# Developing Strategies to Overcome Challenges Faced by Postgraduate Nursing Students

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## ABSTRACT

***Context:*** Improvement of postgraduate experience makes students adopt strategies to overcome challenges encountered to obtain the intended postgraduate degree certificate.
***Aim:*** To investigate challenges faced by postgraduate nursing students, develop strategies for overcoming these challenges, and assessing face and content validity for the proposed strategies.
***Methods:*** The study was carried out at the Faculty of Nursing at Ain Shams University using a methodological design. The sample consisted of two groups, namely postgraduate nursing students including all master and doctorate postgraduate students in different specialties at the last semester of their studies during the academic year 2017/2018; their total number was 236 students and a Jury group (25 professors and assistant professors from different nursing faculties). Three tools were used to achieve the aim of this study. They were a self-administered questionnaire for students to investigate challenges faced during their studies, an opinionnaire sheet to examine the face and content validity of the developed questionnaire, and an opinionnaire sheet to validate the proposed strategies.
***Results:*** The student-related challenges revealed that the psychological-related challenges had the highest mean (2.5±0.4) among the student-related challenges, while the financial-related had the lowest mean (2.2±0.5). The administrative and academic challenges were the most challenging, with a mean (2.2±0.5) for the institutional-related challenges.
***Conclusion:*** Based on the identified challenges and their prioritization, overcoming strategies were developed and were found to have high levels of the face, and content validity by experts' opinions and Content Validity Indicator CVI was (0.99). The study recommended that the developed strategies should be presented to and discussed with postgraduate students in the study setting to improve and ensure their acceptability.

***Keywords:*** Challenges, postgraduate nursing students, strategies

## 1. Introduction

Demand for postgraduate education has escalated since the year 2000 and is still growing. This growth in demand for higher education is not limited to developing but also in developed countries *(Sojkin et al., 2 011).* Research and thesis writing are critical components of postgraduate studies, and many challenges are facing postgraduate students while working on their research. Possible challenges affect the student's completion and attrition rate *(Federal Ministry of Information, 2012).* A study by *Jones (2013)* noted that doctoral students' attrition rates range from 33% to 70%.

The challenges face postgraduate students categorized into four challenges: Research - related challenges: as unable to find a researchable topic, poorly written background, difficulties in writing the discussion of the results section of the thesis, and plagiarism also posed a challenge *(Cambridge University Press, 2017).*

Students-related challenges: balancing jobs and academic work (for part-time) is the big problem as postgraduate students struggle to cope with their simultaneous academic and professional workloads, lack of

support and understanding from their supervisors, inadequate knowledge of programs, inadequate preparation for postgraduate studies, and financial challenges *(Essa, 2010).* Also, challenges as family responsibilities, different social environments, and unexpected circumstances *(Richardson & Gage, 2010).*

Institution-related challenges refer to the institution's information services and quality as the program's poor presentation, limitations of infrastructural support, academic difficulties, and administrative shortcomings *(Federal Ministry of Information, 2012).*

Supervisor-related challenges are related to supervisor as lack of supervisor time, unclear feedback, students' conflict with supervisors, different expectations, cultural background, inadequate supervision, no schedule for meetings, and the supervisors always too busy *(Odena & Burgess, 2017).*

In advocating for an improved postgraduate experience, many postgraduate students adopted effective strategies in overcoming challenges encountered to obtain their intended degree certificate *(Walsh et al., 2015).* Strategies for overcoming challenges faced by postgraduate students including improve the system of supervision, develop research culture among students, resource and guidance support, and improvement of postgraduate

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education by university authorities, improve the quality of education offered by the institution, following thesis and dissertation writing criteria, and effective supervisory system, curriculum enhancement strategies *(Havenga & Sengane, 2018)*.

## 2. Significance of the Study

Over the last decade, there has been a general growth in enrollment and interest in graduate studies. Graduate students deserve support and acknowledgment to perform the research in the right circumstances and an environment free of obstacles *(Ekpoh, 2016)*. To attract new students, retain others and be responsive to a changing labor market, universities need to understand the challenges students face, find a solution to them, and provide the right kind of support to students *(Talebloo & Baki, 2013)*.

