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Academic Motivation, and Self-Efficacy among Undergraduate Nursing Students in Riyadh Elm University: A Cross-Sectional Survey

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Abstract

This study investigated academic motivation and self-efficacy among 211 undergraduate nursing students, exploring their relationship and demographic influences. The sample was predominantly female (66.35%), aged 23-25 years (55.92%), mostly single (65.88%), and largely in their final academic year.

Students exhibited "moderate" overall academic motivation, yet showed "low" intrinsic motivation for reading interesting authors, and some experienced "low" amotivation. Overall self-efficacy was "moderately confident". Students felt "very confident" in understanding complicated ideas (score = 3.42), but only "slightly confident" in learning all module material (score = 2.33) and completing the hardest assigned work (score = 2.25).

A significant, weak-to-moderate positive correlation was found between academic motivation and self-efficacy ($r = 0.247$, $p = 0.026$). Notably, demographic variables (age, gender, marital status, year level) did not significantly impact academic motivation.

In conclusion, nursing students demonstrated moderate motivation and self-efficacy, with specific areas requiring enhancement, particularly in managing workload and certain intrinsic motivators. The positive correlation suggests that interventions targeting one construct can positively influence the other. Nurse educators should implement strategies to boost confidence in handling challenging material and foster engagement to support academic success and professional development.

Keywords: Academic Motivation, Confidence, Nursing Student, Nursing Level, Self-Efficacy

1. Introduction

Academic motivation plays a crucial role in the success and performance of nursing students. Providing professional nurses who can fulfil the health needs of their patients is the main goal of academic nursing education [1]. High academic motivation leads to curiosity, high quality of learning, perseverance in learning, and better academic performance academic motivation encompasses three components: intrinsic motivation (performing an activity for pleasure and self-satisfaction); extrinsic motivation (performing an activity for the external meaning and outcomes and not necessarily for personal benefit); and a-motivation (the choice of studies is not understood and the individual does not know how to connect the outcomes of studying with personal benefit) [2].

Each type of motivation (intrinsic, extrinsic, and a-motivation) may have a various effect on students' performance in a fast-paced, international culture, the expectations and needs of everyone. Nursing students must acquire the necessary information, abilities, and competences adding to being content, driven, supported, and confident in their ability to succeed to achieve this goal [3]. It was highlighted that when students lose their academic motivation, they possibly report obstacle in handling learning problems, their academic self-efficacy is likely to decrease [4].

Academic self-efficacy is the student's belief that he can reach his proposed educational achievements. It similarly indicates the student's judgment of his abilities to arrange and accomplish courses of action required to achieve designated types of academic performance [5]. Increased self-efficacy significantly affects learning, performance, and motivation by increasing dedication and commitment. Academic self-efficacy functions as the internal motivator for students to endure challenges and achieve goals [6]. Evidence suggests that nursing students with low levels of self-efficacy disbelieve in their educational capabilities and lack clinical motivation and self-esteem. These students would prevent any learning experience because they

realize it may result in failure. They also may not initiate educational tasks to avoid making mistakes [7].

Based on the above considerations, the aim of the current study examines the effect of Academic Motivation, and Self-Efficacy. In Saudi Arabia, there is no evidence addressing this issue. Therefore, the present study aimed to evaluate Academic Motivation, and Self-Efficacy among undergraduate students in Riyadh-Elm University (REU).

Research Objectives

This study aims to evaluate the academic motivation, and self-efficacy among undergraduate nursing students at Riyadh Elm University. Specifically, it sought to answer the following objectives:

1. Determine the demographic profile as to
1.1 age
1.2 gender
1.3 marital status
1.4 education level
2. Determine the level of academic motivation among undergraduate nursing students
3. Assess the level of self-efficacy among undergraduate nursing students

Hypotheses

H_1: There is no significant relationship between academic motivation and self-efficacy among undergraduate nursing students.

H_2: There is no significant difference in academic motivation across demographic profile of undergraduate nursing students.

