Effect of academic self-sufficiency on vocational motivation levels of nursing students

Hemşirelik öğrencilerinin akademik öz yeterliliklerinin mesleki güdülenme düzeylerine etkisi

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Abstract

Aim: Self-sufficiency is the self-perception of the individual. This perception can be coping with various situations and accomplishing an activity. Motivation is one of the most important factors affecting human behavior. Our study aimed to evaluate the effect of academic self-sufficiency of student nurses on vocational motivation levels. **Materials and Methods:** We designed as a cross-sectional study. We applied the academic self-efficacy scale (ASES), motivation resources and problems scale, and sociodemographic scale to participants. **Results:** 289 people participated in our study. The mean age was 20.5±2.21 years. The mean of academic self-efficacy was 16.2±3.47. The motivation resources and scale of problems mean was 3.5 ± 0.54. The correlation coefficient between the two scales was r:-0.244, and in the regression analysis, we observed that ASES affected MRPS. (R2:0.06, Durbin-Watson:1.9, f:17.1 and p<0.001). **Conclusion:** Nursing students' MRPS and ASES means were moderate. ASES and MRPS were found to be affected by several variables. In addition, ASES affected MRPS, and the relationship between ASES and MRPS was negatively correlated. To increase the professional motivation levels of the students, we recommended to increase the clinical field and laboratory applications.

Öz

Amaç: Çalışmamızın amacı öğrenci hemşirelerin akademik öz yeterliliklerinin mesleki motivasyon düzeylerine etkisini değerlendirmektir. **Gereç ve Yöntem:** Araştırma kesitsel bir araştırma olarak tasarlandı. Katılımcılara akademik öz-yeterlik ölçeği (ASES), motivasyon kaynakları ve sorunları ölçeği (MRPS) ve sosyodemografik ölçek uygulandı. **Bulgular:** Çalışmamıza 289 kişi katıldı. Yaş ortalaması 20,5±2,21 yıl idi. Akademik öz yeterlik ortalaması 16,3±3,47'dir. Motivasyon kaynakları ve problem ölçeği ortalaması 3,6±0,54 idi. İki ölçek arasındaki korelasyon katsayısı r:-0,244 ve regresyon analizinde ASES'in MRPS'yi etkilediği görüldü. (R2:0.06, Durbin-Watson:1.9, f:17.1 ve p<0.001). **Sonuç:** Hemşirelik öğrencilerinin MRPS ve ASES ortalamaları orta düzeydeydi. Hem ASES hem de MRPS'nin çeşitli değişkenlerden etkilendiği bulundu. Ayrıca ASES'in MRPS'yi etkilediği ve aralarındaki ilişkinin negatif yönlü olduğu bulundu. Hem akademik öz yeterlilik hem de mesleki güdülenme düzeylerinin yükseltilmesi için klinik saha ve laboratuvar uygulamalarının arttırılması önerilmektedir.

INTRODUCTION

Self-efficacy is a person's belief in himself to perform a behavior (1). Academic self-efficacy is the belief in oneself to complete an academic task (2). The quality of education life of university students is related to their academic self-efficacy (3). The previous study suggested that the academic self-efficacy of nursing students changed over time (4). Nursing students experience various problems during their education process. These problems were dislike of the profession, poor practice, stressors created by the clinical environment, and communication problems (5, 6, 7). Motivation plays a crucial role in solving these problems. That is also very crucial in educational studies (8, 9). Studies have shown that students with high intrinsic motivation are more successful (10,11, 12).

It is crucial to train nurses who do their job lovingly and willingly. For this reason, we decided to determine the effect of the academic self-efficacy of student nurses on their professional motivation levels. In the literature, we observed that original studies examining the impact of academic self-efficacy of nurse students on their professional motivation levels are limited. It is crucial to fill this gap. Therefore, our study aims to determine the effect of the academic self-efficacy of student nurses on their professional motivation levels.

MATERIALS AND METHODS

Place of Study and Participant

This research was conducted on nursing students at Burdur Mehmet Akif Ersoy University. A total of 589 nursing students were studying in this department.

Inclusion-Exclusion Criteria for The Study

This research had only one participant criterion. This criterion was determined as becoming a nursing undergraduate student.

