are a social problem and all individuals in society are responsible for that. It is important for society to protect and secure children in order to secure their future. There is a need for a scientific-based, systematic, multidisciplinary, and permanent approach to protect children from abuse and neglect, which are a social health problem. Also, nurses have noteworthy moral, ethical, and legal responsibilities in preventing, identifying and treating child abuse and neglect, which should be handled from a multidisciplinary approach.^{11,12,16,19} Nurses play a key role because they are the first people meeting the child and the family and are a member of profession taking a caregiver role for a longer time. Preventing the abuse and neglect is an easier and more economic way keeping the child from getting hurt, compared to recovering the damage. One of the most important roles of nurses in preventing the abuse and neglect is to recognize the risk groups and abuse-neglect signs in the early period. In this context, it was thought that determining the

knowledge levels of senior students concerning this subject before graduation might contribute to making up the deficiencies—if any—of nursing training programs and to developing these programs.

Purpose

The study was conducted to determine the knowledge levels of senior students from the department of nursing concerning the identification of the signs and risks of child abuse and neglect and to examine their correlation with some sociodemographic factors.

Study Questions

1. What is the knowledge level of the senior nursing students concerning the identification of the signs and risks of child abuse and neglect?
2. Is there any correlation between the knowledge of the senior nursing students concerning the identification of the signs and risks of child abuse and neglect and their sociodemographic characteristics?

Method

Type of the Study

The study was conducted with descriptive and correlational design.

Population and Sample of the Study

The study was conducted in a faculty of nursing in İstanbul and in the department of nursing of a faculty of health sciences in Konya during the fall term of the 2016-2017 Academic Year. The population of the study comprised 415 senior students receiving education in the department of nursing in the two faculties, while the sample comprised a total of 326 students who were present at school when the data of the study were collected, agreed to participate in the study voluntarily, and answered all of the questions. No sampling selection was used and the voluntary students who could be reached comprised 78.55% of the population.

Data Collection Tools

In the study, two forms were used to collect data.

Information Form: This form had 16 questions, which were prepared by the researchers in line with the literature²⁰⁻²³ and questioned the sociodemographic characteristics of the students. The form comprised of open-ended and optional questions questioning the students' age, gender, number of siblings, family's income status, family type, mother's and father's age, educational background, employment, student's state of attending the intern program, clinical area of the intern program, state and time of receiving formal education on child abuse and neglect, and state and time of receiving special education on child abuse and neglect.

The Scale for the Diagnosis of Symptoms and Risks of Child Abuse and Neglect:

The scale was developed by Uysal in 1998 and its validity and reliability study was conducted.²⁰ In order to use the scale in the study, a written permission was obtained from Uysal. In the scale, the questions 3, 5, 8, 10, 12, 14, 16, 27, 28, 30, 32, 34, 41, 42, 46, 49, 52, 54, 59, 61, and 63 are reverse. This 5-point Likert scale has a total of 67 items and has six subscales as physical signs of abuse on the child (19 items), behavioral signs in the child concerning child abuse (15 items), signs of neglect on the child (7 items), characteristics of parents who are prone to abuse and neglect (13 items), characteristics of children who are prone to abuse and neglect (5 items), and family characteristics in child abuse and neglect (8 items). For each item, the option "not right at all" is rated as 1 point, the option "not quite right" is rated as 2 points, the option "undecided" is rated as 3 points, the option "quite right" is rated as 4 points, and the option "very right" is rated as 5

points. The scale mean score is obtained by dividing the total score obtained from the scale into the scale item number and the scale is evaluated over the mean score. As the mean score approaches 5, this indicates that participants give right answers. As the mean score diverges from 3, this indicates that they give wrong answers. In the study by Uysal, Cronbach's alpha value of the scale was found to be 0.924.²⁰ Cronbach's alpha value of the scale was found to be 0.899 for the sample applied in this study.

Data Collection

The data of the study were collected at the end of the course hour in the classroom environment. Prior to distributing the data collection forms, the researchers introduced themselves to the students and informed them about the study verbally. The students who were voluntary to participate and answered all of the questions were included in the study. It took 15 minutes for the students to answer the questions.

Data Assessment

The IBM SPSS statistics 22 (IBM Corp. Armonk, NY: USA. Released 2013) packaged software was used for statistical analyses. Whether or not the variables were normally distributed was evaluated via the Shapiro-Wilk test. The data were evaluated using the descriptive statistical methods (number, percentage, mean, standard deviation, frequency) and the Student's *t*-test was used for two-group comparison of the normally distributed data. The One-way ANOVA was used in multiple-group comparison of the data. The correlation between the scale scores was evaluated using the Pearson's Correlation Analysis. The Multiple Linear Regression Analysis was used in including the independent variables affecting the overall scale and its subscales in the model. The Backward method was used in including the independent variables in the model. The results were evaluated at significance level of $P < .05$.