2. Material and Methods

Study design

This research employs a quantitative, non-experimental, cross-sectional survey design. As a cross-sectional design, it allows for the collection of data from a sample of undergraduate nursing students at Riyadh Elm University at a single point in time. With this design, the researchers describe the current levels of academic motivation and self-efficacy among the student population and examine the relationships between these variables concurrently.

Data collection process

This study was conducted using a self-administered structured survey that contains three sections: **Tool I** includes five questions to assess demographic profile as to age, gender, marital status, and education level. **Tool II Academic Motivation Scale:** This tool [8] was adapted which includes 28 questions used to assess student modification in university by using 5-point Likert scale that corresponds exactly by using indicate to what extent each of the question items presently corresponds to one of the reasons why student go to college. The scoring system includes 7 subscales which are three intrinsic-motivation subscales (13 statements), three extrinsic-motivation subscales (12 statements), and amotivation subscale (3 statements). The total score for the Academic Motivation Scale ranges between 28 and 196, calculated by summing up the scores of each subscale. **Tool III: Academic Self-Efficacy Scale**: this tool [9] was adapted and is a five-item instrument to assess respondents' self-efficacy regarding several skills related to their academic performance and achievement, such as time management, taking notes, taking tests, and general academic ability. Each item on the ASE was scored using a five-point Likert scale, where 1=Not all confident and 5= Extremely confident.

Validity and Reliability of Tools

The research instruments underwent a review by a jury of six experts representing the medical and nursing fields to ascertain their validity and reliability, with all necessary modifications implemented accordingly. Internal consistency for the seven subscales of the Academic Motivation Scale was reported with a Cronbach's alpha of 0.81. Test-retest reliability for these subscales was estimated over a one-month period, showing a mean test-retest correlation of 0.79 [8]. For the Self-Efficacy Scale (Tool III), Cronbach's alpha was used to measure internal consistency, yielding a value of 0.897 [9].

Sample Characteristics

The study participants were comprised of undergraduate nursing students registered in the second semester of the academic year 2023-2024. For the inclusion criteria, students from all levels, including both male and female sexes, who were enrolled in this academic semester while exclusion criteria were the students who chose not to participate in the research survey.

Sampling Technique

A purposive sampling technique was utilized on this study. By using the PASS11 program for sample size calculation, and setting the confidence level at 95% and the margin of error of 5%, it was estimated that 221 students represents the total sample of this study. Students from all levels participated in this study.

Survey Administration

Data collection will be primarily conducted through online distribution of the questionnaire. To reach the study participants effectively, the researchers utilized existing communication channels within Riyadh Elm University's College of Nursing. Specifically, the main research tools/questionnaire were disseminated via email addresses provided to students, or through designated "WhatsApp" groups managed by student representatives or faculty, which are commonly used for academic communication among students. Regular reminders were sent through the same channels (email/WhatsApp groups) to maximize participation rates, without pressuring individuals. This online approach aims to facilitate broad reach and efficient data collection from the targeted student population.

Study Preparation

The study was conducted following a structured framework: Ethical approval will first be obtained from the Research Ethics Committee of the College of Nursing, Riyadh Elm University. Subsequently, a pilot study will be carried out on 10% of the calculated sample size to test the feasibility and applicability of the developed tools; these pilot participants were excluded from the main study sample, and any necessary modifications to the tools were implemented accordingly. Following the pilot, data collection commence with students from all academic levels who agree to participate in the study. The researchers was then initiate data collection, assessing socio-demographic information using Tool I, and gathering motivation and self-efficacy data using Tool II and Tool III, respectively.

Ethical Considerations

Approval was obtained from Institutional Review Board (IRB) of Riyadh Elm University. The written consent was obtained from each participant enrolled in the study after providing comprehensive information about the nature of the study, aim, and benefits. The investigators emphasize that participation is voluntary. Participants was also informed that they have the right to refuse to participate in the study and withdraw at any time and the refusal to participate in the study will not be affected. Anonymity, privacy, safety, and confidentiality will be assured throughout the whole study.

