A STUDY OF THE RELATIONSHIP BETWEEN ANXIETY AND DEPRESSION DURING THE TRANSITION TO ADULTHOOD FROM FRESHMAN TO SENIOR YEAR IN NARESUAN UNIVERSITY HEALTH SCIENCE STUDENTS

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INTRODUCTION

- As Thai people struggle with competitive work conditions and the economic slowdown, many are challenged to provide stability for themselves and their families and cannot adapt to the demands of these times which can lead to feelings of anxiety and depression. When these conditions occur, individuals have to adapt and overcome various emotional barriers (Chaisinthop, S. 2011). These barriers can also lead to a combination of both anxiety and depression. A 2007 study by Roiser found that 72 percent of people diagnosed with anxiety had also experienced depression. 48 percent of people diagnosed with depression also had an anxiety disorder (Misirlisoy E., 2019). In addition, anxiety can be a risk factor for the development of depression (Garber, J., & Weersing, V. R, 2010).

- During the process of growth from adolescence to adulthood, depression and anxiety can result from the social and economic system requiring education skills in a higher educational system like the university (Arnett, 2004). In 1986 Thai graduates were more likely to believe they would be employed than those who graduated in 1996 and undergraduate students from the 2012 reported they were fearful about entering the job market. Since 1982, people are entering their careers more slowly and half of the students continued their studies after graduating rather than go to work. 53.6 percent of graduates were unemployed but were more likely to work as waiters rather than in their chosen field of study. It was also found that people were more likely to marry and have children later with the average age of women increasing when they have their first child and the birth rates are low (Smith, A. R. et al., 2016). In 2020, the number of births of Thai children dropped below 600,000 and is likely to continue to decline.

INTRODUCTION

- This was due to social changes and concerns about job security. Thus, delaying having children is one of the things indicating anxiety about conditions encouraging adult behavior. Consequently, when fewer children are born, the pool of working age people is reduced resulting in insufficient laborers for the market. As a result, the rate of GDP growth decreased because of a reliance on migrant workers (Department of Mental Health, 2021).

- Students in this study at Naresuan University are from the Faculty of Health Sciences and come from various regions in Thailand and all need to adjust to university learning and if unable to do so it can be frustrating which can lead to problems of adult anxiety and depression. The Faculty of Health Sciences comprises only 21.08% of the total number of yearly graduates at the university from all the faculties indicating the health science curriculum and set of expectations is challenging. (Monitoring and Evaluation, Planning Division, Naresuan University, 2017). Therefore, anxiety involved in the development of adulthood and depression among students of the Health Sciences Group of Naresuan University students makes them a likely group to observe and measure anxiety and depression.

RESEARCH OBJECTIVES

1. To assess the level of anxiety in adulthood development and depression among undergraduate students in the Faculty of Health Sciences of Naresuan University.

2. To study the relationship between adult development anxiety and depression among students in the Health Sciences Group, Naresuan University.

3. To compare the differences in development anxiety to adulthood and depression among undergraduate students in the various faculties of health sciences of Naresuan University.

HYPOTHESES

- **Hypothesis 1:** Different sexes had a statistically significant difference in developmental anxieties at the .05 level.

- **Hypothesis 2:** Different age groups had a statistically significant difference in developmental anxieties at the .05 level.

- **Hypothesis 3**: Different faculties had a statistically significant difference in developmental anxieties at the .05 level.

- **Hypothesis 4**: Different GPAs had statistically significant differences in developmental anxiety at the .05 level.

- **Hypothesis 5**: Different mean monthly incomes had a statistically significant difference in adult development anxiety at the .05 level.

- **Hypothesis 6**: Anxiety in developing into adulthood was significantly associated with depression among students in the Health Sciences Group of Naresuan University at the .05 level.