Ethical Considerations

Prior to starting the study, ethics committee approval was obtained from İstanbul University Social and Human Sciences Research Ethics Committee (number: 2016/158) and institutional permission was obtained from the relevant schools. Prior to distributing the data collection forms, the students were informed that the participation was on voluntary basis, they did not have to write their names on the forms and the information to be obtained would only be used for scientific purpose. Written voluntary informed consent form was received from the students.

Findings

Mean age of the students who took part in the study was 21.77 ± 1.02 years. Mean age of the mothers of the students was 47.62 ± 5.49 years. Mean age of their fathers was 51.60 ± 5.91 years. Average number of siblings of the students was 3.21 ± 1.77 and median was 3. Of the students; 81% ($n = 264$) were female, 75.2% had an income equal to expense, 82.8% had a nuclear family, 40.5% ($n = 132$) had mothers with primary education degree, 78.5% ($n = 256$) had unemployed mothers, 40.8% ($n = 133$) had fathers with primary education degree, and 65.6% ($n = 214$) had employed fathers (Table 1). It was determined that all of the students ($n = 326$) took a 2-hour class on child abuse and neglect within the scope of formal education and 0.6% ($n = 2$) received 16-hour special education on child abuse and neglect.

It was found that the total score obtained by the students from "Scale for the Diagnosis of Symptoms and Risks of Child Abuse and Neglect" varied from 2.63 to 4.57, and the mean score was 3.55 ± 0.29 . When examining the mean scores obtained by the students from the

Table 1. Distribution of Students' Sociodemographic Characteristics (N = 326)

Characteristics	Min-Max	Mean ± SD
Age (year)	20-28	21.77 ± 1.02
Mother's age (year)	37-67	47.62 ± 5.49
Father's age (year)	40-75	51.60 ± 5.91
Number of siblings	1-13	3.21 ± 1.77
	n	%
Gender		
Female	264	81.0
Male	62	19.0
Family's income status		
Income less than expense	44	13.5
Income equal to expense	245	75.2
Income more than expense	37	11.3
Family type		
Nuclear family	270	82.8
Extended family	48	14.7
Broken family	8	2.5
Mother education status		
Less than primary education	120	36.8
Primary education degree	132	40.5
High school graduate	65	19.9
Graduated from university	9	2.8
Mother working status		
Employed	54	16.6
Unemployed	256	78.5
Retired	16	4.9
Father education status		
Less than primary education	62	19.0
Primary education degree	133	40.8
High school graduate	97	29.8
Graduated from university	33	10.1
Postgraduate	1	0.3
Father working status		
Employed	214	65.6
Unemployed	30	9.2
Retired	82	25.2

subscales, the highest mean score was observed in the "Identification of Neglect Signs" (3.97 ± 0.50) subscale item, and the lowest mean score was observed in the "Identification of the Characteristics of Children Who are Prone to Abuse and Neglect" (2.96 ± 0.38) subscale item (Table 2).

When comparing the overall scale and subscale mean scores of the students according to their gender, it was determined that the mean score of "Identification of Neglect Signs" subscale was statistically significantly higher in the female students than the male students ($P < .05$) (Table 3). There was no statistically significant correlation between the age and overall scale mean score of the students ($P > .05$). There was a negative statistically significant correlation only between the "Identification of Neglect Signs" subscale mean score and age of the students in a direction at the level of 13.4%; however, this correlation was weak ($P < .05$). There was no statistically significant correlation between mean scores of the overall scale and subscale scores of the students and the age of their parents ($P > .05$) (Table 4). There was no statistically significant correlation between the mean scores of overall scale and its subscales of the students and the age difference with their parents ($P > .05$). There was no statistically significant correlation between the mean scores of the overall scale and its subscales of the students and the educational background of their parents ($P > .05$).

It was found that 37.7% ($n = 123$) of the nursing students attended the intern program within the scope of undergraduate education. Of these students, 34.1% ($n = 42$) worked in internal medicine clinics, 28.5% ($n = 35$) in surgical clinics, 14.6% ($n = 18$) in gynecology clinics, 13% ($n = 16$) in pediatric clinics, and 9.8% ($n = 12$) in psychiatry clinics. Table 5 shows a comparison of the mean scores of the overall scale and its subscales of the students according to their state of attending the intern program. It was determined that only the "Identification of Family Characteristics in Child Abuse and Neglect" subscale mean score of the students attending the intern program was statistically significantly higher than those not attending the program ($P < .05$) (Table 5). No statistically significant difference was found in the analysis of multiple linear regression models, which was established to examine the effect of the students' number of siblings, family income status, mother's and father's educational background, and mother's and

Table 2. Diagnosing the Symptoms and Risks of Child Abuse and Neglect of Students Distribution of Average Scores of General Scale and Subscale Items (N = 326)

