



The Open Nursing Journal

Content list available at: <https://opennursingjournal.com>



RESEARCH ARTICLE

Academic Stress and Self-Efficacy as Predictors of Academic Satisfaction among Nursing Students

Jumana Shehadeh^{1,*}, Ayman M. Hamdan-Mansour², Suhaila N. Halasa³, Manar H. Bani Hani⁴, Manar M. Nabolsi⁵, Imad Thultheen⁶ and Omayyah S. Nassar⁷

¹School of Nursing- The University of Jordan. Amman, Jordan

²Faculty of Nursing, Al Ahliyya Amman University, & School of Nursing, The University of Jordan, Amman, Jordan

³School of Nursing, The University of Jordan, Amman, Jordan

⁴Royal Medical Services College, Albalqa Applied University. Amman, Jordan

⁵School of Nursing, The University of Jordan, Amman, Jordan

⁶Faculty of Medicine and Health Sciences, An-Najah National University, Nablus, Palestine

⁷School of Nursing, The University of Jordan, Amman, Jordan

Abstract:

Background:

number of factors contribute to psychological disturbances among university students. Most important, such psychological factors may influence their academic satisfaction that associates with their performance.

Purpose:

To examine prediction power of academic stress and academic self-efficacy on academic satisfaction among nursing students.

Methods:

A convenience sample of 117 nursing students recruited from two nursing programs in Jordan; one private and one governmental. Self-report format was used to collect data from students regarding academic stress, academic self-efficacy, and academic satisfaction.

Results:

Nursing students had moderate level of academic self-efficacy, high level of academic stress, and low to moderate level of satisfaction about curriculum and faculty performance. Positive relationship found between students Grade Point Average and academic stress and self-efficacy, while there was negative relationship with academic satisfaction ($p < .05$). None of the demographic variables had was a significant predictor of academic satisfaction ($p > .05$). regression showed that self-efficacy, interaction, explained 36% of academic satisfaction about faculties.

Conclusion:

Academic self-efficacy anxiety among nursing students found to contribute to their academic satisfaction. Therefore, academics and psychological counselors at academic institutions need to give more attention to the psychosocial interaction and enhance mentoring and counseling skills to their students.

Keywords: Academic stress, Academic self-efficacy, Academic satisfaction, Nursing students, Psychosocial interaction, Academic satisfaction.

Article History

Received: January 05, 2020

Revised: May 02, 2020

Accepted: May 05, 2020

1. BACKGROUND

Stress is a dynamic interaction in which demands, limitations and opportunities are perceived as threats to an

individual's capabilities [1]. This makes stress a destructive factor for individuals unable to meet their needs and demands, while could be constructive for those who are able to balance their demands [2]. The transition to university or college is overwhelming for students due to changes in their social and psychological demands and needs [2, 3]. Stress among

* Address correspondence to this author at the School of Nursing, the University of Jordan. Amman, Jordan; Tel: 962796383002; E-mail: a.mansour@ju.edu.jo

university students is caused by number of factors; internal and external such academic responsibility, financial constraints, social issues, health-related problem, and university environment. The impact on students may differ according to degree of severity, duration of stress, level of self-efficacy, family and peer support and university rules and regulations [4]. Therefore, the multifaced nature of stress and studentship needs to be articulated to understand students satisfaction and performance.

Studies found that university students are experiencing increased levels of stress that inhibits their academic performance [5]. Balancing university schedule, preparing for exams, and managing personal psychosocial life are perceived as potential stressors among university students [6]. Nursing students, in particular and in addition to the above mentioned stressors, are also required to manage extensive course load and long hours of clinical training and requirements [7]. This makes nursing students more vulnerable to higher levels of stress and psychological disturbances that probably will affect their academic and social performance. Overwhelmed nursing students found to report lower levels of academic performance and inadequate clinical competency [8]. Stress among nursing students have also been found to associate with course assignments, the clinical working environment, and time and economic constrains [8, 9].

Furthermore, the emotional, cognitive and physical consequences of stress among nursing students believed to be interrelated and progressive [10]. Nursing students have identified stress related to clinical training and practice the most disruptive and been connected to increased psychological and physiological symptoms [7]. This would support the notion that distressed nursing students are more likely to experience negative bio-psychosocial consequences resulting in more academic difficulties, lower level of satisfaction, and their self-efficacy could negatively exacerbate their academic performance.

