

# The Prevalence of Depression, Anxiety and Stress in Brunei Preservice Student Teachers

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## Abstract

**Objective:** The study investigated the prevalence of depression, anxiety, and stress in trainee teachers at the University of Brunei Darussalam. **Methods:** A survey was used with 119 preservice students of both genders who were on the undergraduate (BEd) and graduate (PGCE) programmes. Data were measured by the Depression Anxiety Stress Scale (DASS). **Results:** Categories indicative of concerns with depression, anxiety, and stress were more prevalent in females than males. In addition, BEd students were more depressed than their PGCE counterparts. Gender and the programme of study were not correlated with depression, anxiety and stress. Depression, anxiety, and stress were highly correlated. **Conclusions:** Depression, anxiety and stress are some of the problems that can occur among Brunei trainee teachers.

## INTRODUCTION

Conceptualizations vary for depression, anxiety and stress. Depression is a mood disorder that manifests itself in various ways (2). According to Beck (3), depression can negatively influence a person's motivation, affect, cognition and physiology. Anxiety is a general state of uneasiness (fear, tension, worry or apprehension) whose cause can be ambiguous (4, 5). Anxiety is a bodily response to a perceived threat or danger (real or imagined) and it seems to be triggered by an individual's thoughts, beliefs and feelings (6). Stress is generally believed to be the body's physical and mental responses to demands made upon it. It is often the result of a person's reaction to outside events and not necessarily the events themselves (7, 8). Stressors can be either positive or negative events (or both).

## PREVALENCE IN STUDENT POPULATIONS

Research indicates that there is an increase in the prevalence of depression, anxiety and stress in college and university students, including all categories of trainee teachers (9). The amount and frequency of anxiety and stress were higher than those for depression (10). In addition, depression, anxiety and stress were more prevalent in female students than male students (11, 12, 13). Also, more freshmen were afflicted by these three psychological conditions than sophomores (14, 15, 16). Depression, anxiety and stress appear to be linked to each other but the connections have only been determined correlationally and not experimentally (17). In view of this it

is difficult to establish with certainty if (and how) they cause each other. One possible reason why depression, anxiety and stress might co-exist may be due to the fact that they share a few common symptoms, causes and effects (18).

## CLASSIFICATION AND PREVIOUS RESEARCH

Different types of depression and anxiety and an extreme form of stress (i.e., posttraumatic stress disorder) are classified as diseases by the DSM-IV-TR (19) and the ICD-10-CM (20). These three mental health problems affect people in nearly all age-groups and walks of life (2). The intensity of any psychological condition such as depression, anxiety and stress may vary on a continuum or scale ranging from mild / partial (through moderate and severe) to extreme, profound or catastrophic condition (21, 22). A condition that is extreme, profound or catastrophic is often disabling and the affected person might not function in the normal way without suitable professional intervention. Previous studies of depression, anxiety and stress on people in institutions of learning focused mainly on teachers and school administrators (e.g. 23, 24, 25). Most of these studies were on stress rather than depression and anxiety. The studies that investigated depression, anxiety and stress in university students dealt mainly with non-trainee teachers rather than student teachers (both preservice and inservice). A few selected examples of these studies are briefly discussed below. None of these studies is on Brunei trainee teachers.

### **CAUSES OF DEPRESSION, ANXIETY AND STRESS IN UNIVERSITY STUDENTS**

The causes of depression, anxiety and stress in university students are numerous and varied. For example, some researchers found that increased academic workload, assignment papers, mid-term tests, projects and final examinations caused depression (14, 26, 15). As stated above, a more recent study also found that these daily hassles of attending university were quite problematic in the first year of study (16). In a study by Leary (27) shyness was found to be one of the causes of social anxiety. Loneliness, culture shock, and homesickness during the first few months of the first year were also found to have connections with anxiety in foreign students (26). In addition, several other factors such as financial problems, unrealistic expectations of students and their parents, poor time management, repeated failure and lack of experience of success, and public speaking or giving a speech were linked to anxiety (28).

With regard to stress, there is also a wide range of factors that contribute to stress in university students. The majority of the causes of stress seem to be person-age-situation specific. For instance, people experience different stressors in different places (e.g., home context, school setting, and work environment). In addition, children, adolescents, middle aged persons, and the old appear to have different stressors. The causes may be divided into three broad categories: environmental; psychological; and biological (29). Environmental causes of stress include adjusting to life in a new environment, studying in English, and culture shock (26), as well as loneliness or isolation (15). Examples of psychological factors that contribute to stress are revising for tests, sitting for examinations, meeting deadlines for coursework assessments, and repeated failure (15). These are more or less the same factors that also contribute to depression and anxiety. Psychological causes also include the pressure of combining paid work with study, procrastinating, excessive workload and also parents' and students' unrealistic expectations (7). Biological causes include chronic sickness and poor health (30) and the role of biological factors such as the stress hormones and the autonomic nervous system (2, 5, 22, 31).

