

**Original Article**

**Determination of Psychological Resilience, Academic Achievement and Academic Self-Efficacy of Nursing Students**

**Authors:** Nazlı Turgut Atak<sup>1-0000-0002-7006-3854</sup>, Meltem Meriç<sup>1-0000-0002-3146-5500</sup>

**Institutions:**

<sup>1</sup>Near East University Faculty of Nursing, Near East Boulevard, Nicosia/TRNC Mersin 10, Turkey

**Corresponding Author:** Nazlı Turgut Atak

**E-mail:** nazli.arifna@gmail.com

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## **ABSTRACT**

### **BACKGROUND/AIMS**

It is considered that students who have strong psychological resilience and believe that they can overcome academic difficulties are more successful academically. The aim of this study was to determine of psychological resilience, academic achievement and academic self-efficacy of nursing students.

### **MATERIALS and METHODS**

This descriptive and cross-sectional research study was completed with a total of 454 nursing students between September 2017 and January 2018. The data were collected using the Personal Information Form, Resilience Scale for Adults, the Academic Self-Efficacy Scale.

### **RESULTS**

There was a positive but weak significant correlation between students' psychological resilience and academic self-efficacy.

### **CONCLUSION**

Studies aimed at increasing students' psychological resilience will have an impact on the academic self-efficacy of students.

**Keywords:** Academic self-efficacy, psychological resilience, academic achievement, nursing student

## **INTRODUCTION**

Individuals may encounter many difficulties and traumatic situations throughout their lives. The reactions and of individuals who experience these difficulties and their coping skills are different from each other. Some individuals experience psychological problems in traumatic and stressful circumstances, whereas others can get over the effects of these negative circumstances in a short time and return to their normal lives quickly. This can be explained through the concept of psychological resilience which indicates how an individual adapts to difficulties or finds the strength to overcome them (1). The concept of psychological resilience includes individual characteristics and is affected by

many factors in the developmental process. These may include negative life events, chronic diseases, familial problems, economic difficulties and violence (2). It has been suggested that healthy individuals who have encountered a negative experience try to solve further negative experiences using similar methods (3). The perception of self-efficacy is important for psychological resilience. Self-efficacy is one's belief that one is able to cope with the difficulties one may face. It affects the behaviors of individuals and their belief that they can achieve success. Academic self-efficacy, an important sub-dimension of self-efficacy, refers to the individual's belief that they will be successful in attaining the desired goal of a given academic subject or task. Students with high academic self-efficacy make an effort to become more motivated, are more solution-oriented when faced with problems, and are able to regather their strength faster after a negative outcome (4).

In the literature, academic achievement has been defined as the assessment made by teachers of students' responses to lessons taught in schools, their exam scores, their scores for practical activities, and how the scores obtained express their achievement (5). Students' academic achievements are associated with mental, affective, environmental and social factors (6). In order to be considered academically successful, students should not only have a good grade point average but also be habituated to daily study and be able to transfer what they have learned into daily life.

The undergraduate period is a transitional period. During this period, young people are both in search of an identity and also trying to cope with the difficulties of university life. Starting university is a new beginning, with new goals, and it brings with it many issues, such as leaving one's family, establishing new friendships in a different environment, dealing with the fear being alone, experiencing economic difficulties, having to adapt to going to lectures and feeling concern about one's academic achievements. Nursing students may encounter many other difficult circumstances in addition to the ones mentioned above, including experiencing clinical practice in a hospital for the first

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time, communicating with patients, participating in the care of patients, and not knowing how to cope with their patients' problems. In this situation, students may experience inefficacy, despair and severe anxiety in both clinical and academic settings. In addition, they may experience stress and uneasiness while trying to cope with these concerns (7).

It is considered that students who have strong psychological resilience and believe that they can overcome academic difficulties are more successful academically. In this context, it is thought to be important to improve the factors that affect the resilience of nursing students and academic self-efficacy; ensure students' awareness and enable support systems to increase their resilience.