In Egypt, a study conducted by *(Affero & Abiddin, 2011)*showed that many graduate students fail to complete their program due to various challenges. The researchers observed that her colleagues discontinue their master studies related to various challenges facing them. So, the researchers are inspired to investigate the challenges postgraduate nursing students face and develop strategies for overcoming these challenges.

## 3. Aim of the study

This study investigated challenges faced by postgraduate nursing students, developed strategies for overcoming these challenges, and assessed the face and content validity of the proposed strategies.

### 3.1. Research questions

- What are the challenges faced by postgraduate nursing students during their academic studies?
- What are the strategies for overcoming the challenges?
- Do the developed strategies valid?

## 4. Subjects & Methods

### 4.1. Research design

A methodological study design was used in carrying out this study. It is a process used to develop the validity and reliability of instruments to measure constructs used as research variables *(Segen's Medical Dictionary. 2012)*.

### 4.2. Research setting

The study was conducted at the Faculty of Nursing, Ain Shams University. The faculty offers many postgraduate programs such as postgraduate diplomas (3 semesters), master's degree (3 semesters), plus a thesis, and doctorate (2 semesters) plus dissertation in all specialties.

### 4.3. Subjects

The study subjects consisted of two groups:
- Postgraduate nursing students included all master and doctorate, postgraduate students from all specialties (236) during the academic year 2017/2018 at their last semester of studies.

- Jury group: A group of 25 experts in nursing recruited to assess the proposed strategies' face and content validity. It included (6) professors and (19) assistant professors in nursing administration from (9) faculties of nursing in (9) Egyptian Universities. Furthermore, to assess the face and content validity of the developed questionnaire, a group of five professors of Nursing Administration was recruited.

### 4.4. Tools of the study

The data needed for this study were collected using two types of tools, namely a self-administered questionnaire for students and an opinionnaire sheet for the jury to validate the developed questionnaire and the proposed strategies as follow:

### 4.4.1. Challenges facing postgraduate nursing students self-administered questionnaire (CFPNS)

It consisted of the following parts.

Part I was designed to assess students' demographic characteristics concerning their age, gender, marital status, academic study level, mode of sabbatical leave, nursing specialty, and if the study is self-funded.

Part II was devised for investigating the challenges faced by postgraduate nursing students. It was developed in English by the researchers based on *Ekpoh (2016)*. The questionnaire involves 84 statements grouped under three dimensions: student-related challenges, including 48 items intended to assess students-related challenges in research, psychological, financial, and socio-cultural challenges. Institution-related challenges include 20 items covering challenges related to administrative, academic, and facilities. Finally, the supervisor-related challenges' dimension includes 16 items assessing the challenges related to academic supervisors' knowledge, competence, personal concern for student success, and approachability.

*Scoring system*

The response to each item was on a 3-point Likert scale of "challenging/somewhat challenging/not challenging." These were scored from 3 to 1 so that a higher score indicates a high challenge. Each part's scores were summed-up and divided by the number of items to provide average scores. For categorical analysis, the total scores were converted into percent scores. A total present score of <33% was considered "Not challenging," 33-<67% "somewhat challenging," and 67%+ "challenging."

### 4.4.2. Face and Content Validity Opinionnaire Sheet

The researcher constructed it for the jury to validate the developed questionnaire sheet. It consisted of the following three parts:

Part I aimed to collect data related to experts' characteristics (5 experts) such as age, job position, university, and years of experience.

Part II (face validity): This part was used to check whether the developed questionnaire (CFPNS) sheet looks like a questionnaire for investigating all challenges faced by

postgraduate students, as if it contains clear, correct, scientific items and free from duplication or any redundant items. Also, measure the appropriateness of the scoring system used in data collection.

Part III (content validity). This part was intended to assess the degree to which the developed questionnaire (CFPNS) represents all relevant parts of the challenges that face postgraduate nursing students in their study settings. It involves 84 statements based on the modifications suggested by the jury group members, through addition or omission, so the number of statements became 77 statements grouped under three main dimensions, namely student-related challenges, institution related challenges, and supervisor related challenges.