Study Design and Sample Size

This research was designed as a cross-sectional study. The sample was calculated using power analysis (Effect size: 0.5, α err: 0.05, and power: 0.80) (12). A total of 4 classes and a minimum of 192 people 48 people in each group) were calculated.

Data Collection Form

This form consists of three parts. These sections were sociodemographic form, academic self-efficacy scale, and motivation's resources and problems scale.

Sociodemographic Form: We created this part by researching the literature.

Academic Self-Efficacy Scale (ASES): This scale is a Likert scale consisting of 7 items totaly. The internal consistency of the scale is 0.79. A score between 7 points and 28 points is taken from the scale. A high score means a high level of academic self-efficacy (13).

Motivation's Resources and Problems Scale (MRPS): This Likert scale consists of 24 items and three sub-dimensions (intrinsic, extrinsic, and negative motivation). The internal consistency of the scale is 0.82. A high score means a high level of MRPS (8). Ethics Approval and Informed Consent

We obtained Ethics approval from Burdur Mehmet Akif Ersoy University Non-Interventional Clinical Research Ethics Committee (2019-45) and necessary permission from the relevant public institution. Permission for the ASES and MRPS scales was obtained from the authors via e-mail. We read the voluntary consent form before the participant filled in the parts related to the scale. Later the participant filled out the entire form voluntarily. We followed Declaration of Helsinki during the data collection.

Statistical Analysis

The data were analyzed with SPSS (version 22.0, SPSS Inc., Chicago, IL). The results were expressed as n, %, mean ± standard deviation (x±SD). The data were analyzed by student's t-test (t) and ANOVA test (f). Intragroup statistical differences were determined by Posthoc/Tukey lettered, and there is no statistical difference between the same letters ($p > 0.05$). There was a statistical difference between different letters ($p < 0.05$). Differences were considered statistically significant for $p < 0.05$ values.

RESULTS

A total of 289 people participated in our research. Eighteen people who filled in the data form incompletely were not included in the sample. The mean age of the participants was 20.5 ± 2.21 years.

ASES score was 16.2±3.47 (min:7; max:28). MRPS score was 3.5±0.54 p (min: 2.13; max: 6.33). The difference between gender and graduated high school variables were statistically significant in ASES (respectively: p<0.03; p<0.02) (Table 1).

The education class, department's willingness to choose, reason for choosing the department, desire to change department and desire to education another department were found to be statistically significant in MRPS (p<0.05) (Table 2).

Table 1. The descriptive and comparative analysis of participants

Variable		n	%	ASES X±SD	Test/p	MRPS X±SD	Test/p
Gender	Male	72	26.6	15.2±3.22	t:0.03	3.5±0.46	t:0.34
	Female	199	73.4	16.6±3.47		3.5±0.57	
Marital status	Married	7	2.6	17.7±6.92	t:0.26	3.2±0.58	t:0.09
	Single	264	97.4	16.2±3.34		3.5±0.54	
Mother's education	Literate	21	7.7	16.2±3.95		3.6±0.45	
	Primary	145	53.5	16.2±3.41		3.5±0.5	
	Secondary	65	24	16.0±3.36	f:0.88	3.5±0.55	f:0.41
	High	34	12.5	16.5±3.55		3.6±0.74	
	University	6	2.2	17.3±4.37		3.1±0.32	
Father's education	Literate	9	3.3	19.1±4.48		3.5±0.46	
	Primary	98	36.2	16.5±3.37		3.5±0.48	
	Secondary	91	33.6	15.9±3.45	f:0.08	3.5±0.54	f:0.67
	High	63	23.2	16.0±3.17		3.6±0.55	
	University	10	3.7	15.4±4.45		3.7±1.02	
Mother	Working	62	22.5	16.6±3.37	t:0.29	3.4±0.51	t:0.24
	No working	209	76.8	16.1±3.44		3.5±0.55	
Father	Working	216	79.3	16.1±3.43	t:0.45	3.56±0.53	t:0.99
	No working	55	19.9	16.5±3.61		3.56±0.57	
Income	Balanced	196	72.3	16.2±3.36		3.5±0.55	
	Low income	47	17.3	16.8±3.64	f:0.08	3.5±0.51	f:0.17
	High income	28	10.3	14.9±3.67		3.3±0.44	
Working of participant	Working	24	8.9	17.2±3.2	t:0.16	3.5±0.6	t:0.82
	No working	247	91.1	16.1±3.48		3.5±0.54	
Graduated high school	Normal high school	27	10	17±3.74ᵃ		3.4±0.44	
	Science	183	67.5	16.4±3.25ᵃ	f:0.02	3.5±0.54	f:0.34
	Health	36	13.3	14.6±3.74ᵇ		3.6±0.63	
	Other	25	9.2	16.7±3.73ᵃ		3.6±0.47	

