Article

Nursing Students' Success: Selection Characteristics

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Abstract

Higher education institutions (HEIs) are challenged by increased costs, low student success rates, and a changed educational environment. A continuous exploration of possible solutions to these challenges is therefore required. The HEI concerned encountered similar challenges in ensuring nursing students' success. The purpose of this study was to explore the views of lecturers and senior nursing students regarding selection characteristics and to make recommendations regarding student characteristics. A qualitative, explorative, and descriptive design was used to collect data purposefully from lecturers and students. Five semi-structured interviews were conducted with lecturers and two World Café discussions were held with 19 senior students. Trustworthiness measures and ethical principles were applied. This article aims to share the views of lecturers and senior students on selection characteristics that may enhance the success of students in a nursing programme to inform further research. The findings suggest that personal characteristics such as a caring attitude, resiliency, commitment, and conflict management skills are important. An acceptable performance at secondary school level and in specific secondary school subjects is suggested. A fair selection process should include an interview and a psychometric test. It is recommended that all candidates be tested for specific personal characteristics for the purpose of risk identification and support, but not as selection criteria. Further research is required to determine the predictive value that these characteristics and the selection process have for academic success.

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Introduction and Background Information

Higher education institutions (HEIs) are constantly searching for strategies to improve students' chances of success (Tight 2019, 689). Success is often clarified in terms of academic achievement. York, Gibson, and Rankin (2015, 9) describe success in terms of academic achievement, satisfaction, the acquisition of skills and competencies, persistent attainment of learning objectives, and career success. Nursing students need to be prepared for a challenging career, including stressors such as staff shortages, shift work, overload, and feeling powerless to provide quality care (Yılmaz 2017, 10). Selecting the most appropriate candidates, who will not only perform well academically but also be able to fit into the nursing profession, is thus essential.

Admission testing correlates significantly with successful completion of a programme (Jeffrey, Harris, and Sherman 2019, 65). Various tests are used to select candidates for nursing programmes. Tests utilised in the USA include the Test of Essential Academic Skills (TEAS), the Health Education Systems Incorporated (HESI) admissions test, and the Nursing Entrance Test (NET) (Jeffrey, Harris, and Sherman 2019, 66). A test commonly used in various countries, including South Africa, is the Grade Point Average (GPA) score. It is similar to the Admission Point Score (APS) and is based on secondary school performance (Crouch 2015, 51; Jeffrey, Harris, and Sherman 2019, 65).

Interviews are often used in addition to admission tests to determine whether students possess the qualities needed to succeed in a nursing programme. The utilisation of Multiple Mini Interviews (MMIs) became popular in selecting prospective students (Gale et al. 2016, 125; Traynor, McGowan, and Gillespie 2018). However, Yusoff (2019, 238) suggests that further research is needed to determine the educational effect of non-cognitive aspects. Non-cognitive aspects form an important component of the nursing profession. Several studies have examined these characteristics and their influence on student success. These are, inter alia, resiliency (Ozsaban, Turan, and Kaya 2019, 69), emotional intelligence (Suleman et al. 2019), values such as respect and dignity (Miller 2015, 41), and spiritual wellbeing (Beauvais et al. 2014, 918). All these studies indicated that these non-cognitive characteristics contribute to student success.

Studies inconsistently report on age, gender, and culture as influential predictors of success. Wray et al. (2017, 18) indicated that mature students progress faster than younger students, while Gale et al. (2016, 127) reported that age and gender do not influence students' success. Other studies found that female students performed better than male students (Dube and Mlotshwa 2018, 5; Spurlock, Patterson, and Colby 2019, 346). There is consensus that culture and language are substantial predictors of student success (Denham et al. 2018, 176; Mthimunye and Daniels 2019, 210). It is suggested that nurse educators need to adjust their teaching and supporting strategies to accommodate students who speak English as a second language.

Problem Statement

Selecting suitable candidates for nursing programmes, in an effort to prepare student nurses to meet the registration requirements of professional bodies and nursing practice, continues to be a topic of concern nationally (Mthimunye and Daniels 2019, 201) and internationally (Jeffrey, Harris, and Sherman 2019, 65). A wealth of research has been done on student selection and the characteristics that influence their success (Du Pokoy 2011). However, students' profiles continue to change as they become more technologically skilled (Hills et al. 2017). Nursing education institutions thus need to adjust their selection strategies to ensure that candidates demonstrate academic potential and the characteristics and values proper to the nursing profession (Gale et al. 2016, 123).

A quantitative study by Du Pokoy (2011) set out to determine the association of selection components with successful completion of the first year of a four-year Bachelor of Nursing programme. Variables that were significantly associated with academic success in the first year of study were internal locus of control; a higher age; senior certificate results for English, Afrikaans, Biology, and Mathematics; and class- and work-integrated learning attendance (Du Pokoy 2011). This study focused on the first year of study, based on pre-existing criteria used for selection.