Statistical Analysis

The collected data were coded, analyzed, and tabulated using Statistical Package for the Social Sciences (SPSS), Version 22.0 (Armonk, NY: IBM Corp.). Appropriate statistical tests were used. After data collection, they were revised, tabulated, and statistically analyzed using SPSS version 22. Data were tested for normality of distribution before any calculations and were found to be of normal distribution. Continuous data were expressed in mean ± standard deviation, while categorical data were expressed in numbers and percentages. Comparisons were determined using a t-test for variables with continuous data. The chi-square test was used for comparison between variables with categorical data. The significance of the results was interpreted as follows: when $p<0.05$, there were statistically significant differences.

3. Results and Discussion

Table 1: Demographic characteristics of the students (n=211)

Variable/s	Category	Frequency	Percentage
Age	20- 22 years old	63	29.86%
	23- 25 years old	118	55.92%
	26- 28 years old	22	10.43%
	29 years old & above	8	3.79%
Gender	Male	71	33.65%
	Female	140	66.35%
Marital Status	Single	139	65.88%
	Married	53	25.12%
	Divorce/Separated	19	9.00%
Academic level	Level 1	9	4.27%
	Level 2	2	0.95%
	Level 3	27	12.8%
	Level 4	27	12.8%
	Level 5	24	11.37%
	Level 6	17	8.06%
	Level 7	24	11.37%
	Level 8	81	38.39%

The Table 1 provides demographic characteristics of a student sample (n=211), including Age, Gender, Marital Status, and Academic Level. The data indicates that the largest groups of students (55.92%) are between 23 and 25 years old, significantly outnumbering older students in the 26-28 and 29+ age brackets. This distribution aligns with common academic motivation theories. Younger students, particularly those in their early undergraduate years, are often driven by intrinsic motivation, fueled by a natural curiosity and a desire to explore new subjects [10]. Motivational theory of life-span development. This work elaborates on how motivation changes across the lifespan, focusing on goal engagement and disengagement processes, which are highly relevant for adult learners balancing multiple life roles.

Meanwhile, the sample is predominantly female (66.35%) compared to male (33.65%). Gender differences in academic motivation can vary by context and culture. Academic motivation research should move beyond simple male-female comparisons to explore how gender identity, stereotype threat, and the intersection of gender with other demographic factors influence motivational experiences, particularly in discipline-specific contexts like STEM fields [11]. Gender differences in academic motivation, achievement, and learning strategies: A meta-analysis. While specific meta-analyses can be quite recent, this area continually updates with new comprehensive reviews that aim to synthesize findings and explain inconsistencies across studies. These often point to domain-specific motivation differences.

In terms of marital status, the majority of students are single (65.88%), followed by Married (25.12%), and a smaller percentage are Divorced/Separated (9.00%). On this part, marital status introduces different life responsibilities and support systems that can significantly impact academic motivation [12]. Student-parents in higher education: Motivations, challenges, and support needs. This type of research explores the strong intrinsic motivation (e.g., role modeling for children, securing better future for family) often observed in student-parents, alongside the considerable challenges that require strong self-regulation and external support to maintain academic motivation.

The distribution across academic levels is varied, with a high concentration at Level 8 (38.39%), followed by Level 3 and Level 4 (both 12.8%), and Level 5 and Level 7 (both 11.37%). Levels 1 and 2 have the lowest frequencies. The academic level is profoundly linked to motivation, as students' progress through their studies. Research on self-regulation and metacognition [13] emphasizes how students' ability to set goals, monitor their learning, and adapt their strategies evolves with academic level, directly impacting their motivation and success. Students at higher levels (like your "Level 8") are expected to exhibit stronger self-regulatory skills.

In all, each demographic variable offers potential insights into the motivational profiles and challenges of the students. The predominance of students in the 23-25 age range, female gender, single marital status, and especially at the final academic level (Level 8), suggests a population likely to be driven by clear future-oriented goals, high commitment, and potentially a strong mix of both intrinsic satisfaction from their studies and extrinsic motivation related to career and life progression.