RESEARCH CONCEPTUAL FRAMEWORK

Anxiety in developing into adulthood

- Situational

- Work

- Adaptation

- Career

- Responsibility

- Relationship
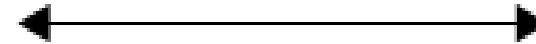
Depression

RESEARCH POPULATION

- 6,737 students in the Health Sciences cluster were divided into 7 faculties: Faculty of Pharmacy, 777 people, Faculty of Medicine, 1,001 people, Faculty of Public Health, 1,568 people, Faculty of Medical Sciences, 1,420 people, Faculty of Nursing, 513 people, Faculty of Dentistry, 324 people, and Faculty of Allied Health Science, 1,134 persons (Department of Education Services, Naresuan University, data as of August 4, 2021).

Research Sample

The sample group for this study were graduate students studying in the Faculty of Health Sciences, Naresuan University. Using the Taro Yamane sample computational formula, the first semester of the academic year 2021 population (6,737) a sample of 400 students was obtained by quota randomization from the 7 health sciences faculties: 46 - Faculty of Pharmacy, 60 - Faculty of Medicine, 93 - Faculty of Public Health, 85 - Faculty of Medical Sciences, 30 - Nursing Science, 19 - Faculty of Dentistry, and 67 - Faculty of Allied Health Sciences.

RESEARCH TOOLS

- The instruments used in this research study were the Adult Anxiety Assessment form of Naresuan University students developed by Kantabhat A. and Nattaporn J. (2022) and the Depression Test (PHQ-9) developed by Manoch Lotrakul et al. at, Ramathibodi Hospital Faculty of Medicine. The study is Divided into 3 Parts:

- Part 1 Personal Data Questionnaire in the form of a Check List.

- Part 2 The Anxiety Assessment Form for the Development of Adult Naresuan University Students

- Part 3 Patient Health Questionnaire-9 (PHQ-9)

RESEARCH RESULTS

Table 1 shows the mean standard deviation and the level of anxiety that develops into adulthood.

	Score level	N	$\bar{X}$	S.D.	Anxiety levels in adulthood
1.	Less than 56	168	45.54	7.20	Low
2.	56-66	121	60.86	2.99	Relatively low
3.	67-73	73	69.82	2.01	Quite high
4.	74 and above	53	79.81	4.82	High
	Total	415	58.65	13.33	Relatively low

From Table 1, the majority of respondents had a relatively low level of developmental anxiety disorder. The mean was 58.65, with 168 of those with a low level of developmental anxiety disorder having an average of 45.54, followed by a relatively low level of developmental anxiety disorder. Of the 121 people, the average level was 60.86 and the level of developmental anxiety was quite high with 73 people with an average of 69.82. The level of developmental anxiety was high with 53 people with an average of 79.81.

Table 2 shows the mean, standard deviation, and depression levels.

	Score Level	N	$\overline{X}$	S.D.	Depression Level
1.	0 - 4	127	2.69	1.31	No Depression
2.	5 - 8	127	6.39	1.14	Mild Depression
3.	9 - 14	119	10.73	1.52	Moderate Depression
4.	15 - 19	28	17.39	1.47	Depression Quite Severe.
5.	20 - 27	14	22.21	2.15	Very Severe Depression
	Total	415	7.78	5.11	Mild Depression

From Table 2, most of the respondents had mild depression. A total of 127 people without depression had an average of 2.69 and 127 had mild depression with an average of 6.39 followed by 119 with moderate depression with an average of 10.73 followed by 28 people with an average of 17.39 with very severe depression, and, 14 with an average of 22.21 very severe depression.

Table 3 shows a comparison of differences in the level of developmental anxiety as an adult by gender.

Variable	N	Mean	S.D.	df	P-value
Male	85	2.25	.52	412	.000
Female	329	2.49	.55		

*Statistical significance level .05

From Table 3, it was found that the test statistics $t(412) = -3.53$, $p < .01$, indicated that different sexes had different levels of developmental anxiety in adulthood. At the .05 level, females had higher developmental anxiety towards adulthood (M = 2.49, SD = .55) than males (M = 2.26, SD = .52).

Table 4 presents a comparison of differences in the level of developmental anxiety to adulthood by age.

