

# Entry Criteria and Nursing Students' Success

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## Abstract

**Background:** Nursing students are supposed to possess certain personal and academic characteristics during the admission process into nursing schools. The purpose of this study was to examine if admission criteria which include students' gender, high-school grade (Tawjihi), and desire to study nursing may predict chances of success as indicated by satisfaction with nursing study, grade point average, and like-nursing.

**Methods:** A cross-sectional design was used with a convenience sample of 224 nursing students in their final year in a public university in Jordan.

**Results:** The results showed that gender of nursing students and their high-school grades were able to predict the students' grade point average and those who liked nursing. Furthermore, the choice to study nursing based on desire was able to predict that students will be more satisfied with studying nursing; however, it did not predict the students' grade point average, whether it will be high or not.

**Conclusions:** School grades and students' desire to study nursing are recommended as an admission criteria for potential success in nursing programs.

**Keywords:** Entry criteria; Nursing students; Success

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## Introduction

Every profession has special requirements for the level of knowledge, skills, and distinctive characteristics of its personnel, which should correspond to the intended profession in order to have career compatibility.<sup>1</sup> Few studies on identifying the factors that motivate nursing students to choose nursing as a career were conducted. The main identified factors affecting career choice include demographic attributes, lifestyle preferences, students' personal values, and societal influence.<sup>2,3</sup>

Professional success was found to be associated with the special level of knowledge and personal characteristics.<sup>4,5</sup>

Nursing education programs are usually designed to provide unique professional education essential for competent practice promoting caring attitudes and behaviors in the professional nurse. Factors associated with career decision are crucial for students who choose to study nursing. Nursing profession postulates that its members study nursing because they do like it.<sup>6-8</sup>

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The existing evidence suggests that the stronger the match between the person's profile of motivations and desires, the higher the chances of achieving career satisfaction, lower levels of turnover, and eventual improvement of quality of care.<sup>9</sup> The majority of Jordanian nursing students perceive themselves as independent learners and have a desire and curiosity to learn new things.<sup>10</sup>

Students characteristics on admission are believed to be important in increasing chances of more qualified and successful students.<sup>2</sup> The purpose of this study was to examine if admission criteria which include students' gender, high-school grade (Tawjihi), and desire to study nursing may predict chances of success as indicated by satisfaction with nursing study, grade point average, and like-nursing.

### **Literature review**

Jordan is relatively a small country with a population of 5.5 million.<sup>11</sup> The country has witnessed a shortage in nurses and a rapid increase in the number of male nurses in the nursing workforce.<sup>12, 13</sup> During the last two decades, interest in studying nursing has increased tremendously, especially among males.<sup>12, 14</sup> In 2007, there are thirteen nursing programs awarding a bachelor degree in nursing.<sup>15</sup> According to the Jordanian Nursing Council (2007), there is a dramatic increase in the number of students entering nursing schools in Jordan;<sup>15</sup> which is opposite to the International Council of Nursing (2006) report of nurses shortage around the world.<sup>16</sup> This increased interest necessitated an inquiry of which personal and academic factors ensure more successful nursing graduates.

Selecting potentially successful candidates for nursing programs and preparing students for smooth entry into the nursing workforce are predominant themes emerging in the literature.<sup>17</sup>

Adib-Hajbaghery and Dianati indicated that despite the increase in the number of nurses, the quality of nursing care have declined.<sup>2</sup> Wrong selection criteria is suggested as a reason for this deterioration in the quality of care.<sup>18</sup>

Nursing students did not always regard nursing as an ideal career and chose it for reasons such as good recruitment opportunities and or the only option left for them.<sup>4, 19, 20</sup> Students' expectations from nursing education varied depending on their perceptions of nursing as a career or a job.<sup>8</sup> Therefore, not only many nursing students were not motivated to study nursing, but also the quality of nursing care seemed to have declined.<sup>2</sup> It is important to realize whether students have realistic perceptions of nursing as they apply for a nursing program.