General Scale and Subscale Items	Med (Min-Max)	Mean ± SD
Identification of Child's Physical Signs of Abuse and Neglect	3.53 (2.37-4.95)	3.70 ± 0.37
Identification of Neglect Signs	3.53 (2.00-5.00)	3.97 ± 0.50
Identification of Child's Behavioral Signs of Abuse and Neglect	3.86 (2.19-4.94)	3.43 ± 0.42
Identification of the Characteristics of Parent Tending to Abuse and Neglect	3.31 (2.42-4.67)	3.46 ± 0.40
Identification of the Characteristics of Children Who are Prone to Abuse and Neglect	3.40 (1.86-4.00)	2.96 ± 0.38
Identification of Family Characteristics in Child Abuse and Neglect	3.63 (1.88-5.00)	3.46 ± 0.49
Total Score	3.52 (2.63-4.57)	3.55 ± 0.29

Table 3. Comparison of Students' General Scale and Subscale Mean Scores for Diagnosing the Symptoms and Risks of Child Abuse and Neglect by Gender (N = 326)

General Scale and Subscale Items	Gender		t	p
	Female (n = 264)	Male (n = 62)		
Identification of Child's Physical Signs of Abuse and Neglect	3.71 ± 0.37	3.66 ± 0.37	0.995	.321
Identification of Neglect Signs	4.00 ± 0.47	3.85 ± 0.58	2.055	.041*
Identification of Child's Behavioral Signs of Abuse and Neglect	3.41 ± 0.43	3.50 ± 0.36	-1.523	.129
Identification of the Characteristics of Parent Tending to Abuse and Neglect	3.46 ± 0.40	3.44 ± 0.40	0.286	.775
Identification of the Characteristics of Children Who are Prone to Abuse and Neglect	2.95 ± 0.37	3.00 ± 0.41	-0.809	.419
Identification of Family Characteristics in Child Abuse and Neglect	3.44 ± 0.47	3.54 ± 0.58	-1.443	.150
Total Score	3.56 ± 0.29	3.55 ± 0.29	0.106	.916

Student's t-test.
p < 0.05.

Table 4. Diagnosing the Symptoms and Risks of Child Abuse and Neglect Correlation of General Scale and Subscale Mean Scores and Ages of Students' Parents (N = 326)

General Scale and Subscale Items	Student Age (year)		Mother Age (year)		Father Age (year)	
	r	p	r	p	r	p
Identification of Child's Physical Signs of Abuse and Neglect	-0.024	.662	0.031	.580	0.001	.580
Identification of Neglect Signs	-0.134	.015*	0.025	.659	0.016	.659
Identification of Child's Behavioral Signs of Abuse and Neglect	-0.015	.784	0.061	.274	0.027	.274
Identification of the Characteristics of Parent Tending to Abuse and Neglect	-0.048	.388	0.002	.975	-0.015	.975
Identification of the Characteristics of Children Who are Prone to Abuse and Neglect	-0.074	.185	-0.016	.767	-0.005	.767
Identification of Family Characteristics in Child Abuse and Neglect	0.011	.845	0.027	.622	0.027	.622
Total Score	-0.062	.266	0.035	.528	0.015	.528

Pearson's Correlation Analysis.

Table 5. Comparison of General Scale and Subscale Mean Scores for Diagnosing the Symptoms and Risks of Child Abuse and Neglect According to Students' Intern Program (N = 326)

General Scale and Subscale Items	Attending Intern Program		t	p
	Yes (n = 123)	No (n = 203)		
Identification of Child's Physical Signs of Abuse and Neglect	3.71 ± 0.36	3.69 ± 0.37	0.438	.662
Identification of Neglect Signs	3.98 ± 0.48	3.96 ± 0.5	0.272	.786
Identification of Child's Behavioral Signs of Abuse and Neglect	3.43 ± 0.43	3.43 ± 0.41	-0.080	.937
Identification of the Characteristics of Parent Tending to Abuse and Neglect	3.49 ± 0.42	3.44 ± 0.38	1.205	.229
Identification of the Characteristics of Children Who are Prone to Abuse and Neglect	2.93 ± 0.4	2.98 ± 0.37	-1.013	.312
Identification of Family Characteristics in Child Abuse and Neglect	3.54 ± 0.54	3.41 ± 0.45	2.339	.020*
Total Score	3.57 ± 0.3	3.54 ± 0.28	0.750	.454

t: Independent Samples t Test.
**p < 0.05.*

father's employment on the scale total and subscale scores ($P > .05$) (Table 6).

