**RESEARCH ARTICLE**

# Factors Affecting Students' Preference for Nursing Education and their Intent to Leave: A Cross-sectional Study

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**Abstract:**

***Introduction:***

Insufficient research has been conducted into the factors that prompt young students to select nursing education as a profession in Saudi Arabia.

***Aim:***

The aim of the study is to identify factors affecting students' preference for nursing education and their intent to leave.

***Methods:***

This study follows a descriptive cross-sectional research design, with data collected by adapting the Tan-Kuick questionnaire to measure second-year nursing students' (n=162) preference for nursing education and intent to leave one academic institution in Saudi Arabia.

***Results:***

Nursing image is identified as the major factor influencing the nursing students' preference for nursing education in Saudi Arabia ($69.89 \pm 16.49$), and parents' image of nursing is identified as the factor with the least amount of influence ($34.52 \pm 22.04$). Additionally, more than half of the nursing students surveyed report intending to leave the nursing profession. Regarding the reasons for their intent to leave, a total of 70% of the surveyed nursing students report having no interest in the nursing profession. Family disagreement and societal image are also identified as common prompts to leave nursing.

***Conclusion:***

The study recommends the use of media to enhance the image of the nursing profession through the presentation of role models that talk to the students and encourage and motivate them to engage in the working life of a nurse. In addition, the study suggests replicating the longitudinal study for the same group in their third and fourth year of study to see if they leave the nursing profession.

**Keywords:** Students' preference, Intent to leave, Nursing image, Nursing education, Saudi Arabia, Healthcare organizations.

## 1. INTRODUCTION

Research has consistently highlighted that the shortage of qualified nurses is an international issue [1]. The number of new nurses entering the workforce recruited internationally or newly graduates will not cover the shortages in healthcare because the number of nursing students entering the nursing profession was lower than the number of nursing students exiting it [2]. Recently, the adverse consequences of having shortages of nurses working in different healthcare organizations have attracted significant attention [3]. Nursing literature has identified the main reasons for selecting nursing as a career option. It has also shown that the perceptions of adolescents regarding their ideal career differ considerably from their perceptions regarding the nursing profession. This may explain why few students select the nursing profession and many students leave the profession [4]. In 2012, the American Nurses' Association noted a 19% decrease in the number of students enrolling in nursing between 2005 and 2010, which was complicated by a similar increase in the

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number of students leaving the profession after graduation, which resulted in an imbalance between the numbers entering and the numbers leaving the profession [5].

There is extensive and well-developed evidence of factors that influence student preference. However, research regarding preference for nursing is limited, particularly in the context of Saudi Arabia. Therefore, additional research is required to identify factors that influence student preferences in this area so that evidence-based strategies can be used to persuade nursing students to continue to pursue a nursing career. Several studies of nursing have suggested factors that may influence students' preferences. These include optimism [6], nursing image, ability, parents' image of nursing, encouragement of the decision to study nursing, and peers' image of nursing [7 - 12]. These factors have also been supported by a further study that identified intellectual and social emphases, practicality, and the advice of others as the main determinants of students' college preference [13].

Despite the increase in the number of educational institutions providing nursing programs, Saudi Arabia faces a chronic shortage of Saudi nurses accompanied by high rates of turnover. The proportion of Saudi nurses in each healthcare organization in Saudi Arabia is exceptionally low in general [14]. However, the status of nursing should be enhanced to make it a worthwhile career. In this context, the media plays a key role in promoting a positive image of the nursing profession. Moreover, educational institutions should reconsider the length of nursing training (which is five years in Saudi Arabia compared to three years in many developed countries) while maintaining competent and safe practice. Furthermore, reducing the financial burden on nursing students through the provision of additional financial support would encourage more students to study nursing. In particular, nurses should be paid a full salary during their intern year, as currently occurs with medical students [15].