## **MATERIALS and METHODS**

### **Sample and Setting**

This descriptive and correlation type of study was conducted in North Cyprus, between September 2017 and January 2018. The population of the present study comprised 650 students who were enrolled in a faculty of nursing. The study aimed to reach the whole universe by not selecting samples. 454 students who study in the faculty of nursing during the fall semester of the 2017-2018 academic year, and who volunteered to participate were included in the study. The percentage of participation in the research was 70 %.

### **Data Collection Instruments**

To collect the data the personal information form determining the sociodemographic characteristics of the students, the resilience scale for adults, and the college academic self-efficacy scale were used.

### **Personal Information Form**

The personal information form consisted of 13 questions related to the sociodemographic characteristics of the students. The form includes questions related to age, gender, marital status, year of study, family type, whether parents were alive, family attitude, income level, social support, place of residence, employment status, whether they had voluntarily chosen to study in the department and their academic average scores.

**Academic achievement:** The University, where the study was conducted, has a requirement to earn a minimum of 2.00 general academic average to graduate from the Faculty of Nursing. Therefore, the study accepted the breakpoint of the general academic average as 2.00 and students who earned 2.00 and above as successful.

### **Resilience Scale for Adults (RSA)**

The scale was developed by Friborg, Hjemdal, Rosenvinge and Martinussen (8) and its Turkish validity and reliability study was conducted by Basim and Çetin (9) The scale consists of six dimensions: perception of self (Cronbach's  $\alpha = .72$ ), social competence ( $\alpha = .77$ ), family cohesion ( $\alpha = .81$ ), social resources ( $\alpha = .83$ ) planned future ( $\alpha = .75$ ) and structured style ( $\alpha = .68$ ). The RSA includes a total of 33 items and is a 5-point Likert-type scale. The higher the score, the higher the psychological resilience and the lower the score, the lower the resilience. In this study, the Cronbach's alpha coefficient of the scale was calculated as 0.86.

### **College Academic Self-Efficacy Scale**

The college academic self-efficacy scale (CASES) was developed by Owen and Foreman (10) and its Turkish validity and reliability study was conducted by Ekici (11) The scale is formed by the three sub- dimension named social status, cognitive applications and technical skills. The CASES includes a total of 33 items and is a 5-point Likert-type scale. Cronbach Alpha reliability coefficient for the general of the scale was found as 0, 86; it is found as 0, 88 for social status dimension; it is 0, 82 for cognitive applications dimension and it 0, 90 for technical skills dimension. In this study, the Cronbach's alpha coefficient of the scale was calculated as 0.90.

### **Procedure**

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Data were collected in the classroom environment before or after the lecture. The students were informed about the purpose and scope of the study and obtained whether they would volunteer to participate in the study. Questionnaires were handed out to the students who agreed to participate in the study. The participants completed the questionnaires in approximately 15 minutes.

### **Ethical Considerations**

Ethical permission was obtained from the ethics board of a University before the study was initiated (Approval Date: 29.06.2017, Approval Number: 424). The study was carried out in accordance with the principles of the Helsinki Declaration. The purposes and methods of study were explained to the students.

### **Data Analysis**

The Statistical Package for the Social Sciences 18.0 software program was used to analyze the data in a computer environment. The data were evaluated using descriptive statistics (eg, median [SD], range, percentage) and the test of normality and paired sample t-tests were used to compare variables. The Pearson correlation analysis was performed to examine the relationship between psychological resilience and academic self-efficacy. The statistical significance level,  $\alpha$ , was accepted as .05.

## **RESULTS**

37% of the nursing students were aged 20 years or below and the mean age of the students was  $21.38 \pm 2.19$  years. It was determined that of the nursing students, 59.7% were female, 97.8% were single and 31.1% were in their fourth year of study. Of the nursing students, 70% lived in a nuclear family, 51.3% had a democratic family, and 68.7% had an income equal to their expenses. It was determined that 74.2% of the students received social support from their families, that 46.9% of them lived with their friends, and that 79.7% of them had chosen to study in the Department of Nursing (Table 1).