The specific nursing programme being reported on in this article used the APS, a Potential Assessment Test, and an interview to select candidates. The Potential Assessment Test measures verbal reasoning, numerical reasoning, and abstract reasoning. The interview measures components of emotional intelligence (Goleman 1996). Du Pokoy (2011) determined that the Potential Assessment Test relevant to that particular study was not predictive of successfully completing the first year of study.

A new selection strategy was required in this research setting. The researchers decided to approach the study in an inductive manner, based on the views of students and lecturers in the setting. In order to get an insider view, it was important to explore the views of lecturers and students regarding the characteristics they believed were necessary in order to be successful in a four-year undergraduate nursing programme. The researcher therefore opted to approach the study in an open and inductive manner. Further studies, similar to that of Du Pokoy (2011), can be conducted to measure the predictive value of the characteristics identified in this study for success in a nursing programme.

Purpose and Objectives

The purpose of this study was to inductively explore selection characteristics with a view to enhancing students' chances of success in a four-year undergraduate nursing programme. The views of students and lecturers were explored in order to make recommendations regarding selection characteristics that have the potential to enhance

students' chances of success. These characteristics should be measured in future longitudinal studies.

The research objectives were to:

- explore and describe the views of lecturers and senior students on student selection factors that have the potential to enhance students' chances of success in an undergraduate nursing programme
- make recommendations about student selection characteristics that may enhance students' chances of success.

Theoretical Framework

Jeffreys' (2015, 427) Nursing Universal Retention and Success (NURS) model was adopted. This model presents a universally applicable organising framework that describes the relationship between multidimensional factors affecting nursing students' retention and success. The aim is to identify at-risk students through examining these factors. The interaction of student profile characteristics; affective, academic, and environmental surroundings; and professional integration factors indicates the retention decisions, persistence, and academic and psychological outcomes (Jeffreys 2015, 426). For this study, profile characteristics—which included age, family and educational background, and family support (emotional and financial factors)—were considered. Affective factors are related to students' cultural values and beliefs and their motivation in terms of commitment. In terms of academic factors, the GPA score was indicated as an important selection factor. In Jeffreys' (2015) NURS model an important factor was to retain student nurses.

Concept Clarification and Operational Definitions

Selection Characteristics

Selection characteristics refer to those characteristics—potentially including student profile characteristics, affective factors, and academic outcomes—which are perceived by lecturers and students as prerequisites for meeting the minimum admission requirements to a Bachelor's degree (DoH 2019, 13).

Success

Success in an educational setting refers to a student successfully completing the programme in the set time period (Manyanga, Sithole, and Hanson 2017, 31). In this setting, students are viewed as being successful when they have mastered the learning outcomes of a specific undergraduate nursing programme, which requires dedication, the ability to manage stress, and resilience.

Nursing Student

A nursing student refers to a person who has registered for a four-year nursing programme to qualify as a nurse (general, psychiatric, and community) and midwife (SANC 1985).

Methodology

Research Setting

The study was conducted at a university offering a four-year nursing degree programme. The university selects 60 to 80 students yearly for this programme. To be selected, a minimum APS of 24 is needed. Candidates are subjected to interview questions about conflict management, caring, and emotional involvement. Apart from the theoretical requirements, students are required to complete a minimum of 4 000 practical hours. Students require a range of skills to balance the academic and clinical demands of the programme.

Research Design

A qualitative, explorative, and descriptive design was followed, since the researchers felt that multiple realities (lecturers and students) would provide insight into selection characteristics as possible predictors of success in this programme. Qualitative research aims to understand human behaviour through considering multiple truths and the context, and through being committed to the participants' views (Brink, Van der Walt, and Van Rensburg 2018, 3). The design was appropriate, as the researchers intended to inductively explore the views of insiders who taught and learnt in the specific nursing programme. The characteristics identified could form the impetus for future studies designed to determine their predictive value for success and to design valid and reliable selection tools and processes.

Population and Sample

The first accessible population consisted of 15 lecturers involved in the teaching of either the theory or the practical aspects of the course, while the second accessible population consisted of 48 third-year and 43 fourth-year students. A purposive sample of five lecturers, ten third-year students, and nine fourth-year students was selected. For the purposes of obtaining insight into and understanding of a phenomenon, a purposive sample which adheres to specific criteria is the most suitable choice, as rich data can be generated (Grove and Gray 2018, 237). The inclusion criteria for lecturers were that they needed to teach the theory or practica of the selected programme, whereas the students were required to be registered for the four-year nursing programme. Students in their third or fourth year of study were chosen because they had experience of the challenges related to the programme.

