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Contributing Factors to Withdrawal Decisions of Military and Nonmilitary Nursing Students

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Contributing factors to withdrawal decisions of military and nonmilitary nursing students

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ABSTRACT

Retaining nursing students in courses is key to increasing the number of new nurses. This study examined factors associated with nursing course or program withdrawal among students with and without prior military experience. The purpose of this study was to uncover differences between groups of students who withdrew compared to those who did not. A cross-sectional study using an online questionnaire surveyed current or recent nursing students (n = 420) using the Educational Requirement Subscale and the Student Withdrawal Questionnaire from Jeffreys' toolkit. Uncovering differences between groups of students who did and did not withdraw from nursing courses or programs shows opportunities for nurse educators to improve strategies for student retention. Students with and without prior military experience reported statistically similar confidence levels, withdrawal rates, and reasons for withdrawal. There was a positive relationship between higher confidence levels and rates of withdrawal. Factors with the strongest influence for withdrawal were academic difficulties (mean = 2.56), family responsibilities (mean = 2.59) and family crisis (mean = 2.62). First generation students reported the greatest level of course withdrawals. Participation in nursing clubs and faculty advisement and helpfulness were most helpful to participants who reported past withdrawal. Data from this study can guide nurse educators to create greater program support and opportunity for peer support for students experiencing factors associated with course withdrawal.

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The recent pandemic has brought attention to the growing shortage of registered nurses. Some are leaving the workplace because of retirement (US Bureau of Labor Statistics, 2021); others are leaving the profession because of stressors experienced from the pandemic (Raso et al., 2021). Compounding the shortage is the projection of positions for registered nurses (RNs) will increase by 9%, or 194,500 openings per year, through 2030 (US Bureau of Labor Statistics, 2021). To meet these demands, nursing education programs must enroll and retain students to increase the number of new graduate nurses. Multiple factors influence student withdrawal from nursing courses and programs. Academic confidence, the self-belief in the ability to organize, work, and execute at the necessary skill level to achieve, is one vital factor to successfully graduating nursing programs. Duckworth (2016) termed this confidence to overcome difficulties over time as “grit.” Terry and Peck (2020) indicated that grit was a significant predictor of academic and clinical performance among a sample of 2349 nursing students. Self-esteem, a component of confidence, has a positive correlation to academic success (Hyseni

Duraku & Hoxha, 2018). Moreover, low confidence was associated with less academic success (Barbe' et al., 2018). Yet, Rangel et al. (2017) reported that a high level of confidence among medical students may correlate with knowledge but may also correlate with being misinformed.

Successful retention strategies require academic and social considerations. Smith et al. (2019) conducted an integrative review of factors that contribute to nursing student retention founding the following six factors considered to improve retention: bridging the gap between stereotypes and the reality of nursing as a profession, student orientation, stress reduction, effective teaching methods, faculty support of students, and mentorship / coaching strategies. Literature on academic retention focuses on factors and strategies for success for minority and racially diverse students, however there is little research examining the differences between military veteran students (MVS) and those with no prior military experience and their retention in nursing programs (Dyar, 2019). Hawkins et al. (2022) indicated that MVS had greater financial stability and access to financial aid or scholarships but were less involved in student nursing organizations than nursing students without military experience. Nationwide, the number of military affiliated students entering

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college and enrolling in health science majors has increased (Postsecondary National Policy Institute [PNPI], 2019). A workforce with an understanding of the military experience is vital to delivering culturally congruent care. Because military veterans prefer to seek health-care in civilian settings and less than half of eligible veterans are enrolled in their health care system (Maiocco et al., 2019; Wang et al., 2021), retention of MVS in nursing programs is imperative to diversify the workforce and include providers who are knowledgeable about the unique medical and mental health needs of veterans.

Uncovering what, if any, differences in factors like confidence and the strength of influences for withdrawal exist between MVS and non-MVS can inform advisors, student success centers, and faculty. This study examines the differences of confidence and withdrawal rates between student groups (MVS versus non-MVS). Also, we looked to examine the influence of reasons for withdrawal and uncover differences between groups of students who withdrew versus those who did not. This study was guided by four research questions.