The distribution of students' mean scores for the RSA and CASES is given in Table 2. The mean subscale scores of the students for the RSA were 14.16±3.18 for Structural Style; 14.96±3.42 for Future Perception; 23.09±4.82 for Family Cohesion; 21.79±4.38 for Personal Competence; 21.50±4.47 for Social Competence and 24.92±4.57 for Social Resources. The mean total RSA score was 120.46±20.02. When the mean subscale scores of the students for the CASES were examined, the mean Social Status score was 31.57±6.57; the mean Cognitive Operations score was 64.95±11.53; the mean Technical Skills score was 13.14±3.19. The mean total CASES score was determined as 109.86±19.25. The general academic average of students was 2,25.

The RSA Family Cohesion sub-scale average scores of the nursing students were found higher in female students compared to the male students (22.45±4.59), and the difference between the groups was significant ( $p<0.005$ ). Similarly, the RSA total average scores were also found higher in female students compared to the male students (23.53±4.93), and the difference between the gender and psychological resilience was statistically significant ( $p<0.005$ ).

The RSA total average scores of the fourth-grade class students were higher than the students of other grades (123.66±19.62), and the difference between the class levels and psychological resilience of the students was statistically significant ( $p<0.005$ ). The Post-Hoc advanced analysis determined that this significance derived from the difference between the average scores of the third and fourth-grade classes.

The study showed that there was a statistically significant difference between family attitudes and RSA total average scores of the nursing students ( $p<0.005$ ). The RSA Family Cohesion sub-scale average scores of the students with highly tolerant families were higher (25.36±4.41), and there was a statistically significant difference between the groups ( $p<0.005$ ). The Post-Hoc advanced analysis

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determined that this significant difference derived from the difference between the democratic family and tolerant family average scores.

The study found that there was a statistically significant difference between the social support and RSA total average scores of the nursing students of the students ( $p=0,001$ ), and all of the sub-scale average scores with the exception of the Social Competence sub-scale. The Post-Hoc advanced analysis determined that this significant difference in the RSA total average scores derived from the difference between the averages scores of family and friend groups.

The study found a statistically significant difference between the class levels and CASES total average scores of the students ( $p<0.005$ ). The Post-Hoc advanced analysis determined that this significant difference between the CASES total average scores and the class levels of students derived from the difference between the average scores of the third and fourth-grade classes.

The CASES total average scores of the students who chose the Nursing Department willingly ( $111.04\pm 18.80$ ) was found higher than other students. The study also found that there was a statistically significant difference between choosing the nursing department willingly and CASES total average scores ( $p<0.005$ ).

The general academic averages of the nursing students who were older than 23 years old were found higher than the other age groups ( $2.37\pm 0.44$ ), and the difference between the age and general academic averages of students was statistically significant ( $p<0.005$ ).

According to the gender variable, the study found that GPAs of the female students were higher than the male students ( $2.34\pm 0.49$ ), and the difference between gender and general academic averages of students was statistically significant ( $p<0.005$ ).

The GPAs of the fourth-grade class students were higher than other students ( $2.41\pm 0.42$ ), and the difference between the class level and general academic averages of students was statistically significant ( $p<0.005$ ). The Post-Hoc advanced analysis determined that this significant difference between the GPA average scores and class level derived from the difference between the average scores of the third and fourth-grade classes.

The study revealed that students who had nuclear families had higher GPAs ( $2.29\pm 0.48$ ) compared to students with different family structures, and the difference between the family structure

and general academic averages of the students was statistically significant ( $p < 0.005$ ). The Post-Hoc advanced analysis determined that the significant difference between the GPA average scores and family structures derived from the difference between the average scores of the nuclear and fragmented family structures.

The GPAs of the students who stayed in a dormitory were also found higher than other students ( $2.47 \pm 0.43$ ), and the difference between the place of residence and general academic averages of the students was found statistically significant ( $p < 0.005$ ).

When the correlation of the RSA with the CASES and students' general academic average scores were examined, it was found that there was a positive, significant but weak correlation between all subscale scores of both scales ( $p < 0.001$ ) except for the correlation between the Family Cohesion subscale of the RSA and the Social Status subscale of the CASES ( $r = 0.054$ ;  $p = 0.247$ ) (Table 3).