Ethical Considerations

The proposal was approved by the Faculty Committee for Research Ethics of the selected university (FCRE 2017/08/003). Permission to conduct the study was sought from the dean of the faculty and the head of school. The third- and fourth-year guardian lecturers (gate keepers) were approached. Each participant who volunteered signed an informed consent letter. Limitations of anonymity regarding the World Café discussions were explained and the participants' identities were protected by using pseudonyms. The field workers and the external coder signed confidentiality agreements. The principal researcher was not a lecturer at the selected university, and thus the students' vulnerability was safeguarded.

Data Collection

The data were collected between 25 November 2017 and 23 March 2018. Two World Café discussions were conducted, separately, with ten third-year students and nine fourth-year students. This method was chosen since it facilitates relaxed discussions in an atmosphere similar to a discussion around a coffee table. Koen (2018, 17) reports that using World Café discussions as a qualitative data collection method promotes constructive dialogue. These discussions were a challenge in terms of securing a time and venue that would not infringe on the students' academic activities. Students were grouped into three to four participants per table. At each table, a specific question was discussed. There were general and more specific probes.

The general questions were:

1. Which factors will contribute to a student nurse being able to successfully deal with the challenges of this nursing programme?
2. How should the selection of nursing students be done?

The specific questions asked were:

1. Which profile characteristics influence the success of nursing students?
2. Which student affective factors influence student success?
3. Which academic factors, prior to admission, influence student success?
4. Any additional information you might think will be helpful regarding student 'success'.

A host (one of the students) was selected for each table. The host explained previous discussions once the participants had rotated to the next table. Discussions at the tables lasted for approximately 20 minutes. Trained field workers oversaw the discussions. Key views were recorded at each table on a large sheet of paper, using words and symbols. In total, the World Café discussions lasted between 90 minutes and two hours. The researcher made field notes during the discussions.

The discussions were supplemented with semi-structured individual interviews with five lecturers. The interviews lasted 45 to 60 minutes and were conducted in English in the lecturers' offices, at a time convenient for the lecturers and the school. The central theme was addressed by the following question: 'Please share your views about the student selection factors to consider during the selection process to enhance success in this undergraduate nursing programme.' Probing questions were utilised to elicit in-depth information. Similar to the World Café discussions, securing appointments with lecturers was difficult due to their work schedules—hence the small sample of five lecturers. During the data analysis it was confirmed that the two sets of data provided sufficient information and that data saturation was achieved.

Data Analysis

The audio-recorded interviews were transcribed, whilst the World Café paper tablecloths were visually displayed in preparation for analysis, together with the field notes. The data were analysed as they were collected to determine data saturation. Tesch's (1990, 142–45) method of data analysis was applied for both the interviews and the World Café discussions. An independent coder was used to verify the researcher's analysis. The two sets of data were initially analysed separately; they were later merged as similar themes and categories came to the fore.

Trustworthiness

Credibility was ensured using purposive sampling, by spending a lengthy time with the data, and through triangulation by using different methods (semi-structured individual interviews and World Café discussions) and populations (lecturers and students). Transferability was achieved by providing a dense description of the methodology and findings and having specific inclusion criteria for the samples. Detailed records, consent letters, transcripts, paper tablecloths, details of independent coder consensus discussions, and details of general discussions with supervisors were kept for auditing purposes. These aspects support dependable and confirmable findings, as suggested by Grove and Gray (2018, 86).

Findings

Participants were of the view that prospective nursing students should have the characteristics that fit the distinctive profile for this specific nursing programme. These characteristics were divided into three themes, namely student profile characteristics, educational dimensions, and the formal selection process. In the subsections below, some of the participants' responses have been edited for intelligibility.

Theme 1: Student Profile Characteristics

Participants shared their views regarding prospective nursing students' profiles in terms of age and background. They were of the view that the student's background and

personal attributes should be considered during the selection process. A lecturer expressed it as follows:

> It is very important that we have students who want to be here, who want to do the programme.

Table 1 details the categories and subcategories related to the student profile characteristics identified in the data.

Table 1: Categories and subcategories related to student profile characteristics

Category	**Subcategory**
Age	Young versus older candidates
Students' background	Geographical background Cultural background and beliefs Family support Family educational background
Personal attributes	Caring attitude Resilience Commitment Conflict management skills

Age

The participants disagreed regarding age as a factor to be consider during selection. Some participants were in favour of selecting young students, while others stated that age does not really matter. Young students were described as energetic, while mature students were depicted as being there for the financial benefit, though some might be very committed:

> Young students need a future and are energetic. They could apply their minds effectively, and as a result they grasp information much easier than the older ones. (Student)

> I don't think age really has an impact, because according to my experience we get very young students—young, young students who are excelling—and then I get older students who are there for job opportunities, but sometimes the older student is very committed. (Lecturer)