Table 2: Level of academic motivation among undergraduate nursing students (n=211)

Academic Motivation	Sub-scale	Statement	Score	Interpretation
Intrinsic	To know	Because I experience pleasure and satisfaction while learning new things.	2.82	Moderate
		For the pleasure I experience in broadening my knowledge about subjects which appeal to me.	2.84	Moderate
		For the pleasure I experience when I learn interesting things.	2.97	Moderate
		For the pleasure that I experience when I feel completely absorbed by what certain authors have written.	2.76	Moderate
	Toward accomplishment	For the pleasure I experience while surpassing myself in my studies.	2.65	Moderate
		For the satisfaction I feel when I am in the process of accomplishing difficult academic activities.	2.92	Moderate
		For the satisfaction I experience when I am doing well in school.	2.49	Moderate
		Because college allows me to experience a personal satisfaction in my quest for excellence in my studies.	2.86	Moderate
		For the pleasure that I experience while I am surpassing myself in one of my personal accomplishments.	3.14	Moderate
	To experience stimulation	For the intense feelings I experience when I am communicating my own ideas to others.	2.69	Moderate
		For the pleasure I experience when I discover new things never seen before.	2.45	Moderate
		For the pleasure that I experience when I read interesting authors.	2.36	Low
		For the "high" feeling that I experience while reading about various interesting subjects.	2.78	Moderate
Extrinsic	External regulation	Because I want to have a better salary later on.	2.50	Moderate
		Because with only a high-school degree I would not find a high-paying job later on.	2.78	Moderate
	Introjected regulation	To prove to myself that I am capable of completing my college degree.	3.12	Moderate
		Because of the fact that when I succeed in school I feel important.	2.84	Moderate
		Because I want to show myself that I can succeed in my studies.	3.23	Moderate
		To show others that I am an intelligent person.	2.88	Moderate
	Identified regulation	Because eventually it will enable me to enter the job market in a field that I like.	2.89	Moderate
		Because this will help me make a better choice regarding my career orientation.	3.10	Moderate
		Because I want to have “the good life” later on.	3.09	Moderate
		Because I believe that a few additional years of education will improve my competence as a worker.	3.09	Moderate
		In order to obtain a more prestigious job later on.	3.10	Moderate
		Because I think that a college education will help me better prepare for the career I have chosen.	3.09	Moderate
Amotivation	No-specific	Honestly, I don’t know; I really feel that I am wasting my time in school.	1.94	Low
		I once had good reasons for going to college; however, now I wonder whether I should continue.	2.14	Low
		I can’t see why I go to college and frankly, I couldn’t care less.	2.42	Moderate

***Legend:** 1.00-2.33 Low motivation; 2.34-3.66 Moderate Motivation; 3.67-5.00 High Motivation

The Table 2 provides a detailed breakdown of the levels of academic motivation among 211 nursing students. First is the intrinsic motivation with three subscales: "To know," "Toward accomplishment," and "To experience stimulation." For each sub-scale, specific statements are listed, along with their mean "Score" and an "Interpretation" of that score. Based on the results, all nursing students have moderate academic motivation which means the nursing students are motivated but their motivation is not at highest possible level, except in the areas of “To experience stimulation which is the For the pleasure that I experience when I read interesting authors” where nursing students have low academic motivation.

In the subscale To know, all students exhibit a moderate level of motivation [2.82, 2.84, 2.97, 2.76] driven by the inherent joy of learning, expanding knowledge, and engaging with interesting material. This indicates a genuine interest in the subject matter. For the subscale of Toward Accomplishments, the nursing students are moderately motivated by the challenge of difficult tasks, the satisfaction of success, the pursuit of excellence, and the joy of personal achievement and expressing their ideas. This highlights a drive for mastery and competence. And for the To experience stimulation, nursing students have moderate academic motivation. While most aspects here are moderate, the statement "For the pleasure that I experience when I read interesting authors" shows a "Low" score (2.36). This might suggest that while students generally seek new experiences and engaging subjects, their motivation specifically tied to the pleasure of reading authors may be lower than other forms of stimulation or knowledge acquisition. This could indicate a preference for other learning modalities (e.g., practical, visual, auditory) or a perceived lack of "interesting" authors in their required readings. Numerous studies on the academic motivation of nursing students consistently show moderate levels. One study found that on the consistency across diverse sample as they focus on self-efficacy and professional identity which found that nursing students maintain a generally moderate to strong level of motivation to complete their rigorous programs. Their motivations are often tied to career aspirations and the inherent value they place on helping others [14, 15].