Nursing is well known as a hospital-based profession. Nevertheless, a lack of evidence regarding career preferences for nurses incorporates research, teaching, and healthcare management, which has resulted in an increased demand for well-educated nurses. Poor nursing image and lack of awareness regarding the nursing profession have been identified as the main reasons why the nursing profession is undervalued. A few studies have aimed specifically to identify the factors that influence students to select nursing as a career in the Saudi Arabian context. These studies have focused on identifying the key elements that play an important role in students' preference for nursing as a career. However, these studies have not formed the overarching perspective that is essential to this study. In addition, research has shown that discussion and enrolment marketing strategies are largely

influenced by international nursing literature results and recommendations. Hence, this study aims to identify factors that influence students' preference for selecting the nursing profession as a career and is the first study to examine students' intent to leave the career and reasons for doing so.

## 2. MATERIALS AND METHODS
### 2.1. Study Design and Sample

A descriptive cross-sectional research design was implemented to identify factors affecting students' preference for nursing education and their intent to leave. The study was conducted at the faculty of nursing that provides a baccalaureate nursing program for female section only at one academic institution located in Jeddah City in Saudi Arabia, which was selected because of the large number of students in the second year. The study sample was a convenience sample of 162 second-year nursing students. The inclusion criteria identified any second-year nursing student enrolled at the selected academic institution to study nursing.

### 2.2. Data Collection Method

Data was collected *via* a questionnaire. The questionnaire used in this study was adapted from Tan-Kuick (2012) [16]. It consisted of two parts. Part I included questions related to demographic characteristics data such as age, marital status, number of children, residence; dichotomous questions about the students' intent to leave nursing; and open-ended questions about the reasons for their intent to leave or stay. In Part II, a five-point Likert scale was used to measure students' responses to 34 items related to the following factors that may influence students' preference for nursing education: ability (7 items), optimism (7 items), nursing image (7 items), parents' image of nursing (3 items), peers' image of nursing (5 items), and nursing preference (5 items). Five specialized faculty staff validated the tool. The study was piloted on 10% of the participants. In addition, a coefficient **α** test revealed reliability of **0.90**. Written consent was obtained from the participating students.

### 2.3. Data Collection Procedure

Ethical approval was obtained from the ethical committee of the faculty of nursing at the academic institution. An explanation of the study details and information was given to the students at the end of the class. Moreover, it was explained that participation in the study was voluntary. Furthermore, the students were assured regarding the privacy and confidentiality of their responses as the survey will be anonymous and without names. The questionnaire was delivered manually to the study sample to be completed and returned. The data collection process took from September to October 2018.

**Table 1. Socio-demographics of nursing students.**

| Demographic Characteristics | No. | Percentage % |
|---|---|---|
| Age (Years) | | |
| 16 – 18 | 22 | 13.6 |
| 19 – 21 | 130 | 80.2 |
| 22 – 24 | 8 | 4.9 |

*(Table 1) contd.....*

| | | |
|---|---|---|
| ≥ 25 | 2 | 1.2 |
| **Gender** | | |
| Female | 162 | 100% |
| Male | 0 | 0 |
| **Marital Status** | | |
| Single | 161 | 99.4 |
| Married | 1 | 0.6 |
| Divorced | 0 | 0.0 |
| Widowed | 0 | 0.0 |
| **No. of Children** | | |
| None | 161 | 99.4 |
| 1 | 1 | 0.6 |
| 2 | 0 | 0.0 |
| 3+ | 0 | 0.0 |
| **Residence** | | |
| Campus | 17 | 10.5 |
| Alone | 7 | 4.3 |
| With Family | 138 | 85.2 |

**Table 2. Descriptive analysis of the studied students according to factors affecting their preference for nursing education.**

| Factors affecting students' preference for nursing education | Mean | SD |
|---|---|---|
| Ability | 66.31 | 15.79 |
| Optimism | 67.53 | 20.89 |
| Nursing Image | 69.89 | 16.49 |
| Parents' Image of Nursing | 34.52 | 22.04 |
| Peers' Image of Nursing | 48.40 | 13.36 |
| Nursing Preference | 35.74 | 24.51 |
| Overall | 57.36 | 13.88 |