Discussion

It was determined that the total mean score of the students for 'The Scale for the Diagnosis of Symptoms and Risks of Child Abuse and Neglect' was 3.55 ± 0.29 (Table 2). As the mean score obtained from the scale used in the present study diverged from 3, this indicated that the students gave wrong answers to the questions. However, as the mean score approached 5, this indicated that the students gave right answers to the questions. Although the score of the students in the present study diverged from 3, it was not close to 5, which indicated that the right answers were high. Accordingly, the students who participated in the present study did not have adequate knowledge level concerning child abuse and neglect. In their study, Ozbey et al.²¹ determined that the total mean score obtained by nursing students from this scale was 3.70 ± 0.3 and the total mean score obtained by senior students was 3.70 ± 0.4 . In another study conducted with nursing students, it was found that the scale total mean score of the students was 3.81 ± 0.3 .²² In a study conducted with students receiving education in the faculty of health sciences, it was determined that the total mean score obtained by nursing students from 'The Scale for the Diagnosis of Symptoms and Risks of Child Abuse and Neglect' was 3.54 ± 0.33 .²³ The results of these studies²¹⁻²³ conducted with nursing students receiving education in Turkey were highly similar with the result of the present study. This was thought to be associated with the similar nursing curricula of the schools in Turkey. In a study examining the knowledge levels of nursing students in a university in Saudi Arabia concerning child abuse and neglect, it was reported that the knowledge level of the students was above medium. Also in the study, it was determined that students taking the "Family Health and Child Protection" and "Nursing Care of Children and their Families" classes had a higher knowledge level concerning child abuse and neglect than those not taking the classes.²⁴ In a study conducted in India, it was found that nursing students had an inadequate knowledge level concerning child abuse and neglect (13.84 ± 4.35). However, it was determined that the knowledge level of fourth-year students (16.33 ± 3.75) was higher than the knowledge level of second (11.95 ± 3.76) and third-year students (15.34 ± 4.34).²⁵ In these studies conducted in Saudi Arabia and India, a comparison was made between the grades, because students from all grades participated in the study. However, as the sample group of the present study consisted of only the senior nursing students, no comparison was made between the grades.

It was determined that the highest mean score obtained by the students from the subscales was observed in the "Identification of Neglect Signs" (3.97 ± 0.50) subscale. However, the lowest mean score was found in the "Identification of the Characteristics of Children Who are Prone to Abuse and Neglect" (2.96 ± 0.38) subscales (Table 2). Also in the study by Ozbey et al.,²¹ the highest mean score was found in the "Identification of Neglect Signs" (3.90 ± 0.50) subscale, and the lowest mean score was found in the "Identification of the Characteristics of Children Who are Prone to Abuse and Neglect" (3.30 ± 0.50) subscale, which is compatible with the present study. In another study conducted with nursing students, it was found that the highest mean score was observed in the "Identification of Neglect Signs" (4.01 ± 0.53) subscale, and the lowest mean score was observed in the "Identification of the Characteristics of Children Who are Prone to Abuse and Neglect" (3.43 ± 0.52) subscale.²² In a study conducted with students receiving education in the faculty of health sciences, it was similarly determined that the highest mean score of the students was observed in the "Identification of Neglect Signs" (4.05 ± 0.57)

subscale, and the lowest mean score was observed in the "Identification of the Characteristics of Children Who are Prone to Abuse and Neglect" (3.06 ± 0.50) subscale.²³ Items in the "Identification of Neglect Signs" subscale were mainly based on the child's physical observation, and since they comprised implicitly discernable characteristics such as hygiene, growth retardation, and vaccination status, it was thought that the students were more successful in this subscale. However, it was observed that the students had a lower knowledge level concerning implicitly indiscernible characteristics such as the child's drug addiction, behavioral problems like lying-stealing, introversion, suicide attempt, and communication problem, which were included in the "Identification of the Characteristics of Children Who are Prone to Abuse and Neglect" subscale. Based on this finding, it was thought to be necessary to support the education of students in terms of knowing children who comprise a risk group for abuse and neglect.

When examining the scale total mean scores of the students included in the study according to their gender, it was found that there was no significant difference between the female (3.56 ± 0.29) and male (3.55 ± 0.29) students ($P > .05$) (Table 3). In a study conducted with nursing students, it was determined that there was no statistically significant difference between the scale total mean scores of female (3.83 ± 0.29) and male (3.73 ± 0.31) students, which is compatible with the present study.²² Unlike, in a study conducted with nursing students it was found that female students (4.71 ± 3.7) had significantly higher scale total mean scores than the male students (4.57 ± 3.6).²¹ Also in contradistinction to result of the present study, in a study conducted with students receiving education in the faculty of health sciences it was determined that the scale total mean scores were statistically significantly higher in female participants (3.58 ± 0.32) than male participants (3.49 ± 0.30).²³ Although the present study and the study by Tınmaz Pehlivan²² found no statistically significant difference between the scale total mean scores in terms of gender, it was observed that female participants had higher scale total mean scores. In the present study it was also determined that the female students had a statistically significantly higher "Identification of Neglect Signs" subscale mean score (4.00 ± 0.47) than the male students (3.85 ± 0.58) ($P < .05$) (Table 3). All these results were thought to be associated with the fact that female students are more sensitive to the issue of child abuse and neglect. Also in the present study it was found that the students' number of siblings, family income status, mother's and father's educational background, and mother's and father's employment had no statistically significant effect on the scale total score and subscale scores ($P > .05$) (Table 6). In a study conducted with nursing students, it was found that the students' mean scores in overall Scale for the Diagnosis of Symptoms and Risks of Child Abuse and Neglect and its subscales did not vary according to economic condition.²² Other studies in the literature did not examine the correlation between the students' number of siblings, family income status, mother's and father's educational background and employment, and the scale score. In the present study, however, the correlation between these variables and the scale total and subscale scores was examined and no significant difference was found. Based on this result, it can be interpreted that these socio-demographic characteristics are not significant variables affecting the knowledge level of students concerning the identification of the signs and risks of child abuse and neglect.