### **STUDY OBJECTIVES**

The overall goal of the present study was to assess the prevalence of depression, anxiety, and stress in a selected group of student teachers at the University of Brunei Darussalam (UBD). Specifically, the study probed and

addressed the following research problems:

What is the prevalence of depression, anxiety and stress in Brunei student-teacher research participants by gender and program of study?

Is there a relationship between the independent variables (gender and study program) and the dependent variables (depression, anxiety and stress) in the Brunei student sample context?

What is the relationship between depression, anxiety and stress among Brunei university students?

### **METHOD**

#### **SAMPLE**

The field survey method was used to investigate the research problem. The target population of the study were trainee teachers taking an educational psychology course taught by the researcher. There were 124 students in the course from the Bachelor of Education (BEd) degree programme and the Postgraduate Certificate in Education (PGCE) programme but only 119 were present on the day the instrument was administered. Of these 119 participants, 32 (27%) were males while 87 (73%) were females. The majority, 68 (57%) were studying for the BEd degree while 51 (43%) were taking the graduate certificate course. The age of all the research participants ranged from 18 to 39 (Mean = 24.6; SD = 5.8). There was no statistically significant gender differences in age between males (Mean = 23.8; SD = 4.9) and females (Mean = 24.9; SD = 6.0) [ $t(117) = 0.94, p > 0.05$ ]. However the BEd students (Mean = 23.6; SD = 6.8) and PGCE students (Mean = 25.9; SD = 3.7) differed significantly in age [ $t(117) = 2.14; p < 0.05$ ].

#### **INSTRUMENT**

Data for the study were collected with the Depression Anxiety Stress Scale (DASS) developed by Lovibond and Lovibond (1). This is a self-report scale designed to measure the negative emotional states of depression, anxiety and stress. The scale contains 42 items divided into three subscales (depression, anxiety and stress) each with 14 items. The study used the original DASS instrument and not a translated version. The author is aware that the DASS has been translated into the Bahasa Melayu language in Malaysia. This translated version was not used for two main reasons. First, the original English version is written at a very low level of English easily understood by Brunei people with a university education. During the pilot phase, the Brunei student teachers did not have any problems in

answering the items. There was therefore no need to translate and back translate the instrument for purposes of this study. Second, the Bahasa Melayu language spoken in Brunei Darussalam, Malaysia, and Indonesia are not exactly the same. There are dialectical differences and Brunei people prefer to use their own dialect of the language.

One semester before conducting the study, the instrument was piloted using a sample of 41 trainee teachers. From the pretest data the depression scale had an alpha reliability of 0.83 and a mean nonspurious item-total correlation of 0.46 as construct validity coefficient. The alpha consistency reliability for the anxiety scale was 0.74 with a mean corrected item-total correlation of 0.38 as evidence of construct validity. The stress scale was the most reliable (Cronbach alpha = 0.84) and valid (mean attenuated item-total correlation = 0.49). The reliability of the instrument was also computed using data from the present study. The stress subscale was again the most reliable (alpha = 0.87), followed by the depression subscale (0.85) and the anxiety subscale (0.77). The average corrected item-to-scale correlations from the present study data ranged from 0.48 (depression subscale), 0.43 (anxiety) to 0.51 (stress). Internal consistency reliability estimated by Cronbach (32) alpha is considered acceptable when in the 0.70 - 0.80 range (33, 34). In addition, psychometric theory holds that an item is valid if it correlates positively and highly with adjusted total scores of which it does not form a part (35). The minimum acceptable average item-total correlation as evidence of construct validity is 0.30 (36).

All the three subscales are Likert-type instruments each with a 4-point response format (ranging from 0 = did not apply to me at all, to 3 = applied to me very much or most of the time). The scales measure different aspects of depression, anxiety and stress. Furthermore different specific characteristics are used to identify or label high scores on each scale.

**PROCEDURE**

Prior to administering the instrument, ethical conditions for participating in the study were verbally explained to the respondents. These included privacy, voluntary participation, anonymity, confidentiality, and protection from both psychological and physical harm. Students participated in the study on the basis of this verbal informed consent. They were also free to withdraw from the study at any point or stage. In addition, the study met the ethical requirements of the University of Brunei Darussalam Research Committee

and the government of Brunei Darussalam.