### 2.4. Data Analysis

The data were collected, tabulated, and analyzed using IBM SPSS software package Version 20. The results for the open-ended questions were described using numbers and percentages. Quantitative data were described using range (minimum and maximum), mean, and standard deviation — the significance of the obtained results was judged at the 5% level. A student's t-test for normally distributed quantitative variables was conducted to compare between two studied groups and an F-test (ANOVA) for normally distributed quantitative variables was conducted to compare between more than two groups.

## 3. RESULTS

### 3.1. Characteristics of the Study Sample

Table **1** shows that 80.2% of the second-year nursing students were in the 19 to 21 age group; all nursing students in the study were female 100%. The majority of the nursing students (99.4%) were single; and a total of 85.2% of the nursing students lived with their families, whereas 4.3% lived alone.

Table **2** presents the mean percentages of the scores given by the nursing students regarding factors affecting their preference for nursing education (57.36 ±13.88). It shows that nursing image, optimism, ability, peers' image, nursing preference, and parents' image were identified as the most significant predictors of the students' preference for nursing education. The highest mean score percentages (69.89 ± 16.49) were obtained for the nursing image factor and parents' image of nursing was identified as the lowest scoring factor (34.52 ± 22.04).

Table **3** presents the second-year students' opinions regarding factors affecting students' preference for nursing education. Regarding the ability factors, "I enjoy meeting people" was ranked the highest (4.14 ± 01) by participants, and "I have always wanted to be a nurse" was ranked the lowest (2.4 ± 1.33). Regarding the optimism factors, "Nursing study allows me to learn more about applicable knowledge" achieved the highest mean score (4.06 ± 0.98), and the lowest mean score (3.38 ± 1.19) was obtained for "I am positive of my career advancement in nursing".

In relation to the second year's opinions regarding nursing image, the highest mean score (4.48 ± 0.88) was in response to "Nursing is a caring and helpful profession", and the lowest mean score (2.95 ± 1.20) was in response to "Nursing is a poorly paid profession". In addition, for parents' image of nursing as a factor affecting students' preference to nursing education, the highest mean score " (2.72 ± 1.33) was in response to "My parent(s) believes(s) that nursing is a reliable and rewarding career, and the lowest mean score (1.72 ± 0.85) was obtained for "I chose nursing education because my parent(s) is/are in the same profession". Moreover, "My

friend(s) is/are positive about nursing education" represented the highest mean score (3.57± 1.22) relating to the peers' image of nursing factor, and "I chose nursing education because my friend(s) is/are in the same profession" represented the lowest mean score (1.96 ± 1.01) for this factor. With regard to the nursing preference factor, "I am satisfied with my education choice" was ranked highest (3.02 ± 1.21); conversely, "Nursing is my first choice of university education" was ranked lowest (2.13 ± 1.16).

Table **4** shows the second-year students' opinions regarding the intent to leave and causes. More than half of the students (55.6%) stated that they intended to leave the nursing profession, 29% of them stated that they did not intend to leave, and 15.4% stated that they may or may not intend to leave. Regarding causes of intent to leave, 70% of those who intended to leave did not love the nursing profession. On the other hand, one-quarter of them (25.6%) intended to leave due to family disagreement, and 17.8% intended to leave due to social image. On the contrary, of those who did not intend to leave, 85.1% stated that they loved nursing, and 12.8% wanted to stay in the field due to employment opportunities.