There was a positive, significant, but weak correlation between the Structural Style subscale of the RSA and the general academic average score ( $p < 0.001$ ). A negative, weak correlation was determined between the mean Personal Competence subscale score of the RSA and the general academic average ( $r = -0.001$ ) (Table 3).

There was a positive, significant, but weak correlation between the mean total scores of the RSA and the CASES ( $r = 0.263$ ;  $p < 0.001$ ). There was no significant correlation between the mean total RSA score and general academic average score ( $p = 0.024$ ); however, there was a positive, significant, but weak correlation between the CASES and general academic average ( $r = 0.260$ ;  $p < 0.001$ ) (Table 3).

## **DISCUSSION**

In this study, findings related to the psychological resilience, academic achievement and academic self-efficacy levels of the students in a Department of Nursing and the correlation between them were discussed in line with the literature. It was found that the differences between students'

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gender, year of study, family structure, family attitudes, social support, whether they had willingly chosen to study in the department and psychological resilience were statistically significant. Studies have shown that female students have higher psychological resilience than male students (12, 13). Likewise, in our study, female students were found to have greater psychological resilience. This may be due to the fact that women have better skills in coping with stress and solving problems, that they are more likely to seek help for problem areas, and due to other factors contributing to psychological resilience. In the study conducted by Şahin and Buzlu (14) with university students, it was stated that as the years of study increased, students became better at communicating with and relating to the people in their environment, and thus their psychological resilience increased. Students beginning university may face many problems in the first year, such as being away from their families, feeling scared of being alone, having to establish themselves in a new environment, facing economic difficulties and feeling concerned about their academic success, and they may experience stress and difficulties while trying to cope (15, 16). Similar to the literature, it can be thought that the increase in psychological resilience as the years of study increased in our study may be due to the students maturing and gaining independence and increased self-awareness about themselves and their environment, and an increased knowledge and experience of their profession.

It was determined that the significant difference between family attitudes and the psychological resilience of the students resulted from the difference in the mean score for democratic family attitude. A democratic family attitude is a decisive and reassuring parental attitude. Parents with this attitude show unconditional love and respect to their children, the needs of the children are met and managed, and they are able to develop a sense of responsibility in the children is ensured. When the studies conducted were examined, it was determined that a democratic family attitude increased psychological resilience, self-efficacy, and self-esteem in students (17, 18). If students feel that they are not alone and that they are important, they are more likely to perceive the future positively, to have increased psychological resilience, and to adapt more easily to negative results when they encounter difficult experiences (19). In the study conducted by Malkoç and Yalçın (20) it was stated that students' psychological well-being increased as their social support from their family and friends increased. The findings of our study are similar to those in the literature and it can be said

that the social support provided by family and friends protects the physical and mental health of the students and increases their psychological resilience.

It was determined that the difference between students' year of study, whether they had willingly chosen to study in the department and their academic self-efficacy was statistically significant. Studies have stated that academic self-efficacy increases as the year of study of students increases (21, 22). It can be suggested that students' academic self-efficacy becomes stronger due to the fact that as they have studied for longer, their academic knowledge has increased, they are more involved in clinical practices, and their skills have developed.

In the study conducted by Egelioglu et al. (23) with nursing students, it was found that there was a significant correlation between having willingly chosen the department of nursing and the academic achievement score. The choice of profession indicates a commitment to a field in which one believes one will achieve success. Students' choice of the profession can be affected by many factors such as their individual characteristics and their familial and environmental situations and this is reflected in the student's success in and after his/her period of education and in a feeling of academic efficacy. The significant difference between the students' academic self-efficacy and whether they had willingly chosen the department supports the findings in the literature.

The differences between age, gender, grade, family structure, place of residence and general academic average score and general academic achievement were found to be significant. The reason for the significant difference between age and academic achievement in our study may be due to the fact that students' professional knowledge increased as their age increased and that students were focused on their academic achievement after graduation. Studies have found a significant correlation between age and academic achievement (24, 25). It has been stated in the literature that female students are more successful than the male students and that personal characteristics directly related to

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academic achievements, such as self-esteem, self-efficacy, good time management, satisfaction with life and psychological well-being, are more often found in female students than in male students (26). Given that female students showed a high degree of psychological resilience and academic self-efficacy in our study as well, it is thought that their academic achievements may have been affected by these two positive factors.