The negative impact of stress on nursing students is buffered available personal and environmental support. For example, high level of self-efficacy interferes with students' ability to manage academic demands effectively, while low self-efficacy may cause additional psychological distress [11]. Previous reports indicated that self-efficacy has positive impact on students' academic success, optimism, and problem-solving skills [11, 12]. Self-efficacy was also found to have positive moderating effect on stress and student's ability to manage assignments and clinical responsibilities related to patient's care [13].

The literature has adequately addressed multiple stressors that nursing students are experiencing; however, negative impact of stress among nursing students on their academic performance, ability to fulfill course requirements, and satisfaction with curriculum and faculty supervision has not been adequately addressed. Little efforts have been done to connect nursing students' experience and academic nursing students' performance and satisfaction. Nevertheless, there is still a need to find out the impact of negative experience and academic stress on students' performance, their satisfaction, and their perceptions nursing education system. Therefore, the

purpose to examine prediction power of academic stress and academic self-efficacy on academic satisfaction among nursing students.

2. MATERIALS AND METHODS

2.1. Design

This study used descriptive correlational design to collect data using a self-administered questionnaire from nursing students in two nursing programs in Jordan; one private and one governmental. Data were collected in relation to students' academic self-efficacy and stress, students' satisfaction with the nursing program, specifically advising, and instruction.

2.2. Sample and Setting

A convenience sample of 117 university students were recruited from one private and one governmental nursing program in Jordan. The inclusion criteria for the participants were: 1) current nursing students, and 2) had finished at least one semester of core nursing courses; therefore, students would be in their second year of the program.

2.3. Data Collection

Prior to data collection, ethical approval was obtained from the Ethics Committee at the targeted universities. Students were recruited through an announcement at the students' communication boards. Those who expressed interest in participating were requested to contact principal investigator or directed to the research assistant located in the coordinator's office at the university. Students were informed that the study is anonymous and voluntary. Interested students were given the package of two self-report questionnaires with a front page presenting the purpose of the study, its significance, and a note confirming the anonymity and confidentiality of the study. To ensure confidentiality, participants were assured in the consent letter that the data will be used for research purposes, and electronic data will be kept at researcher personal computer that no one has access to. Anonymity assured through having all identifiable information saved in a separate file using a coding system. Only the researcher was able to unlock the codes of participants' files. The cover letter included contact information of the principal investigator and instructions to where to return the questionnaires. The data collection started in the middle of the first term (fall terms). Two hundred and fifty packages were distributed and 117 were returned with a 47% response rate. Subject's information was kept confidential by the investigator. All projects' electronic versions were kept in the primary investigator's computer.

2.4. Measurement

The data were collected using an Arabic version of a self-report questionnaire. The World Health Organization [14] guideline for translation and tool adaptation was used to translate the tools. Initially, the tool was translated by a mental health consultant who has knowledge and proficiency in English-speaking culture and whose native language is Arabic. Then, a bilingual (English and Arabic) expert identified and resolved the inadequate expressions/concepts of the translation,

as well as any discrepancies between the forward translation and the existing or comparable previous versions of the questions. Then, the instrument was translated back to English by an independent translator, whose native language is English and who has no knowledge of the topic. Emphasis in the back-translation was on conceptual and cultural equivalence and not linguistic equivalence. Discrepancies were discussed and no further work was needed. Pilot testing conducted using nursing students ($n = 15$) requesting their appraisals for the appropriateness of the translation and for its cultural appropriateness, time needed, and clarity. The tools are:

(1). Academic self-efficacy and stress was measured using Academic Self-Efficacy and Stress Scale [15]. The scale comprised two parts: self-efficacy and stress. Students were asked to respond to 26 items (tasks) they were supposed to be exposed to while studying nursing. Items such as 7 tasks “writing term papers,” “asking questions in class,” and “managing both school and work.” For each task, students were asked to rate on an 11-point Likert scale how stressful they found the task, (from 0 = not at all stressful to 10= extremely stressful), scores range from 0 to 260. A second scale asks students to rate the same tasks according to how confident they are that they could successfully complete the task (from 0 = not at all confident to 10 = extremely confident). Each scale consisted of four subscales (interaction at school, academic performance out of class, academic performance in class, managing work, family, and school). The direction toward being high or low has been considered in terms of score above and below quartiles. The actual expected score of the scale, scale midpoint, used to value the severity. Thus, above midpoint considered as moderate effect. Thus, (0-2.5) low, (2.6-5.0) fair, (5.1-7.75) moderate, and 7.6 or above is considered high (based on quartile equation). The scale has good reliability measure with Cronbach’s alpha of 0.90 [15]. In this study, Cronbach’s alpha was 0.94 for academic stress and 0.95 for self-efficacy.