**Table 3. Distribution of the studied students according to factors affecting their preference for nursing education.**

| Factors | Items | Mean | SD |
|---|---|---|---|
| Ability | I have always wanted to be a nurse. | 2.4 | 1.33 |
| | I am capable of caring for and helping others. | 4.12 | 1.11 |
| | I am able to understand others in need. | 3.96 | 1 |
| | I am able to cope in a demanding and stressful environment. | 3.66 | 0.91 |
| | I enjoy meeting people. | 4.14 | 1 |
| | I have good interpersonal skills | 3.9 | 0.85 |
| | Nursing is too difficult for me. | 3.4 | 1.2 |
| | Nursing study enables one to gain an acceptable university education and appreciation of ideas. | 3.67 | 0.99 |
| Optimism | Nursing study allows me to learn more about applicable knowledge. | 4.06 | 0.98 |
| | Nursing study prepares me for my chosen career. | 3.59 | 1.23 |
| | Nursing provides extensive job mobility and opportunities. | 3.82 | 1.09 |
| | I am positive about my career advancement in nursing | 3.38 | 1.19 |
| | I am positive about my education advancement in nursing. | 3.49 | 1.22 |
| | Nursing provides the opportunity to grow professionally. | 3.89 | 1.03 |
| Nursing Image | Nursing is a caring and helping profession. | 4.48 | 0.88 |
| | Nursing is a challenging and exciting profession. | 4.14 | 1.03 |
| | Nursing is a profession that exercises great autonomy. | 3.85 | 1.09 |
| | Nursing commands respect and recognition. | 3.69 | 1.24 |
| | Nursing provides job security. | 3.83 | 1.15 |
| | Nursing is a stressful and demanding profession. | 3.64 | 1.04 |
| | Nursing is a poorly paid profession. | 2.95 | 1.20 |
| Parents' Image of Nursing | I chose nursing education because my parent(s) is/are in the same profession. | 1.72 | 0.85 |
| | My parent(s) believe(s) that nursing is a reliable and rewarding career. | 2.72 | 1.33 |
| | My parent(s) is/are positive about nursing education. | 2.70 | 1.40 |
| | I chose nursing education because my friend(s) is/are in the same profession. | 1.96 | 1.01 |
| Peers' Image of Nursing | My friend(s) think(s) that nursing is an altruistic profession. | 3.17 | 1.16 |
| | My friend(s) think(s) that nursing is an appealing profession. | 3.35 | 1.06 |
| | My friend(s) think(s) that nursing is a female profession. | 2.64 | 1.11 |
| | My friend(s) is/are positive about nursing education. | 3.57 | 1.22 |
| Nursing preference | Nursing is my first choice of university education. | 2.13 | 1.16 |
| | Nursing is my first choice of career. | 2.27 | 1.28 |
| | I always wanted to be a nurse. | 2.34 | 1.25 |
| | I am satisfied with my education choice. | 3.02 | 1.21 |
| | I am thinking of making a change in my education choice. | 2.38 | 1.33 |

**Table 4. Distribution of the studied students according to intent to leave and causes.**

| Intent to Leave | No. | Percentage % |
|---|---|---|
| **Do you intend to leave nursing?** | | |
| Yes | 90 | 55.6 |

*(Table 4) contd.....*

| | | |
|---|---|---|
| No | 47 | 29.0 |
| Maybe yes or no | 25 | 15.4 |
| **If yes (n = 90)** | | |
| I don't love the nursing profession | 63 | 70.0 |
| Society image | 16 | 17.8 |
| Family disagreement | 23 | 25.6 |
| Difficult study | 9 | 10.0 |
| Low salary | 2 | 2.2 |
| **If no (n = 47)** | | |
| I love the nursing profession | 40 | 85.1 |
| Employment opportunities | 6 | 12.8 |
| High salary | 4 | 8.5 |
| No other opportunities | 3 | 6.4 |