In parallel with the results of this study, other studies have demonstrated that as the year of study increases, academic achievement also increases (27, 28). At the beginning of their university life, students may encounter difficulties in adapting to conditions such as a new location, lectures and the physical environment. As the years of study progress, students' perspectives on events change, their professional knowledge and skills increase, problems in adapting decrease, and their academic achievement thus increases.

Literature indicates that having a nuclear family contributes to students' academic achievement and post-graduate working life. Nuclear families provide the necessary environment, motivation and social support in order to provide a good education to their children. This also increases students' academic achievement.

One of the most important problems of students who start university is finding accommodation and the first choice of accommodation for students and their families are usually dormitories. Students staying in a dormitory socialize with people from other cultures, their social environment expands, they share knowledge with their friends, they study as a group, they have a suitable studying environment, they do not have any transport problems, they participate in the lectures and they benefit from events and libraries on campus. This enables students to achieve success in their lectures (29). In our study, the academic achievement of the students who stayed in a dormitory was at a high level. This may be because the physical conditions of the dormitories were good, they were on the university campus and close to the libraries, they had suitable study areas and students from the same department were able to study together.

In this study, a positive, weak, but significant correlation was found between the total psychological resilience and total academic self-efficacy scores of the nursing students. Nursing students encounter many stressors related to academic and clinical settings during their undergraduate

education. Difficulty in coping with these stressors may cause a loss of motivation, self-control, stress and a lack of self-confidence, and may affect learning. It has been stated in the literature that students with high psychological resilience experience less concern and has more belief that they can overcome any difficult circumstances they encounter (1). Likewise, academic self-efficacy, which expresses the individual's belief that he/she can successfully achieve academic goals, is strongly linked to psychological resilience. The results of our study are consistent with those in the literature. The weak correlation between the two variables may be attributed to the lack of support programs for psychological resilience and academic self-efficacy in nursing students.

This study determined that there was a positive, significant, but weak correlation between academic self-efficacy and general academic average scores and that academic self-efficacy had a statistically significant relationship to academic achievement. In the studies which have examined academic self-efficacy and academic achievement, it has been found that there was a high correlation between these two concepts and that achievement stimulated academic self-efficacy (30, 31).

Students who have high self-efficacy make more effort to complete assigned tasks, perform better academically compared to students with low self-efficacy and do not procrastinate with regard to their academic work (32). Similar to their study, this study found that students' belief in their own academic success was reflected in their academic achievements.

In our study, no significant correlation was found between the total psychological resilience score and general academic average score and it was determined that psychological resilience had no statistically significant relationship to academic achievement. Academic life contributes greatly to the development of students as a result of the knowledge and experiences they acquired as well as to their motivation and strength to cope with negativity. On the other hand, the fact that academic education is a long and dynamic process that may be affected by many different factors can also lead students to

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experience issues most of the time. This may affect students' resilience. A correlation between psychological resilience and academic achievement was not found in our study; however, there are studies showing that there is a positive correlation between these two elements (33, 34).

In conclusion, this study found a significant, positive and weak correlation between the psychological resilience and academic self-efficacy of nursing students. In addition, no significant correlation was determined between the students' psychological resilience and their general academic average scores. Moreover, it was determined that there was a positive, significant, but weak correlation between academic self-efficacy and general academic average scores of the students.

In line with the results of our study, further studies should be conducted to investigate whether increasing students' psychological resilience will have an effect on their academic self-efficacy. Psychological resilience, academic self-efficacy and general academic average scores were found to be affected by many factors including gender, year of study, family structure, family attitude, social support, place of residence, and whether the department had been willingly chosen. It is important to evaluate students in terms of these variables. It is also important to plan awareness-based training for the areas in which students need to be strengthened.