*Scoring system*

The questionnaire items' responses were on a 2-point Likert scale: "agree," "disagree ". These were scored from 2 to 1, respectively, so that a higher score indicates high agreement. The items' scores were summed-up, and the total was divided by the number of the items of students' challenges, giving a percent score, if the percent score was 75% or more (corresponding to agree) if less than 75% (corresponding to disagree).

### 4.4.3. Face and content validity opinionnaire sheet
of the proposed strategies for overcoming postgraduate students' challenges.

It developed by the researcher consisted of the following three parts:

Part I aimed to collect data related to experts' characteristics (25 experts) such as age, job position, years of experience, and university.

Part II (face validity): This part was used to check whether the strategies look like strategies for overcoming challenges faced by postgraduate students as if it has comprehensive, achievable, scientific items, free from duplication or any redundant items used.

Part III (content validity): This part was intended to assess the degree to which the proposed strategies are relevant to challenges. It involves 50 challenges overcoming strategies, each with several strategies to overcome, divided under three dimensions, namely students, institution, and supervisor as follows:

- Strategies to overcome student-related challenges included 233 strategies to overcome challenges related to research (10 strategies), psychological (9 strategies), financial (6 strategies), and socio-cultural (5 strategies).
- Strategies to overcome institution-related challenges included 32 items to overcome challenges related to administrative (2 strategies), academic (26 strategies), and facilities (4 strategies).
- Strategies to overcome supervisor-related challenges: 70 items to overcome 14 challenges as the supervisor is busy with many commitments, differences of views among supervisors of the thesis, change supervisors.

*Scoring system*

The opinionnaire items' responses were on a 2-point Likert scale: "agree," "disagree." These were scored from 2

to 1 respectively so that a higher score indicates agreement. The items' scores were summed-up, and the total was divided by the number of the items in the strategies for overcoming challenges facing the students', giving a percent score, if the percent score was 80% or more (corresponding to agree) if less than 80% (corresponding to disagree).

### 4.5. Procedures

Field Work was done through two phases: The data collection phase and developing and validating the strategies phase.

Data collection phase: After securing the necessary approvals, the researchers introduced themselves to the postgraduate students, explained the study's aim and how-to fill-in the self-administering questionnaire, and sought their cooperation. Consent to participate was obtained orally before handing the questionnaire to any subject. The actual fieldwork extended from the beginning of October 2017 to the end of March 2018,

Developing and validating the strategies to overcome the challenges of postgraduate students' phase. Based on the questionnaire findings, and in the light of pertinent literature, the researchers developed strategies for overcoming the challenges faced by postgraduate students. This phase was done through three stages, as follows:

Stage I (Preliminary strategy formulation): This stage took three months, from April 2018 to the beginning of August 2018. The following steps were pursued:
- Collecting data for identifying challenges faced by postgraduate nursing students.
- Estimating the frequency of the items of each challenge using a check sheet
- Reviewing of recent national and international related literature. This step was to determine the best means to overcome challenges faced by students.
- Setting objectives: This is a crucial component of strategy formulation
- Investigating the forms of strategy design and choosing the appropriate form of strategy design.

Stage II (strategy development): This stage took three months, from March 2019 to the beginning of September 2019.

Stage III (strategy evaluation): The developed strategies were validated using two methods: jury group experts and content validity index (CVI). It is the most commonly used method to calculate content validity quantitatively. The experts' opinions were sought for the relevance, appropriateness, clarity, comprehensiveness, and accuracy of the strategies. The modifications suggested by the jury group members, addition and omission, were done.

The content validity using the Content Validity Index (CVI) was done twice. The validity was 0.99 and 0.98, respectively. The strategies were then finalized based on jury comments and suggestions. Thus, the strategies for overcoming challenges faced by postgraduate nursing students were developed. From the beginning of May to mid-September 2019, this stage lasted for five months by a

jury group consisting of 25 professors and assistant professors of Nursing Administration.

Ethical Approval: Before study conduction, ethical approval was obtained from the Faculty of Nursing's Scientific Research and Ethics Committee, Ain Shams University. Oral informed consent was obtained from the participants. They were informed about their right to refuse or withdraw from the study with no consequences. They were reassured about the anonymity and confidentiality of the information collected and that it would be used for scientific research.