Research Questions

- 1 Is there a difference in the level of confidence between nursing students with prior military experience and nursing students with no prior military experience?
- 2 Is there a difference between the rate of withdrawal for nursing students with prior military experience compared to nursing students with no prior military experience?
- 3 What is the strength of influence of select reasons for withdrawal among students that have previously withdrawn from a nursing course or program?
- 4 What are the differences between students that have withdrawn from a nursing course or program compared to those that have not withdrawn from a course or program?

Conceptual Framework

Jeffreys' (2012) Nursing Undergraduate Retention and Success (NURS) Model, specifically the self-efficacy pathway, provided the conceptual framework for this study. The NURS Model self-efficacy pathway examines the influence of self-efficacy on student actions, performance, and persistence. This study measured participants' perceived degree of confidence and factors that contributed to nursing course withdrawal.

Study Design and Sample

This cross-sectional study used an anonymous online survey to determine nursing students' confidence levels, rates of withdrawal, influence of reasons for withdrawal and factors related to withdrawal from a nursing course or program. Although the aims of this current study are novel, we used the same participants and methodology reported in a prior article (Hawkins et al., 2022). This study analyzes and reports on different data that was collected at the same time as the previous study as part of a single survey. Convenience and snowball sampling methods were used to recruit participants. Email distribution lists and social media platforms were used to recruit a nationwide sample. Inclusion criteria were nursing students who were currently enrolled in a prelicensure program or had graduated within the past six months. Data were collected using Qualtrics, an accessible and password-protected web-based survey research tool. Institutional review board approval was obtained from Old Dominion University.

Instruments

Data instruments for this study included a demographic survey, the Jeffreys' Educational Requirements Subscale (ERS), and, for students who had previously withdrawn from a nursing course, the Jeffreys' Student Withdrawal Questionnaire (SWQ). The ERS and SWQ questionnaires are part of Jeffrey's Nursing Retention Toolkit (2012). Licensure was obtained for use. The 11-item demographic survey collected variables for comparison between groups including age, marital status, gender, ethnicity, race, military affiliation, employment status, prelicensure program type, whether participants were first-generation college students, whether participants had dependent children and whether participants had previously withdrawn from a program. The 10-item Educational Requirements Subscale (ERS) is one of two subscales that comprise the Jeffery's Self-Efficacy Tool. The ERS measured students' perceived degree of confidence in successfully completing specific academic tasks such as attending class, reviewing notes, preparing for exams, submitting assignments on time, and obtaining a passing grade (Jeffreys, 2012). The ERS can be used alone or in conjunction with other toolkit items (Jeffreys, 2012) and, for this study, only the ERS was used. Content validity was established by a 13-member expert panel, and the ERS needed no revisions. The test-retest reliability coefficient was 0.85 for the ERS (Jeffreys, 1998). A review of the literature yielded no further reliability or validity evidence. The 10-item SWQ assessed student perceptions of factors that contributed to withdrawal from a nursing course (Jeffreys, 2012). The SWQ has not been psychometrically tested (personal correspondence with Dr. Jeffreys, June 17, 2022). Although these instruments have been widely used in the literature, in-depth psychometric testing of ERS and SWQ is needed.

Results

The statistical analysis software program IBM SPSS 27 was used to analyze data. Our results describe the differences between students with and without prior military experience in level of confidence for achieving educational tasks and rate of withdrawal; the strength of influence of select reasons for withdrawal from a nursing course or program and descriptive characteristics related to withdrawal decisions of students that have previously withdrawn from a nursing course or program compared to those that have not. Descriptive and inferential statistics were used to compare groups.

Demographics

Our total sample consisted of 420 participants of which 62 were MVS and 358 were non-MVS. Participants were not forced to respond to each question on the survey therefore, the population (n) varies for some survey items due to missing data. Table 1 provides a comparison of demographic variables between MVS and non-MVS. The average age of participants was 31.5 years for MVS and 25.8 years for non-MVS. In addition to being older on average, MVS were also more likely to be married and have dependent children. Additionally, a higher percentage of MVS were male (32.8%) compared to non-MVS (8.4%) and a higher percentage were first-generation college students (35%) compared to non-MVS (26.5). The MVS were more ethnically and racially diverse and more likely to be enrolled in a bachelor's degree in nursing program. Finally, a lower percentage of MVS were employed.