The choice of nursing as a future career was found to be related to males and females personal characteristics.<sup>14, 21</sup> Zysberg and Berry found a link between gender and desire to study nursing.<sup>9</sup> Law and Arthur found that the predictors of nursing students who had high potential for success were female students, who possessed a positive opinion of nursing, and that their high-school grades are high.<sup>22</sup> The reasons for male nurses to choose nursing as a career were summarized by the desire to care for others, job security and salary, and seeking leadership and advancement. On the other hand, women were influenced by their social environment about their suitability for the nursing profession.<sup>9, 22</sup>

Entry criteria and the selection of potentially successful nursing students is understudied in Jordan. Jrasat, Samawi, and Wilson conducted a descriptive study on 330 male and female- first year nursing students to explore the characteristics of students entering associate degree nursing programs in Jordan.<sup>23</sup> They found that students' personal desire to become nurses accounted for only 31 % of the total, while there was no correlation between the student's gender, high-school public certificate average, or socio-economic conditions and the decision to become a nurse.<sup>23</sup>

It is likely that certain factors may contribute to more effective education and retention strategies. In Jordan, admission to public nursing programs depends only on the competition among the students based on their high-school grades; no interviews or other selection criteria are required.

Thus, identifying the variables that contribute to learning motivation will provide the information necessary to predict who will have more chances to be a successful nurse. In this study, students' success will be measured by students' Grade Point Average (GPA), how much students like nursing, and satisfaction in studying nursing.

## Methods

This study aims to address the following questions:

1. Is there a difference between the high-school grade (GPA) and satisfaction with nursing in relation to students' gender and/or students' desire to study nursing?
2. What are the factors that ultimately predict nursing students' success?

**Design and Sample:** This cross-sectional study included a convenience sample of 224 nursing students in their fourth year of study at a public university in Jordan. Sample size was calculated using Cohen's technique for power analysis for multiple regression, based on an alpha of .05, power of .90, a medium effect size of .15, and 3 independent variables; a sample size of 99 was needed.<sup>24</sup> The purpose of the oversampling in this study was to reduce the risk of bias and to increase the representativeness of the sample.

A questionnaire was designed by the authors of this study and sent out for comments from nursing colleagues. Five faculty members with doctorate degrees were consulted for the Scale's face validity. Students' satisfaction with the status of nursing profession was measured by the question "To what extent are you satisfied with the profession of nursing now?" Moreover, the student's level of like the profession of nursing was measured by the question "To what extent do you like nursing now?" Both questions were measured using a ten-point numerical rating scale, with a score of 1= lowest level of satisfaction or liking of nursing and a score of 10= highest level of satisfaction or liking of nursing, respectively.

The numerical rating scale is a methodologically sound instrument for quantitative assessment of psychological measurement that produces a ratio scale properties.<sup>25</sup> The numerical rating scale provides a reliable and valid method of measurement more than the visual analogue scale.<sup>25, 26</sup> In this study, test-retest method was used to establish the reliability of the scales. The correlation coefficients were .75 for like-nursing scale, and .89 for satisfaction with nursing scale.

**Procedure:** Approval of the study protocol was obtained from the University's Ethics Committee. The researchers sought permission from the Dean of the Faculty of Nursing to collect data from students. Students were assured that information obtained will be kept confidential and for the purpose of research use only. Their consent to participation was voluntary as they could withdraw whenever they felt they wanted to do so. The time required to complete each questionnaire was between 10 to 15 minutes. The questionnaires were distributed and collected over one month by the researchers themselves.

**Data Management and Analyses:** All variables were evaluated using Statistical Package for Social Sciences (SPSS 14.0 for Windows). In addition to descriptive statistics, inferential statistics for comparison between sample characteristics and prediction of the students' outcome were used for data analyses.

## Results

The participants' characteristics are presented in Table (1). Around 59% of the participants were male students. The age mean of the participants was 21.37, (standard deviation of 2.28). About 80% of the total students incurred the cost of their study. While students who chose to study nursing based on desire formed 60%, 32% of the total students changed their view toward nursing for worse during their study.

**Table (1): Sample characteristics (N=224).**

Characteristics	N (%)
<b>Gender</b>	
Male	131 (58.5)
Female	93 (41.5)
<b>Tuition Fees paid by</b>	
Self	180 (80.4)
Scholarship	44 (19.6)
<b>Choice of nursing based on</b>	
Desire	134 (59.8)
No desire	90 (40.2)
<b>View toward nursing</b>	
Changed for better	106 (47.3)
Changed for worse	71 (31.7)
Did not change	47 (21.0)

The findings of the study (Table 2) indicated that female nursing students have higher grades in high-school and higher GPA at the university than male nursing students. Furthermore, female nursing students liked nursing more than male nursing students ( $t = -5.78$ ;  $p < .01$ ). No difference was found between male and female nursing students in their satisfaction with the status of nursing profession. Students who chose to study nursing based on desire did not differ in their high-school grades and university GPA from those who did not have initial desire to study nursing. Additionally, students who chose to study nursing based on desire were more satisfied with the status of nursing profession and they liked nursing more than students without the desire to study nursing.