### 4.6. Data analysis

Data entry and statistical analysis were done using SPSS 20.0 statistical software package. Data were presented using descriptive statistics in frequencies and percentages for qualitative variables, mean and standard deviations, medians, and first and third quartiles for quantitative variables. Cronbach alpha coefficient was used to assess the internal consistency reliability of the tool. Qualitative categorical variables were compared using the chi-square test. Multiple linear regression analyses were done to identify the independent factors influencing the scores of the various challenges. Statistical significance was considered at p-value <0.05 and p-value <0.01. For quantitative evaluation (face and content validity) to the proposed strategies, Content Validity Index (CVI) was used and computed by dividing the number of panelists indicating "agree" compared to the total number of panelists.

## 5. Results

Table 1 shows that the study sample included 236 postgraduate nursing students whose ages ranged between 23 and 45. The majority were females (70.8%) and married (72.9%). Slightly more than three-fourths of the postgraduate nursing students were at the master's degree level (77.1%). Only 10.2% of postgraduate nursing students were full-time students. Approximately one-fourth of the postgraduate nursing students were in the critical care nursing specialty (24.6%), and the great majority were self-funded (93.6%).

Table 2 illustrates that the psychological-related challenges had the highest mean (2.5±0.4) among the students-related challenges, while the financial-related had the lowest mean (2.2±0.5). For the institutional-related challenges, the administrative and academic changes were the most challenging with a mean (2.2±0.5).

Figure 1 displays that most postgraduate nursing students considered total challenges as real challenges (78.8%). On the other hand, 21.2% considered them as somewhat challenging.

Table 3 points to highly statistically significant relations between postgraduate nursing students' opinions of total challenges and their age (p<0.001), academic study

level (p<0.001), and a significant difference for self-funding (p=0.02). It is noticed that more students in the age group less than 30 years, at the master's degree level, and self-funded considered these factors challenging.

Table 4 demonstrates that the postgraduate nursing students' age and academic study level were statistically significant independent negative predictors of postgraduate nursing students' total challenges score. On the other hand, self-funding was a positive predictor.

Table 5 shows that the jury group panel consisted of 25 experts whose mean age was 49.4±5.5, and years of experience were 22.5+ 5.5. The majority were assistant professors (76%), with a higher percentage from Menufyia (24.0%) and Tanta (20.0%) Universities.

Table 6 illustrates the results of proposed strategies validity by jury group, and the total CVI was (0.99). The table shows full agreement upon all items, except for wording clarity of strategies (0.96) and comprehensiveness to all elements, and if there is no repetition or duplications (0.84).

**Table (1): Frequency and percentage distribution of postgraduate students according to their sociodemographic characteristics (n=236).**

| Demographic characteristics | Frequency | Percent |
|---|---|---|
| **Age** | | |
| <30 | 127 | 53.8 |
| 30- | 59 | 25.0 |
| 35+ | 50 | 21.2 |
| Range | 23-45 | |
| Mean ±SD | 30.4±5.1 | |
| Median | 29.00 | |
| **Gender** | | |
| Male | 69 | 29.2 |
| Female | 167 | 70.8 |
| **Marital status** | | |
| Married | 172 | 72.9 |
| Unmarried | 64 | 27.1 |
| **Academic study level** | | |
| Master | 182 | 77.1 |
| Doctorate | 54 | 22.9 |
| **Mode of sabbatical leave** | | |
| Fulltime | 24 | 10.2 |
| Part-time | 212 | 89.8 |
| **Nursing specialty** | | |
| Administration | 8 | 3.4 |
| Mental health | 27 | 11.4 |
| Medical-surgical | 33 | 14.0 |
| Community health | 38 | 16.1 |
| Obstetrics/ gynecology | 18 | 7.6 |
| Pediatrics | 54 | 22.9 |
| Critical care | 58 | 24.6 |
| **Self-funded** | | |
| No | 15 | 6.4 |
| Yes | 221 | 93.6 |