**Table 5. Relationship between factors affecting the preference for nursing education and intent to leave of students at King Abdul–Aziz University and their demographic data (n = 162).**

| Demographic Data | Ability | Optimism | Nursing Image | Parents' Image of Nursing | Peers' Image of Nursing | Nursing Preference | Overall |
|---|---|---|---|---|---|---|---|
| **Age (Years)** | **Mean ± SD** | **Mean ± SD** | **Mean ± SD** | **Mean ± SD** | **Mean ± SD** | **Mean ± SD** | **Mean ± SD** |
| 16 – 18 | 58.44 ± 16.48 | 57.47 ± 22.34 | 63.15 ± 22.60 | 32.20 ± 22.17 | 46.14 ± 13.80 | 27.73 ± 22.66 | 50.57 ± 15.54 |
| 19 – 21 | 67.61 ± 15.05 | 69.29 ± 19.46 | 71.35 ± 14.76 | 35.13 ± 22.23 | 48.54 ± 13.10 | 36.81 ± 24.20 | 58.52 ± 12.67 |
| 22 – 24 | 70.09 ± 20.99 | 67.41 ± 34.33 | 67.86 ± 21.85 | 33.33 ± 23.15 | 51.88 ± 18.50 | 44.38 ± 33.11 | 59.38 ± 23.57 |
| ≥ 25 | 53.57 ± 10.10 | 64.29 ± 5.05 | 57.14 ± 0.0 | 25.0 ± 0.0 | 50.0 ± 0.0 | 20.0 ± 7.07 | 48.53 ± 0.0 |
| **F(p)** | 2.793*(0.042*) | 2.063 (0.107) | 2.040 (0.110) | 0.243 (0.866) | 0.401 (0.753) | 1.485 (0.221) | 2.450 (0.066) |
| **Residence** | **Mean ± SD** | **Mean ± SD** | **Mean ± SD** | **Mean ± SD** | **Mean ± SD** | **Mean ± SD** | **Mean ± SD** |
| Campus | 59.03 ± 15.57 | 53.99 ± 26.33 | 58.19 ± 24.02 | 27.94 ± 24.11 | 46.18 ± 10.54 | 28.24 ± 20.61 | 48.66 ± 16.28 |
| Alone | 61.22 ± 22.34 | 61.73 ± 25.23 | 64.29 ± 12.88 | 38.10 ± 27.16 | 46.43 ± 14.92 | 33.57 ± 28.97 | 53.68 ± 18.29 |
| With Family | 67.47 ± 15.28 | 69.49 ± 19.39 | 71.61 ± 14.95 | 35.14 ± 21.54 | 48.77 ± 13.64 | 36.78 ± 24.72 | 58.62 ± 13.01 |
| **F(p)** | 2.591 (0.078) | 4.646*(0.011*) | 5.749*(0.004*) | 0.904 (0.407) | 0.361 (0.697) | 0.947 (0.390) | 4.325*(0.015*) |

F: **F for ANOVA test**
p: p value for the relationship between factors affecting the preference for nursing education and intent to leave of students at King Abdul–Aziz University and their demographic data
*: Statistically significant at p ≤ 0.05

**Table 6. Relationship between factors affecting the preference for nursing education and intent to leave of students at King Abdul–Aziz University and their demographic data (n = 162).**