(2). Academic satisfaction was measured using the students' Satisfaction Scale [16]. The original scale is formed of five parts. In this study, we have used two parts: the program schedule (8 items) and advising and instruction (10 items). Each part asking students to rate their satisfaction on the given items on a five-point Likert scale. Scores range from 18 to 90 with higher score imply higher satisfaction level. For the purpose of analysis, some of the items after being answered by the respondent need to be reversed to create the sum score of the scale. Reliability coefficients for the overall scale and all sub-scales ranged from 0.68 through 0.85, suggesting that the instrument exhibited adequate internal consistency reliability. In this study Cronbach’s alpha was 0.79 (program schedule) and 0.88 (advising and instruction).

(3). Demographic data included students are asked to report information related to their age, gender, GPA, academic level, any penalties during their academic life, their choice of nursing, plans pursuing higher education, and general health status.

2.5. Data Analysis

Variables of the study described using the central tendency

measures (means, and medians) and the dispersion measures (standard deviation and ranges). Pearson correlation coefficient (Pearson r) used to test the correlation between the selected factors. The t -test for two-independent samples and ANOVA has been used to test differences in academic stress and efficacy related to categorical variables. Two- steps multiple hierarchical regression analysis was performed to examine prediction power of academic stress and academic self-efficacy on academic satisfaction controlling for selected demographic characteristics. Alpha has been set to .05 two tailed level of significance and power of .80

3. RESULTS

3.1. Demographic Characteristics

The sample consisted of 117 nursing students with mean age of 20.6 (SD = 1.90). The majority of students were females ($n = 92$, 78.7%). Almost two-thirds (57.2%) of the students were in their third and fourth academic year. The mean GPA (out of 4.0) for the students was 2.86 (SD = 0.59). About 13.3% ($n = 16$) students reported that they were employed, and 4.3% ($n = 5$) had academic penalties such as warning letter for misconduct or due to low grade notice as part of university policy. Moreover, 73.5% ($n = 86$) of students reported that studying nursing was their decision, and 88.0% ($n = 103$) are motivated to pursue their graduate studies in nursing.

3.2. Academic Stress

The results (Table 1) showed that the total mean score for the academic self-efficacy and stress scale was measured using visual analogue scale, 4.16 (SD = 0.99). Using item analysis, the analysis showed that mean item scores ranged from 2.63 (SD = 3.17) “making friends at school” to 6.35 (SD = 3.03) “having more tests in the same week”. The three highest and lowest stressful tasks are shown in Table 1. The analysis, in general, indicates that students have moderate level of stress related to performing academic tasks.

Considering the subscales of academic stress scale, the analysis showed that the four subscales (interaction at school, academic performance out of class, academic performance in class, managing work, family, and school) indicate moderate level of academic stress except interaction at school in which students reported low level (Table 2). using the quartile equation, academic performance out of class has a median (P_{50}) of 32 with 50% of the scores are between 19 and 43. Considering that the expected score range for this subscale to be 70, and 50% of students have a score of 32 or less, the students' performance indicates a moderate level of stress related to academic performance out of class. This also applied to academic performance in class, managing work, family, and school. While for interaction at school subscale, the median (P_{50}) was 23 and 50% of the students have a score of 13 to 33 indicating low level of stress related to interaction at school.

3.3. Academic Self-Efficacy

Regarding self-efficacy, the analysis (Table 1) showed that students had moderate to high level of academic self efficacy with mean of 6.74 (SD = 0.64). the item analysis showed that

the lowest mean item score was observed in “managing time effectively” (M = 5.81, SD = 2.88), While the highest mean items score observed in “participating in class discussions” (M = 8, SD = 2.24). This indicates that students have a moderate to high level of self-efficacy related to performing academic tasks, using the quartile equation.

Considering the subscales of academic self-efficacy scale, the analysis showed that the four subscales (interaction at school, academic performance out of class, academic performance in class, managing work, family, and school) indicated moderate to a high level of academic self-efficacy with lowest scores observed in interaction at school subscale (Table 1). The median scores (P₅₀) for the subscales are clustered higher than the expected midpoint of each subscale. For example, academic performance out of class has a median of 46 with 50% of the scores are between 39 and 57. Considering that the expected score range for this subscale which formed of seven items to be out of 70, and 50% of students have a score of 46 or higher, the students' performance indicate a high level of self-efficacy related to academic performance out of class. This is also applied to interaction at school, academic performance in class, and managing work, family, and school subscales.