#### **Main Points:**

- Students' psychological resilience and academic self-efficacy are an important issue that affects their achievements.
- Our study has showed a significant, positive, and weak correlation between the psychological resilience and academic self-efficacy of nursing students.
- It is also important to plan awareness-based training for the areas in which students need to be strengthened.

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**Table 1.** Distribution of the characteristics of the nursing students education (n=454)

<b>Characteristics n %</b>		
<b>Age</b>		
17- 20	168	37.0
21-22	146	32.2
Over 23 Years	140	30.8
Mean Age	454	21.38±2.19
<b>Gender</b>		
Female	271	59.7
Male	183	40.3
<b>Marital Status</b>		
Married	10	2.2
Single	444	97.8

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<b>Academic Year</b>		
1st	76	16.7
2nd	116	25.6
3rd	121	26.7
4th	141	31.1
<b>Family Type</b>		
Nuclear	318	70.0
Extended	120	26.4
Broken	16	3.5
<b>Mother</b>		
Alive	442	97.4
Not Alive	12	2.6
<b>Father</b>		
Alive	434	95.6
Not Alive	20	4.4
<b>Family Attitude</b>		
Democratic	223	51.3
Careless	9	2.8
Strict	83	18.3
Inconsistent	10	2.2
Perfectionist	21	4.6
Overprotective	57	12.6
Permissive	41	9
<b>Income Status</b>		
Income Less Than Expenses	86	18.9
Income Equal to Expenses	312	68.7
Income More Than Expenses	56	12.3
<b>Social Support</b>		
Family	337	74.2
Friend/Date	107	23.5
Other	10	2.1
<b>Current Place of Residence</b>		
With Friends in Dormitory	108	23.8
With Friends at Home	213	46.9
With Family at Home	122	26.9
Alone at Home	11	2.4
<b>Employment Status</b>		
Employed	65	14.3
Unemployed	389	85.7
<b>Choosing the Department Willingly</b>		
Yes	392	79.7
No	92	20.3

\*Frequency, number, and percentage were used.

**Table 2.** Mean RSA and CASES scores of the nursing students (n=454)

<b>Scales</b>	<b>Mean±Sd</b>	<b>Minimum and maximum scores</b>
<b>Resilience Scale for Adults (RSA)</b>		
Perception of Self	21.79±4.38	6-30
Perception of Future	14.96±3.42	4-20
Structural Style	14.16±3.18	4-20
Social Competence	21.50±4.47	6-30
Family Cohesion	23.09±4.82	6-30
Social Resources	24.92±4.57	7-35
Total Score	120.46±20.02	33-165

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**College Academic Self-Efficacy Scale  
(CASES)**

Social Status	31.57±6.57	10-50
Cognitive Operations	64.95±11.53	19-95
Technical Skills	13.14±3.19	4-20
Total Score	109.86±19.25	33-165

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**Table 3.** Cross-scale correlation analysis

CASES	Social Status		Cognitive Operations		Technical Skills		CASES Total Score		General Academic Average	
	r	p	r	p	r	p	r	p	r*	p
<b>RSA</b>										
<b>Structural Style</b>	0,199	<0,001	0,225	<0,001	0,172	<0,001	0,250	<0,001	0,161	<0,001
<b>Perception of Future</b>	0,194	<0,001	0,284	<0,001	0,196	<0,001	0,273	<0,001	0,052	0,267
<b>Family Cohesion</b>	0,054	0,247	0,182	<0,001	0,130	<0,006	0,159	<0,001	0,044	0,348
<b>Perception of Self</b>	0,230	<0,001	0,256	<0,001	0,262	<0,001	0,274	<0,001	-0,001	0,988
<b>Social Competence</b>	0,161	<0,001	0,147	<0,002	0,225	<0,001	0,175	<0,001	0,083	0,076
<b>Social Resources</b>	0,113	<0,001	0,171	<0,001	0,177	<0,001	0,170	<0,001	0,038	0,424
<b>RSA Total Score</b>	0,184	<0,001	0,261	<0,001	0,240	<0,001	0,263	<0,001	0,072	0,124
<b>CASES Total Score</b>	0,846	<0,001	0,940	<0,001	0,740	<0,001	-	-	0,260	<0,001

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