

The Relationship between Psychological Well-being, Academic Engagement, and Self-Regulated Learning among Student Nurses

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ABSTRACT The objective of the study is to assess the relationship between psychological wellbeing, academic engagement, and self-regulated learning among nursing students. A descriptive correlational study design was employed. This study was conducted between November and December 2020 in the University of Hail, Saudi Arabia, with a convenience sample of 200 nursing students. This study demonstrates a low level of psychological wellbeing (72%), high level of academic engagement (52%) and high academic self-regulation (39%). A weak statistically significant positive correlation ($pval = .392$) between students' psychological wellbeing scores and their academic self-regulated learning was noted, along with a statistically moderate significant positive correlation ($pval = .519$) between academic engagement and the academic self-regulated learning scores. A weak statistically significant positive correlation between students' psychological wellbeing scores and their academic self-regulated learning, and statistically moderate significant positive correlation between academic engagement and the academic self-regulated learning scores were noted.

INTRODUCTION

The concept of psychological wellbeing is defined as how well one functions as a member of society (Kim 2019), and this is considered important in training and developing future nurses. During clinical training and after graduation, nurses work in a variety of settings that present them with different levels of challenges to produce high-quality patient care (Ratanasiripong and Wang 2011). Student nurses, compared to other disciplines, may encounter increased levels of educational stress, as they must adjust to numerous clinical practices. Academic stress results in psychological distress and has detrimental effects on wellbeing (Roslani et al. 2017). As individuals with high levels of psychological wellbeing can meet the fundamental psychological needs of autonomy, competence, and relevance (Zhang et al. 2015), it is therefore essential for nursing students to have a significant level of psychological wellbeing to manage stressful situations that they may face during clinical training.

In addition, academic engagement involves students' time and energy in regard to psycholog-

ically related activities and the strengthening of desirable intellectual outcomes (Hudson and Carrasco 2017). Student engagement can therefore be used as a continuous assessment of the quality of a nursing program and the success of graduate students (Pacheco et al. 2020). It can thus be employed as a determinant of success within nursing programs and even within the field upon graduation (Yu et al. 2018).

Evidence supports a positive relationship between psychological wellbeing and students' academic engagement. For instance, in teaching, promoting students' psychological wellbeing is often seen as a collaborative strategy to improve student engagement (Shi et al. 2015). Moreover, positive psychological wellbeing is presumably significantly linked not only to students' academic engagement but also their performance and healthy behaviour, being a powerful predictor for long-term health outcomes (Alshammari et al. 2020). However, students who are unable to fulfil their academic obligations may experience stress, which is of significance to their academic success (Zheng and Zhang 2020) and may shape their good performance on their paths to becoming professional nurses (Butcon et al. 2021).

As an active and productive process, self-regulated learning establishes and tracks learning goals as well as regulates and controls students' knowledge, motivation, and behaviour while they

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are guided and constrained by their objectives and the characteristics of the environment (Harding et al. 2018; Salamonson et al. 2016). Students benefit from self-regulated learning behaviours, as they encounter challenging problems, seek solutions, and strive for success and satisfaction in the struggles at hand (Salamonson et al. 2016). When students regulate their learning, they raise their independence and proficiency, progressively developing, adjusting to, and accessing learning opportunities beyond those envisioned by their educators. Therefore, to overcome the challenges of the increasingly complex and changeable medical environment, future nurses must be fully equipped, which requires an elevated level of self-regulated learning ability (Ryff 1989).

Objective of the Study

Nonetheless, no studies have simultaneously considered all of these characteristics or investigated what the links would signify for the academic success of certain university students. Therefore, the objective of the study is to assess the relationship between psychological wellbeing, academic engagement, and self-regulated learning among nursing students. Measuring these factors may provide an insight into the students' academic success. Moreover, results of this study can expand teachers' understanding of how to help nursing students succeed and eventually become better nurses in the workforce.

MATERIAL AND METHODS

Design

A descriptive correlational design was utilised to determine the relationship between psychological wellbeing, academic engagement, and self-regulated learning among student nurses.

Participants

The study sample included 200 male and female participants resulting from convenience sampling of junior and senior nursing students at the University of Hail in Saudi Arabia. Students who were absent during data collection or gathering were excluded.

Data Collection

Data collection started in November 2020 and ended in December 2020. The researchers met the nursing students and explained the aim and nature of the study as well as the method of the questionnaire. This was performed individually or through group meetings. The researchers distributed the questionnaire sheets to the nursing students, and the time required for completion ranged from 5 to 10 minutes for the psychological wellbeing scale, 5 to 10 minutes for the student engagement instrument, and 10 to 15 minutes for the academic self-regulated learning scale. The forms were collected and reviewed to check their completeness to avoid missing data. The data collection occurred three days per week within two months.