3.4. Students' Satisfaction about Curriculum, Teaching and Supervision

The analysis related to students' satisfaction about curriculum showed that students had a mean score of 26.11 (SD= 3.72) while 50% of the students had a score of 24 to 28. Considering that the expected score range for this scale is 40, and that 50% of them had a score of 26, the analysis indicates that students had moderate to low level of satisfaction. On the

other hand, students had higher score of satisfaction about their teaching and supervision activities at the school. The analysis also showed that students had a mean score of 33.91 (SD = 4.25) in satisfaction with teaching and supervision scale. The expected range of score in this scale is 50 and 50% of them had a score of 34. This indicates that students had moderate level of satisfaction related to teaching and supervision.

To examine the relationship between academic stress, self-efficacy, satisfaction about curriculum and satisfaction about teaching and supervision, Pearson coefficient (r) was used (Table 2). The analysis showed that students' satisfaction with their curriculum has a significant and positive association with self-efficacy in managing work, school and family issues (r = 0.22, p < .001) and with self-efficacy without-class activities (r = 0.31, p < .001).

The magnitude of correlated; however, is low. On the other hand, students' satisfaction about teaching and supervision has a significant and positive association with self-efficacy during academic performance in-class, self-efficacy with academic performance outclass, self-efficacy with interaction at school, and with satisfaction with curriculum (p < .001) with low to moderate level of correlation between the variable ranging from .37 (self-efficacy with interaction at school) to .44 (self-efficacy with academic performance). It is also observed that stress related to tasks has no significant association with satisfaction with curriculum or satisfaction with teaching and supervision. Moreover, the analysis showed that the magnitude of correlation between students' satisfaction with teaching and supervision and self-efficacy domains was much larger than the magnitude of correlation with students' satisfaction with curriculum.

Table 1. The Highest and lowest mean item scores for the academic self-efficacy and stress scale (N = 117).

Items	M	SD	Min	Max
Least stressful tasks				
Making friends at school	2.63	3.17	0	10
Doing well on my toughest tests	2.72	2.72	0	10
Participating in class discussions	2.77	2.87	0	10
Most stressful tasks	-	-	-	-
Having more test in the same week	6.35	3.03	0	10
Talking to college staff	5.58	3.49	0	10
Doing well on exams	5.35	3.25	0	10
Total scale	4.16	.99	2.64	6.35
Least confident tasks	-	-	-	-
Managing time effectively	5.81	2.88	1.0	10
Managing both school and work	5.83	3.21	0	10
Having more test in the same week	5.84	2.75	0	10
Most confident	-	-	-	-
Participating in class discussions	8.00	2.24	0	10
Making friends at school	7.95	2.36	0	10
Doing well on my toughest tests	7.57	2.43	0	10
total scale	6.74	.64	5.73	8.01

Table 2. Bivariate Correlation between Academic Stress, academic Self-efficacy, and academic Satisfaction (N = 117).

-	SI	S-OC	SIC	SM	SEM	SEIC	SEOC	SE-I	Sat-Curr	Sat-TS
Stress-Interaction	-	-	-	-	-	-	-	-	-	-
Stress-Outclass	.81**	-	-	-	-	-	-	-	-	-
Stress-In class	.78**	.87**	-	-	-	-	-	-	-	-
Stress-Managing work	.69**	.75**	.78**	-	-	-	-	-	-	-
SE-managing work	-.43**	-.46**	-.38**	-.43**	-	-	-	-	-	-
SE-In class	-.27*	-.38**	-.33**	-.26*	.73**	-	-	-	-	-
SE-Outclass	-.30**	-.41**	-.31**	-.31**	.86**	.80**	-	-	-	-
SE-Interaction	-.37**	-.38**	-.32**	-.28*	.84**	.79**	.86**	-	-	-
Sat-Curriculum	-0.06	-0.15	-0.11	-0.08	0.22*	0.15	0.31**	0.20	-	-
Sat-teaching, supervision	0.06	-0.09	0.01	-0.01	0.39**	0.38**	0.37**	0.37**	0.44**	-

SE= Self-efficacy, Sat=Satisfaction **. Correlation is significant at the 0.01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed).