n: participant, %: participant percentage, X±SD: Mean±st andard deviation, t: student t test, f: ANOVA, ASES: Academic Self-Efficacy Scale MRPS: Motivation's Resources and Problems Scale.

Table 2. Descriptive analysis of participants

Variable		n	%	ASES X±SD	Test/p	MRPS X±SD	Test/p
Education class	1th	68	25.1	16.5±3.24		3.7±0.50ᵃ	
	2nd	59	21.8	16.8±3.46	f:0,07	3.6±0.62ᵃ	f:<0.001
	3th	71	26.2	16.3±3.56		3.5±0.51ᵃᵇ	
	4th	73	26.9	15.3±3.46		3.3±0.46ᵇ	
Department's willingness to choose	Yes	161	59.3	16±3.2		3.6±0.56ᵃ	
	No	50	18.5	17±4.16	f:0,25	3.2±0.44ᵇ	f:<0.001
	Undecided	60	22.2	16.1±3.46		3.4±0.42ᶜ	
Reason for deciding on the department	Loving profession	84	31	15.9±3.43		3.8±0.58ᵃ	
	Easy job finding	131	48.3	16.4±3.58	f:0,27	3.4±0.47ᵇ	f:<0.001
	Family decision	36	13.3	15.6±3.76		3.3±0.53ᵇ	
	Insufficient exam score	20	7.4	17.3±1.63		3.4±0.49ᵇ	
Desire to change department	Yes	40	14.8	15.6±3.4		3.2±0.48ᵃ	
	No	175	64.6	16.2±3.49	f:0,19	3.6±0.55ᵇ	f:<0.001
	Undecided	56	20.7	16.8±3.36		3.4±0.44ᵃ	
Desire to education another department	Yes	99	36.5	15.9±3.4		3.4±0.52a	
	No	126	46.5	16.5±3.53	f:0,51	3.6±0.56ᵇ	f:0.03
	Undecided	46	17	16.2±3.43		3.6±0.50ᵃᵇ	
Type of hospital	Public hospital	197	72.7	16.5±3.38		3.5±0.51	
	Private hospital	6	2.2	18±2.83		3.1±0.42	
	University hospital	48	17.7	15.7±3.65	f:0,06	3.7±0.61	f:0.09
	Training hospital	10	3.7	15.4±3.81		3.6±0.56	
	Other type	10	3.7	13.9±3.21		3.4±0.72	

n: participant, %: participant percentage, X±SD: Mean±standard deviation, t: student t test, f: ANOVA, ASES: Academic Self-Efficacy Scale MRPS: Motivation's Resources and Problems Scale.

In our study, the difference between ASES and gender variables was statistically significant (p<0.05). We observed that the difference between ASES and graduated high school was statistically significant (p<0.05). We found that the education class, department's willingness to choose, reason for deciding on the department, desire to change department, and desire to educate another department were statistically significant in MRPS (p<0.05).

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Table 3. Prediction of ASES on MRPS

Model*	B	SE	Beta				LB	UB
1	(Constant)	4.18	0.15		27.22	<0.001	3.9	4.5
	ASES	-0.04	0.01	-0.244	-4.13	<0.001	-0.06	-0.02

*Lineer regression, Dependent Variable: MRPS, f: ANOVA, SE: Standard Error, LB: Lower Bound for %95 Confidence Interval, UP: Upper Bound for %95 Confidence Interval

The correlation coefficient between the two scales (ASES and MRPS) was -0.244. As a result of linear regression analysis, ASES affects MBPS. and this effect was statistically significant (r:-0.244, r2:0.06, Durbin-Watson:1.9, f:17.1 and p<0.001) (Table 3).