**Table (2): Total scores of challenges among postgraduate nursing students in the study sample (n=236)**

| Challenges | Score (max=3) | | | |
|---|---|---|---|---|
| | Range | Mean ± SD | Median | 25%ile-75%ile |
| **Student-related challenges** | | | | |
| Research | 1.3-3.0 | 2.3±0.4 | 2.37 | 2.0-2.6 |
| Psychological | 1.2-3.0 | 2.5±0.4 | 2.60 | 2.4-2.8 |
| Financial | 1.0-3.0 | 2.2±0.5 | 2.67 | 2.3-3.0 |
| Socio-cultural | 1.2-3.0 | 2.3±0.4 | 2.33 | 2.1-2.6 |
| Total student-related challenges | 1.6-3.0 | 2.4±3.0 | 2.44 | 2.3-2.6 |
| **Institution-related challenges** | | | | |
| Administrative | 1.0-3.0 | 2.2±0.5 | 2.25 | 1.9-2.5 |
| Academic | 1.0-3.0 | 2.2±0.5 | 2.90 | 2.0-2.5 |
| Facilities | 1.2-3.0 | 2.0±0.4 | 1.92 | 1.6-2.3 |
| Total Institutional-related challenges | 1.4-3.0 | 2.1±0.3 | 2.06 | 1.9-2.3 |
| **Supervisor-related challenges** | 1.0-3.0 | 2.3±0.5 | 2.31 | 2.0-2.7 |
| Total challenges | 1.3-3.0 | 2.3±0.3 | 2.28 | 2.1-2.5 |
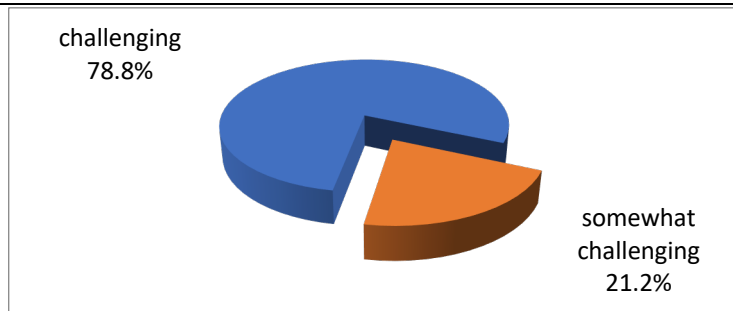


**Figure (1): Percentage distribution of the total challenges among postgraduate nursing students in the study sample (n=236).**

**Table (3): Relations between total challenges and postgraduate nursing students' characteristics.**

| Students characteristics | Total challenges | | | | $X^2$ test | P-value |
|---|---|---|---|---|---|---|
| | Challenging | | Somewhat challenging | | | |
| | No. | % | No. | % | | |
| **Age** | | | | | | |
| <30 | 113 | 89.0 | 14 | 11.0 | 17.07 | <0.001 |
| 30- | 39 | 66.1 | 20 | 33.9 | | |
| 35+ | 34 | 68.0 | 16 | 32.0 | | |
| **Gender** | | | | | | |
| Male | 58 | 84.1 | 11 | 15.9 | 1.61 | 0.21 |
| Female | 128 | 76.6 | 39 | 23.4 | | |
| **Marital status** | | | | | | |
| Married | 136 | 79.1 | 36 | 20.9 | 0.02 | 0.87 |
| Unmarried | 50 | 78.1 | 14 | 21.9 | | |
| **Academic study level** | | | | | | |
| Master | 155 | 85.2 | 27 | 14.8 | 19.22 | <0.001 |
| Doctorate | 31 | 57.4 | 23 | 42.6 | | |
| **Mode of sabbatical leave** | | | | | | |
| Fulltime | 16 | 66.7 | 8 | 33.3 | 2.36 | 0.12 |
| Part-time | 170 | 80.2 | 42 | 19.8 | | |
| **Nursing specialty** | | | | | | |
| Administration | 4 | 50.0 | 4 | 50.0 | | |
| Mental health | 21 | 77.8 | 6 | 22.2 | | |
| Medical-surgical | 25 | 75.8 | 8 | 24.2 | 9.86 | 0.13 |
| Community health | 31 | 81.6 | 7 | 18.4 | | |
| Obstetrics/ gynecology | 11 | 61.1 | 7 | 38.9 | | |
| Pediatrics | 44 | 81.5 | 10 | 18.5 | | |
| Critical care | 50 | 86.2 | 8 | 13.8 | | |
| **Self-funded** | | | | | | |
| No | 8 | 5.3 | 7 | 46.7 | Fisher | 0.02 |
| Yes | 178 | 80.5 | 43 | 19.5 | | |