In nursing education, the internship program plays a key role in contributing to the individual and professional development of students, increasing their professional competence, integrating theory and practice, developing their critical thinking skills, affecting their self-efficacy positively, and increasing their

Table 6. Regression Analysis Results to Determine the Effects of Students' Sociodemographic Characteristics on Diagnosing the Symptoms and Risks of Abuse and Neglect on General Scale and Subscale Scores.

Dependent variable	Independent variable	β_0 (%95 CI)	Std. Error	β_1	t	p	r ¹	r ²	VIF
Identification of Child's Physical Signs of Abuse and Neglect ¹	Constant	3.711 (3.509-3.913)	0.103		36.165	<.000			
	Number of siblings	-0.004 (-0.03-0.021)	0.013	-0.020	-0.324	.746	-0.043	-0.018	1.239
	Income status (Income equal to expense)	0.036 (-0.087-0.159)	0.063	0.043	0.581	.562	0.015	0.033	1.724
	Income status (Income more than expense)	0.057 (-0.115-0.228)	0.087	0.048	0.650	.516	0.040	0.037	1.773
	Mother education status (Primary education degree)	-0.014 (-0.122-0.094)	0.055	-0.018	-0.248	.805	0.011	-0.014	1.730
	Mother education status (High school graduate)	-0.053 (-0.186-0.081)	0.068	-0.057	-0.776	.438	-0.020	-0.044	1.747
	Mother education status (Graduated from university)	0.106 (-0.165-0.377)	0.138	0.047	0.769	.443	0.063	0.044	1.218
	Father education status (Primary education degree)	0.019 (-0.108-0.147)	0.065	0.026	0.298	.766	-0.005	0.017	2.418
	Father education status (High school graduate)	0.03 (-0.102-0.161)	0.067	0.037	0.447	.655	0.036	0.025	2.226
	Father education status (Graduated from university)	0.028 (-0.149-0.205)	0.090	0.023	0.308	.758	0.005	0.017	1.753
	Father working status (Unemployed)	-0.069 (-0.217-0.08)	0.076	-0.054	-0.908	.365	-0.079	-0.051	1.138
	Mother working status (Unemployed)	-0.067 (-0.183-0.048)	0.059	-0.075	-1.146	.253	-0.093	-0.065	1.383
	Mother working status (Retired)	0.042 (-0.175-0.258)	0.110	0.025	0.378	.706	0.067	0.021	1.346
	Father working status (Retired)	0.069 (-0.03-0.168)	0.050	0.082	1.377	.170	0.087	0.078	1.132
Identification of Neglect Signs ²	Constant	4.014 (3.746-4.282)	0.136		29.442	<.000			
	Number of siblings	-0.022 (-0.056-0.012)	0.017	-0.078	-1.278	.202	-0.090	-0.072	1.239
	Income status (Income equal to expense)	0.095 (-0.069-0.258)	0.083	0.082	1.139	.255	0.048	0.064	1.724
	Income status (Income more than expense)	0.084 (-0.144-0.311)	0.116	0.053	0.724	.470	0.029	0.041	1.773
	Mother education status (Primary education degree)	0.01 (-0.134-0.153)	0.073	0.010	0.134	.894	0.067	0.008	1.730
	Mother education status (High school graduate)	-0.2 (-0.378 - - 0.023)	0.090	-0.162	-2.227	.127	-0.103	-0.125	1.747
	Mother education status (Graduated from university)	0.08 (-0.281-0.44)	0.183	0.026	0.436	.663	0.064	0.025	1.218
	Father education status (Primary education degree)	-0.015 (-0.184-0.155)	0.086	-0.014	-0.169	.866	-0.045	-0.010	2.418
	Father education status (High school graduate)	0.068 (-0.106-0.243)	0.089	0.063	0.769	.442	0.053	0.044	2.226
	Father education status (Graduated from university)	0.125 (-0.11-0.36)	0.119	0.076	1.049	.295	0.046	0.059	1.753
	Father working status (Unemployed)	-0.161 (-0.358-0.037)	0.100	-0.094	-1.600	.111	-0.135	-0.090	1.138
	Mother working status (Unemployed)	-0.057 (-0.21-0.097)	0.078	-0.047	-0.727	.467	-0.028	-0.041	1.383
	Mother working status (Retired)	-0.098 (-0.385-0.189)	0.146	-0.043	-0.671	.503	-0.028	-0.038	1.346

