

Investigation of relationship between levels of self-care agency and self-efficacy in nursing students**Emine Derya Ister***Assistant Professor, Kahramanmaraş Sutcu Imam University, Faculty of Health Sciences, Nursing Department, Turkey***Received: 01-10-2019 / Revised: 20-12-2019 / Accepted: 03-01-2020****ABSTRACT**

Purpose: This descriptive-correlational study was conducted to determine the level of self-care agency and self-efficacy of nursing students and relationship between self-care agency and self-efficacy. **Methods:** The population of this research consisted of 432 nursing students at Adiyaman University School of Health in Adiyaman, Turkey. The sample consisted of 210 nursing students. The data were collected by using student introduction form, The General Self-Efficacy Scale (GSES), and Self-care power scale. The scales and form were distributed and collected by the researchers in classrooms. Data were analyzed using descriptive and comparative statistical methods. The relationship between the scales was determined by pearson correlation analysis. **Results:** It was determined that 62.4% of the students were women, 33.3% were in 4th class, 58.1% were high school graduates, 63.3% preferred the nursing department of their own will. The mean score of self-care agency of students was found to be 93.03 ± 20.62 . The mean score of total GSES was 82.60 ± 12.83 . There was statistically significant relationship between the total self-efficacy scores and Self care agency ($r=0.494$, $p=0.000$). **Conclusion:** It was concluded that nursing students had upper of medium level self-care agency and self-efficacy. It was seen that there was a positive moderate relationship between self-care agency and self-efficacy levels of nursing students.

Key words: Self care agency, self-efficacy, nursing, student

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INTRODUCTION

Self-efficacy is defined as the belief that an individual can initiate the necessary activities and get results in order to be effective on the events related to his / her life. A strong belief in self-efficacy enhances success and well-being.^[1,2] Bandura (1997) stated that person who has high self-efficacy does not resent her/his failures, he/she recover quickly and continue her/his actions. When the person with high self-efficacy belief fails; this failure does not depend on its own lack, but on the inaccuracy of the methods and strategies used, and makes new plans. However, if one's belief in self-efficacy is low, he/she thinks that he/she will not succeed and is reluctant to react.^[3]

Self-efficacy belief is effective in areas such as individual health care practices, gaining healthy lifestyle behaviors, and leaving bad health habits. Belief in self-efficacy, which is the main determinant of behavior and behavioral changes, determines how much effort an individual will face when he / she encounters a problem, although not sufficient to achieve the desired behavior. In this process, when a person is worried about solving the problem, she/he is afraid to take action, and if he is confident, he will try to find a successful result by making more effort.^[2] Self-care is defined as the application of the activities initiated and realized by the individual on his / her behalf in the protection, development, promotion, prevention of diseases and coping with the health. The self-care theory developed by Dorothea Orem for the first time is based on the individual's ability to take responsibility for their own health. Self-care emerges as an act of self-care by affecting the internal and external factors of individuals. Self-care agency is the

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ability to initiate or implement health activities to maintain an individual's life, health and well-being. The ability to self-care varies and develops from childhood to old age. Self-care agency is a human power or ability that develops through the process of spontaneous learning, mental activity, curiosity, education, supervision and experience. ^[4] Nursing is a community service that has existed since the earliest dates and emerged to make people healthy, provide patient comfort and care for the patient.^[5] This descriptive-correlation study was conducted to determine the level of self-care agency and self-efficacy of nursing students and relationship between self-care agency and self-efficacy.

METHODS

Purpose and type of research

This descriptive-correlation study was conducted to determine the level of self-care agency and self-efficacy of nursing students and relationship between self-care agency and self-efficacy.

Questions of the research

- What is the level of self-care agency of nursing students?
- What is the level of self-efficacy of nursing students?
- Is there a relationship between the self-care agency of and self-efficacy levels of nursing students?

Population and sample of the research

The population of this research consisted of 432 nursing students at Adiyaman University School of Health in Adiyaman, Turkey. The sample consisted of 210 nursing students who accepted to participate in the study and answered the questions in the questionnaire forms completely.

