Pharmacy Thesis

Anxiety Test predicted Academic achievement in Pharmacy students at Burapha University 2017

การทดสอบความวิตกกังวลทำนายผลการเรียนของนิสิตเภสัชศาสตร์

มหาวิทยาลัยบูรพา พ.ศ. 2560

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This thesis was part of a bachelor's degree program
Academic Year 2017
Faculty of Pharmaceutical sciences
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Preface

The Anxiety Test predicted Academic achievement in Pharmacy students at Burapha University 2017 was the part of the graduate degree program in pharmacy, Burapha University 2017. It was designed to examine relationship between anxiety and academic achievement at the College of Pharmacy, Burapha University 2017. Finally, we successfully established academic achievement prediction model via Hierarchical Stepwise Multiple Regression Analysis statistical procedure. We found that anxiety, friend support and gender were three significant predictors.

We were proud to submitted and present this thesis because we did hard work to plan, search related literatures, gather scales, collect almost complete data and analyze them cautiously. We read it, reread it and perused it before we close the project on 15th December 2017. Any further questions please contact us directly via telephone or email.

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ABSTRACT

Objectives: 1. To examine student's anxiety. 2. To identify relationship between anxiety and academic achievement. 3. To establish academic achievement prediction model by 1. Anxiety, 2. Social support and 3. Demographic data. **Method:** A cross-sectional survey study was performed at college of Pharmacy, Burapha University, Thailand, in 2017. All population (1^{st}-5^{th} year students), n=627, were selected as the census sample however, only 568 students participated, the return rate was 90.59%. A 2 page questionnaire consisted of Thai Spielberger's Form (TSF) and socioeconomic status. The TSF measured 2 dimensions namely: emotional and worry. It consisted of 14 measurement variables measured by visual analogue scale. **Results:** The TSF's internal consistency was detected by Cronbach's Alpha yield r=0.849. The second year student had the most anxiety score compared to all students (1^{st} to 5^{th} year). Anxiety had a negative correlation to GPAX (r = -0.084, p=0.047, Pearson's correlation). Hierarchical Stepwise Multiple Regression Analysis was employed to establish academic achievement prediction model by using anxiety, social support and gender as the predictors: GPAX = 0.061 boy/girl-friend + 0.109 friend support *+0.092 anxiety* -0.017 family support -0.008 parents -0.128 gender* *. (p-value 0.010, 0.030 and 0.002 respectively) with R-square 0.410 **Conclusion:** Gender had the biggest impact on academic achievement and 3 significant predictors of Academic Achievement model were gender, friend support and anxiety.

Major Advisor……

(Associate Professor Titinun Auamnoy Ph.D.)

โครงงานวิจัยทางเภสัชศาสตร์ปีการศึกษา 2560

เรื่อง การทดสอบความวิตกกังวลทำนายผลการเรียนของนิสิตเภสัชศาสตร์ มหาวิทยาลัยบูรพา พ.ศ. 2560

