Extent of Test Anxiety among Nursing Students in Oman and impact on academic performance

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Abstract

Background: Tests and examinations are considered to be one of the major sources of anxiety among students world-wide.

Purpose: to examine the extent of test anxiety among nursing students and its impact on their academic performance.

Method: a descriptive correlational design was used. A sample of 153 nursing students participated. The Test Anxiety Scale (TAS), social-demographic, and academic background were used.

Results: 153 nursing students participated, the majority of them were female; 118 (77.1%), are studying a regular nursing program; 134 (87.6%), are not under study probation; 21 (86.3%) are in their 3rd and 4th academic year 95 (62.1%). The majority of the students have moderate test anxiety or worry 66 (43%), impairment 85 (56%) and overall 85 (55.6%).

Discussion: the results of the study revealed that it is important to collaborate all efforts starting from nursing colleges, faculties, and administrators to develop consulting services on anxiety management strategies to optimise students' performance.

Implication: Guidance programs on study skills consultation, and workshops on a national basis should be to implement in the curriculum.

Keywords

Test Anxiety, Academic Performance, Nursing Students

1.0 Background

1.1 INTRODUCTION

Tests and examinations of performance at higher education level are considered as having a key role for decision making in our competitive society [1]. One of the prevailing challenges in the achievement of learning success through examinations is test anxiety [1]. Anxiety, in its normal form can make people responsible hard workers [2]. Excessive levels of anxiety can lead to an increased and debilitating amount of anxiety which may cause physical and psychological problems [3]. Anxiety, if mild can motivate people to work hard; otherwise it may interfere with their ability to think, perform and even to complete tasks [4]. There are approximately, about 15–20% of university students who experience such anxiety [5]. This occurs when the student's performance is under examination [6] and this might lead to social phobia [7, 8].

Students may suffer from anticipatory anxiety before the day of exam, and situational anxiety on the day of exam [9] in addition to emotional, psychological and behavioural stressors [10]. Nursing programs can be a source of anxiety because of different learning assessment methods in theory and clinical courses [11]. Approximately 30% of nursing students experience anxiety [12]. Therefore, assessing anxiety risk factors is becoming an area of interest as it affects the academic performance of students [7, 13–15]

1.2 Research Questions

To satisfy the research query, utilising the quantitative research paradigm, the following are the specific research questions that will be answered by the study:

1. What is the prevalence of test anxiety among nursing students?
2. What is the distribution of test anxiety based on students' socio-demographic and academic profile?
3. What is the relationship between students' test anxiety level and their academic performance in GPA?

2.0 Methodology

2.1 Research Design

A descriptive correlational cross sectional research design was utilised.

2.2 Sampling

Data were collected using a self-administered questionnaire at Sultan Qaboos University (SQU). The sample consisted of nursing students who met the eligible criteria including students who are enrolled in actual nursing course and have finished the foundation year.

2.3 Study Instruments

Demographical data, academic profile, and the Test Anxiety Scale were utilised in the current project. Questions related to gender, age, academic years, GPA, medical status, hobbies and type of education. Gender, for example, was categorised as male or female. Medical status and hobbies were categorised as yes and no. Type of education was treated as regular or bridging (diploma) education. The test instrument was adapted from the Westside Test Anxiety Scale. [16].

2.4 Ethical Considerations

Approval to conduct the study was obtained from the research ethical committee of the College of Nursing in Sultan Qaboos University, the college administrators, the course coordinators, and the participants.

2.4 Data Analysis

The Statistical Package for the Social Sciences (SPSS 23) at a 0.05 level of significance was used. Descriptive and inferential analyses were conducted.

3.1 Results

Table 1. Distribution of Test Anxiety among Nursing Students (N = 153)

Level of Anxiety	Worry		Impairment		Overall	
	f	%	f	%	f	%
Comfortably low anxiety	15	11.8	12	7.8	15	9.8
Normal or average test anxiety	65	11.1	26	17.0	22	14.4
High normal test anxiety	58	24.2	48	31.4	43	28.1
Moderately high anxiety	15	19.0	37	24.2	42	27.5
High test anxiety	31	20.3	17	11.1	20	13.1
Extremely high anxiety	21	13.7	13	8.5	11	7.2
Total	153	100.0	153	100.0	153	100.0

The aim of this study was to examine the extent of test anxiety among nursing students in Oman. As shown in table 1, 153 nursing students participated in this study, the majority of them were female 118 (77.1%), single 132 (86.3%), living off campus 95 (62.1%), do not have medical conditions 140 (91.5%), are studying in a regular nursing program 134 (87.6%), are not under study probation 21 (86.3%) and are in their third or fourth academic year 95 (62.1%). The majority of the students have moderate test anxiety, worry 66 (43%), impairment 85 (56%) and overall 85 (55.6%).