**Table (2): Comparison between students characteristics based on their gender and desire to study nursing.**

Characteristics	Groups	N	Mean (SD)	t
<b>High-school grade</b>	Male	131	78.96 (7.62)	-4.73*
	Female	93	83.86 (7.69)	
	Desire	134	80.84 (8.04)	-0.36
	No desire	90	81.22 (7.99)	
<b>GPA</b>	Male	131	2.77 (0.41)	-4.56*
	Female	93	3.04 (0.47)	
	Desire	134	2.91 (0.44)	1.15
	No desire	90	2.84 (0.47)	
<b>Like-nursing</b>	Male	131	5.07 (2.47)	-5.78*
	Female	93	6.98 (2.38)	
	Desire	134	6.86 (2.13)	7.60*
	No desire	90	4.38 (2.56)	
<b>Satisfied with nursing</b>	Male	131	4.34 (2.23)	-1.51
	Female	93	4.81 (2.35)	
	Desire	134	5.90 (2.04)	4.52*
	No desire	90	3.70 (2.39)	

\*  $p < 0.01$

After examining the assumptions of linear regression, three multiple regression analyses for, "GPA," "Satisfaction with nursing" and "Like-nursing" according to entry criteria were conducted (Table 3). The results of the regression analyses showed that female nursing students like nursing more ( $t = 5.16$ ;  $p < .001$ ) and get a higher GPA ( $t = 2.14$ ;  $p < .01$ ) than male nursing students. Students with a choice to study nursing based on desire will not have a higher GPA but will like nursing more than those without an initial desire to study nursing ( $t = -8.04$ ;  $p < .001$ ).

The strongest predictor for the GPA was the high-school grade (Beta = .54); however, high-school grade did not predict whether students will like nursing or not. Students with a higher desire to study nursing on admission were more satisfied with nursing during their last year of study. The independent variables: gender, high-school grade, and choice of nursing based on desire, were able to explain .35, .32, and .09 of students' GPA, like-nursing, and satisfaction, respectively ( $p < .001$ ).

**Table (3): Multiple regression analyses for, "GPA," "Satisfaction with nursing" and "Like-nursing" according to entry criteria.**

Entry criteria	B	Beta	t	Dependent variable	Adjusted R <sup>2</sup> (F)
Gender	.11	.12	2.14*		
High-school grade	.03	.54	9.51**		
Choice of nursing based on desire	-.07	-.08	-1.47	GPA	.35 (40.21)**
Gender	.27	.06	.86		
High-school grade	.02	.06	.96		
Choice of nursing based on desire	-1.38	-.30	-4.59**	Satisfaction	.09 (8.04)**
Gender	1.58	.31	5.16**		
High-school grade	.03	.09	1.49		
Choice of nursing based on desire	-2.36	-.45	-8.04**	Like-nursing	.32 (36.25)**

\*  $p < .05$  \*\*  $P < .001$ 

## Discussion

The findings of this study suggest an admission criteria for nursing students that may predict their chances of success as nurses. The plethora literature about nursing students' characteristics in the West described them as mainly females with a recent interest of males in joining nursing career. However, over half of the students in this study were males (58.5%). This phenomenon of increasing male students' numbers is common in all Jordanian universities.<sup>14, 15</sup> Although both males and females undergo the same entry criteria, that is based on high-school grades, female students seem to have a significantly higher school grade average as well as a higher GPA than their male counterparts. However, readers should be careful in making a conclusion that female nursing students have higher chances for success based solely on the grades because more variables are needed to determine students' chances for success in nursing programs.