ผู้จัดทำโครงงานวิจัยทางเภสัชศาสตร์

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อาจารย์ที่ปรึกษา

1. รศ. ดร. ฐิตินันท์ เอื้ออำนวย

อาจารย์ที่ปรึกษาร่วม

1. อาจารย์ ภาสกร อ่อนนิ่ม

บทคัดย่อ

วัตถุประสงค์ 1. เพื่อประเมินความวิตกกังวลของนิสิตคณะเภสัชศาสตร์ ชั้นปี 1-5 มหาวิทยาลัยบูรพา 2. เพื่อหาความสัมพันธ์ของความวิตกกังวลกับผลการเรียนของนิสิตคณะเภสัชศาสตร์ ชั้นปี 1-5 มหาวิทยาลัยบูรพา 3. เพื่อสร้างสมการทำนายผลผลสัมฤทธิ์ทางการศึกษา จากความวิตกกังวล การสนับสนุนจากสังคมและปัจจัยพื้นฐานของนิสิต **วิธีวิจัย** เป็นวิจัยเชิงสำรวจ (survey) ภาคตัดขวางระยะสั้น (cross-sectional) ในนิสิตคณะเภสัชศาสตร์ ชั้นปี 1-5 มหาวิทยาลัยบูรพา พ.ศ. 2560 กลุ่มประชากรคือ นิสิตเภสัชศาสตร์มหาวิทยาลัยบูรพาทั้งหมดจำนวน 627 คน โดยสุ่มนิสิตทุกคน โดยมีนิสิตที่เข้าร่วมงานวิจัยจำนวน 568 คน จึงมีอัตราการตอบกลับ 90.59% แบบสอบถามที่ใช้ประกอบด้วยคำถาม 2 หน้า คือ แบบประเมินความวิตกกังวลThai Spielberger's Form (TSF) และเศรษฐฐานะและสังคม โดยแบบประเมินความวิตกกังวล (TSF) จะวัดความวิตกกังวลใน 2 ด้าน คือ ด้านอารมณ์และความวิตกกังวล ซึ่งแบบประเมินนี้ประกอบด้วยคำถาม 14 ข้อ ใช้มาตรวัดแบบ visual analogue scale **ผลการวิจัย** แบบสอบถามนี้มีความเที่ยงตรงโดยวัดจากค่า Cronbach's Alpha เท่ากับ 0.849 ผลการศึกษาพบว่า นิสิตชั้นปีที่ 2 มีความวิตกกังวลมากที่สุดเมื่อเทียบกับชั้นปีอื่นๆ โดยมีความสัมพันธ์เชิงลบระหว่างความวิตกกังวลของนิสิตกับผลสัมฤทธิ์ทางการศึกษาอย่างมีนัยสำคัญทางสถิติ ($r = -0.084$, $p=0.047$, Pearson's correlation) สถิติ Hierarchical Stepwise Multiple

Regression ได้โมเดลทำนายผลสัมฤทธิ์ทางการศึกษาจากความวิตกกังวลกับการสนับสนุนจากสังคม จากนั้นได้สมการทำนายคือ GPAX = 0.061 Boy/girl-friend + 0.109 Friend support* + 0.092 Anxiety* - 0.017 Family support - 0.008 Parents - 0.128 Male** (p-value 0.010, 0.030 and 0.002 ตามลำดับ) R^2=0.410 **สรุป** เพศเป็นตัวแปรที่ส่งผลต่อผลสัมฤทธิ์ทางการศึกษามากที่สุด และมี 3 ตัวแปรที่ทำนายผลสัมฤทธิ์ทางการศึกษาได้อย่างมีนัยสำคัญทางสถิติ คือ เพศ, การสนับสนุนจากเพื่อน และ ความวิตกกังวล

อาจารย์ที่ปรึกษาหลัก.....

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Chapter 1
Rational

“Anxiety is an emotion characterized by an unpleasant state of inner turmoil, often accompanied by nervous behavior, such as pacing back and forth, somatic complaints, and rumination” (1)

Prabhu, 2016 defined anxiety as “the subjectively unpleasant feelings of dread over anticipated events, such as the feeling of imminent death.” (2) Moreover, American Psychiatric Association suggested that “anxiety is not the same as fear, which is a response to a real or perceived immediate threat, whereas anxiety is the expectation of future threat. (3)

Ruedrich described anxiety as a feeling of uneasiness and worry, usually generalized and unfocused as an overreaction to a situation that is only subjectively seen as menacing. (4)

American Psychiatric Association added that anxiety is often accompanied by muscular tension, restlessness, fatigue and problems in concentration. it can be appropriate, but when experienced regularly the individual may suffer from an anxiety disorder. (3)

Barker, found that people facing anxiety may withdraw from situations which have provoked anxiety in the past. Barker, Saraceno and Testa did classify anxiety into 2 types of anxiety. (5)

Existential anxiety can occur when a person faces angst an existential crisis, or nihilistic feelings. People can also face mathematical anxiety, somatic anxiety, stage fright, or anxiety test. Social anxiety and stranger anxiety are caused when people are apprehensive around strangers or other people in general. Furthermore, anxiety has been linked with physical symptoms such as IBS (Irritable bowel syndrome) and can heighten other mental health illnesses such as OCD (Obsessive Compulsive Disorder) and panic disorder. The first step in the management of a person with anxiety symptoms is to evaluate the possible presence of an underlying medical cause, whose recognition is essential in order to decide its correct treatment. (6) (7) Anxiety symptoms may be masking an organic disease, or appear associated or as a result of a medical disorder. (6) (7) (8) (9)

Jersild stated that “anxiety would cause stress. It would cause people to evaluate the situations. When they realized dangerous situation they felt stress, insomnia, irritability, fatigue, heart palpitations, dance Sweating, dry mouth, dizziness. These symptoms would stimulate the physiological and behavioral responses to behavioral, learning and educational achievement of individuals as well. (10)

Most pharmacy students got high anxiety. Sarason 1990, found negative relationship between anxiety and academic achievement. (11) Prima Vitasari also found the negative relationship between anxiety and academic performance of engineering students. (12)

This study aims to find anxiety test predicted academic achievement in Pharmacy student year 1-5 at Burapha University and generate equation predict academic achievement. The factors including, anxiety, friend support, family support, gender, activity, income and habitation those forecasted academic achievement of Pharmacy students year 1-5 at Burapha University, 2017.