Table 2. Distribution of test anxiety based on their socio-demographic (N=153)

Profile Variables	Mean(SD)	Anxiety Level	Test Statistic	Sig value
Age				
18-20	2.82(.69)	High Normal		
21-23	2.97(0.7)	High Normal		
24-26	3.33(0.69)	Moderately High		
27-29	2.88(0.79)	High Normal		
30 and above	2.9(0.79)	High Normal	F(4)=1.233	0.304
Gender				
Male	2.97(0.63)	High Normal		
Female	2.86(0.74)	High Normal	t(151)=0.841	0.401
Marital status				
Single	2.89(0.72)	High Normal		
Married	2.86(21)	High Normal	t(151)=0.192	0.848
No	2.88(66)	High Normal		
Yes	2.89(87)	High Normal	t(151)=0.138	0.890

As shown in table 2, it was found that the mean difference in the levels of test anxiety of male (M = 2.97, SD = 0.63,) and female students (M = 2.86, SD = 0.74) is not significant (t = 0.841, df = 151, p = 0.401), in addition to what is shown based on the ages of the students (F = 1.233, df = 4, 134, p = 0.304). The same finding exists when the anxiety level of single (M = 2.89,

SD = 0.72) and married (M = 2.86, SD = 0.70) students was compared; (t = 0.192, df = 151, p = 0.848). Furthermore, living arrangements whether living on campus (M = 2.91, SD = 0.72) or off campus (M = 2.89, SD = 0.71), or with family (M = 2.79, SD = 0.72) do not show any significant differences in a term of test anxiety (t = 0.327, df = 152, p = 0.722). Students also reported no differences in their level of anxiety in terms of the absence (M = 2.90, SD = 0.72) or presence (M = 2.74, SD = 0.72) of a medical condition, t(df = 151) = 0.772, p = 0.441. Furthermore, students who are taking stimulants to increase their alertness and wakefulness (M = 2.88, SD = 0.80) have the same level of anxiety to those who are not taking stimulants (M = 2.89, SD = 0.64) t(df = 151) = -0.138, p = 0.890.

Table 3. Distribution of test anxiety based on student's academic profile (N=153)

Profile Variables	Mean(SD)	Anxiety level	Test Statistic	Sig value
Academic Program				
Regular	2.89(0.72)	High Normal	t(151)=0.108	0.915
Bridging	2.87(0.69)	High Normal		
Academic Year				
2nd year	2.85(0.59)	High Normal		
3rd year	2.87(0.70)	High Normal		
4th year	2.86(0.78)	High Normal		
Probationary History				
No	2.86(0.68)	High Normal	t(151)=-1.324	0.188
Yes	3.08(0.89)	Moderately High		

Study Hours				
Less than 3hrs	2.78(0.85)	High Normal		
2-5 hrs	2.81(0.70)	High Normal	F(2)=.874	0.456
5-7 hrs	2.79(0.72)	High Normal		
More than 7 hrs	2.98(0.71)	High Normal		

As shown in table 3, both academic programs, regular (M = 2.89, SD = 0.72) and bridging students (M = 2.87, SD = 0.69) have the same amount of anxiety related to examinations, t(df = 151) = 0.108, p = 0.915. Even those with probation history (M = 3.08, SD = 0.89) and those without (M = 2.86, SD = 0.68) or those who are honours for their achievement (M = 2.97, SD = 0.58) or not (M = 2.86, SD = 0.75), based on their academic achievements, have a mild to moderate level of anxiety, t(df = 151) = -1.324, p = 0.188, t(df = 151) = -0.701, p = 0.485 respectively. Differences also do not exist on the level of anxiety based on students' sleeping hours, t(df = 3, 149) = 1.549, p = 0.204 and study hours F(0.874). P = 0.456.

Table 4. Relationship between students' test anxiety level and their academic performance through GPA (N = 153).

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			MEANSCORE	MEANWORRY	MEANIMPAIREMENT
Spearman's rho	PREV GPA	Correlation Coefficient	-.164*	-.183*	-.135

Sig. (2-tailed)	.044	.024	.097
N	152	152	152

*Significant at 0.05

Further analysis of the relationship as outlined in table 4 indicated that students' levels of anxiety have no significance in relation to their academic achievement (r = 0.044, p = 0.097). The results of the current study revealed that there is a slightly moderate but not significant correlation between total test anxiety and students' grade point average (GPA). Therefore, anxiety is felt regardless of the students' background, study habits and practices.