Questionnaires

The data for this study were collected using three tools mentioned above, that is, the psychological wellbeing scale (Ryff 1989), the student engagement instrument, and the academic self-regulated learning scale.

Ryff's psychological wellbeing scale consists of 42 items and measures six aspects of wellbeing and happiness (with seven questions each) including autonomy, personal growth, positive relations with others, purpose in life, and self-acceptance. These items are scored on a six-point Likert scale ranging from 'strongly disagree' (1) to 'strongly agree' (6). Total scores can be from 42 to 252 and are classified as low (< 60%), moderate (60 to 75%), and high (> 75%). A high score for each category shows that the respondent has a mastery of that part of life. In comparison, lower scores suggest that the respondent does not feel comfortable with this specific aspect. Scale scores are determined as the sum of related items, and items were reversed where necessary. The tool's reliability was assessed by evaluating its internal consistency with Cronbach's alpha coefficient, which was 0.88.

The student engagement instrument was developed by Appleton et al. (2006) to measure the cognitive and affective engagement of students in school. This measure comprises 33 items that assess five dimensions of teacher-student relationships (TSR with nine items), peer support at school (PSS with six items), family support for learning (FSL with four items), control and relevance of schoolwork, and future aspira-

tions and goals (FG with five items). The responses are scored on a four-point Likert scale ranging from ‘strongly disagree’ (1) to ‘strongly agree’ (4). Total scores of students’ engagement levels range from 33 to 132 and are classified as low (<60%), moderate (60 to 75%), and high (> 75%). The tool’s reliability was assessed with an internal consistency evaluation utilising Cronbach’s alpha coefficient, which was 0.913.

Finally, the academic self-regulated learning scale was developed by Magno (2010) to measure students’ self-regulation within the context of learning in higher education. This scale comprises 54 items that measure seven dimensions of memory strategy (14 items), goal-setting (five items), self-evaluation (12 items), seeking assistance (8 items), environmental structuring (5 items), learning responsibility (5 items), and planning and organising (5 items). Students’ responses are scored on a four-point Likert scale ranging from ‘strongly disagree’ (1) to ‘strongly agree’ (4). The minimum and maximum scores a student could obtain regarding the level of self-regulation are 54 and 216, respectively. Scores falling between 54 and 107 indicate a low level of self-regulated learning, and scores ranging from 108 to 161 and 162 to 216 represent moderate and high levels of self-regulated learning, respectively. The tool’s reliability was assessed by an internal consistency evaluation utilising Cronbach’s alpha coefficient, which was 0.967.

Ethical Considerations

The participants were notified of their right to decline or withdraw from the study with no consequences. They were also assured of the anonymity and confidentiality of the information collected and its utilisation only for scientific study. No detrimental manoeuvres were executed or employed, and no risks were expected in conducting the study with participants.

Statistical Design

Analysis of statistical data was performed by utilising the IBM SPSS version 25 software package, and this process was followed by further data analysis and tabulation. Data were offered using descriptive statistics including the number, frequency, and Pearson correlation coefficients (*r*). The value of the significance level was considered

when p-values ≤ 0.05, whereas p-values > 0.05 indicated no significant results.

RESULTS

Table 1 shows that eighty-two percent of the participants were 20 to less than 25 years old, thirty-four percent were in their second academic year and twenty-six percent in the fourth year. Sixty-four percent identified as female, thirty-one percent had a good GPA, and the majority (75.5%) were single.

Table 1: Frequency and percentage distribution of the participants’ personal characteristics (n = 200)

<i>Personal characteristics</i>	<i>No.</i>	<i>%</i>
<i>Age in Years</i>		
20 - < 25	164	82.0
25 - < 31	15	7.5
31 - < 36	18	9.0
36 - 40	3	1.5
<i>Academic Year</i>		
First	36	18.0
Second	68	34.0
Third	44	22.0
Fourth	52	26.0
<i>Gender</i>		
Male	72	36.0
Female	128	64.0
<i>GPA</i>		
Excellent	23	11.5
Very Good	57	28.5
Good	62	31.0
Pass	58	29.0
<i>Marital Status</i>		
Single	151	75.5
Married	46	23.0
Divorced	3	1.5
<i>Number of Failures</i>		
No failure	102	51.0
Failure	98	49

Table 2 depicts that about three-fourths of the participating nurses (72%) had a low level of psychological wellbeing, and more than half (52%) had a high level of academic engagement, while two-fifths (40%) had a moderate level of academic self-regulated learning.

Table 3 illustrates that there is a weak statistically significant positive correlation between students’ psychological wellbeing scores and their academic self-regulated learning. In addition, there was a moderate statistically significant positive correlation between academic engagement and the scores for academic self-regulated learning.