| Demographic Data | Ability | Optimism | Nursing Image | Parents' Image of Nursing | Peers' Image of Nursing | Nursing Preference | Overall |
|---|---|---|---|---|---|---|---|
| **Marital Status** | **Mean ± SD** | **Mean ± SD** | **Mean ± SD** | **Mean ± SD** | **Mean ± SD** | **Mean ± SD** | **Mean ± SD** |
| Single | 66.33 ± 15.84 | 67.72 ± 20.81 | 70.08 ± 16.37 | 34.58 ± 22.09 | 48.51 ± 13.32 | 35.84 ± 24.55 | 57.48 ± 13.84 |
| Married | 64.29 | 35.71 | 39.29 | 25.0 | 30.0 | 20.0 | 38.24 |
| **t(p)** | 0.128 (0.898) | 1.534 (0.127) | 1.875 (0.063) | 0.432 (0.666) | 1.385 (0.168) | 0.643 (0.521) | 1.386 (0.168) |
| **No. of Children** | **Mean ± SD** | **Mean ± SD** | **Mean ± SD** | **Mean ± SD** | **Mean ± SD** | **Mean ± SD** | **Mean ± SD** |
| None | 66.33 ± 15.84 | 67.72 ± 20.81 | 70.08 ± 16.37 | 34.58 ± 22.09 | 48.51 ± 13.32 | 35.84 ± 24.55 | 57.48 ± 13.84 |
| 1 | 64.29 | 35.71 | 39.29 | 25.0 | 30.0 | 20.0 | 38.24 |
| **t(p)** | 0.128 (0.898) | 1.534 (0.127) | 1.875 (0.063) | 0.432 (0.666) | 1.385 (0.168) | 0.643 (0.521) | 1.386 (0.168) |
| **Do you intend to leave nursing?** | **Mean ± SD** | **Mean ± SD** | **Mean ± SD** | **Mean ± SD** | **Mean ± SD** | **Mean ± SD** | **Mean ± SD** |
| Yes | 61.62 ± 15.03 | 61.04 ± 20.55 | 66.92 ± 17.97 | 29.85 ± 20.11 | 45.32 ± 13.0 | 24.50 ± 13.70 | 51.93 ± 12.06 |
| No | 76.24 ± 12.49 | 81.25 ± 13.89 | 76.17 ± 10.46 | 44.39 ± 22.85 | 54.90 ± 11.78 | 59.52 ± 25.42 | 68.85 ± 9.99 |
| **t(p)** | 6.085* (<0.001*) | 7.356* (<0.001*) | 4.121* (<0.001*) | 4.111* (<0.001*) | 4.513* (<0.001*) | 9.315* (<0.001*) | 8.789* (<0.001*) |

**t**: Student's t-test. **p**: p value for the relationship between factors affecting the preference for nursing education and intent to leave of students at King Abdul–Aziz University and their demographic data *: Statistically significant at p ≤ 0.05

Tables **5** and **6** show the relationship between the overall factors affecting the student's preference for nursing education, intent to leave, and demographic characteristics. A significant relationship was identified between the overall factors and two socio-demographic characteristics - nursing students' residence and intent to leave. In addition, no significant relationship was identified between overall factors and age, marital status, and a number of children.

There was a significant difference between the ability factors and two socio-demographic characteristics — age and intent to leave. However, there was no significant relationship between the ability factors and the marital status, number of children, and residence socio-demographic characteristics. With regard to age, the nursing students in the 22–24 age group reported higher scores (70.09 ± 20.99) for the ability factors compared to those in the 25-plus age group (53.57 ± 10.10). In addition, the students who did not intend to leave nursing gave lower scores (76.24 ± 12.49) for the ability factors compared to those who intended to leave (61.62 ± 15.03).

Likewise, there was no significant difference between the optimism factors in terms of age, marital status, and the number of children. However, there was a significant difference between the same factors in term of residence and intent to leave. The students who lived with their families gave higher scores (69.49 ± 19.39) than those who lived on campus (53.99 ± 26.33). On the other hand, students who did not intend to leave nursing gave higher scores for the optimism factors (81.25 ± 13.89) compared to those who intended to leave (61.04 ± 20.55).

Regarding the nursing image factors, age, marital status, and a number of children did not differ significantly. Conversely, residence and intent to leave differed significantly. The results showed that students who lived with their families ranked nursing image factors higher than those who lived on campus (71.61 ± 14.95 and 58.19 ± 24.02, respectively). In relation to intent to leave, the students who did not intend to leave nursing tanked the nursing image factors higher than those who intended to leave (76.17 ± 10.46 and 66.92 ± 17.97, respectively).