Table 1: Item numbers and min-max values of general self-efficacy scale total and sub-groups

Sub-groups	Items	Item numbers	Min-max
Initiating behaviour	2, 11, 12, 14, 17, 18, 20, 22	8	8-40
Maintaining behaviour	4, 5, 6, 7, 10, 16, 19	7	7-35
Completing behaviour	3, 8, 9, 15, 23	5	5-25
Struggling with obstacles	1, 13, 21	3	3-15
Total	All items	23	23-115

Data collection

The scales and form were distributed and collected by the researchers in classrooms. Before the application of the forms, the students were informed about the purpose of the research and that the information would not be disclosed to others and their written consent was obtained.

Data analysis

The data were evaluated in SPSS 17.0 program. Data were analyzed using descriptive (mean, standard deviation, median, minimum-maximum, percentage

Data collection tools

The data were collected by using student introduction form, The General Self-Efficacy Scale (GSES), and Self-care agency scale. Student introduction form contains eight questions about the sociodemographic characteristics of the students. The General Self-Efficacy Scale, the most widely used general self-efficacy measure, was developed by Sherer et al. (1982) to measure a general set of expectations that an individual carries into new situations. A high score shows good self-efficacy. ^[6] Psychometric properties of the Turkish version of the scale were evaluated by Gozum and Aksayan (1999), and its Cronbach's alpha coefficient was found to be 0.81 and its test-retest reliability was 0.92.^[7] The Cronbach's alpha coefficient of the GSES in our study was 0.75. The scale consists of 23 items and 4 sub-dimensions. The lowest 23, the highest 115 points can be obtained. In [Table 1], sub-dimensions of the scale, number of items and min-max values are given. The Appraisal of Self-Care Agency Scale, which was developed in 1979 by Kearney and Fleischer and tested in 1993 by Nahçivan for applicability and reliability in Turkey.^[8,9] There are 35 expressions in the Appraisal of Self-Care Agency Scale measuring the ability of patients to look after themselves. The expressions in the Appraisal of Self-Care Agency are scored from 0 to 4, making it a quintet Likert-type scale. Eight expressions in the scale (3, 6, 9, 13, 19, 22, 26 and 31) are negatively assessed and the scoring is reversed. The highest score that can be obtained from the scale is 140. As the scores increase, the self-care agencies of patients also increase in direct proportion. The Cronbach alpha reliability coefficient of the scale was 0.83 in this study.

calculations) and comparative statistical methods. The relationship between the scales was determined by pearson correlation analysis.

Ethical aspect of the study

The permission was obtained from the health school administration. In addition, each student who participated in the study was informed about the study, and the purpose, process and expectations of the study were explained to those who agreed to participate in the study and their written consent was obtained.

Limitations of the study

The fact that this study was conducted only with nursing students in the province of Adiyaman constitutes the limitation of the study.

RESULTS**Table 2: Distribution of socio demographic characteristics of students**

	Noun (n=210)	Percent (%)
Gender		
Male	79	37.6
Female	131	62.4
Class		
1. Class	28	13.3
2. Class	64	30.5
3. Class	48	22.9
4. Class	70	33.3
Graduated High School		
Normal high school	122	58.1
Health vocational high School	5	2.4
Anatolian High School	83	39.5
Voluntary choice of nursing		
Yes	133	63.3
No	77	36.7
Father's education level		
Illiterate	15	7.1
Primary Education	123	58.6
High School	43	20.5
License Degree	25	11.9
Master Degree	4	1.9
Mother's education level		
Illiterate	77	36.7
Primary Education	97	46.2
High School	33	15.7
License Degree	3	1.4

It was determined that 62.4% of the students were women, 33.3% were in 4th class, 58.1% were high school graduates, 63.3% preferred the nursing department of their own will, 58.6% of their fathers and 46.2% of their mothers' primary school graduates [Table 2].