Table 6. Regression Analysis Results to Determine the Effects of Students' Sociodemographic Characteristics on Diagnosing the Symptoms and Risks of Abuse and Neglect on General Scale and Subscale Scores. (Continued)

Dependent variable	Independent variable	β_0 (%95 CI)	Std. Error	β_1	t	p	r ¹	r ²	VIF
Identification of Child's Behavioral Signs of Abuse and Neglect ³	Father working status (Retired)	0.073 (-0.058-0.204)	0.067	0.064	1.096	.274	0.068	0.062	1.132
	Constant	3.494 (3.268-3.72)	0.115		30.446	<.000			
	Number of siblings	-0.003 (-0.031-0.026)	0.014	-0.011	-0.182	.855	-0.021	-0.010	1.239
	Income status (Income equal to expense)	0.112 (-0.026-0.249)	0.070	0.117	1.600	.111	0.075	0.090	1.724
	Income status (Income more than expense)	0.086 (-0.106-0.277)	0.097	0.065	0.880	.380	0.015	0.050	1.773
	Mother education status (Primary education degree)	-0.001 (-0.122-0.119)	0.061	-0.002	-0.023	.982	-0.009	-0.001	1.730
	Mother education status (High school graduate)	-0.056 (-0.205-0.093)	0.076	-0.055	-0.745	.457	-0.009	-0.042	1.747
	Mother education status (Graduated from university)	-0.006 (-0.31-0.297)	0.154	-0.003	-0.041	.967	0.016	-0.002	1.218
	Father education status (Primary education degree)	-0.067 (-0.209-0.076)	0.073	-0.079	-0.918	.359	-0.074	-0.052	2.418
	Father education status (High school graduate)	-0.044 (-0.191-0.103)	0.075	-0.049	-0.586	.558	-0.024	-0.033	2.226
	Father education status (Graduated from university)	0.138 (-0.06-0.336)	0.101	0.101	1.372	.171	0.123	0.078	1.753
	Father working status (Unemployed)	-0.037 (-0.203-0.13)	0.085	-0.026	-0.434	.665	-0.059	-0.025	1.138
	Mother working status (Unemployed)	-0.038 (-0.167-0.091)	0.066	-0.038	-0.584	.560	-0.017	-0.033	1.383
	Mother working status (Retired)	-0.078 (-0.32-0.164)	0.123	-0.041	-0.636	.525	-0.020	-0.036	1.346
Identification of the Characteristics of Parent Tending to Abuse and Neglect ⁴	Father working status (Retired)	0.079 (-0.031-0.19)	0.056	0.084	1.412	.159	0.063	0.080	1.132
	Constant	3.517 (3.263-3.771)	0.129		27.276	<.000			
	Number of siblings	-0.003 (-0.035-0.029)	0.016	-0.011	-0.171	.864	-0.009	-0.010	1.239
	Income status (Income equal to expense)	0.075 (-0.08-0.229)	0.079	0.070	0.950	.343	0.046	0.054	1.724
	Income status (Income more than expense)	0.047 (-0.168-0.262)	0.109	0.032	0.430	.667	0.000	0.024	1.773
	Mother education status (Primary education degree)	-0.018 (-0.154-0.118)	0.069	-0.019	-0.259	.796	0.003	-0.015	1.730
	Mother education status (High school graduate)	-0.06 (-0.228-0.107)	0.085	-0.052	-0.705	.481	-0.032	-0.040	1.747
	Mother education status (Graduated from university)	-0.071 (-0.412-0.27)	0.173	-0.026	-0.412	.681	-0.015	-0.023	1.218
	Father education status (Primary education degree)	-0.021 (-0.182-0.139)	0.081	-0.023	-0.262	.793	-0.018	-0.015	2.418
	Father education status (High school graduate)	-0.025 (-0.191-0.14)	0.084	-0.025	-0.301	.764	-0.022	-0.017	2.226
	Father education status (Graduated from university)	0.053 (-0.169-0.275)	0.113	0.035	0.470	.639	0.041	0.027	1.753

Table 6. Regression Analysis Results to Determine the Effects of Students' Sociodemographic Characteristics on Diagnosing the Symptoms and Risks of Abuse and Neglect on General Scale and Subscale Scores. (Continued)