Table 2: Total score of nursing students' level of psychological wellbeing, academic engagement and self-regulated learning

<i>Psychological well-being</i>		<i>Academic engagement</i>		<i>Academic self-regulated learning</i>	
<i>High</i>	<i>Low</i>	<i>High</i>	<i>Low</i>	<i>High</i>	<i>Low</i>
7%	72%	52%	9%	39%	22%

Table 3: Relationship among the scores for students' psychological wellbeing, academic engagement and academic self-learning

	<i>Spearman's rank correlation coefficient</i>		
	<i>Psychological wellbeing</i>	<i>Academic engagement</i>	<i>Academic Self-regulated learning</i>
Psychological wellbeing	1.000	-0.070	.392**
Academic engagement	-0.070	1.000	.519**
Academic self-regulated learning	.392**	.519**	1.000

** Significant at 0.01

Table 4 displays that there was a statistically significant correlation among marital status, number of failures, and psychological wellbeing as well as between academic engagement and age.

Table 5 shows the effect of psychological wellbeing on academic engagement, revealing a sig-

nificant influence. Moreover, it shows that there is a significant effect of psychological wellbeing on academic self-regulated learning (that is, when the psychological wellbeing score increases by one unit, the academic self-regulated learning increases by 0.335 units).

Table 4: Relationship among personal characteristics and psychological wellbeing, academic engagement, and academic self-learning (n = 200)

<i>Personal characteristics</i>	<i>Psychological wellbeing</i>		<i>Academic engagement</i>		<i>Academic Self-regulated learning</i>	
	<i>R</i>	<i>p-value</i>	<i>r</i>	<i>p-value</i>	<i>r</i>	<i>p-value</i>
Age in years	0.080	0.972	0.253	0.033	0.162	0.497
Academic year	0.217	0.130	0.186	0.304	0.196	0.238
Sex	0.080	0.527	0.134	0.163	0.032	0.905
GPA	0.195	0.244	0.096	0.933	0.188	0.292
Marital status	0.262	0.005*	0.135	0.450	0.158	0.278
Number of failures	0.285	0.023*	0.172	0.637	0.188	0.504

Table 5: Regression model of psychological wellbeing, academic engagement, and academic self-regulated learning

<i>Model</i>	<i>Independent variables</i>	<i>Coefficients</i>	<i>T</i>	<i>R Square</i>	<i>Sig.</i>
1	(Constant)	105.433	15.460	0.001	0.000*
	Psychological wellbeing	-0.021	-0.398		0.691
a. Dependent variable: Academic engagement					
Psychological wellbeing and academic self-regulated learning					
<i>Model</i>	<i>Independent variables</i>	<i>Coefficients</i>	<i>T</i>	<i>R Square</i>	<i>Sig.</i>
1	(Constant)	108.049	14.761	0.149	0.000*
	Psychological wellbeing	0.335	5.883		0.000*
a. Dependent variable: Academic self-regulated learning					

DISCUSSION

Students' psychological wellbeing is closely related to a positive school environment, which involves their social and academic adaptation (Ukeh and Hassan 2018). Concerning the distribution of psychological wellbeing among nursing students, this study's results reveal that approximately three-fourths of the participants had a low level of psychological wellbeing. The lowest dimension was self-acceptance, followed sequentially by positive relationships with others, purpose in life, personal growth, and autonomy. This may be because nursing is recognised as one of the most stressful and emotionally demanding professions. Indeed, stress among nursing students is often considered an unavoidable problem that may produce poor psychological wellbeing. Possessing emotional competence allows students to decrease their stress and improve their psychological wellbeing (Lachine et al. 2019). The current findings are in concurrence with Preoteasa et al. (2016) who illustrated that more than three quarters of participants indicated a significant progressive decline of positive wellbeing over the semester. Furthermore, Gagnon et al. (2016) have determined that the subjects had low to moderate levels of psychological wellbeing.

The results of the present study also indicate that more than half of the participants had a high level of academic engagement, while more than a third had a moderate level. This may be because nursing students are educated and supported in dual roles, that is, one within the classroom and one within clinical settings. Active involvement with learning and learning approaches (Alsayed et al. 2021) allow students to become more effective, current and knowledgeable, as they become professional nurses (Hudson 2015). This result aligns with Sengsouliya et al. (2020) who reported students expressing their engagement in learning at a high level across all dimensions. In addition, this finding is supported by Hudson (2015) who conducted a study among nursing students to assess their engagement, which was rated as high overall. Abdul Sattar et al. (2018) also found that participants scored higher and positively in all domains of student engagement.

Finally, the results of the current study reveal that two-fifths of participants had a moderate level of academic self-regulated learning, whereas slight-

ly less than two-fifths had a high level. This may be so because students in nursing specialties often struggle to establish goals that they wish to achieve through study or by expanding their knowledge, and they often lack resource management and time-management strategies that enable them to meet the challenges of the increasingly complex and changeable medical environment. These results are in line with those of Chen et al. (2019) who found that university students maintain a moderate capacity to self-regulate. This finding, however, is inconsistent with Gagnon et al. (2016) who reported that more than three-quarters of participants had high self-regulation, and less than one-fifth had moderate or low levels of self-regulation.