**DATA ANALYSIS**

Items in the DASS subscales were scored according to instructions in the technical manual (1). Data from the DASS may be used either in form of raw scores or transformed scores (Z-scores or percentiles). In this study raw scores were used and analysed by descriptive statistics (frequencies, percentages, mean and standard deviation) and inferential statistics (t-test, analysis of covariance (ANCOVA) and correlation) using SPSS.

**RESULTS**

**DEPRESSION IN BRUNEI STUDENT TEACHERS**

The prevalence of depression among the research participants is presented in Table 1. Only two students (both of them females) had profound depression (Score > 28). However 7 students had severe depression, score > 21 (most of them females). The two females with profound depression were both on the BEd programme. Of the 7 trainee teachers with severe depression, 5 were in the BEd programme and 2 in the PGCE course. A number of students (43, 36%) had moderate (score 14-20) to mild (score 10-13) depression while the majority (67, 56%) were functioning at the normal level (score 0-9) on the depression scale.

**Figure 1**

Table 1: Frequency distributions of depression scores (N = 119)

Score range	Males (n = 32)	Females (n = 87)	BEd (n = 68)	PGCE (n = 51)
28 - 42	0 (0.00%)	2 (2.30%)	2 (2.94%)	0 (0.0%)
21- 27	1 (3.10%)	6 (6.90%)	5 (7.35%)	2 (3.92%)
14 - 20	8 (25.00%)	11 (12.64%)	11 (16.18%)	8 (15.69%)
10 - 13	4 (12.50%)	20 (22.99%)	15 (22.06%)	9 (17.65%)
0 - 9	19 (59.40%)	48 (55.17%)	35 (51.47%)	32 (62.74%)

**ANXIETY IN BRUNEI STUDENT TEACHERS**

Table 2 shows the levels of anxiety in trainee teachers and the number of students affected by gender and study programme at various score intervals. Anxiety affected the females and BEd students most at the profound level (score 20-42), severe level (score 15-19), and mild / moderate level (score 10-14). There were 22 (18%) students with mild anxiety (score 8-9). Only 25 (21%) of the students were operating at the normal level with regard to anxiety (score 0-7).

Figure 2

Table 2: Frequency distributions of anxiety scores (N = 119)

Score range	Males (n = 32)	Females (n = 87)	BEd (n = 68)	PGCE (n = 51)
20-42	2 (6.25%)	7 (8.05%)	5 (7.35%)	4 (7.84%)
15-19	4 (12.50%)	14 (16.09%)	12 (17.65%)	6 (11.77%)
10-14	13 (40.63%)	32 (36.78%)	27 (39.70%)	18 (35.29%)
8-9	6 (18.75%)	16 (18.39%)	12 (17.65%)	10 (19.61%)
0-7	7 (21.87%)	18 (20.69%)	12 (17.65%)	13 (25.49%)

**STRESS IN BRUNEI STUDENT TEACHERS**

Only one female BEd student teacher had profound stress (score 34-42 interval) according to Table 3. Most of the students with severe stress (score 26-33) were also females on the BEd programme. There were 50 (42%) students with mild to moderate levels of stress (score 19-25). The majority of students, 88 (74%) had mild to normal levels of stress. Of these, 28 (24%) were at the mild level (score 15-18) while 60 (50%) were at the normal level (score 0-14).

Figure 3

Table 3: Frequency distributions of stress scores (N = 119)

Score range	Males (n = 32%)	Females (n = 87)	BEd (n = 68)	PGCE (n = 51)
34-42	0 (0.00%)	1 (1.15%)	1 (1.47%)	0 (0.00%)
26-33	3 (9.37%)	5 (5.75%)	6 (8.82%)	2 (3.92%)
19-25	5 (15.63%)	17 (19.54%)	13 (19.12%)	9 (17.65%)
15-18	7 (21.88%)	21 (24.14%)	14 (20.59%)	14 (27.45%)
0-14	17 (53.12%)	43 (49.42%)	34 (50.00%)	26 (50.98%)

**DEPRESSION, ANXIETY AND STRESS BY GENDER**

Although females scored slightly higher than their male counterparts on all the three subscales (depression, anxiety and stress), t-test analyses showed no significant gender differences (see Table 4). At the group level, mean scores in Table 4 indicate that both genders were functioning at the normal levels on depression. However the two genders were functioning at the moderate levels of anxiety. With regard to stress, the males and females were on average functioning at the normal and mild/partial levels respectively.