Dependent variable	Independent variable	β_0 (%95 CI)	Std. Error	β_1	t	p	r ¹	r ²	VIF
Identification of the Characteristics of Children Who are Prone to Abuse and Neglect ⁵	Father working status (Unemployed)	-0.089 (-0.276-0.098)	0.095	-0.056	-0.941	.348	-0.068	-0.053	1.138
	Mother working status (Unemployed)	-0.013 (-0.158-0.132)	0.074	-0.012	-0.179	.858	0.020	-0.010	1.383
	Mother working status (Retired)	-0.115 (-0.387-0.157)	0.138	-0.054	-0.831	.407	-0.050	-0.047	1.346
	Father working status (Retired)	0.037 (-0.087-0.161)	0.063	0.035	0.582	.561	0.032	0.033	1.132
	Constant	2.749 (2.501-2.996)	0.126		21.862	<.000			
	Number of siblings	0.018 (-0.013-0.049)	0.016	0.071	1.148	.252	0.104	0.065	1.239
	Income status (Income equal to expense)	0.094 (-0.057-0.245)	0.077	0.089	1.226	.221	0.059	0.069	1.724
	Income status (Income more than expense)	0.064 (-0.146-0.274)	0.107	0.044	0.599	.549	-0.022	0.034	1.773
	Mother education status (Primary education degree)	-0.07 (-0.202-0.062)	0.067	-0.076	-1.040	.299	-0.086	-0.059	1.730
	Mother education status (High school graduate)	-0.018 (-0.181-0.145)	0.083	-0.016	-0.215	.830	0.008	-0.012	1.747
	Mother education status (Graduated from university)	-0.268 (-0.6-0.065)	0.169	-0.097	-1.585	.114	-0.090	-0.089	1.218
	Father education status (Primary education degree)	-0.029 (-0.185-0.128)	0.079	-0.031	-0.360	.719	-0.039	-0.020	2.418
	Father education status (High school graduate)	-0.002 (-0.163-0.159)	0.082	-0.002	-0.026	.980	0.010	-0.001	2.226
	Father education status (Graduated from university)	-0.08 (-0.296-0.137)	0.110	-0.053	-0.724	.470	-0.058	-0.041	1.753
	Father working status (Unemployed)	0.144 (-0.038-0.326)	0.093	0.092	1.556	.121	0.121	0.088	1.138
Mother working status (Unemployed)	-0.007 (-0.148-0.135)	0.072	-0.006	-0.091	.928	-0.001	-0.005	1.383	
Mother working status (Retired)	0.024 (-0.241-0.289)	0.135	0.012	0.181	.857	0.004	0.010	1.346	
Father working status (Retired)	-0.073 (-0.194-0.048)	0.062	-0.070	-1.187	.236	-0.082	-0.067	1.132	
Constant	3.32 (3.051-3.589)	0.137		24.289	<.000				
Identification of Family Characteristics in Child Abuse and Neglect ⁶	Number of siblings	-0.011 (-0.045-0.023)	0.017	-0.041	-0.658	.511	-0.037	-0.037	1.239
	Income status (Income equal to expense)	0.104 (-0.059-0.268)	0.083	0.092	1.255	.210	0.061	0.071	1.724
	Income status (Income more than expense)	0.078 (-0.15-0.305)	0.116	0.050	0.669	.504	0.001	0.038	1.773
	Mother education status (Primary education degree)	-0.065 (-0.209-0.079)	0.073	-0.065	-0.884	.377	-0.022	-0.050	1.730
	Mother education status (High school graduate)	-0.013 (-0.191-0.164)	0.090	-0.011	-0.148	.883	0.046	-0.008	1.747
	Mother education status (Graduated from university)	-0.171 (-0.532-0.19)	0.184	-0.057	-0.931	.352	-0.042	-0.053	1.218

Table 6. Regression Analysis Results to Determine the Effects of Students' Sociodemographic Characteristics on Diagnosing the Symptoms and Risks of Abuse and Neglect on General Scale and Subscale Scores. (Continued)