Students' Backgrounds

The element of student background was expressed in terms of the geographical area where they reside, whether urban or rural. The view was that students from rural areas have less exposure to technology and do not use English to express themselves. Both lecturers and students agree that that students' backgrounds should be considered:

> Most definitely we have got the students who studied in rural areas, where English is not spoken that much. In fact they will be teaching all the subjects in vernacular, so when it comes to class, these students face a challenge in following instructions. (Lecturer)

> The student must be computer literate, to be able to search for information and write assignments and assessments. (Student)

Regarding cultural background and beliefs, student nurses are exposed to procedures such as providing intimate care to a person of the opposite gender who might be much older than the student. They are also confronted with contentious issues such as having to assist with the termination of pregnancies. When admitted to the programme, students are confronted with new social activities, such as substance use engaged in by their peers. Participants were of the view that these issues cause internal conflict within students, as they are opposed to their culture and beliefs:

> Coming from a religion where abortion is taboo, and now in nursing one is to learn even those things that are opposed to our ways of life. (Student)

> Rural students have so many new things to learn. They sometimes lose track and become involved in drugs and alcohol and partying. (Lecturer)

There was no consensus on whether a family's educational background and financial status influence a student's success. One lecturer argued that students admired those in their families who had performed well. However, a counterargument was raised, namely that students coming from families who went to medical school did not necessarily perform better:

> During my years there were students whose parents had been to medical schools. So, they were not motivated by their educated parents; they completed the programme two years later. (Lecturer)

Family social and financial support were highlighted as contributory factors to success in the programme. Students mentioned that if they are committed they will succeed, despite failing modules and financial challenges. Lecturers noted that it is difficult for students to progress without the financial and social support of their family:

> If the family rules are available, as well as emotional support, it works. And financial support in the family—if the child does not have any financial support at home and they are not receiving a grant, they are not going to complete the programme. (Lecturer)

> When a student is eager in their studies, they can succeed despite financial issues or academic problems such as failing a module. (Student)

> If a student comes from a financially disadvantaged family, and is unable to provide for his or her needs whilst in the programme, this may have an emotional bearing on the

> progress of the student, and it may impact negatively on the student's academic progress. (Student)

Personal Attributes

Participants reasoned that to become a nurse and to succeed in the programme, students need to have a caring attitude, as this will influence success and be reflected in patient care through the nurse being empathetic. If students have a caring attitude, this will influence their learning positively:

> The students' ability to demonstrate a caring attitude has a positive influence on learning in nursing. (Student)

> Those who are passionate about the profession will have a positive and caring attitude, because they like the profession and this demonstrates the possibility of being successful. (Student)

> Caring attitude—there is a difference between nursing and caring. (Lecturer)

Both students and lecturers agreed that students need to be resilient and committed. They associated these characteristics with the ability to manage the stress caused by the theoretical and practical demands of the programme:

> Resilience is always needed, because problems will always be there, and those who are able to manage their stress, it shows in their clinical or academic work performance. (Student)

> Commitment appears to be one of the important factors that enhances success. (Lecturer)

Participants associated conflict management with emotional awareness, an aspect needed in order to be successful in this programme. They argued that one needs to be able to manage conflict when confronted with different kinds of people:

> Conflict occurs often. … therefore students need to have emotional awareness and the ability to manage conflict; otherwise students will be discouraged and drop out of their studies. (Student)

> The ability of a student to manage conflict is very important for nurses. (Lecturer)

Theme 2: The Educational Dimension

Participants expressed the educational dimension to success in this nursing programme in terms of the required subjects and secondary school performance. These findings are depicted in Table 2. Knowledge gained during secondary school and specific subjects were regarded as keys to success.

Table 2: Categories and subcategories related to the educational dimension

Category	Subcategory
Required subjects	Life Sciences English Mathematics/Mathematical Literacy
Secondary school performance	APS

Required Subjects

The participants considered the subjects required for selection to be Life Sciences, English, and Mathematics or Mathematical Literacy. These formed the basis for mastering the content of the programme, such as understanding human anatomy:

> In Life Sciences, students learn an introduction to human anatomy. This is a foundation … it is necessary because we do human anatomy. (Student)

Students and lecturers overwhelmingly agreed that English is vital in enhancing student success because, as the medium of instruction, it enables students to analyse and diagnose, skills needed in nursing:

> English must be a requirement. (Student)

> English is very important as the language of communication. (Lecturer)

Diverse views were held regarding Mathematics versus Mathematical Literacy. Some participants argued that Mathematical Literacy was sufficient, while others stated that a student should have Mathematics. The argument for Mathematics was that students need to administer medication, which requires calculations:

> Maths—our students can't do simple calculations. That is why they end up giving patients the wrong medication. (Lecturer)