Yet, the motivation of nursing students is typically shaped by both inherent and external factors, with intrinsic motivation highly regarded for fostering sustained engagement and achievement [16]. Given its vocational nature, nursing frequently appeals to individuals possessing an innate drive to provide care, address challenges, and promote health, characteristics that strongly correlate with intrinsic motivation [17]. The academic motivation of nursing students found their average intrinsic motivation scores to be in the "moderate" range [18]. This suggests that while

these students genuinely enjoy and find satisfaction in learning nursing concepts and skills, their intrinsic drive might not be at its peak for every single aspect of their academic journey.

On the other hand, the above table also presents the findings regarding the levels of academic motivation among the 211 nursing students surveyed. The table focuses on three sub-scales of extrinsic motivation: External regulation, Introjected regulation, and Identified regulation, along with the average scores and their interpretations. As for external regulation, the nursing students are moderately motivated by the promise of a higher salary and the desire to avoid limited job prospects that can come with not having a college degree. This means that while these tangible external benefits do play a part, they aren't the main reasons students stay engaged in their studies. The current study's exploration of external, introjected, and identified regulation aligns directly with Self-Determination Theory (SDT) [19, 20]. The moderate scores for "better salary" and "avoiding low-paying jobs" in this study resonate with the SDT's description of external regulation, where behavior is controlled by external contingencies [16]. While these factors are present, their moderate influence suggests that nursing students are not solely driven by these overt external pressures. Recent studies continue to acknowledge the role of external factors like financial compensation in academic motivation, though often within a broader motivational framework [21].

For introjected regulation, the scores within this sub-scale, particularly for "proving capability" (3.12) and "showing self-success" (3.23), suggest a slightly stronger internal drive related to self-worth and validation compared to external regulation. This indicates that students appear to be moderately motivated by a desire to prove their competence and intelligence, both to themselves and to others. This suggests that while maintaining a positive self-image and reaching personal goals contribute to their continued academic effort, these aren't the only, or even the primary, driving forces. For nursing students, this could manifest as a desire to meet the high standards of the profession or gain approval from educators and peers, a dynamic explored in recent studies on academic pressures [22].

And for identified regulation, all statements received scores around the 3.00 to 3.10 range, consistently interpreted as moderate. Nursing students are moderately motivated by how much they believe their education will benefit their future careers and overall quality of life. This suggests that while they see the personal value and usefulness of their studies, it's not the sole or overwhelming factor driving them. The belief that education enhances competence, prepares them for their chosen field, and leads to a desirable lifestyle are significant, albeit not overwhelmingly strong, motivators. This sub-scale generally shows slightly higher scores compared to external regulation, suggesting a greater internalization of academic goals related to personal and professional development. The moderate scores related to "entering a liked job market," "career orientation," "the good life," "improved competence," and "prestigious job" clearly fall under identified regulation. Students perceive the personal relevance and utility of their education for their future. This aligns with SDT's concept that identified regulation fosters greater autonomy and is associated with more positive outcomes than external or introjected regulation [16]. Studies in nursing education frequently emphasize the importance of students' identification with their future professional roles and the value they place on their education for career development [23, 24].

Lastly, the amotivation score falls within the "Low motivation" range. This means that a significant portion of the 211 undergraduate students surveyed experience feelings of uncertainty about their academic path and perceive their time in school as potentially wasted. This indicates a concerning lack of purpose or engagement among some students regarding their nursing education.