The objectives of this study were:

1. To assess the first year to the fifth year pharmacy student’s anxiety.
2. To identify relationship between anxiety and academic achievement of the first year to the fifth year pharmacy students.
3. To establish academic achievement prediction model by Thai Spielberger’s Form by relevant factors 1. Emotionality, 2. Worry and 3. Student demographic background.

Hypothesis

1. Descriptive statistics.
2. Ho: $\rho_{\text{anxiety academic}} = 0$
3. Academic achievement = b0 + b1 Boy/girl-friend + b2 Friend support + b3 Anxiety + b4 Family support + b5 Parents + b6 Male

Benefits

1. To explore, understand, explain, predict and then control the anxiety of Pharmacy students at Burapha University.

2. To identify relationship between anxiety and academic achievement of Pharmacy students at Burapha University.

3. To find prediction model of anxiety and the other factors affect academic achievement of Pharmacy students at Burapha University 2017.

Conceptual framework

Figure 1.1 Simple model

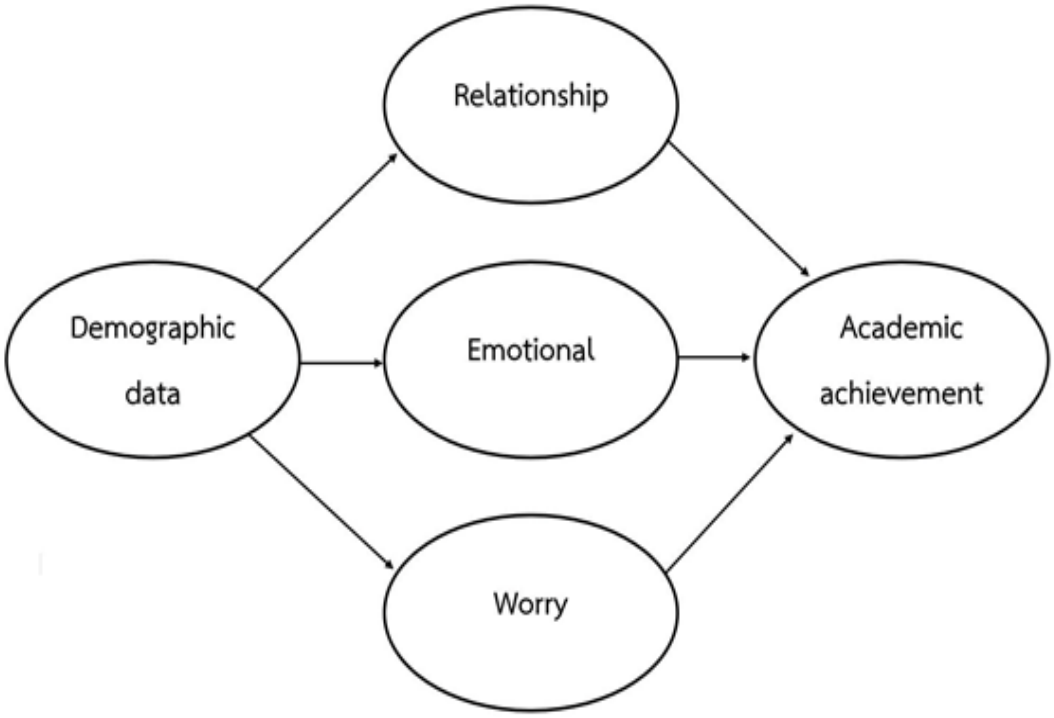
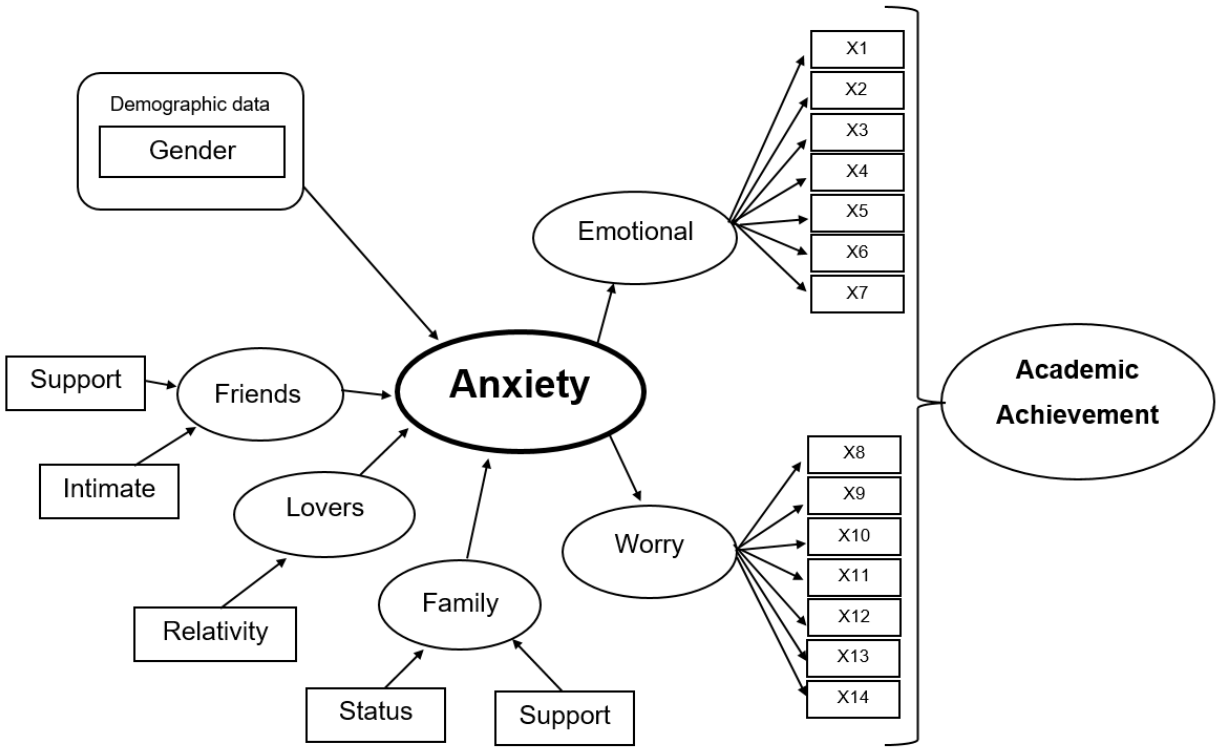