**Table (4): Best fitting multiple linear regression model for the total challenges score.**

| Students characteristics | Unstandardized coefficients | | Standardized coefficients | T-test | P-value | 95% confidence interval for B | |
|---|---|---|---|---|---|---|---|
| | B | Std. Error | | | | Lower | Upper |
| Constant | 2.74 | 0.14 | | 19.072 | <0.001 | 2.46 | 3.02 |
| Age | -0.01 | 0.00 | -0.24 | -3.613 | <0.001 | -0.02 | -0.01 |
| Academic study level | -0.13 | 0.05 | -0.17 | -2.591 | 0.010 | -0.22 | -0.03 |
| Self-funding | 0.14 | 0.08 | 0.11 | 1.750 | 0.081 | -0.02 | 0.29 |

**Table (5): Frequency and percentage distribution of the jury group's demographic characteristics (n=25).**

| Jury characteristics | Frequency | Percent |
|---|---|---|
| **Age** | | |
| <50 | 11 | 44.0 |
| 50+ | 14 | 56.0 |
| Range | 37.0-62.0 | |
| Mean ±SD | 49.4±5.5 | |
| Median | 50.0 | |
| **Job position** | | |
| Professor | 6 | 24.0 |
| Assistant professor | 19 | 76.0 |
| **University** | | |
| Menufyia | 6 | 24.0 |
| Tanta | 5 | 20.0 |
| Zagazig | 4 | 16.0 |
| Ain-shams | 3 | 12.0 |
| Banha | 3 | 12.0 |
| Mansoura | 1 | 4.0 |
| Helwan | 1 | 4.0 |
| Cairo | 1 | 4.0 |
| Bort said | 1 | 4.0 |
| **Experience years:** | | |
| ≤ 20 | 13 | 52.0 |
| >20 | 12 | 48.0 |
| Range | 15.0-40.0 | |
| Mean ±SD | 22.5± 5.5 | |
| Median | 20.0 | |

**Table (6): Results of proposed strategies validity by jury group and CVI (n=25).**

| Items | Agree | Item CVI |
|---|---|---|
| **The proposed strategies look like strategies for overcoming the challenges facing postgraduate student** | 25 | 1.00 |
| **The postgraduate challenges cover the following dimensions:** | | |
| Students, institution, supervisor, are these dimensions enough to cover challenges facing postgraduate students | 25 | 1.00 |
| Do these dimensions contain balanced items | 25 | 1.00 |
| Do the items in each dimension enough to measure or overcome the challenges | 25 | 1.00 |
| **The proposed strategies cover the following elements:** | | |
| Students | 25 | 1.00 |
| Institution | 25 | 1.00 |
| Supervisors | 25 | 1.00 |
| **The proposed strategies contain items:** | | |
| Clear | 25 | 1.00 |
| Specific | 25 | 1.00 |
| Comprehensive | 25 | 1.00 |
| Achievable | 25 | 1.00 |
| **Wording (writing) of the proposed strategies is:** | | |
| Clear | 24 | 0.96 |
| Comprehensive to all elements | 21 | 0.84 |
| Has no repetition or duplications | 21 | 0.84 |
| Total CVI | | 0.99 |

## 6. Discussion

The mounting need for qualified professional nursing practitioners mandates that continuing postgraduate nursing education should progress and develop in order to be able to attract more students and to be appropriately educated and prepare them for practice *(Kaas, 2019)*. The impact of such education cannot be over-emphasized *(Wisker & Robinson, 2012)*. Moreover, nursing educators should adopt more innovative teaching and training methods to achieve this *(McInerney & Green-Thomppson, 2017; Pereira & Walmeley, 2019)*.

This study investigated challenges faced by postgraduate nursing students, developed strategies for overcoming these challenges, and assessed the face and content validity of the proposed strategies. Related to students' characteristics, more than half of the postgraduate students were less than 30 years, around three-fourths were married and in master's degree programs as the numbers of students in doctoral degree programs are always lower. Still, the majority were female students, as expected from the old history of the nursing specialty's feminine nature, which has been changed over the past decade. A similar higher preponderance of female nurses participating in postgraduate training was reported in a study in Nigeria *(Ekpoh, 2016)*.