Figure 4

Table 4: Differences in depression, anxiety and stress by gender (N = 119)

Variable	Males M (SD) (n = 32)	Females M (SD) (n = 87)	t-test t	p-value
Depression	9.13 (5.56)	9.82 (6.61)	0.53	0.599
Anxiety	11.06 (4.82)	11.39 (5.47)	0.30	0.765
Stress	14.03 (6.32)	15.14 (6.69)	0.81	0.419

Note: BEd = Bachelor of Education, PGCE = Postgraduate Certificate in Education, M = Mean, SD = Standard deviation

**DEPRESSION, ANXIETY AND STRESS BY STUDY PROGRAM**

Table 5 shows that there was a significant difference in

levels of depression by study programme. PGCE students were functioning at the normal levels of depression while the BEd students were at the mild/partial levels. However, in the ANCOVA analysis adjusting for age and gender, this significant difference no longer remained. T-test analyses did not yield any significant differences between students on the two study programmes with respect to anxiety and stress. Both groups were, on average, functioning at the moderate levels of anxiety. Although not significant, PGCE students had lower and more normal levels of stress as compared to BEd Students.

Figure 5

Table 5: Differences in depression, anxiety and stress by programme (N = 119)

Variable	BEd M (SD) (n = 68)	PGCE M (SD) (n = 51)	t-test t	p-value	ANCOVA F	p-value
Depression	10.74 (6.76)	8.16 (5.41)	2.24	0.027	1.39	0.241
Anxiety	11.89 (5.28)	10.51 (5.22)	1.42	0.157	0.02	0.891
Stress	15.56 (6.94)	13.88 (6.01)	1.38	0.170	0.73	0.395

Note: BEd = Bachelor of Education, PGCE = Postgraduate Certificate in Education, M = Mean, SD = Standard deviation

**RELATIONSHIP BETWEEN THE STUDY VARIABLES**

The extent to which the study variables were related to each other is presented in Table 6. All three dependent variables (depression, anxiety, and stress) had moderate to strong positive correlations.

Figure 6

Table 6: Correlations among the study variables (N = 119)

Variables	Depression	Anxiety	Stress
Depression	1		
Anxiety	0.680**	1	
Stress	0.648**	0.647**	1

\*\* p < 0.01 (2-tailed)

**DISCUSSION**

Like trainee teachers in other countries, university student teachers in Brunei Darussalam also have many problems of a psychological nature. The present study identified depression, anxiety and stress as some of the problems preservice trainee teachers have in Brunei.

The causes of depression, anxiety and stress among student teachers in Brunei can be many, varied and not easy to know as noted from the literature review in this study. Similar to previous research (16) this study found that gender and programme of study were not predictors of depression,

anxiety, and stress in the Brunei student teachers context. This finding calls for further research to identify the real causes of depression, anxiety and stress in Brunei student teachers. The fact that depression, anxiety, and stress were found to be highly correlated in this study as in the previous investigations (17) complicates the problem. It implies that the three conditions may have common features that make it difficult to isolate or separate the causes and effects of these three mental health problems. The implication drawn from all this is that more sophisticated research employing both quantitative and qualitative procedures needs to be conducted to identify the specific causes, effects and treatment requirements.

Identifying trainee teachers' problems is, in itself, an important undertaking but not enough. An equally important obligation is to provide suitable and adequate interventions to solve the problems. This is perhaps where more attention, efforts and resources need to be directed. The provision of satisfactory therapeutic solutions might be quite challenging because the causes of depression, anxiety and stress are, as noted above, overlapping to some extent. Stigma is associated with mental health concerns (<sup>37</sup>). Some of the problems that will be encountered may include the following: how will students be encouraged to undergo voluntary psychological assessment and therapy? The present study did not find out whether the students affected by depression, anxiety, and stress were currently receiving therapy or counseling.

### STUDY LIMITATIONS

This study has four main limitations. First, the sample used did not include all categories of trainee teachers at UBD. Only student teachers on one course taught by the researcher participated in the study. Second, the causes of depression, anxiety and stress are many but only a few factors (gender and programme of study) were investigated as independent variables in the present study.

### CONCLUSIONS

The study investigated the prevalence of depression, anxiety and stress among student teachers at the University of Brunei Darussalam. Ample evidence from the study confirmed that these problems affect some Brunei trainee teachers of both genders in the two study programmes investigated. Further research is recommended to gain deeper understanding of the problems and their possible solutions.

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