DISCUSSION

The lowest 7 and the highest 28 points are obtained from the scale of ASES. A high score shows that academic self-efficacy grade is also high (13). In our study, the academic self-efficacy scores of the students were moderate (16.2±3.47). We suggest that nursing students have moderate faith in academic achievement. The research of Kocaaslan et al. (14) supports our results. The average academic self-efficacy scores obtained in previous scientific studies was higher than the average of our research (15, 16). When we compared our study findings with other studies, we can say that the academic self-efficacy of the students participating in our study is lower than others. We found that the differences between the gender (higher in females than males) and high school graduation were statistically significant. There was no statistical difference between other variables. Bulfone et al. (4), while women's academic self-efficacy increases over time, men's self-efficacy decreases. These findings support our findings regarding gender (17, 18, 19, 20), but some studies do not support this finding (5,21, 22, 23). The fact that female nursing students took more roles in academic studies may have affected the ASES mean. In addition, the higher adoption of the female nursing profession may also affect the mean ASES. In some studies, there is no statistical difference (24). This situation may have affected both the high school education and university education of students. The difference between academic self-efficacy scores and high school graduation was statistically significant. This difference stems from the health vocational high school. In the graduated high school variable, we found that the difference within the group resulted from the average of the health vocational high school option. Again, the study of Bulfone et al. (4) supports our results.

In our study, the MRPS score mean of the students

was moderate. In another study, the MRPS score mean of the students was high (25). It has been shown in the literature that motivation can be affected by various variables. Graduating from high school is effective on motivation (26). While the in-group difference between the variables of the class studied, the willingness and the reason for choosing the nursing department, and the desire to change the nursing department was found to be statistically significant, there was no in-group difference in the other variables. When the mean score of the MRPS scale was examined within the group of the class studied, the mean of the third and fourth grades was lower than the other groups, and the statistical difference stemmed from this. In our study, among the reasons for the decrease in professional motivation levels towards the last year, may be due to the lack of sufficient clinical conditions for the practise of nursing theoretical knowledges. The fact that students felt clinically inadequate may have negatively affected their levels of professional motivation. When the variable of willingness to choose the nursing department was evaluated in terms of MRPS averages, the statistical difference was significant. This difference was due to the difference in the mean for all options. When the variable of the reason for choosing the nursing department was examined, the option to love the profession was found to be higher on average than the other options, and a statistical difference was observed. Among other reasons, employment opportunities, family desire, and the nursing profession may have been preferred (27,28,29). Doing something willingly is a situation that increases intrinsic motivation. The high choice of liking the profession may be related to this. When the willingness to change the nursing department was examined, the mean of the "no" option was higher than the mean of the other option. Supporting this variable, when the variable of reading another department after studying the nursing department was evaluated within the group, the "yes" option was found to be lower than the other options on the mean.

In our study, we found ASES affects MRPS (negative correlation). Contrary to our study finding, in research conducted by Cengiz et al. (25), a positive correlation was found between the general self-efficacy of nursing students and their professional motivation levels. In the study of Okuroğlu (2022),

the relationship between academic self-efficacy and the clinical performance of nursing students correlated positively (30). Students with high academic self-efficacy have higher academic success. This result may be related to the fact that academically successful students prefer to be academicians rather than nurses. In addition, the students participating in the congresses are generally academically successful students who want to become academicians in the future.

CONCLUSION

Nursing students' MRPS and ASES averages were moderate. Both ASES and MRPS scores were found to be affected by several variables. Also, ASES was found to affect MRPS. The negative correlation was found between the academic self-efficacy and their professional motivation. Increasing academic self-efficacy is crıcial because it is related to academic success. This situation will indirectly positively affect the nursing profession. However, according to our study results, a negative correlation was found between ASES and MRPS. Academic success is crucial for the quality of the nursing profession, which can prepare them well for the profession. Therefore, it would be beneficial to conduct studies aimed at positively increasing the impact of academic self-efficacy on professional motivation. To increase the professional motivation levels of the students, it is recommended to increase the clinical field and laboratory applications.

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