According to the present study finding, most of the postgraduate nursing students in the present study were challenged in their study as more than three-quarters of them reported they face challenges, and the remaining nearly one quarter reported they are somewhat challenging. According to their opinions, the students-related factors were the most challenging, whereas the institution-related factors were the least challenging. This finding indicates that most of the efforts should be directed to student-related factors, particularly the psychological ones, which were the most challenging. Similar factors were identified in a study in Russia, which examined the nature of postgraduate training *(Auranen & Nieminen, 2010)*.

Concerning the student-related psychological challenges among postgraduate nursing students in the current study, this finding is quite expected given that the great majority of these students are part-time students and self-funded. Moreover, according to the university regulations, the students have a deadline to finish their degrees; otherwise, they would lose their time and money, with subsequent stress and distress. These present study findings agree with *Erbay Çetinkaya and Yilmaz (2017)*, whose study in Australia revealed that students were challenged psychologically by time constraints to complete thesis work.

According to the current study findings, most postgraduate nursing students viewed all student-related financial challenges as lower challenging. This finding is quite expected, given that only a tiny minority of them had such financial support or scholarship. In contradiction to this study's finding, *Ekpoh (2016)* highlighted that the most challenging factors to postgraduate students' research are the problem of funding. *Vindrola-Padros et al. (2018)* also

reported a similar finding in a study in Latin America. Furthermore, the lack of funding was shown to seriously affect most students' research, and it could be a source of serious distraction and deep frustration *(Kombo & Tromp, 2006)*.

The institution-related challenges were considered the least challenges by postgraduate nursing students in the present study. This result is quite important, especially because these students have deadlines to end-up their degree. This result depends on institutional preparation from the library, internet supply, trained administrative staff, particularly with their part-time status, which may lead to a situation where the student should present his/her finished research work within a few weeks or months. Otherwise, the student's registration would be terminated. Thus, *Mitchell et al. (2018)*, in a study in the United Kingdom, recommended that educators be trained in the provision of constructive feedback to their students.

The multivariate analyses provided more confirmation of these results, identifying age and academic level as independent significant negative predictors. This finding indicates that these factors less challenge older age and doctorate level students. The finding might be attributed to the process of maturity, socialization with the academic environment, and mastery in research among these students as they go through their educational trajectory, an explanation that is shared with *Jairam & Kahl Jr. (2012)*.

The multivariate analysis also identified self-funding as a positive predictor of postgraduate nursing students' total challenges scores. This finding might be explained by that being self-funded exerts more force on the students responsible for financing their education. Therefore, they might be more sensitive to any challenge that may jeopardize their success and achievement of the degree.

Based on the analysis of the postgraduate nursing students' opinions about the various challenges facing their postgraduate education and research, and given pertinent literature, the researcher was developing strategies to overcome these challenges. The strategies were presented to a panel of experts to gauge their face and content validity. After implementing their comments and suggestions, the strategies were finalized, mainly related to the repetition of some items, rephrasing, and re-arranging their sequence. The present study demonstrates a total content validity CVI of 0.99. The merits of similar strategies have been demonstrated in studies in Norway *(Nyhagen & Strom, 2016)* and Australia *(Nguyen et al., 2018)*.

## 7. Conclusion

In conclusion, most postgraduate nursing students viewed challenges, particularly regarding student-related challenges and, to a lesser extent, institutional and supervisor-related challenges. Among the student-related challenges, the financial, psychological ones are the most challenging, whereas the academic and administrative ones were the highest among the institution-related challenges. Based on the identified challenges and prioritization and

pertinent literature, overcoming strategies were developed and found to have a high face and content validity by experts' opinions and CVI.

## 8. Recommendations

The study recommends discussing the developed strategies with postgraduate students in the study setting to improve and ensure their acceptability. The faculty should conduct an annual survey to identify the students' challenges and the necessary measures that should be taken to address the challenges to provide an effective learning environment. Seminars and workshops in thesis supervision, research methodology, and thesis writing are recommended for academic staff and students. Further intervention studies to evaluate the effect of implementing the developed strategies on postgraduate students' academic performance and achievements or satisfaction and attrition/completion issues.

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