3.2 Discussion

It is a given fact that anxiety towards examinations is one of the existing hurdles of learning among students [1, 10]. Although many will accept mild anxiety as a normal phenomenon that will make students motivated, excited and challenged to boost their learning [2, 17, 18], there is a very thin line that separates such experiences from the next level of anxiety which can lead to increased nervousness which may cause physical and psychological problems. It can be deduced from the findings that students' state of anxiety can contribute to their ability to think, perform and even complete the examination [19, 20]

The literature also indicated that nursing students, because of the nature of the course, the presence of high-stakes evaluation and direct evaluation of patient care, face higher levels of anxiety compared to other students [12, 21].

For these reasons, it is important to strengthen the existing assessment of nursing students' anxiety and to implement relevant programs and strategies to alleviate their anxieties. It was noted in different studies that students' anxiety can be varied from moderate to severe [7, 22–29]. these findings are congruent with the findings of this study where the majority of nursing students have

moderate to high test anxiety, 55.6% and 20.3% respectively. This can be explained by the fact that most of the students in the College of Nursing in SQU can take two major nursing courses at the same time requiring them to complete many tasks and assignments within a limited time frame as well as to complete the university and college requirement courses and electives.

The demographic characteristics of the students, based on this study, have no significant or potential impact on their level of anxiety, thereby, highlighting the fact that test anxiety is a universal experience that affects every student in the university. Many studies conducted in different countries support this claim [30, 31]. However, there is some literature stating that females experience a higher level of anxiety compared to males [22, 23]. Studies on medical students also found that female students have higher levels of anxiety [25, 32]. However, these studies mentioned that findings may be biased because most of the participants were female students in addition to the fact most of the students in the profession are female [33].

Some studies also mentioned that a unidirectional correlation exists between age and test anxiety [7, 9, 34] which was not found in the current study. It is important to note that the same study findings were congruent with our claim in the Eastern Regions [15, 35, 36].

Marital status was found not to be significantly correlated to test anxiety, which is also congruent with some findings [7, 24], but not all findings [37, 38]. The diversity of results in different research studies postulated conflicting findings in terms of the relationship between sleeping hours/ habits and students' level of anxiety. Though the current study did not significantly show the said phenomenon, some studies correlated the presence of anxiety to sleep deprivation—both in quality and quantity [39–41], while others correlated it to sleeping aids or stimulants [29, 40]. As revealed in this study, students' hours of study, type of program, and academic level do not show any statistically significant correlation with their test anxiety level. It is interesting to

compare these findings with the work of other researchers who found that students with more additional educational years are more likely [42], or less likely [43] to have test anxiety.

Another conflicting finding was found in this study when examining the relationship between test anxiety and students' academic achievement. While the current study exhibits a slightly moderate but not significant relationship between test anxiety and academic performance, some other studies show an inverse significant relationship between the mentioned variables [27, 44].

Although nursing students in SQU exhibit some degree of moderate to high test anxiety during their academic life, the college provides a system for students to advance. Each student is assigned to one advisor who takes on the responsibility of helping him/her with any condition/problem regarding their study plan that might affect them physiologically, psychologically and even academically. Students in the College of Nursing are also requiring participate in simulation training as the vision of the college is to make the simulation equal to 10% of the students' clinical training hours. Therefore, they are more likely to be exposed to a variety of clinical conditions improving, not only their skills, but also their knowledge, independent learning, critical thinking and decision making.

The existence of a faculty advisors, peer mentoring, counselling centres, and other supportive resources and groups are effective measures in reducing anxiety among students [3, 39, 45–48]. This program is being developed to make it universally available and sensitive to the needs of the nursing students [49].

Treatments were also considered in the literature to overcome test anxiety such as behavioral, cognitive, and combination of both. [47, 50]. These categories also include desensitisation procedures [51], relaxation skills [52], progressive muscle relaxation techniques

[53], music therapy [54], aromatherapy [55], guided reflection [56], psychoeducation [51], [57] and training for test-taking skills, problem solving techniques [58]. But even with the number of therapies and treatments, prevention is always better than cure [59].

4.1 Limitations

It is important to note that the different studies cited, and the current study, found similar limitations related to the anxiety instruments, limitations in the sample size, mostly female dominated sample and the varying types of the nursing program offered [25, 33]. Nevertheless, even without the consensus of the literature on the demographic and social characteristics of students, nursing education cannot deny the fact that anxiety exists and must be dealt with accordingly. Routine assessment of students' anxiety should be conducted to enable teachers and educational administrators to develop programs specific to the needs of the individual students.

4.2 Conclusion

Test anxiety impacts students of all backgrounds and levels, it may affect them emotionally, behaviourally or physically, in addition to its effect on their academic performance. Colleges of nursing, faculties, administrators, and other disciplines should combine their efforts to modify the curriculum to meet students' needs and to help in building a strong alliance with the students, in addition to their role in proposing a preventive and useful plan to overcome this phenomenon and to help to build good relations with students by acknowledging them, by respecting their personality and enhancing their self-confidence. This could be done through guidance programs on study skills, consultation and workshops on a national basis.

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