Table 3: Comparison of Self care agency, age and self-efficacy and mean subscale scores of students

	Min-max	Mean±SD
Age	18-32	21.20±1.93
Self care agency	40-140	93.03±20.62
Initiating behaviour	14-40	29.33±6.57
Maintaining behaviour	12-35	25.21±5.25
Completing behaviour	7-25	18.60±3.53
Struggling with obstacles	4-15	9.45±2.60
Total GSES	55-115	82.60±12.83

The mean age of the students were 21.20 ± 1.93 . The mean score of self-care agency of students was found to be 93.03 ± 20.62 [Table 3]. The mean score of total GSES was 82.60 ± 12.83 . The mean scores of the sub-groups were showed in [Table 3].

Table 4: Comparison of nursing students' self-care agency and GSES scores with some characteristics of students

	Self-care (Mean±SD)	Total GSES
Gender		
Male	89.83±21.9	82.85±13.78
Female	94.96±19.61	82.65±12.37
	t=-1.75 p=0.081	t=0.11 p=0.913
Class		
1.Class	91.53±15.38	79.39±12.31
2. Class	91.73±18.15	83.95±12.13
3. Class	90.14±21.19	81.04±11.17
4.Class	96.81±23.79	83.82±14.70
	F=1.23 p=0.298	F=1.26 p=0.289
Graduated High School		
Normal high school	93.59±20.47	82.59±12.93
Health vocational high School	98.40±22.34	85.00±12.10
Anatolian High School	91.90±20.92	82.55±13.03
	F=0.336 p=0.715	F=0.085 p=0.918
Voluntary choice of nursing		
Yes	96.48±20.84	84.00±13.04
No	87.07±18.93	80.49±12.38
	t=3.259 p=0.001	t=1.91 p=0.057
Father's education level		
Illiterate	91.46±19.32	85.20±12.41
Primary Education	93.65±18.76	82.80±12.59
High School	94.67±23.93	82.62±15.20
License Degree	89.96±24.15	81.20±11.52
Master Degree	81.50±22.88	77.00±5.71
	KW=2.544 p=0.937	KW=2.08 p=0.720
Mother's education level		
Illiterate	94.49±19.21	84.01±11.96
Primary Education	93.75±21.07	82.78±12.94
High School	89.63±21.99	79.81±14.91
License Degree	70.00±20.62	73.66±4.61
	KW=6.054 p=0.109	KW=5.318 p=0.150

Self-care agency scores didn't change by gender, class, high school graduation, parent education level ($p>0.05$). It was determined that the mean score of self-care agency of the students who chose the nursing profession voluntarily was significantly higher than the

group who chose the nursing unwillingly ($p=0.001$). Total GSES scores didn't change by gender, class, high school graduation, voluntary choice of nursing, parent education level ($p>0.05$) [Table 4].

Table 5: Relationship between self care agency and self-efficacy total and sub-groups

	Self care agency	p value
Initiating behaviour	r=0.374	p=0.000
Maintaining behaviour	r=0.341	p=0.000
Completing behaviour	r=0.441	p=0.000
Struggling with obstacles	r=0.202	p=0.003
Total GSES	r=0.494	p=0.000

There was statistically significant relationship between the total self-efficacy scores and Self care agency ($r=0.494$, $p=0.000$). There was statistically significant relationship between initiating behaviour, maintaining behaviour, completing behaviour, struggling with obstacles scores and self care agency scores (respectively $r=0.374$, $r=0.341$, $r=0.441$, $r=0.202$; $p=0.000$) [Table 5].