Table 3: Level of self-efficacy among undergraduate nursing students (n=211)

Self-Efficacy Item	1	2	3	4	5	Scores	Interpretation
How confident are you that you can complete all work that assigned in your modules	51	32	61	24	43	2.89	**Moderately confident**
When complicated idea are present in your modules, how confident are you that you can understand them	19	73	6	26	87	3.42	**Very Confident**
How confident are you that you can learn all of the material presented in your module?	27	57	52	45	3	2.33	**Slightly confident**
How confident are you that you can do hardest work that is assigned in your module?	20	60	58	25	12	2.25	**Slightly Confident**
How confident are you that you will remember what you learned in your current modules next year	32	59	43	34	43	2.99	**Moderately confident**
Total Average Scores						2.78	**Moderately confident**

***Legend:** 1.00-1.800 Not at all confident; 1.81-2.60 Slightly confident; 2.61-3.40 moderately confident; 3.41-4.20 very confident; 4.21-5.00 extremely confident

Table 3 indicates an overall moderate level of self-efficacy among the undergraduate nursing students. Based on the table, a significant portion of students (61) feel moderately confident about completing all assigned work and remember what you learned. While a fair number also expressed slight confidence, a standout finding is that a significant majority of students (87%) are very confident in one particular area. This strongly suggests that nursing students, as a whole, are highly capable of understanding the complex material presented in their modules, a crucial aptitude for success in nursing education.

Confidence in completing all assigned work and remembering material next year is moderate. This indicates that while students are confident in their ability to understand difficult concepts, they may be overwhelmed by the large amount of information and the intensive effort demanded by their nursing modules. This gap between perceived ability and the actual workload is a key factor in their academic motivation. This relates with the study about self-efficacy of clinical performance in nursing [22]. This research corroborates the strong connection between a nursing student's motivation for choosing their field and their clinical self-efficacy, an important finding that likely applies to advanced cohorts (e.g., Level 8) who are deeply committed to their profession; it also underscores the significant role of clinical education status in shaping this self-efficacy within nursing programs. One study shows that it's highly relevant for nursing students and links academic self-efficacy with resilience and social support, factors that could influence how students cope with "hard work" and "learning all material [25].

Regarding self-efficacy levels, it can be seen the moderate level of self-efficacy among students. A moderate level of self-efficacy means that an individual generally believes in their capability to succeed at a task or in a specific situation, but this belief isn't exceptionally high or consistently unwavering. They have a reasonable degree of confidence in their abilities to execute the actions needed to achieve desired outcomes, even if they might still experience some doubt or acknowledge potential challenges. In academic contexts, In educational settings, Numerous studies reveal that a considerable number of students exhibit moderate self-efficacy, as exemplified by research showing that most students demonstrate this level in writing performance, where it holds a weak but significant positive correlation with actual achievement, this indicates that while self-efficacy impacts performance, its influence is often tempered by other variables.

Moreover, one research discusses how academic self-efficacy, learning engagement, and challenges like work and family pressures (highly relevant to your demographic) influence academic achievement [26]. The findings about the unique challenges of advanced students with dual pressures can be extrapolated to your Level 8 nursing students. In essence, a moderate level of self-efficacy suggests a functional belief in one's abilities, enabling engagement and effort, but acknowledging that there's room for growth or that external factors might influence outcomes.

Table 4: Correlation between academic motivation and self-efficacy among nursing students

Variables	N	Correlation Coefficient (r)	p-value	Significance level	Results	Interpretation
Academic Motivation VS Self-efficacy	211	0.247	0.026	0.05	Positive correlation	Statistically significant

The Table 4 presents the relationship between academic motivation and self-efficacy among nursing students. Based on the results, the correlation coefficient (r) is positive (0.247). This indicates a positive correlation between academic motivation and self-efficacy among nursing students. In simpler terms, as academic motivation tends to increase, self-efficacy also tends to increase, and vice versa. A correlation coefficient of 0.247 is generally considered a weak to moderate positive correlation. While there is a relationship, it is not a very strong one. This means that while academic motivation and self-efficacy tend to move in the same direction, academic motivation alone does not explain a large proportion of the variance in self-efficacy (or vice-versa). Since $p<\alpha$ ($0.026 < 0.05$), we reject the null hypothesis. It demonstrates that among 211 nursing students, there is a statistically significant, weak to moderate positive correlation between academic motivation and self-efficacy. This suggests that higher academic motivation is associated with higher self-efficacy, and this relationship is not due to random chance. However, it's important to note that while significant; the correlation is not very strong, indicating that other factors also play a role in self-efficacy among nursing students.