With regard to the difference between parents' and peers' images of nursing, and nursing preference with socio-demographic characteristics, the same tables illustrate that there was no significant difference between the mean scores of these factors and each of the sociodemographic characteristics except intent to leave. Indeed, the students who did not intend to leave nursing reported higher scores regarding these factors compared to those who intended to leave (44.39 ± 22.85, 54.90 ± 11.78, and 59.52 ± 25.42 compared to 29.85 ± 20.11, 45.32 ± 13.0, and 24.50 ± 13.70, respectively.

## 4. DISCUSSION

This study aimed to identify factors affecting students' preference for nursing education and their intent to leave. The results demonstrated that the nursing image was the most common factor affecting student's preference for nursing education. This reflects the findings of previous research which have indicated that nursing is not recommended as a career among young people and is referred to as a "dying profession"

[17]. However, the data provided from this study were obtained from female nursing students only due to the fact that the baccalaureate program in the study setting is only provided for female nursing students. Hence, this result can be explained by the lack of awareness in Saudi society regarding the nursing profession as a result of cultural constraints that prohibit and limit the gender mix and working in night shifts.

In the context of the nursing image, nursing as a caring and helpful profession was observed to be an imperative item. Indeed, the desire to help or care for others in the nursing profession has been reported in several studies conducted in various countries [3, 18 - 22]. Although in Gulf countries, the nursing profession is generally not socially accepted, with cultural issues influencing the values attached to nursing as a career choice, one study found that nursing students in Bahrain perceived the nursing profession as a humanitarian profession that aims to help and provide care for people [23]. Likewise, a study conducted in Canada found that students had a positive view of nurses, "seeing them as kind, compassionate people in an exciting career that would make them feel good about what they are doing" [24]. Thus, the results of this study could be due to the perception of nursing as a humanistic profession.

Optimism was the second category of factors identified as affecting students' preference for nursing education. In this context, the students perceived that nursing study allowed them to learn applicable knowledge, which was highlighted as a factor that influenced their preference for nursing education. This result may be due to the application of theoretical knowledge in practice in different nursing programs provided by the educational institution. Moreover, the ability was also identified as a factor affecting students' preference for nursing education, and students reported enjoying meeting people. This is consistent with the results of a previous study, which found that students demonstrated the abilities or characteristics associated with being a nurse, as they could communicate with people and help or assist others [25]. A possible explanation of this result is that the nursing profession provides the opportunity for students to meet and deal with a variety of people and other professionals of different nationalities.

In addition, peer image was identified as the fourth factor affecting student preference for nursing education. In this context, the nursing students in this study perceived peers who hold positive perceptions as highly influential in encouraging others to enter and select nursing education. Furthermore, support from friends was deemed to have a crucial role in decision making, particularly regarding career choice. This result is in agreement with two different studies, which both found that positive peer perception had a significant influence on the selection of nursing as a profession [11, 26]. Furthermore, an additional study found that students who entered nursing programs were influenced and encouraged by friends and peers in the nursing field as well as their participation in voluntary activities before joining the nursing field [25].

Despite the student responses regarding the factors discussed above, in the context of nursing preference, the students ranked "Nursing is my first choice of university education" lowest. This result is consistent with a study, which

identified a reason for becoming a nurse as the inability to enroll in other study programs [22]. This suggests that this result was obtained due to a lack of other opportunities for the students to select other specialties at university. In addition, the nursing field is considered similar and close to other specialties in other faculties, such as medicine, pharmacy, and dentistry, that require higher GPAs.