Level of Confidence

As measured by the Educational Requirements Subscale (ERS), the mean level of confidence for achieving educational tasks was 8.3 (n = 56) on a 1–10 scale for nursing students with military experience compared to 8.4 (n = 274) for nursing students with no prior military

Table 1.
Comparison of Demographic Variables Between Groups

Variable	Military Veteran Students (MVS)	No Prior Military Experience (non-MVS)
Mean age	31.5 years (n = 62)	25.8 years (n = 351)
Marital status	60% married (n = 36) 20% single (n = 12) 8.3% single living with partner (n = 5) 10% divorced (n = 6) 1.7% widowed (n = 1)	22.5% married (n = 80) 62.5% single (n = 222) 12.1% single living with partner (n = 43) 2.5% divorced (n = 9) 0.3% widowed (n = 1)
Gender	32.8% male (n = 20) 67.2% female (n = 41)	8.4% male (n = 30) 91.3% female (n = 327) 0.3% non-binary (n = 1)
Ethnicity	14.8% Hispanic (n = 9) 85.2% non-Hispanic (n = 52)	9.6% Hispanic (n = 34) 90.4% non-Hispanic (n = 321)
Race*	24% African American (n = 15) 4.8% American Indian/Alaska Native (n = 3) 0% Pacific Islander (n = 0) 69.4% White or Caucasian (n = 43) 6.5% other (n = 4)	14.5% African American (n = 52) 0.6% American Indian/Alaska Native (n = 2) 0% Pacific Islander (n = 0) 75.4% White or Caucasian (n = 270) 3.6% other (n = 13)
First-generation college	35% (n = 21)	26.5% (n = 94)
Has dependent children	55% (n = 33)	21.7% (n = 77)
Prelicensure program type	14.5% Associate degree (n = 9) 85.5% Bachelor's degree (n = 53)	23.5% Associate degree (n = 84) 76.5% Bachelor's degree (n = 273)
Employment	51.7% none (n = 31) 48.3% employed (n = 29)	34.1% none (n = 121) 65.9% employed (n = 234)
Military affiliation	Active duty (n = 6) Veteran (n = 41) Reservist (n = 4) ROTC (n = 3) Retired (n = 6)	
Withdrew from nursing course or program	8.8% (n = 5)	7.8% (n = 22)

* Participants could endorse more than one racial category.

experience. Using an independent t-test, there was no statistically significant difference between the groups at $p = 0.419$.

Comparison of Rate of Withdrawal

Three-hundred and thirty-eight participants ($N = 338$), including MVS ($n = 57$) non-MVS ($n = 281$), answered both the question about previous military experience and the question of withdrawing from a nursing course or program. Twenty-seven total participants indicated they had withdrawn from either a nursing course or program. Of these 27 participants, five (18.5%) had prior military experience and 22 (81.5%) had no prior military experience. For comparison by ratio, 5/57 (8.8%) of those that withdrew from a nursing course or program had prior military experience and 22/281 (7.8%) had no prior military experience. Using Chi-square analysis, there was not a statistically significant difference in rate of withdrawal from a nursing course or program based on whether a participant had military experience or not ($p = 0.811$).

Strength of Influence for Reasons for Withdrawal

For all students who previously withdrew from a nursing course or program, items with the strongest influence on withdrawal decisions were academic difficulties (mean = 2.56), family responsibilities (mean = 2.59) and family crisis (mean = 2.62). Using chi square analysis there was no significant difference in the strength of influence

between MVS and non-MVS. The mean results for the 10-item SWQ are displayed in Table 2.

Comparison of Factors Related to Withdrawal

When comparing students that have previously withdrawn from a nursing course or program to those that had never withdrawn, the following factors were statistically significant between groups: perceived amount of supportiveness or restrictiveness for faculty advisement and helpfulness, perceived amount of supportiveness or restrictiveness for membership in a nursing club or organization, level of confidence in obtaining a passing grade for clinical laboratories, and the number of credits the student was in enrolled during most recent semester. Twenty-six of the students that indicated withdrawal from either a nursing course or program perceived that faculty advisement and helpfulness supported retention to a greater degree ($n = 26$) than did students that had not withdrawn ($n = 310$) at a $p = 0.030$ (Mann–Whitney $U = 3111$, $z = -2.18$). Twelve students who withdrew from either a nursing course or program also perceived that membership in a nursing club or organization supported retention to a greater degree ($n = 12$) than did students that had not withdrawn ($n = 181$) at a $p = 0.047$ (Mann–Whitney $U = 751$, $z = -1.98$). When comparing the level of confidence in obtaining a passing grade for clinical laboratories, twenty-seven students that had previously withdrawn from either a nursing course or program had a higher level of confidence ($n = 27$) than did students that had not withdrawn ($n = 309$) at a $p = 0.021$ (Mann–Whitney $U = 3154$, $z = -2.32$). Twenty-seven students that indicated they had previously withdrawn from either a nursing course or program were enrolled in less credits in their most recently completed semester ($n = 27$) than the students that had not withdrawn ($n = 311$) at a $p = 0.001$ (Mann–Whitney $U = 2790$, $z = -3.48$). There was no statistically significant difference based on gender or ethnicity in terms of frequency of withdrawal from a nursing course or program. However, those students that indicated they were the first to attend college from their respective families were 2.27 times (95% CI 1.02–5.06) more likely to have withdrawn from a course or program than those that were not the first members of their families to attend college (Table 3).