> Only Mathematics Literacy is enough for us as student nurses. (Student)

Secondary School Performance

Both students and lecturers viewed the APS and Grade 12 marks as predictors of success. They indicated that an APS of 24 to 27 is needed:

> I think a student with a high APS score can definitely be successful in the programme. An APS must not be lower than 24. (Lecturer)

> Passing Matric with a Bachelor with an APS of 25 is required. (Student)

The students had an intense discussion on the percentages obtained at secondary school level for certain subjects, although lecturers did not elaborate on this point. An example of the students' comments is as follows:

> Fifty to sixty per cent should be obtained in Life sciences, English fifty per cent as added language and English sixty per cent as first language. (Student)

Theme 3: The Formal Selection Process

The formal selection process was discussed in terms of conducting a formal interview and a test for candidates who wish to be admitted to the programme. The categories and subcategories are indicated in Table 3.

Table 3: Categories and subcategories related to the formal selection process

Category	**Subcategory**
Interview	January intake
Test	Nursing-related questions

The Interview

Lecturers felt that an interview such as the one used for selection in the current programme was not a reliable method for selection, as it was not reliable in predicting success:

> My experience is that when we interview the students, not everybody is well conversant. They might have the expertise, but they cannot express themselves at the level where you want them to be. (Lecturer)

The students believed that all candidates should be interviewed. They added that a nursing-related presentation delivered by the student during the interview would be valuable in the selection process. Students motivated this view as follows:

> The students who come in January get a cultural shock when they realise the undergraduate nursing programme is packed, and the fact that they did not want to be here. (Student)

> There should be a one-on-one interview process for all prospective candidates to make a physical presentation that will give the academy an idea of the kind of a candidate that one is. (Student)

The Test

Students were vocal about the importance of a formal test to establish a candidate's ability to solve problems and to discuss topics in English. It was also suggested that questions in this test should be related to nursing:

> There should also be problem-solving questions and questions related to the ability of a student to have a discussion in English, since it is a medium of instruction. (Student)

Both lecturers and students believed this test should be formalised and that it should also test nursing aspects:

> According to my opinion, there must be the ones that suit nursing, where we can see the internal factors, because they are the qualities that we need in nursing. (Student)

> Asking questions related to general knowledge of nursing that the public should reasonably know about, could indicate that the candidate has gone out to find information about nursing. (Lecturer)

Discussion

The failure to complete a nursing programme in the set time period is of interest for both nursing institutions and the nursing profession (Beauvais et al. 2014, 919; Kahu and Nelson 2018, 58). The successful completion of a nursing programme means not only that students have passed the required subjects, but also that they have obtained the values and competencies needed for the profession. It is therefore essential to select the best possible candidates (Mthimunye and Daniels 2019, 217). The findings of the current study suggest that aspects to consider regarding student selection are the identification of profile characteristics that will fit the programme outcomes, a certain pre-entry educational level to ensure that the candidate can meet the demands of the programme, and an amendment of the formal selection process.

The participants viewed biographical information such as age, culture, family educational background, financial support, and family support as having a bearing on success. They were of the view that these factors should be considered during the selection process—not for purposes of exclusion, but to identify possible risk areas that call for support and early intervention. Arguments for and against mature and young students were voiced. Mature students often have additional family responsibilities that impact on their study progression (Tower et al. 2015, 131). However, Wray et al. (2017, 19) found in their UK study that older students are more likely to complete the nursing programme. Du Pokoy (2011, 105) found that the age of students and parental support were predictors for the successful completion of the first year of a nursing programme.

University life and nursing culture might come as a cultural shock for some students. The view was expressed that many students come from rural areas where English is less spoken and exposure to technology is limited. Korhonen et al. (2019) found that language barriers resulted in stress and feelings of isolation and Du Pokoy (2011, 80) suggested that the use of English as the preferred medium of instruction was a challenge for the successful completion of the first year of study. Supportive strategies during the programme are therefore imperative in order to facilitate language and cultural competence (Chen et al. 2018, 43).

Diverse views were held regarding the influence of one's family educational background on student success. An Indonesian study found that students whose parents attained lower levels of education are more inclined to be engaged and motivated in their studies (Astuti, Sumarwan, and Qayim 2016, 111). Elmir et al. (2019, 149) found that Australian students' progress was hindered by a lack of social and financial support. Therefore, fostering a supportive environment is important to ensure student success (Li et al. 2018, 124).

The personal attributes of caring, resiliency, commitment, and conflict management skills were considered important when selecting students. These findings correspond with other studies that report on resiliency, emotional intelligence, stress management, and social support, all of which are strongly associated with success among nursing students (Beauvais et al. 2014, 922; Ozsaban, Turan, and Kaya 2019, 73, 74). Additionally, participants stated that students who are emotionally aware will be able to manage conflict better. Suleman et al. (2019) tested the concepts self-awareness, empathy, conflict management, commitment, self-motivation, and value orientation as indicators of emotional intelligence. They found a strong relationship between emotional intelligence and academic success.