DISCUSSION

In this study, the mean score of students' self-care agency was found to be 93.03 ± 20.62 . This result indicate that self care agency of nursing students in the study were moderate. Ozturk et al. (2009) found mean of self care agency 103.43 ± 16.21 .^[10] In a study conducted by Süzek and Çakmak (2004) in order to evaluate the self-care agency of school of health students, the mean score of self-care agency was 96.6 ± 18.2 .^[11] Ergin et al. (2011) reported that the mean score of self-care agency of medical students was 95.8 ± 18.7 .^[12] According to the results of this study and other studies conducted in our country, it can be said that the self-care agency of university students is moderate. In this study, statistically significant difference was not found between the self-care agency mean scores of female and male students ($p > 0.05$). Ünal et al. (2007) stated that the students who were studying in health related programs in vocational schools had the self-care agency of male students 87.75 ± 19.86 ; reported that the female students 94.27 ± 19.72 . In the same study, it was reported that there was a statistically significant difference between the mean scores of self-care agency according to gender.^[13] In a study conducted by Süzek and Çakmak (2004) in order to evaluate the self-care agency of School of Health students, self-care agency did not change according to gender.^[11] Kaya et al. reported that there was no self-care agency by gender.^[14] According to these results, it can be said that the self-care agency of male and female students is similar in our country. In this study, it was determined that students' self-care agency did not change according to the high school they graduated from ($p > 0.05$). The findings of other studies conducted to determine the self-care agency in our country support our study.^[14,15] In the study, it was determined that the mean score of the students' self-care power did not change according to the education level of the parents ($p > 0.05$). In a study conducted with students studying in nursing and health services, similar to our results, it was reported that the mean score of students' self-care agency did not change according to the education level of parents.^[11] However, in the study conducted with the students of the Faculty of Medicine,

it was stated that the self-care agency of the students changed according to the education level of the parents.^[12] In another study conducted with nursing students, it was reported that there was no statistically significant difference between the self-care agency scores of the nursing students according to the father's education level, whereas there was a statistically significant difference between the self-care agency scores of the students according to the mother's educational level.^[15] In this study, the mean score of Total GSES of nursing students was 82.60 ± 12.83 . Yiğitbaş and Çağla Health School students' mean score of Total GSES was $91.01 + 9.99$; In a study conducted by Zengin (2007) with midwifery and nursing students of the School of Health, the mean Total GSES score was 89.06 ± 11.20 .^[16] In the study conducted by Uz and Kitiş (2017) with nurses working in the hospital, the mean score of Total GSES of the nurses was found to be 79.67 ± 13.70 .^[17] In this study; self-efficacy scores of male and female students were similar. Karadağ et al. (2011) reported that self-efficacy scores of nursing male and female students were similar in Turkey.^[18] Kızılcı et al. (2015) evaluated the self-efficacy level of nursing students in terms of gender and the average of female students was 91.17 ± 11.88 ; The mean of male students was 87.98 ± 14.45 and there was no statistically significant difference between the two mean values ($p > 0.05$).^[19] In this study, a statistically significant positive correlation was found between self-care agency and total GSES score ($p = 0.000$). This finding shows that there is an important relationship between self-care agency and self-efficacy of nursing students. There are no studies examining the relationship between self-care agency and self-efficacy of nursing students. But there are studies that evaluate self-care and self-efficacy some patients with chronic illness. Bağ and Mollaoğlu reported a positive correlation between hemodialysis patients' self-care ability and self-efficacy. Also in the same study it was determined that as the level of self-care ability increases self-efficacy level also increases.^[20] Chen et al. (2014) reported self-efficacy was independently-associated with self-care adherence who referred patients to heart failure clinics ($P = 0.016$).^[21] Shari and Wu found a significant positive relationship between self-efficacy and self-care behavior patients with type 2 diabetes ($r=0.481$, $P < 0.001$).^[22] In the light of these findings, it can be said that there is a moderate positive relationship between self-care agency and self-efficacy.

CONCLUSION

In this study, it was concluded that the level of self-care agency of nursing students were upper of medium level (93.3) and that gender, high school graduation, class, mother and father education did not affect self-

care agency. Voluntary choice of nursing department affects self care agency of nursing student. It was concluded that GSES mean of the students (82.60) were upper of medium level. Also gender, class, graduated high school, voluntary choice of nursing, father's education level, mother's education level did not affect GSES. The main outcome of the study was that there was a moderate positive relationship between self-care agency and self-efficacy.

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How to cite this Article: Ister ED. Investigation of relationship between levels of self-care agency and self-efficacy in nursing students. Asian Pac. J. Health Sci., 2020; 7(1):1-6.
Source of Support: Nil, **Conflict of Interest:** None declared.