In this study, self-efficacy subscales showed significant and negative correlation with subscales of stress related to academic tasks with correlation magnitudes ranging from low of correlation ($r = 0.27$) (stress related to interaction at school and self-efficacy with academic performance in-class) to moderate level ($r = 0.46$) (stress related to academic performance out of class and self-efficacy related to academic management of family, work and school issues).

3.5. Prediction of Academic Satisfaction

Two- steps multiple hierarchical regression analysis was performed to examine prediction power of academic stress and academic self-efficacy on academic satisfaction controlling for selected demographic characteristics.

the analysis (Table 3). showed that the model 1 that includes the demographic factors (age, gender, GPA, academic year, average pint in high school, and working status) was not significant ($F = .762, p = .061$) with $R^2 = .16$ (16%). While in model 2, by adding the academic stress and academic self-efficacy to the model, the model found to be significant ($F = 1.90, p = .006$) with $R^2 = .37$ (37%). The R^2 change form model 1 to 2 was .22 (22%).

The results indicate that 37% of the variation in academic satisfaction are explained by the model that contains self-

academic stress and academic self-efficacy controlling for demographic variables. In model 1 (the demographic factors), none of the variables was a significant predictor of academic satisfaction. While, in model 2, only academic self-efficacy was a significant positive predictor ($B = 0.95, p = 0.001$). This indicates that students with higher score in academic self-efficacy are more likely to have higher scores in academic satisfaction. All other variables including academic stress were not significant predictors.

3.6. Differences Related to Demographic Characteristics

Regarding differences related to personal and demographic characteristics. The analysis (Table 4) showed that there is a significant difference, using t- test for two independent samples, between male and female nursing students in their self-efficacy related to in interaction at school, academic performance in-class, academic performance out of class and managing work, school and family issues ($p < .05$). Interestingly, in all subscales, female students' mean scores were higher than male students' mean scores. On the other hand, there was a significant difference in interaction at school between students who did receive academic penalties and those who did not; the students that received academic penalties had a higher mean score.

Table 3. Two steps Multiple Hierarchal Regressing academic satisfaction on academic stress and academic self-efficacy controlling for demographic among University Students in Jordan (N = 117).

Variables	Model 1				Model 2			
	B	SEM	β	p	B	SEM	β	p
Gender	3.9	3.2	0.26	0.221	2.8	2.86	0.19	0.332
Age	-0.46	0.91	-0.13	0.623	-0.53	0.85	-0.15	0.532
Academic level	1.2	1.4	0.20	0.415	0.62	1.3	0.11	0.626
Grade point average	2.2	2.6	0.19	0.390	1.9	2.5	0.16	0.440
Grade in high school	-0.21	0.21	-0.23	0.322	-0.33	0.21	-0.36	0.116
Working status	0.95	3.0	0.05	0.751	0.18	2.7	0.01	0.947
Academic stress	-	-	-	-	.04	.03	.28	0.133
Academic self-efficacy	-	-	-	-	0.10	0.03	0.58	0.001
R^2	0.156				0.373			
Model fit	F = 0.762, p = 0.061				F = 1.90, p = 0.006			

(Table 5) cont.....

Variables	Model 1				Model 2			
	B	SEM	β	p	B	SEM	β	p
R ² change	-				0.22			

Table 4. Differences in self-efficacy related to demographic characteristics (Number = 117).

Variable			M	SD	t-test	p-value
Self-efficacy	-	-				
Interaction at school	Gender	Male	23.27	7.80	-2.27	0.026
		Female	27.39	7.40		
Academic performance out of class	Gender	Male	41.00	14.56	-.199	0.049
		Female	48.00	13.42		
Academic performance in class	Gender	Male	37.37	11.00	-2.04	0.044
		Female	42.74	10.06		
Interaction at school	Punished	Yes	31.50	6.35	-2.03	0.045
		No	42.12	10.36		

ANOVA test was used to examine the difference between (1st, 2nd, 3rd, and 4th year) students in their self-efficacy related to interaction at school, the analysis showed that there were significant differences between students in different study years in their self-efficacy related to interaction at school ($F_{3,114} = 6.01, p = 0.001$), self-efficacy of academic performance in-class ($F_{3,114} = 3.18, p = 0.028$) as related to their academic level. Using post hoc comparison, Scheffé, the differences were observed between students of the 2nd and 4th year, while no other differences were observed. In addition, Pearson *r* was used to examine the association between students' GPA, and students' average grade in high school with academic stress, self-efficacy, and satisfaction. The analysis (Table 4) showed that GPA had significant and positive correlation with all subscales of self-efficacy. Including, negative and significant correlation with stress related to academic performance out of class and managing work, school and home. On the other hand, average grade point in high school had only a significant and positive correlation with self-efficacy of academic performance out of class. No significant correlation or differences between students' personal and demographic characteristics and their satisfaction with curriculum and teaching and supervising not academic stress.