Discussion and Implications

This study sought to answer the following research questions. First, is there a difference in the level of confidence between nursing

Table 2.
Strength of Influence of Reasons for Course or Program Withdrawal

Student Withdrawal Questionnaire (SWQ)	Strength of Influence of Reasons for Course or Program Withdrawal				
	N	Mean	Std. Deviation	Minimum	Maximum
Transportation arrangements	27	3.74	0.712	1	4
Financial status	27	3.04	1.255	1	4
Class schedule	27	3.33	1.000	1	4
Family crises	27	2.63	1.418	1	4
Employment responsibilities	27	3.19	1.111	1	4
Family responsibilities	27	2.59	1.448	1	4
Academic difficulty or failure	27	2.56	1.423	1	4
Child-care arrangements	26	3.65	0.797	1	4
Change in health status	27	3.33	1.109	1	4
Uncertainty or change in major	27	3.70	0.775	1	4

Note: Lower mean score indicated stronger influence.

Table 3
Descriptive Characteristics of Participants with Previous Withdrawal

Variable	Previous Withdrawal	Pearson Chi-Square
Gender	14.8% male (n = 4) 85.2% female (n = 23)	p = 0.942, df 2
Ethnicity	Non-Hispanic 85.2% (n = 23) Hispanic 14.8% (n = 4)	p = 0.329, df 1
First member in family to attend college	44.4% yes (n = 12) 55.5% no (n = 15)	*p = 0.04, df 1

* Those participants that indicated that they are the first member of their family to attend college are more likely to have withdrawn from a course or nursing program with an odds ratio of 2.272 at a 95% confidence interval of 1.02–5.06.

students with prior military experience and nursing students with no prior military experience? Second, is there a difference between the rate of withdrawal for nursing students with military experience compared to nursing students with no prior military experience? Third, what is the strength of influence of select reasons for withdrawal among students that have previously withdrawn from a nursing course or program? Lastly, what are the differences between students that have withdrawn from a nursing course or program compared to those that have not withdrawn from a course or program?

Our findings yielded no significant differences between MVS and non-MVS in areas of confidence in academic task completion or rate of withdrawal from nursing courses or programs. According to [Jeffreys \(2012\)](#), confidence was a statistically significant factor in completing fundamental academic tasks, such as attendance, preparation, and timely assignment submission. These tasks are all necessary for academic success. The results of our study show that MVS are no different from the general nursing student body in their level of academic confidence. Though the end results are similar between groups for confidence, other individual factors that may affect academic success may need further investigation. Understanding that confidence and rate of withdrawal of nursing students does not significantly vary based on current or past military status can inform faculty and advisors to apply best practices for teaching and learning to all nursing students. To ensure academic success, faculty need a better understanding of student's unique traits and characteristics that impact learning. Also, other factors influence students' withdrawal decisions. For example, evidence suggests that many factors such as depression, anxiety, insomnia, substance use disorders, and disabilities that are associated with past military service may negatively affect academic performance ([Alschuler & Yarab, 2018](#); [Cox, 2019](#); [Eakman et al., 2019](#)). Further, dislocation from family support systems as well as financial and family obligations poses added stressors common to MVS ([Kato et al., 2016](#)). Yet, the data from this study shows that despite social and emotional challenges overall program withdrawal was similar from MVS and non-MVS participants.