The weak statistically significant positive association between students' psychological wellbeing scores and their academic self-regulated learning in this study may be due to skilled, self-regulated students. Accordingly, a significant influence of self-regulated learning development on various manifestations of the students' psychological wellbeing was found (Fomina et al. 2020). Likewise, this study is supported by earlier research (Singh and Sharma 2018) showing the significant role of self-regulated development in the prediction of students' psychological wellbeing and a positive impact from students' self-regulated learning on their wellbeing. This indicates that students' problem-solving abilities improve as they learn self-regulation, and they may achieve better levels of wellbeing.

The significant effect of psychological wellbeing on academic self-regulated learning indicates that students' psychological wellbeing is closely associated with a positive university environment, which involves their academic adaptation. This can make students feel more satisfied with their lives as a whole and increase their self-regulated learning capabilities. Studies conducted demonstrate significant relationships between self-regulated learning and students' psychological wellbeing (Fomina et al. 2020) and that self-regulation capacity positively predicts psychological wellbeing (Gagnon et al. 2016; Converse et al. 2018). Similarly, Park et al. (2012) have stated that the capacity for self-regulation is significant in the functioning of students' stress, wellbeing, and mental health. In a dynamic context, a positive impact on wellbeing within subsequent periods is also found for characteristics such as academic engagement (Pietarinen et al. 2014).

Concerning the correlation among the scores for psychological wellbeing, academic engagement, and academic self-learning among students, there is a moderate statistically significant positive correlation between academic engagement and academic self-regulated learning. Learners who are taught self-regulated learning skills are more likely to elicit higher levels of academic engagement and achievement. Accordingly, students with the tendency toward high self-regulated behaviour are most likely to be more engaged among students as opposed to those with a low tendency toward self-regulation (Anggelika and Rahardjo 2019). Findings by Yu et al. (2018) have also revealed positive effects of personal wellbeing on academic engagement during university years.

Finally, this study demonstrates a statistically significant correlation among marital status, number of failures, and psychological wellbeing. As reported by Soulsby and Bennett (2015), this may be because marital status appears to be associated with access to social support, and a supportive partner's presence helps to protect against the detrimental effects of stressful events and contributes to improved psychological health, leading to better psychological wellbeing. Additionally, students who have low levels of psychological wellbeing may have study problems that lead to delayed graduation, the possibility of quitting school, or failure. Furthermore, there is a statistically significant correlation between academic engagement and age, and this may occur among the senior students, as the longer they have been in school, the more challenges they face. In turn, this may enable them to manage their lives independently and become more engaged than junior students. In contrast, no gender difference was observed regarding academic engagement (Yu et al. 2018) but this has been contradicted by Ludban and Gitimu (2015) where a significant relationship between age and psychological wellbeing was found. This current study demonstrates that college students' psychological wellbeing is affected by their age.

Overall, this study indicates that psychological wellbeing, academic engagement, and self-regulated learning among student nurses are seen as requirements for academic success. For example, psychological wellbeing may be a prerequisite for students' mental and physical health. Students with high levels of wellbeing can be more resilient, present fewer delinquency behaviours and aggres-

siveness, and thus experience greater self-esteem, self-efficacy, and adaptation abilities. Moreover, there is an indication that higher engagement and motivation may inspire behaviours that fit with conduct, which contributes to students reaching their academic goals. Lastly, these study findings demonstrate that self-regulated students can evaluate the prerequisites for new learning activities in light of their academic strengths and devise suitable decision-making techniques during problem solving.

However, this study has limitations that should be considered in future research. For example, the use of convenience sampling may affect the generalisation of the study results, and the mediating variables and demographics can be tailored to address specific problems or target groups.

CONCLUSION

The participating nursing students had a low level of psychological wellbeing, a high to moderate level of academic engagement, and a moderate to low level of academic self-regulated learning. Moreover, there is a weak statistically positive relationship between students' psychological wellbeing and their academic self-regulated learning. Additionally, there was a moderate statistically significant positive correlation between academic engagement and the academic self-regulated learning scores.

RECOMMENDATIONS

In order to potentially increase student involvement, motivation, and self-regulation as well as improve campus culture and learning settings, it is highly recommended that an educational institution provide individual academic, mental, and behavioural services for students to use.

CONFLICT OF INTERESTS

There have been no conflicts of interest regarding the conduct of this study.

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AUTHORS' CONTRIBUTION

H. M. A. and S. N. conceptualised and conducted the research, analysed and interpreted the data, and drafted the initial and final manuscripts. They both approved the final draft and are responsible for the content and similarity index of the manuscript.

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