4. DISCUSSION

University students, in general, are overwhelmed with social and psychological demands that makes them vulnerable to high risk behaviors [3, 16]. Therefore, number of social and psychological factors contribute to stress among university students. Nursing education, in particular, is considered stressful due to high academic demands, clinical requirements and complex challenges in the clinical setting [17, 18]. This caused nursing students to spend greater time at clinical placements and are required to fulfill multiple roles leading to further stress. This study examined the association of academic stress and self-efficacy with academic satisfaction among nursing students. It has been found that students had a moderate level of stress related to academic performance and moderate to high level of self-efficacy related to their ability to accomplish the required in-class and out-class assignments.

The findings in general, agree with previous studies revealed a high level of academic stress [13]. Nevertheless, we have found that students in this study had moderate to high level of self-efficacy that probably contributes to buffer negative consequences of stress. One explanation could be related to type of students in which we found that students in this study had high average points in their high school and have selected studying nursing. This could have created their high level of self-efficacy and less harmful academic stress. A previous international study had emphasized the effect of academic stress on students and reported that stress among nursing students resulted in an inability to function at an optimal level and inhibited growth and development [10]. This shows how academic stress may negatively affect students' satisfaction and performance.

Moreover, it has been found that stress among nursing students is mainly due to a lack of professional knowledge and skills, while others found that nursing interns experienced moderate to severe level of stress during clinical training [19]. The international and national studies do support the notion that just being a nurse student will make him/her vulnerable to stress or stressors [19]. In this study we have found that nursing students do not suffer high level of stress, on the contrary, they had low to moderate levels of stress. One explanation is that nursing education has been developed prominently in Jordan during the past few decades allowing students to perform and function in a motivated nursing education environment which may contribute to lower level of stress related to academic performance. Previous reports support such findings and interpretation and reported that academic self-efficacy is positively associated with quality of performance and using cognitive and metacognitive processing strategies [4].

Understanding academic self-efficacy will help and guide in developing and implementing effective instructional strategies to achieve the intended learning outcomes. Using proximal goals is eventually helping students to set goals that are not too difficult to reach. Therefore, students must be aware of their own abilities and assessing self-efficacy is one core component to achieve these goals. Normally, students tend to underestimate their capabilities that might hinder them for

making appropriate academic achievement [20]. Therefore, accurate Calibration, where students are given the accurate estimate of their capabilities, is quite important since it highly affecting students' self-efficacy [20]. This could be through clear honest feedback and constructive criticism [20]. We have also found that senior nursing students are developing greater self-efficacy which is part of their academic maturation and support previous reports [21]. This also infers that academic stress have not affected negatively students' performance neither their academic self-efficacy and that was also supported by previous reports [11, 15]. With progression at the program, students developed higher level of confidence to perform their academic task, in particular, academic performance in class and interaction at school [13].

Regarding gender differences, the findings of this study and the literature agree that female students had higher self-efficacy and have more effective time management than male students [15]. The available literature, though valuable, might not be generalizable to all cultures. University students in Jordan, and the Arab region in general, continue to live at home and, in fact, rarely leave their home until they are married [3, 22, 23]. Expectations and roles of male and female children also vary greatly. Male adult children are expected to share in all adult males' responsibilities inside and outside their home. Although allowed more freedom than females; however, they are burdened with more responsibilities than females [24]. Furthermore, the adult females in a typical Jordanian family are expected to share in the household chores and have strong restrictions on their mobility and time spent outside the family home [25, 26]. Therefore, females in Jordan are more committed to education, spend more time at home than male students, thus; spend more time fulfilling their academic demands.

This study has also found that academic stress was a not as significant predictor of academic satisfaction, while academic self-efficacy was a positive predictor. This could be explained though the correlation found and the aforementioned that students did select studying nursing and had high average high school scores. The connection between self-efficacy and satisfaction is controversial in the literature. While, some found that self-efficacy is not a significant predictor of academic satisfaction [27], others found that students' academic self-efficacy would create more interactive teaching leading to higher academic satisfaction toward instruction and advising [28]. The controversial reports could be related to variations in methods using in the studies and type of students. Students who are able to manage their skills probably have more willingness to participate in these studies while those with dysfunctional stress probably won't participate when sampling is conscience. Moreover, none of demographic variables was found to be significant predictor of academic satisfaction. As mentioned before; the majority of participants were females, in their fourth and third college year, with no academic penalties, choose nursing willingly, and have motivation for graduate study. This means that participant demographics tend to be intense in one hand, and there was no adequate diversity in participants' demographic data to support prediction model.