Figure 1.2 Full model



Conceptualization

1. Anxiety

Anxiety is an emergency response to stimuli that could be dangerous. Harm the mind and person's body. This response is based on experience, personality, beliefs or thoughts of the individual. The incentive to motivate people to look unclear, and not specific. (13)

2. The relationship between student and friend support.

The relationship between student and friend support is a mutually trust each other, Accept each other, Have a good feeling, Do not make the other feel threatened or forced, No one has any influence or power over the other, Must be equal Intimate, Have help when needed and feel happy when they are together. (14)

3. Relationship between family support.

The good relationships within the family. It is a factor that encourages the family to have love, commitment, understanding, forgiveness, and help each other when faced with obstacles. Causing a warm family. But weak relationships It's will result in families lacking warmth and divorce at a higher rate. (15)

4. The relationship between boy/girl-friend

Boy/girl-friend relationship, it is a special relationship between two people. Which are closely bound together, happy to have found each other, they can talk comfortably in everything, both happy and suffering in daily life.

Romantic relationship happens in many aspects. For some couples may start with a close friend when the opportunity to learn each other's temper until it is a sympathy for each other that make deep emotional sensitivity. This is love. (16)

5. Activity and recreation

Student activity refers to activities that students are prepared under the supervision of Advisors University. To students both physically, mentally, emotionally, socially, disciplined, moral, intellectual, and creative. The student participants must be willing, not forcing and no points were involved. (17)

Chapter 2
Literature review

Anxiety is a major factor that affects thinking and the learning efficiency. High competition in education occurs everywhere in the developed countries. Most student are anxious and nervous when they study. Many scholars tried to investigate the relationship of anxiety and academic achievement. Because It is an interesting topic, this study will do in the same direction however we will add more relevant variables and use pharmacy student at Burapha University as subjects to verify generalization (external validity).