The educational dimension was expressed by focusing on the subjects required for programme entrance and secondary school performance (an APS of 24 or higher). The participants were of the opinion that Life Sciences, English, and Mathematics or Mathematical Literacy were prerequisite subjects. English was emphasised as extremely important. Similarly, Dube and Mlotshwa's (2018, 7) study showed that poor academic performance was due to a lack of proficiency in English. However, Kridiotis, Bezuidenhout, and Raubenheimer (2016, 212) indicate that English is not a significant indicator of success among radiography students. A Canadian study found that the utilisation of the GPA, biology, and chemistry as admission criteria is a strong predictor of student success, but that non-academic factors should be identified to support high-risk students (Jeffrey, Harris, and Sherman 2019, 69).

The view was held that the current interview is not a reliable selection method. A systematic review on the use of the MMI found it to be reliable and valid; however, more research is needed on the non-cognitive component (Yusoff 2019, 238). MMIs consist of multiple and focused encounters designed to appraise cognitive and non-cognitive skills. The current study suggests a combination of an interview and tests that contain fair measurements of nursing-related aspects to predict success. Mthimunye and Daniels' (2019, 217) systematic review focusing on academic performance shows that English proficiency, emotional intelligence, self-control, resilience, academic skills, and motivational abilities enhanced students' chances of success. Liaw et al. (2017) suggest that psychometric testing, indicating a candidate's perception of nursing as career choice, is a useful test for prospective students.

Conclusion

The study obtained an insider view on the selection characteristics that may enhance students' chances of success in a four-year undergraduate nursing programme. The findings suggest that two dimensions should be considered in selecting and supporting for success, namely personal and educational characteristics. The findings further suggest that school subjects and academic performance at secondary school should be considered as selection criteria. Age, student background, and personal attributes should be used in a developmental and supportive manner. These criteria have been suggested and measured by a number of studies that both support and dispute these recommendations. The findings further suggest that there should be more than one dimension to the selection process. This study has mainly confirmed the existing body of knowledge on selecting for optimal chances of success in nursing programmes.

Recommendations

The characteristics identified in this study should be measured in a longitudinal study to determine their predictive value for success. In terms of the educational dimension, the predictive value of the APS score range; enrolment in the subjects Mathematics, Mathematics Literacy, and Life Sciences in Grade 12; and these subjects' values (e.g. 4, 5, or 6) should be determined. In addition, the predictive value of personal attributes, such as a caring attitude, resilience, commitment, and conflict management skills, should be determined. Based on these findings, appropriate psychometric tests must be identified and a reliable interview schedule and measurement tool developed. Further research is required to identify the unique weighting combination in the selection process between educational and personal attributes.

It is further recommended that during the selection process, biographical information such as age, cultural background, financial support, and educational background of the family only be included to determine the level of support needed during the programme and not as a means to restrict access based on these personal characteristics.

Limitations of the Study

The undergraduate programme studied was a legacy programme. It was phased out in 2019 and replaced with a new Bachelor of Nursing and Midwifery qualification (SANC 2016). The findings might not be applicable in other contexts, although the literature supports the findings of the current study and indicates that these findings could be used as a guide. The limited number of lecturers interviewed might have influenced the findings; however, the use of another set of data to explore the same phenomenon curtailed this limitation.

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References

Astuti, Farchaini Budi, Ujang Sumarwan, and Ibnul Qayim. 2016. "The Role of Student Engagement in the Success of Study of Scholarship Awardee Students of Bogor Agricultural University, Indonesia." *Journal of Education and E-Learning Research* 3 (3): 106–14. https://doi.org/10.20448/journal.509/2016.3.3/509.3.106.114.

Beauvais, Audrey M., Julie G. Stewart, Susan DeNisco, and John E. Beauvais. 2014. "Factors Related to Academic Success among Nursing Students: A Descriptive Correlational Research Study." *Nurse Education Today* 34 (6): 918–23. https://doi.org/10.1016/j.nedt.2013.12.005.

Brink, H., C. van der Walt, and G. van Rensburg. 2018. *Fundamentals of Research Methodology for Healthcare Professionals*. 4th ed. Cape town: Juta.

Chen, Hsiu Chin, Francine Jensen, Gary Measom, Sean Bennett, Nyree Dawn Nichols, Linda Wiggins, and Adam Anderton. 2018. "Factors Influencing the Development of Cultural Competence in Undergraduate Nursing Students." *Journal of Nursing Education* 57 (1): 40–43. https://doi.org/10.3928/01484834-20180102-08.