Dependent variable	Independent variable	β_0 (%95 CI)	Std. Error	β_1	t	p	r^1	r^2	VIF
Total Score ⁷	Father education status (Primary education degree)	0.084 (-0.086-0.254)	0.086	0.084	0.974	.331	0.000	0.055	2.418
	Father education status (High school graduate)	0.045 (-0.13-0.221)	0.089	0.042	0.511	.610	-0.032	0.029	2.226
	Father education status (Graduated from university)	0.249 (0.013-0.484)	0.120	0.153	2.076	.139	0.120	0.117	1.753
	Father working status (Unemployed)	0.013 (-0.185-0.211)	0.101	0.008	0.132	.895	-0.034	0.008	1.138
	Mother working status (Unemployed)	0.038 (-0.116-0.191)	0.078	0.031	0.481	.631	0.057	0.027	1.383
	Mother working status (Retired)	-0.144 (-0.432-0.144)	0.146	-0.063	-0.983	.326	-0.056	-0.056	1.346
	Father working status (Retired)	0.09 (-0.041-0.222)	0.067	0.080	1.349	.178	0.062	0.076	1.132
	Constant	3.526 (3.359-3.693)	0.085		41.563	<.000			
	Number of siblings	-0.004 (-0.025-0.017)	0.011	-0.025	-0.402	.688	-0.032	-0.023	1.239
	Income status (Income equal to expense)	0.079 (-0.022-0.181)	0.052	0.113	1.538	.125	0.068	0.087	1.724
	Income status (Income more than expense)	0.067 (-0.074-0.209)	0.072	0.070	0.936	.350	0.020	0.053	1.773
	Mother education status (Primary education degree)	-0.02 (-0.11-0.069)	0.045	-0.033	-0.448	.654	-0.002	-0.025	1.730
	Mother education status (High school graduate)	-0.062 (-0.173-0.048)	0.056	-0.082	-1.114	.266	-0.026	-0.063	1.747
	Mother education status (Graduated from university)	-0.02 (-0.245-0.204)	0.114	-0.011	-0.177	.860	0.013	-0.010	1.218
	Father education status (Primary education degree)	-0.007 (-0.113-0.098)	0.054	-0.012	-0.136	.892	-0.042	-0.008	2.418
	Father education status (High school graduate)	0.007 (-0.102-0.115)	0.055	0.010	0.118	.906	0.003	0.007	2.226
	Father education status (Graduated from university)	0.084 (-0.062-0.23)	0.074	0.083	1.128	.260	0.073	0.064	1.753
	Father working status (Unemployed)	-0.046 (-0.169-0.077)	0.062	-0.044	-0.735	.463	-0.077	-0.042	1.138
	Mother working status (Unemployed)	-0.032 (-0.127-0.063)	0.049	-0.043	-0.660	.510	-0.025	-0.037	1.383
	Mother working status (Retired)	-0.052 (-0.23-0.127)	0.091	-0.037	-0.567	.571	-0.012	-0.032	1.346
Father working status (Retired)	0.056 (-0.026-0.138)	0.042	0.080	1.344	.180	0.070	0.076	1.132	

β_0 : Unstandardized beta coefficients. β_1 : Standardized beta coefficients. r^1 : Zero-order correlation. r^2 : Partial correlation.
¹F = 0.708, ¹p = 0.755, ¹R² = 0.029, ¹Adjusted R² = - 0.012.
²F = 1.485, ²p = 0.121, ²R² = 0.058, ²Adjusted R² = 0.019.
³F = 0.951, ³p = 0.500, ³R² = 0.038, ³Adjusted R² = - 0.002.
⁴F = 0.369, ⁴p = 0.978, ⁴R² = 0.015, ⁴Adjusted R² = - 0.026.
⁵F = 1.203, ⁵p = 0.276, ⁵R² = 0.048, ⁵Adjusted R² = 0.008.
⁶F = 0.932, ⁶p = 0.520, ⁶R² = 0.038, ⁶Adjusted R² = - 0.003.
⁷F = 0.719, ⁷p = 0.744, ⁷R² = 0.029, ⁷Adjusted R² = - 0.011.

communication skills.^{26–28} In the present study, it was determined that there was no significant difference between the students attending the intern program and those not attending the program in terms of the scale total mean score ($P > .05$). However, only the mean score of “Identification of Family Characteristics in Child Abuse and Neglect” subscale was higher in the students attending the intern program ($P < .05$) (Table 5). Contrary to expectations,

the fact that the students attending the intern program obtained higher scores from only one subscale of the Identification of the Signs and Risks of Child Abuse and Neglect Scale may be interpreted as the fact that it was inadequate for the students included in the study to take only a two-hour theoretical class on child abuse and neglect throughout their four-year undergraduate education.

Limitations of the Study

As the study was conducted in two schools, the study result can only be generalized to the students receiving education in these schools.

Conclusion

As a consequence, it was determined that the knowledge level of the senior nursing students included in this study concerning child abuse and neglect was above medium. Therefore, it can be recommended that the course hour spared to the issue of child abuse and neglect in nursing undergraduate education be increased, child abuse and neglect be included as a separate course in the curriculum, and students be directed toward conferences, seminars, and courses on child abuse and neglect. It is believed that developing the evaluation skills of students concerning the identification of the signs of child and family abuse-neglect within the scope of the intern program may be useful for increasing the knowledge level of students.

Ethics Committee Approval: Ethics committee approval was obtained from Istanbul University Social and Human Sciences Research Ethics Committee (number: 2016/158) and institutional permission was obtained from the relevant schools.

Informed Consent: Prior to distributing the data collection forms, the students were informed that the participation was on voluntary basis, they did not have to write their names on the forms and the information to be obtained would only be used for scientific purpose. Written voluntary informed consent form was received from the students.

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