One limitation of this study is using convenience sampling

in which students with good level of stress management might be more interested to participate than those who really stressed and lack management skills.

CONCLUSION

This study found that academic self-efficacy predated academic satisfaction, while academic stress was not. University students suffer moderate levels of academic stress; however, this have not affected their perception of academic self-efficacy. These findings provide nursing educators and counselors at universities with evidence regarding factors that contribute to students' satisfaction. Faculties and counselors are demanded to enhance their students' self-efficacy and academic performance through appropriate interaction and finding out factors that causing academic distress. In general, the study showed that university students may need to sharpen their skills to adapt to academic stressors; therefore, faculties and administrators have to give more attention to the personal and social dismissions of education and not merely the academic ones. Further studies need to examine sources of academic stress and testing insertional approaches that enhance academic self-efficacy.

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

Ethical Approval obtained from The IRB of The University of Jordan. 20/8/2018.

HUMAN AND ANIMAL RIGHTS

Not applicable.

CONSENT FOR PUBLICATION

Informed consent has been obtained from all the participants.

AVAILABILITY OF DATA AND MATERIALS

The authors confirm that the data supporting the findings of this study are available within the article.

FUNDING

None.

CONFLICT OF INTEREST

The authors declare no conflict of interest, financial or otherwise.

ACKNOWLEDGEMENTS

Declared none.

REFERENCES

- [1] Kohler JM, Munz DC, Grawitch MJ. Test of a Dynamic Stress Model for Organisational Change: Do Males and Females Require Different Models? *Appl Psychol* 2006; 55(2): 168-91. [<http://dx.doi.org/10.1111/j.1464-0597.2006.00229.x>]
- [2] Pender NJ, Murdaugh CL, Parsons MA. *Health Promotion in Nursing Practice*. 7th ed. UK: Pearson 2015.
- [3] Hamdan-Mansour AM, Halabi JO, Dawani HA. Depression, hostility, and substance use among university students in Jordan. *Ment Health Subst Use* 2009; 2(1): 52-63.