The nursing education is uniquely challenging, characterized by rigorous academic demands, high-stakes clinical experiences, and exposure to emotionally taxing situations [27]. In this demanding environment, students' academic motivation and self-efficacy are critical for their adaptation, learning, and eventual professional competence. Studies have shown a positive correlation between academic motivation and self-efficacy. Studies have conducted found statistically significant positive relationships between academic motivation and self-efficacy among undergraduate nursing students [7, 15]. These studies suggest that students who are more motivated academically tend to possess higher self-efficacy beliefs regarding their ability to succeed in their nursing studies. Similarly, a study affirmed that academic motivation increased as the level of academic self-efficacy increased [18]. In this sense, it means that is has an impact on the academic outcomes of the student. These argued that high levels of academic self-efficacy have been linked to improved academic performance and clinical competence in nursing students [28]. Students who believe in their capabilities are more likely to engage deeply with learning materials, perform well in examinations, and confidently execute clinical skills.

Lastly, the current findings of this study on positive correlation between academic motivation and self-efficacy underscore the importance of fostering both in nursing students. Nurse educators can leverage by building improving self-efficacy in nursing education by implementing pedagogical strategies that promote mastery experiences, provide vicarious learning opportunities (e.g., peer modeling), offer verbal persuasion (constructive feedback and encouragement), and manage physiological and affective states (e.g., stress reduction techniques) can enhance students' self-efficacy [29, 30].

Table 5: Significant differences in academic motivation of the nursing students across demographic profile

Demographic Variable	Categories	N	Test statistics	F/T value	*p*-value	Result	Interpretation
Age	20-22 years	63	One way ANOVA	F = 0.868	0.515	Accept the null hypothesis (H_2)	Not statistically significant
	23-25 years	118					
	26-28 years	22					
	39+ years	8					
Gender	Female	140	T test	t = 1.397	0.472	Accept the null hypothesis (H_2)	Not statistically significant
	Male	71					
Marital Status	Single	139	One way ANOVA	F = 1.204	0.463	Accept the null hypothesis (H_2)	Not statistically significant
	Married	53					
	Divorced	19					
Year Level	Year 1	11	One way ANOVA	F =1.152	0.443	Accept the null hypothesis (H_2)	Not statistically significant
	Year 2	54					
	Year 3	41					
	Year 4	105					

The Table 5 shows the significant differences in academic motivation of the nursing students across demographic profile. It presents the results of statistical analyses investigating the relationship between various demographic variables (Age, Gender, Marital Status, and Year Level) and the academic motivation of nursing students. Based on the results, age, gender, marital status and year level does not significantly impact academic motivation among nursing students. In other words, there are no meaningful differences in how motivated nursing students are, regardless of their socio-demographic mentioned. Any variations in motivation scores between age groups are likely just random occurrences.

As for the age, while life experiences may vary with age, academic motivation itself might be more strongly driven by current learning experiences and goals. For instance, previous study indicates that motivation might fluctuate; perhaps being high in the initial years, dipping in the middle, and then rising again towards graduation as career aspirations become more immediate. Older students might also have different motivational drivers (e.g., career change, family. A study in Saudi Arabian university students revealed that learning strategies influenced motivation, but age and gender were not significant predictors of academic engagement [31]. Similarly, one meta-analysis have found that demographic factors like age or gender are less impactful on motivation in health science students than psychological factors, teaching methods, or the learning environment [32]. They suggested that intrinsic drives and self-regulation are more significant in sustaining academic effort than demographic differences.