Parent image was identified in this study as the factor that affecting the students' preference for selecting nursing education. However, the results showed that the parent(s) were perceived as viewing nursing as a reliable and rewarding career. This result is in line with a previous study which found that parents who demonstrated a positive mindset towards nursing influenced students' motivation to select the nursing profession as a path of study [16]. This result can be explained through Vision 2030, which has placed emphasis on increasing employment opportunities for Saudis. In the current study, more than half of the students stated that they intended to leave nursing education. Regarding the intent to leave, 70% of those who intended to leave did not love the nursing profession. Conversely, other researchers have identified different reasons for pursuing nursing, such as personal aspirations (*e.g.*, enjoyment or love of nursing) and career aspirations (*e.g.*, the ability to enter university education) [3]. Indeed, enjoyment of nursing or a love of nursing has been recorded in many studies [27 - 29].

The results of the current study showed that more than half of students intended to leave the nursing profession. This study provided better insight into how the Saudi government's efforts to enhance nursing enrolment can be consistent with the factors that can affect secondary school preference for university nursing. Present activities include the visit of high schools to educate and enhance the reputation of the nursing profession as well as increasing opportunities for dialogue between students and their parents and conducting enrollment meetings in secondary schools. The Ministry of Health in Saudi Arabia has already developed various strategies to supply healthcare institutions with ample nurses as part of the scope of the Saudi Vision 2030 [30].

Nursing students' residence and intent to leave were significantly associated with the overall factors influencing the students' preference for nursing education. However, the results showed that the significance of ability decreased with age. The nursing students were aware of their skills and abilities. They used their interpersonal skills and ability to cope with physical difficulties and stress, which previous research has identified as important factors for student preference [3]. In addition, the results showed that students who lived with their families ranked nursing image as an affecting factor higher than those who lived alone on campus. This result could be explained in relation to the fact that families are considered a valuable source of support for students, and a lack of family support can create difficulties for students in continuing their studies. Indeed, previous studies have identified family relationships as the most common source of stress in students [31, 32].

The results of the study highlighted the impact of positive parents and peers on the nursing image. In addition, ability, optimism, and nursing preferences were identified as the factors most significantly affecting students' intent to leave nursing. Previous research has shown that negative perceptions of nursing have led to a decline in interest among school leavers, resulting in inadequate numbers of young people entering the nursing profession [33]. Indeed, the intention to leave nursing in the current study correlated positively with participants having a negative image of nursing. In terms of limitations, the major limitation of this study was that it was limited to one faculty of nursing at one institution, which limited the generalizability of the results.

## CONCLUSION

In conclusion, the study found that the factor with the greatest influence on the female Saudi nursing students' preference for nursing education was nursing image. On the other hand, parents' image of nursing was identified as the factor with the least influence. In addition, more than half of the students intended to leave the nursing profession. Regarding the reasons for students' intent to leave, more than half of those who intended to leave did not have an interest in the nursing profession. Family disagreement and society image were also identified as common reasons to leave nursing. Thus, it is recommended to use the mass media to enhance the image of the nursing profession in society, such as presenting role models to talk to the students in order to encourage them and motivate them to engage in the working life of a nurse. Educators should be aware of factors that could help increase nursing student enrolment in Saudi Arabia and may aid in improving the perception of the nursing profession in Saudi culture. This could be achieved by providing secondary school authorities with adequate and useful information with which to enhance nursing image and assist students with making the decision to enter nursing education, arouse more enthusiasm and motivation amongst nursing students, and have a positive impact on retention in the nursing profession. Additionally, a further study to identify factors affecting the same group of students' preferences for nursing education and intent to leave from both gender from different nursing colleges in the Kingdom of Saudi Arabia is recommended. Moreover, further longitudinal research is recommended to identify factors affecting the same group of students' preferences for nursing education and intent to leave during their third and fourth year of study.

## ETHICS APPROVAL AND CONSENT TO PARTI-CIPATE

Ethical approval was obtained from the ethical committee of the faculty of nursing at the academic institution, King Abdulaziz University, Saudi Arabia (NREC Serial No:Ref No 1F.36).

## HUMAN AND ANIMAL RIGHTS

Not applicable.

## CONSENT FOR PUBLICATION

All patients participated on a voluntary basis and gave their informed consent.

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