This research tries to integrate pertinent pristine researchers as the following:

2.1 Definition of anxiety

According to Dictionary of the Royal Institute "Anxiety is thought to have been caused by nervousness or distress". (18)

Callahan (2001) stated that anxiety is a mental symptom. There are several forms of anxiety such as excessive anxiety, fear, jitter, excessive emotional response and negative thinking. When some people has anxiety, they are expressed by silenced but the brain is still autistic, making it worse that impact on quality of life. (12)

Sarason in Harris et al (2003) described anxiety as a fundamental human emotional. It contains fear and diffidence that often express when an individual is in danger. (12)

Spielberger's (1995) defined the meaning of anxiety as emotional states include tension, panic and change from autonomic nervous system. (12)

2.2 Cause of anxiety

Freud said that anxiety is caused by the babies can't control their excitement caused by stimuli that come into effect. Especially stimuli or experiences that cause mental and pain, as well as loss of loved ones.

Sullivan expressed some anxiety as a result of the biological needs of individuals who are not responding satisfactorily to social acceptance.

While Horney explains that in general, humans have two basic needs: a sense of security and satisfaction. If a person receives a satisfactory response, only one side Lack of security response and acceptance. It makes people got basic anxiety and this will lead to neurotic anxiety that may occur later.

For Skinner, said the anxiety caused by the condition of the stimuli with things that cause dissatisfaction. And the emotions that are specific circumstances.

All of the above Reflecting that anxiety is the basic human emotion that can happen. From birth to the end of life, caused by various reasons as mentioned above. It is also caused by fear of intangibles. That is a state of insecurity that may be caused by a child's social development. It can be explained that this feeling usually starts with childhood. Especially while the child does not help himself. That need to take care from adults. If a child receives love and carefully. The children will not lack warmth. Feel like being care. If children lack love and caring will make children lack of warmth. Feel like abandoned, Evoke a sense of insecurity, insecurity and fear. Which is the basis of anxiety.

Moreover, Emotional distress is also a condition associated with what the person creates. As responsible for the work, which involves anxiety in the work itself. Because of they want to work for maximum efficiency. It also causes many other causes such as learning, lack of self-confidence, feelings of low self-esteem, etc.

Anxiety is an important role in the adaptation of a normal person. Individuals with anxiety is at an appropriate level. It is motivated to push for the work to be effective. For this reason, appropriate levels of anxiety are beneficial to the person's lifestyle. This motivates people to do things with caution, intent and consciousness. Which leads to achieving the desired goal. While anxiety levels that are too high will cause many adverse effects. (19)

2.3 Severity of anxiety

Psychologists divided the level of anxiety expression into four levels.

2.3.1 Mild anxiety

People are alert, enthusiasm for environmental observation, active and creative. They can explaine the story clearly.

2.3.2 Moderate anxiety

People will have degraded of recognition and concentrate on one thing but high alert. They can’t explaine the story clearly.

2.3.3 Severe anxiety

People will have decreased of awareness, restlessness, not aware and not understand about the story. Someone will have anorexia, high blood pressure, abdominal pain, nausea, vomiting and mental disorders such as stress, depression and seizures.

2.3.4 Panic anxiety

Person can't take care of himself. They have decreased of resistance to stimulation, can't recognize the new things, anger, lack of dependence, sadness, separation from social and frown.

Table 2.1 Anxiety levels that cause effects on individual behavioral, emotional and cognitive.

Anxiety level	Behavior	Emotional	Thought
1. Mild anxiety	Calm, discreetly, concentrate, be careful to speak, be conscious and have normal daily life	Feel safe, happiness and no more emotional expression	Conscious awareness well, creativity, planning and ideally something new
2. Moderate anxiety	Start to shake slightly. Not calm, talk more, edgy, loudness and show more behavior. If in haste.	Edgy, fearful, preoccupied with what is going to happen or may escape because of fear or retreat.	Perception decreased. Interested in one thing and think to solve only at one point
3. Severe anxiety	Hands, arms shaking that can noticeable. Not calm, moving all the time, speak more and fast until start to insomnia	Fearful, feel unhappy, anxious, be unstable, unsafe, feel discouraged and unconscious	Perception decreased until it did not perceive anything. Confused and cannot think everything, focus, decide and remember

4. Panic anxiety	The body shaking that cannot do anything. Avoid everything. Fear of death. Show bad behavior such as shouting, panic, and possibly hurt others	Extreme terror, feel helpless, fear of being abandoned to live alone and afraid of death	No recognition and cannot think everything and solve, Confused and not decided