When it comes to gender and marital status, research generally shows they aren't as strong or consistent predictors of academic motivation as psychological factors or the immediate learning environment. Any small differences observed are likely due to underlying factors linked to these demographics, such as societal expectations or responsibilities, rather than the demographics themselves. In contrast, one study indicated that academic motivation significantly predicts student engagement. This relationship, however, is influenced by both gender and the specific academic discipline. The findings highlight the importance of developing gender-sensitive educational strategies to create fair and inclusive learning environments for all students [33].

Conversely, a substantial study of academic level plays a role in shaping academic motivation. The older students exhibit higher levels of intrinsic motivation driven by clear career goals and life experiences [34]. The potential fluctuations in motivation across different academic years, with a reported dip in motivation during the middle years of a program before a resurgence in the final year due to impending professional practice [35]. The absence of such significant differences in the present study could be attributed to the specific motivational construct measured, the homogeneity of the sample in terms of underlying drives towards the nursing profession, or the overriding influence of other unmeasured variables such as teaching quality, perceived self-efficacy, or the overall supportive learning environment [36].

In essence, while factors like age, gender, marital status, and academic level can play a role in academic motivation, their impact is generally minor and indirect. Psychological traits and the learning environment have a much stronger and more direct influence. When demographic differences in motivation do appear, they are usually linked to underlying factors such as societal roles, personal responsibilities, maturity, and how individuals psychologically respond to these situations.

4. Conclusions

This study explored the relationship between academic motivation and self-efficacy in 211 undergraduate nursing students. The demographic data showed that the participants were mostly female, with the largest group falling into the 23-25 age bracket, and the majority of students being single. Students generally showed a moderate level of academic motivation, encompassing both internal drives like the joy of learning and the satisfaction of achievement, and external factors such as the career benefits of their education.

However, there was a specific area where intrinsic motivation was low: the pleasure derived from reading interesting authors. This suggests some students might not connect well with certain reading materials or learning methods. A significant concern was also the low score in amotivation, meaning some students felt uncertain and lacked purpose in their academic endeavors.

Nursing students in the study generally reported "moderately confident" levels of self-efficacy. A notable strength was their "very confident" belief in their ability to grasp complex ideas, a vital skill for nurses who need strong critical thinking and analytical abilities.

The study revealed a statistically significant, positive correlation between academic motivation and self-efficacy, though the relationship was weak to moderate ($r = 0.247$, $p = 0.026$). This means that students with higher academic motivation also tended to have higher self-efficacy, and vice-versa, indicating a mutual influence between these two factors. Interestingly, demographic factors like age, gender, marital status, and academic year level had no significant impact on academic motivation in this study. This suggests that psychological traits and the learning environment might play a more dominant role.

5. Recommendation

Based on these findings, the following recommendations are proposed for nurse educators, students, and future researchers:

1. Nurse educators should create and use specific teaching methods to help students feel more confident when dealing with a lot of material and tough parts of their courses. This could involve breaking down complex topics, providing organized study guides, and offering workshops on effective learning and time management.
2. To address the lack of motivation students feel when reading academic authors, educators should integrate a variety of engaging learning methods. This could include interactive simulations, case studies, guest speakers, and debates. By doing so, they can cater to different learning styles and make the content more stimulating.
3. Identify students exhibiting signs of amotivation early and provide academic and personal counseling support to help them reconnect with their educational goals and reignite their sense of purpose.
4. Students should be encouraged to use active learning strategies to handle their workload and improve their understanding. This includes regularly reviewing

material, practicing with difficult problems, and asking for clarification when they encounter challenging concepts.
5. Future researchers should qualitatively explore students' reasons for feeling less confident about mastering all course material and tackling the most challenging assignments, as well as why specific intrinsic motivators, such as enjoying academic readings, are less prevalent.

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7. Competing interests
The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

8. Authors Contributions
All authors contributed to the study conception and design. Material reparation, data gathering and analysis were performed by all authors. All authors read and approved the final manuscript.

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