Age	N	Mean	F	df1/df2	P-Value
18	113	2.37	1.354	7/407	.223
19	133	2.44			
20	89	2.56			
21	48	2.39			
22	22	2.48			
23	6	2.09			
24	2	2.64			
25	2	2.54			
Total	415	2.44			

From **Table 4**, it was found that the test statistical values $F_{(7, 407)} = 1.354$, $p = .223$ showed that different ages had no significant differences in anxiety levels in the development of adulthood, statistical significance level .05.

Table 5 presents a comparison of differences in the level of developmental anxiety as an adult classified by faculty under study.

Faculty	N	Mean	F	df1/df2	P-Value
Faculty of Pharmacy	46	2.36	5.634	6/408	.000
Faculty of Medicine	62	2.27			
Faculty of Public Health	94	2.41			
Faculty of Medical Sciences	88	2.70			
Faculty of Nursing	32	2.24			
Faculty of Dentistry	26	2.38			
Faculty of Allied Health Sciences	67	2.47			
Total	415	2.44			

From **Table 5,** it was found that the test statistic $F_{(6,408)}$ was 5.634, $p < .01$, indicating that different faculties had significantly different levels of anxiety in developing into adulthood.

Table 6 presents a comparison of differences in developmental anxiety levels into adulthood classified by mean academic performance. (GPA)

GPA	N	Mean	F	df1/df2	P-Value
2.01-2.50	34	2.59	1.116	3/411	.342
2.51-3.00	88	2.45			
3.01-3.50	150	2.44			
3.50 and above	143	2.40			
Total	415	2.44			

From Table 6, it was found that the test statistical value F(3, 411) was 1.116, p = .342, indicating that diffferent mean grades had no significant difference in anxiety levels in the development of adulthood at .05 significant level.

Table 7 Test for the difference of the mean pairs using the Sheffe test method.

Faculty	$\bar{x}$	Pharmacy	Medicine	Public Health	Medical Science	Nursing	Dentistry	Allied Health Sciences
		2.36	2.27	2.41	2.70	2.24	2.38	2.47
Pharmacy	2.36	-	0.09 (0.99)	-0.04 (1.00)	-0.34 (0.61)	0.11 (0.98)	-0.01 (1.00)	-0.10 (0.98)
Medicine	2.27	-	-	-0.13 (0.86)	**-0.43*** **(0.00)**	0.02 (1.00)	-0.11 (0.99)	-0.20 (0.58)
Public Health	2.41	-	-	-	**-0.29*** **(0.03)**	0.16 (0.90)	0.02 (1.00)	-0.06 (0.99)
Medical Science	2.70	-	-	-	-	**0.46*** **(0.01)**	-0.13 (0.98)	0.23 (0.31)
Nursing	2.24	-	-	-	-	-	-0.13 (0.98)	-0.22 (0.68)
Dentistry	2.38	-	-	-	-	-	-	-0.09 (0.99)

From Table 7, when considering the results of the comparison of the pairs' mean by Sheffe's method, it was found that the mean level of anxiety in developing into an adult pair of the Faculty of Medical Sciences was different from that of the other 3 faculties. The Faculty of Medical Sciences (M = 2.70, SD = .42) had a higher level of anxiety in the development of adulthood than the Faculty of Nursing (M = 2.24, SD = .41), followed by the Faculty of Medicine. (M = 2.27, SD = .63) and Faculty of Public Health (M = 2.41, SD = .53). In comparison to the mean score of the other faculties it was found that there were no anxiety differences developing into adulthood.

Table 8 presents a comparison of differences in developmental anxiety levels into adults classified by monthly income.

monthly income	N	Mean	F	df1/df2	P-Value
Less than 4,000 baht/month	139	2.50	1.406	3/411	.240
4,001-6,000 baht/month	153	2.43			
6,001-8,000 baht/month	52	2.45			
More than 8,001 baht/month	71	2.33			
Total	415	2.44			

From Table 8, it was found that the test statistic $F_{(3, 411)}$ was 1.406, p = .240, indicating that different average monthly incomes had the same level of anxiety in developing into adulthood, statistically significant at the .05 level.

Table 9 shows the relationship of developmental anxiety level to adulthood and depression level.