Crouch, Suzanne J. 2015. "Predicting Success in Nursing Programs." *Journal of College Teaching and Learning* 12 (1): 45–54. https://doi.org/10.19030/tlc.v12i1.9069.

Denham, Sharon A., Mari Tietze, Zoheb Allam, Jennifer Talleff, Nola Schrum, and Tao Wang. 2018. "Academic Success of Undergraduate Nursing Students." *Nurse Education in Practice* 33 (November): 172–77. https://doi.org/10.1016/j.nepr.2018.08.013.

DoH (Department of Health). 2019. *National Policy on Nursing Education and Training*. Pretoria: DoH. Accessed March 10, 2021. https://www.gov.za/sites/default/files/gcis_document/201904/42380gon544.pdf.

Du Pokoy, R. 2011. "Indicators for Successful Completion of the First Year Nursing Science." MTech diss., Tshwane University of Technology.

Dube, Makhosazane B., and Puseletso R. Mlotshwa. 2018. "Factors Influencing Enrolled Nursing Students' Academic Performance at a Selected Private Nursing Education Institution in KwaZulu-Natal." *Curationis* 41 (1): 1–7. https://doi.org/10.4102/curationis.v41i1.1850.

Elmir, Rakime, Lucie M. Ramjan, Bronwyn Everett, and Yenna Salamonson. 2019. "Nursing Students' Experiences of Repeating Units in an Undergraduate Program: A Qualitative Study." *Nurse Education Today* 79 (August): 147–52. https://doi.org/10.1016/j.nedt.2019.05.024.

Gale, Julia, Ann Ooms, Robert Grant, Kris Paget, and Di Marks-Maran. 2016. "Student Nurse Selection and Predictability of Academic Success: The Multiple Mini Interview Project." *Nurse Education Today* 40: 123–27. https://doi.org/10.1016/j.nedt.2016.01.031.

Goleman, D. 1996. *Emotional Intelligence.* London: Bloomsbury.

Grove, S. K., and J. R. Gray. 2018. *Understanding Nursing Research: Building an Evidence-Based Practice*. 7th ed. St Louis: Elsevier.

Hills, Caroline Mary, Tracy Levett-Jones, Samuel Lapkin, and Helen Warren-Forward. 2017. "Generation Y Health Professional Students' Preferred Teaching and Learning Approaches: A Systematic Review." *The Open Journal of Occupational Therapy* 5 (1). https://doi.org/10.15453/2168-6408.1278.

Jeffrey, Paul, Robin Harris, and Jan Sherman. 2019. "Quality Improvement: A Practical Nursing Program's Admission Test." *Nurse Education Today* 73: 65–70. https://doi.org/10.1016/j.nedt.2018.11.016.

Jeffreys, Marianne R. 2015. "Jeffreys's Nursing Universal Retention and Success Model: Overview and Action Ideas for Optimizing Outcomes A–Z." *Nurse Education Today* 35 (3): 425–31. https://doi.org/10.1016/j.nedt.2014.11.004.

Kahu, Ella R., and Karen Nelson. 2018. "Student Engagement in the Educational Interface: Understanding the Mechanisms of Student Success." *Higher Education Research and Development* 37 (1): 58–71. https://doi.org/10.1080/07294360.2017.1344197.

Koen, M. P. 2018. "The World Café as a Data Collection Method in Qualitative Research in Positive Psychology." MA diss., North-West University.

Korhonen, Heidi, Anna Maria Tuomikoski, Ashlee Oikarainen, Maria Kääriäinen, Satu Elo, Helvi Kyngäs, Eeva Liikanen, and Kristina Mikkonen. 2019. "Culturally and Linguistically Diverse Healthcare Students' Experiences of the Clinical Learning Environment and Mentoring: A Qualitative Study." *Nurse Education in Practice* 41 (October): 102637. https://doi.org/10.1016/j.nepr.2019.102637.

Kridiotis, Carol Anne, Johan Bezuidenhout, and Jacques Raubenheimer. 2016. "Selection Criteria for a Radiography Programme in South Africa: Predictors for Academic Success in the First Year of Study." *Health SA Gesondheid* 21: 206–13. https://doi.org/10.1016/j.hsag.2016.01.005.

Li, Jie, Xue Han, Wangshuai Wang, Gong Sun, and Zhiming Cheng. 2018. "How Social Support Influences University Students' Academic Achievement and Emotional Exhaustion: The Mediating Role of Self-Esteem." *Learning and Individual Differences* 61 (January): 120–26. https://doi.org/10.1016/j.lindif.2017.11.016.