The results of this study indicate no differences between males and females in relation to satisfaction with nursing. This result is not in agreement with Stott's, who found that male nursing students had a feeling of isolation and exclusion from an academic and clinical perspective.<sup>27</sup>

Another qualitative study of men's perceived educational experiences in a baccalaureate program by Ellis et al. indicated that men found nursing as tiring, stressful, busy and intellectually difficult adding that had they known about this before joining nursing they might have not chosen nursing as a career.<sup>28</sup>

High-school grades were able to predict that students would get higher Grade Point Average GPA at the end of the university education. Several studies investigated the relationship between high-school grades, and demographic and psychological characteristics.<sup>29</sup> Wong and Wong found that GPA for nursing students in the third and fourth years was a significant predictor for students' success in the nursing program.<sup>30</sup> Ofori and Charlton reported that entry qualifications had an impact on students' performance.<sup>31</sup> Other studies found that students' grades in nursing program was a predictor of success in the National Council Licensure Exam for registered nurses in the United States and in Taiwan.<sup>32, 33</sup>

In this study, the students' who chose to study nursing based on desire continued to show their likeness to nursing and to be satisfied in their study.

One of the few studies in Jordan by Jrasat, Samawi, and Wilson which investigated beginning Jordanian nursing students' attitudes toward the nursing profession in two associate programs showed that student's personal desire to become a nurse accounted for only 31 % of the total,<sup>23</sup> while in our study 60% of the students chose nursing based on desire. In Iran, Adib-Hajbaghery and Dianati found that most students decided to go to nursing college while they were in high-school level and chose nursing because they had a desire to help others.<sup>2</sup> The findings of Hemsley-Brown and Foskett study showed that almost 90% of students had a career choice regardless of the financial rewards and their choice was based on desire and interest in helping people.<sup>21</sup> On the other hand, Baykal et al. revealed that many nursing students in Turkey chose nursing as a last resort because they had no choice to go into university education other than nursing.<sup>5</sup> Thus, based on the findings of this study, it is important for students who will be enrolled in the nursing profession to have a desire to study nursing in the first place.

In general, being a female who chooses to study nursing due to special interest in nursing and not necessarily with good standing in the school grades was more capable of showing likeness or satisfaction with the nursing career. The students' characteristics: gender, choice to study nursing and high-school grades were able to explain .35 of the academic performance as manifested by GPA. This result shows that female students who are used to being top of their classes, and chose to study nursing based on their desire were able to keep a high GPA at the university level.

### Conclusion

As the number of nursing students being admitted to nursing programs becomes unprecedented, it becomes important to consider certain characteristics rather than focusing on students number in order to have more nurses that are successful. Based on the results of this study, it would be unwise to rely solely on students' school grades as the criteria for admission to nursing programs. High-school grade was only significant in predicting the university GPA.

As a nurse, it is important to like the profession, and to be satisfied in its practice. Nursing students with high school grades admitted to a nursing program because of their interest in nursing are more likely to get higher GPA and to like their professional choice. However, the findings of this study should be considered with caution because the sample was obtained from one setting, which is considered a limitation of this study.

### Recommendations and Implications

Although variables such as students' desire to study nursing and good school performance may indicate which students will possess positive attitudes toward nursing with high chances for success. It is recommended to replicate this study on a larger sample from different universities before adopting the findings for changing the admission policy to nursing programs.

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## معايير القبول لطلبة التمريض وفرص نجاحهم فيه كمهنة ودراسة

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### الملخص

هدفت الدراسة إلى تعرّف الخصائص الشخصية والأكاديمية التي يجب أن تتوافر في الطلبة المقبولين لدراسة التمريض، ويمكن أن تتنبأ بفرص نجاحهم، وذلك بدلالة رضاهم عن الدراسة ومعدل علاماتهم الجامعي وحبهم لمهنة التمريض. تكونت العينة من 224 طالب وطالبة تمريض في السنة الأخيرة من الدراسة في إحدى الجامعات الحكومية في الأردن. وقد أظهرت نتائج الدراسة أن جنس الطالب ومعدل الثانوية العامة استطاعا التنبؤ بتحصيل الطالب الجامعي ورغبته في مهنة التمريض. كما أن اختيار دراسته التمريض بناءً على رغبة الطالب استطاع أن يتنبأ بأن رضا الطلبة عن دراستهم كان عالياً، ولكن لم يستطع أن يتنبأ بأن معدل علاماتهم سيكون مرتفعاً. إن اختيار طلبة التمريض المرشحين للنجاح في دراستهم بناءً على الرغبة وعلامات المدرسة هي من توصيات الدراسة للقبول في برامج التمريض.

الكلمات الدالة: معايير القبول، طلبة التمريض، النجاح.