Variable	Depression level		
	Pearson Correlation(r)	p-value	Correlation level
Anxiety Levels to adulthood	.599**	.000	Medium

**Statistically significant at .01 level

From Table 9, it was found that Pearson's correlation analysis showed that the level of developmental anxiety disorder with depression was significantly positively correlated with r = .59, p < .01. Most adults have high levels of anxiety into adulthood and also have high levels of depression.

CONCLUSIONS

- It was found that the anxiety in the development into adulthood among the majority of 168 health science students had low anxiety with an average of 45.54. The factors that had a high degree of effect on anxiety in the development of adulthood were work factor with an average of 2.61 and the occupational factor with an average of 2.54. It was found that the factors that had a low effect on anxiety in the development of adulthood were the adjustment aspect averaged at 2.43 and the situational aspect with an average of 2.31.

DISCUSSION OF THE RESEARCH

• Developmental anxieties in adulthood of the sample students were different according to gender. This finding was consistent with Euariyapanichkul, P. (2006) who found that gender was associated with job search anxiety with females having more anxiety compared to males. This was consistent with the study of Sisomprasong S. (2009) which found that females were more sensitive to stress than males.

• In terms of the age difference in the student sample there was no difference in anxiety developing into adulthood. Darunporn Samana (2014) studied the factors affecting anxiety in students and found even with a part time job while at the university in year 2014 at Ramkhamhaeng University students of various ages there was no difference in anxiety level. In contrast to this, Volková, A., & Dušková, P. (2015) found that 20-22 year olds had the greatest fear among young adults with fears of education, losing love, failure, spouse and fear of death. This difference may be culturally based because in Asian society students 18 to 22 years old are still studying and family dependent whereas in Western societies students have finished school and are more independent.

• In the different faculties of students in Health Sciences there are different developmental anxieties into adulthood in line with Euariyapanichkul, P. (2006) who found that students who had studied directly towards a professional career had less anxiety in finding a job than those who graduated from a faculty that had no professional career certification or license goal. For example, in the Faculty of Medical Sciences there is no specific professional certification but there are specific certification goals in the Faculty of Nursing and the Faculty of Medicine which require a medical licensing exam.

- As a result, students studying in the Faculty of Medical Sciences without a licensing goal have more anxiety about becoming an adult than students from other faculties. The Employment Analysis Report of Naresuan University Graduates (2016) found that the Faculty of Medical Sciences had a low employment rate of 68.32% while the Faculty of Public Health had an employment rate of 82.47%. and the Faculty of Nursing had an employment rate of 100 percent. Considering the low employment rate of the Faculty of Medical Sciences students, this may be a factor in why students have more anxiety about developing into adulthood than other faculties.

- In relation to different grade point averages of students in the Faculty of Health Sciences there was no difference in the anxiety of developing into adulthood. This was in line what Euariyapanichkul, P. (2006) findings that the students' GPA and job search anxiety were not related. Sisomprasong, S. (2009) also found that academic achievement was not related to the stress of medical students. The average GPA of the students in the Faculty of Health Sciences was 3.01 - 3.50 which was a good level. Therefore, grades may not be a factor in causing anxiety in the development of adulthood.

- There was no difference in the anxiety of developing into adulthood in terms of monthly income in the cluster of Faculty of Health Sciences students and this is consistent with Janesirisak N. (2019) study findings that the monthly income of different students is not an influencing factor about anxiety.

- Anxiety in developing into adulthood was associated with moderate depression among students in the Health Sciences cluster. This was consistent with Malakul Na Ayudhya, A. (2003), who found that only 20% of the students had both depression and anxiety and most people with depression also have anxiety disorders and those with anxiety were more likely to experience co-morbid depression. According to Shao, R. et al. (2020), depression and anxiety were significantly positively correlated with each other. Other studies have shown that people with high anxiety tend to develop depression more easily.

RECOMMENDATIONS

1. Students in all of the faculties of the university should be surveyed for the anxiety of developing into adulthood and results should be compared.

2. Additional tools or tests should be used to collect data to make the research more complete such as a stress test or mental health test.

3. The information obtained from the research should be returned to the various faculties for use in adjusting policy and planning for health management with Naresuan University students.

Thank you

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