Liaw, Sok Ying, Ling Ting Wu, Violeta Lopez, Yeow Leng Chow, Siriwan Lim, Eleanor Holroyd, Khoon Kiat Tan, and Wenru Wang. 2017. "Development and Psychometric Testing of an Instrument to Compare Career Choice Influences and Perceptions of Nursing among Healthcare Students." *BMC Medical Education* 17 (1): Art. 72. https://doi.org/10.1186/s12909-017-0910-7.

Manyanga, Fidelis, Alec Sithole, and Shawn M. Hanson. 2017. "Comparison of Student Retention Models in Undergraduate Education from the Past Eight Decades." *Journal of Applied Learning in Higher Education* 7 (Spring): 29–41.

Miller, Sam Louise. 2015. "Values-Based Recruitment in Health Care." *Nursing Standard* 29 (21): 37–41. https://doi.org/10.7748/ns.29.21.37.e9339.

Mthimunye, K., and F. M. Daniels. 2019. "Predictors of Academic Performance, Success and Retention amongst Undergraduate Nursing Students: A Systematic Review." *South African Journal of Higher Education* 33 (1): 200–220. https://doi.org/10.20853/33-1-2631.

Ozsaban, Aysel, Nuray Turan, and Hatice Kaya. 2019. "Resilience in Nursing Students: The Effect of Academic Stress and Social Support." *Clinical and Experimental Health Sciences* 9: 69–76. https://doi.org/10.33808/marusbed.546903.

SANC (South African Nursing Council). 1985. "Regulations Relating to the Approval of and the Minimum Requirements for the Education and Training of a Nurse (General, Psychiatric and Community) and Midwife Leading to Registration." Government Notice No. R.425, as amended. Accessed March 7, 2021. https://www.sanc.co.za/regulat/Reg-4yr.htm.

SANC. 2016. "Information Regarding the Phasing Out of Legacy Qualifications; and Implementation of Nursing Qualifications Aligned to the Higher Education Qualifications Sub-framework (HEQSF)." Circular 7/2016. Accessed March 10, 2021. https://www.sanc.co.za/archive/archive2016/newsc1607.htm.

Spurlock, Darrell R., Barbara J. Patterson, and Normajean Colby. 2019. "Gender Differences and Similarities in Accelerated Nursing Education Programs: Evidence of Success from the New Careers in Nursing Program." *Nursing Education Perspectives* 40 (6): 343–51. https://doi.org/10.1097/01.nep.0000000000000508.

Suleman, Qaiser, Ishtiaq Hussain, Makhdoom Ali Syed, Rashida Parveen, Ishrat Siddiqa Lodhi, and Ziarab Mahmood. 2019. "Association between Emotional Intelligence and Academic Success among Undergraduates: A Cross-Sectional Study in KUST, Pakistan." *PLOS ONE* 14 (7): e0219468. https://doi.org/10.1371/journal.pone.0219468.

Tesch, Renata. 1990. *Qualitative Research: Analysis Types and Software Tools*. London: Falmer.

Tight, Malcolm. 2019. "Student Retention and Engagement in Higher Education." *Journal of Further and Higher Education* 44 (5): 689–704. https://doi.org/10.1080/0309877X.2019.1576860.

Tower, Marion, Rachel Walker, Keithia Wilson, Bernadette Watson, and Glenyss Tronoff. 2015. "Engaging, Supporting and Retaining Academic At-Risk Students in a Bachelor of Nursing: Setting Risk Markers, Interventions and Outcomes." *The International Journal of the First Year in Higher Education* 6 (1): 121–34. https://doi.org/10.5204/intjfyhe.v6i1.251.

Traynor, Marian, Iain McGowan, and Kathryn Gillespie. 2018. "The Multiple Mini Interview for Admission to Nursing: Male Perspectives." *MedEdPublish* 7 (4). https://doi.org/10.15694/mep.2018.0000283.1.

Wray, Jane, Jo Aspland, David Barrett, and Eric Gardiner. 2017. "Factors Affecting the Programme Completion of Pre-registration Nursing Students through a Three Year Course: A Retrospective Cohort Study." *Nurse Education in Practice* 24: 14–20. https://doi.org/10.1016/j.nepr.2017.03.002.

Yılmaz, Emel Bahadır. 2017. "Resilience as a Strategy for Struggling against Challenges Related to the Nursing Profession." *Chinese Nursing Research* 4 (1): 9–13. https://doi.org/10.1016/j.cnre.2017.03.004.

York, Travis T., Charles Gibson, and Susan Rankin. 2015. "Defining and Measuring Academic Success." *Practical Assessment, Research and Evaluation* 20 (5): 1–20.

Yusoff, Muhamad S. Bahri. 2019. "Multiple Mini Interview as an Admission Tool in Higher Education: Insights from a Systematic Review." *Journal of Taibah University Medical Sciences* 14 (3): 203–40. https://doi.org/10.1016/j.jtumed.2019.03.006.