This study used the SWQ to assess which factors had the strongest influence on their decision to withdraw. Items with the strongest influence on withdrawal decisions were academic difficulties, family responsibilities, for both MVS and non-MVS participants. Not surprisingly, students previously reported academic difficulties as contributory to withdrawal from nursing programs ([Chan et al., 2019](#)). [Michel et al. \(2021\)](#) noted that academic difficulties that led to consideration for withdrawal of nursing students were exacerbated during the pandemic. This study adds to the body of literature that family responsibilities and crisis have also previously been reported as barriers to academic success ([Cox et al., 2021](#); [Hawkins et al., 2022](#); [Priode, 2020](#)). Nurse educators should design courses to include low stakes assignments that scaffold into higher stakes assignments to identify academically struggling students earlier. Further, access to

counseling must be encouraged as a regular benefit to students. Nurse educators should work to normalize using counseling services before a crisis occurs.

Our last research question focused on differences between groups of participants who previously withdrew and those who did not. Consistent with [Voelpel et al. \(2017\)](#), our study confirmed that among nursing students who reported course or program withdrawal, faculty advisement and helpfulness was perceived as more supportive of retention. Further research is needed to explore whether this meant students who withdrew felt they had lack of support or if faculty support encouraged re-enrollment. This study also adds to the data that students who withdrew reported that membership in a nursing club or organization supported retention. Notably, there were only 12 participants in this study who reported a withdrawal and a perception that club or organization membership supported retention. Although this is only 0.028% of the study participants, further research may uncover if club or organization membership provides a mechanism for re-enrollment among withdrawal students. This data adds to the research by [Nikolaidou et al. \(2019\)](#), who reported that students in a Registered Nurse to Bachelor of Science (RN-BSN) program perceived that friend support within and outside of school supported retention. Nursing clubs and organizations may provide an avenue to garner peer support.

Though there were no differences in the rate of withdrawal between genders or ethnic groups represented in this study, first-generation students reported withdrawal at 2.27 times higher than students who had a parent who attended college. This is consistent with data from the National Center for Educational Statistics ([Cataldi et al., 2018](#)) that demonstrates overall attrition rates for first generation students is over two times greater (33%) compared to students who have parents who completed college (14%). It is important to note that MVS are often first-generation students ([PNPI, 2019](#)). Nurse educators should be aware of the connection between the military and being a first-generation student. Educators can provide resources and referrals as well as create peer cohorts among MVS. Interestingly, when we analyzed factors that contributed to withdrawal, higher confidence was not correlated with greater success among nursing students regardless of military status. Instead, we found a statistically significant relationship between higher confidence and course or program withdrawal. Further research is needed to explore the positive relationship between confidence and withdrawal.

Limitations

Limitations of the study include sampling bias. There may be differences between those who chose to take part in the survey and those who did not. Also, we did not capture any participants who withdrew from a program and did not re-enroll. Due to the online nature of the survey, potential participants who lack access or are uncomfortable with technology may have been dissuaded from participation. Another limitation of this study is related to exclusion bias. Access to potential participants was achieved through gatekeepers at schools of nursing. Some gatekeepers declined to share the survey with students. A third limitation is survivorship bias. We did not have a mechanism for contacting former students who did not re-enroll after a withdrawal. Insights from students who terminally withdrew may have different perspectives than the data captured in this study. A limitation in data collection was that the survey did not force item answers which resulted in missing data points. We had a limited sample size of participants who reported prior withdrawal (n = 27) and a limited sample size of participants with current or past military experience (n = 62). Although the limits in sample size were expected, the small sample may not be representative of the general population. Further, samples were not evenly distributed so we used nonparametric statistical analysis. We recommend that future studies seek larger sample sizes,

develop strategies to recruit a larger number of military veteran students and those who have withdrawn from nursing school without intent to return. Finally, this study is limited by a lack of robust psychometric testing of the instruments. We recommend conducting an in depth psychometric testing of the ERS and SWQ.

Conclusion

Preventing course withdrawal or promoting re-enrollment after a withdrawal may be one way to increase the number of new nurses entering the field. Nurse educators and programs should focus on identifying the environmental stressors, such as family obligations and crisis, of nursing students and providing support. Building a supportive culture that promotes peer support as well as strong faculty advisement may counteract factors that would otherwise lead to course or program withdrawal. Nursing schools should consider developing support mechanisms for first generation students to decrease withdrawal among this group since rates were found to be higher.

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Declaration of Competing Interest

The authors report no potential or actual conflict of interest related to this research.

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