- [4] [http://dx.doi.org/10.1080/17523280802593301] Artino AR Jr. Academic self-efficacy: From educational theory to instructional practice. *Perspect Med Educ* 2012; 1(2): 76-85. [http://dx.doi.org/10.1007/s40037-012-0012-5] [PMID: 23316462]
- [5] American College Health Association-National College Health Assessment. Publications and Reports 2014. http://www.acha-ncha.org/pubs_rpts.html
- [6] Araas TE. Dissertation Abstracts International. Associations of mindfulness, perceived stress, and health behaviors in college freshmen. *Humanities and Social Sciences. ProQuest Information & Learning* 2008; 69: p. 521.
- [7] Jimenez C, Navia-Osorio PM, Diaz CV. Stress and health in novice and experienced nursing students. *J Adv Nurs* 2010; 66(2): 442-55. [http://dx.doi.org/10.1111/j.1365-2648.2009.05183.x] [PMID: 20423427]
- [8] Shaban IA, Khater WA, Akhu-Zaheya LM. Undergraduate nursing students' stress sources and coping behaviours during their initial period of clinical training: A Jordanian perspective. *Nurse Educ Pract* 2012; 12(4): 204-9.
- [9] Spielberger CD, Reheiser EC. *Research Companion to Organizational Health Psychology*. Research companion to organizational health psychology. 2005; pp. 441-54.
- [10] Freeburn M, Sinclair M. Mental health nursing students' experience of stress: Burdened by a heavy load. *J Psychiatr Ment Health Nurs* 2009; 16(4): 335-42. [http://dx.doi.org/10.1111/j.1365-2850.2008.01376.x] [PMID: 19383012]
- [11] Conner M. Self-efficacy, stress, and social support in retention of student registered nurse anesthetists. *AANA J* 2015; 83(2): 133-8. [PMID: 26016172]
- [12] Suresh P, Matthews A, Coyne I. Stress and stressors in the clinical environment: A comparative study of fourth-year student nurses and newly qualified general nurses in Ireland. *J Clin Nurs* 2013; 22(5-6): 770-9. [PMID: 22931367]
- [13] Çivitci A. The Moderating Role of Positive and Negative Affect on the Relationship between Perceived Social Support and Stress in College Students. *Educ Sci Theor Pract* 2015; 15(3): 565-73.
- [14] World Health Organization. Process of translation and adaptation of instruments http://www.who.int/substance_abuse/research_tools/translation/en/
- [15] Zajacova A, Lynch SM, Espenshade TJ. Self-Efficacy, Stress, and Academic Success in College. *Res High Educ* 2005; 46(6): 677-706. [http://dx.doi.org/10.1007/s11162-004-4139-z]
- [16] Sumner DA. A Measurement of Student Satisfaction Levels as a Means of Program Evaluation: An Examination of Baker University's Educational Leadership Doctoral Program. Baker University 2008.
- [17] Hussein Shehadeh J, Hamdan-Mansour AM. Prevalence and association of premenstrual syndrome and premenstrual dysphoric disorder with academic performance among female university students. *Perspect Psychiatr Care* 2018; 54(2): 176-84. [http://dx.doi.org/10.1111/ppc.12219] [PMID: 28543046]
- [18] Hamaideh SH, Hamdan-Mansour AM. Psychological, cognitive, and personal variables that predict college academic achievement among health sciences students. *Nurse Educ Today* 2014; 34(5): 703-8. [http://dx.doi.org/10.1016/j.nedt.2013.09.010] [PMID: 24094748]
- [19] Singh C, Sharma S, Sharma RK. Level of stress and coping strategies used by nursing interns. *Nursing and Midwifery Research Journal* 2011; 7(4): 152-60.
- [20] van de Grift W, Helms-Lorenz M, Maulana R. Teaching skills of student teachers: Calibration of an evaluation instrument and its value in predicting student academic engagement. *Stud Educ Eval* 2014; 43: 150-9. [http://dx.doi.org/10.1016/j.stueduc.2014.09.003]
- [21] Gibbons C, Dempster M, Moutray M. Stress, coping and satisfaction in nursing students. *J Adv Nurs* 2011; 67(3): 621-32. [http://dx.doi.org/10.1111/j.1365-2648.2010.05495.x] [PMID: 21077931]
- [22] Fawaz M, Hamdan-Mansour A. Effect of using HFS on motivation and clinical judgment among nursing students in Lebanon. *Nurse Educ Today* 2016; 46(2): 36-42. [http://dx.doi.org/10.1016/j.nedt.2016.08.026] [PMID: 27591378]
- [23] Hamdan-Mansour AM, Mahmoud KF, Al Shibi AN, Arabiat DH. Impulsivity and sensation-seeking personality traits as predictors of substance use among university students. *J Psychosoc Nurs Ment Health Serv* 2018; 56(1): 57-63. [http://dx.doi.org/10.3928/02793695-20170905-04] [PMID: 28892553]
- [24] Arabiat DH, Shaheen A, Nassar O, Saleh M, Mansour A. Social and Health Determinants of Adolescents' Wellbeing in Jordan: Implications for Policy and Practice. *J Pediatr Nurs* 2018; 39: 55-60. [http://dx.doi.org/10.1016/j.pedn.2017.03.015] [PMID: 28381331]
- [25] Shaheen AM, Nassar OS, Amre HM, Hamdan-Mansour AM. Factors affecting health-promoting behaviors of university students in Jordan. *Health* 2015; 7: 1-8. [http://dx.doi.org/10.4236/health.2015.71001]
- [26] Sheu H-B, Mejia A, Rigali-Oiler M, Primé DR, Chong SS. Social cognitive predictors of academic and life satisfaction: Measurement and structural equivalence across three racial/ethnic groups. *J Couns Psychol* 2016; 63(4): 460-74. [http://dx.doi.org/10.1037/cou0000158] [PMID: 27177025]
- [27] Fawaz M, Tassi A, Hamdan-Mansour A. Challenges Facing Nursing Education in the Advanced Healthcare Environment. *J Afr Nurs Sci* 2018; 9: 105-10.
- [28] Chan CKL, So WKW, Fong DYT. Hong Kong baccalaureate nursing students' stress and their coping strategies in clinical practice. *J Prof Nurs* 2009; 25(5): 307-13. [http://dx.doi.org/10.1016/j.profnurs.2009.01.018] [PMID: 19751936]