The level of anxiety classification can be used to measure the severity of these symptoms above. The psychologist estimated that in normal individuals should have the anxiety level on a scale of 1 to 2. If the level of anxiety reaches levels 3 and 4, the person is classified as a psychiatric emergency. Those people should get help. (20)

2.4 Evaluation of anxiety

There were many kinds of anxiety assessment tools. Those were

2.4.1 Anxiety test and the Graduate Record Examinations (GRE) General Test by Donald E. Powers which was designed to test the stress levels of student enrolled in postgraduate study of the University of the United States. Powers created this test to measure the stress level of the student and tried to solve the problem of reducing anxiety. The test was divided anxiety concept into 3 constructs those were, emotional, worry and demographic background. (21)

2.4.2 The State-Trait Anxiety Inventory (STAI) by Charles D. Spielberger was a scale commonly used to measure trait and state of anxiety It could be used in clinical settings to diagnose anxiety and could to decompose it from depressive syndromes. It also was often used in research as an indicator of caregiver distress. It is a 20 items scale for assessing trait anxiety and 20 scale for state anxiety. It was a 4 points Likert scale. The higher scores indicated the greater anxiety. (22)

2.4.3 Student demographic background questionnaire by Amporn Tanawatsuggasere was composed of general information of the respondents, learning background and social relations Background. (23)

We did not choose 1. Anxiety Test and the Graduate Record Examinations (GRE) General Test by Donald E. Powers because it was designed to test only after the exam. We do want to measure the level of anxiety before and during the exam so we selected “The State-Trait Anxiety Inventory (STAI)” created by Charles D. Spielberger because It was a better scale which designed to test before, during and after the exam. We did add some features from student demographic background questionnaire by Amporn Tanawatsuggasere because they were important data.

2.5 Academic achievement

The academic achievement is the learning outcomes based on the course. It is the average student test score. (24)

2.6 The relationship between anxiety and academic achievement

There were several studies on relationship between anxiety and academic achievement. An interesting one was Prima Vitasari work (2010). He studied the relationship between anxiety and academic achievement of engineering students. Vitasari found that anxiety had a negative relationship with the academic achievement of engineer students ($r = -.26$, $p=0.00$). It implied that the higher anxiety score, the lower academic achievement. (12)

Vitasari (2010)’s discovery used State Trait Anxiety Inventory (STAI) (12) was triangulated by Mahmood (2010) used The Test Anxiety Inventory (TAI) ($p=0.00$). However, Mahmood took a cognitive factor (worry), affective factors (emotional) and TAI total into consideration. (25)

Mohammad Nadeem (2012) detected negative relationship between anxiety and academic achievement ($p=0.00$). When anxiety increased, academic achievement decreases in both male and female students. (26)

Eman Dawood (2016) studied the relationship between anxiety and academic achievement in nurse students. He found that anxiety had a negative relationship with the academic achievement of nurse students ($r = -0.14$, $p = 0.01$). It implied that the higher anxiety score, the lower academic achievement. (27)

Jennifer (2013) educated about anxiety, academic performance and academic achievement. She found that anxiety had a negative relationship with the academic achievement ($r = -.16$, $p < .05$). It means students with high level of anxiety before examination, they will lower academic achievement. (28)

On the contrary in 2016, Hasan Muhammad studied the relationship between anxiety in male and female students in high school and academic achievement. He found that anxiety did not significantly correlate with academic achievement. (29)

The study on international students of the University of Bedfordshire. They found that anxiety was significantly positively related to academic achievement ($p = 0.01$). (30)

2.7 Relevant factors affect to anxiety

Relevant factors directly and indirectly affected to anxiety in this study were the following.

2.7.1 Gender
2.7.2 Years
2.7.3 Family income
2.7.4 Activity and recreation
2.7.5 Resident
2.7.6 Social support by friend
2.7.7 Social support by family
2.7.8 Social support by boy/girl-friend

2.8 Other related researches

2.8.1 The relationship between anxiety and gender

The research from Jodi McKnight et.al. They studied the relationship between gender and anxiety (A Comparison of Student Anxiety Levels in Face-to-Face interview and Video Conferencing Courses) of Students in Mid Continent University. There were 132 respondents. 54 (41%) males and 78 (59%) females. Anxiety test (STAI) by Spielberger (1983) was used in this study. They found that the mean of female's STAI scores was higher than the mean of male's STAI scores. (31) This result went to the same direction with the study on relationships between anxiety test, gender, academic achievement and years. The research was performed at Iranian EFL University. Respondents were 110 undergraduate students in the University of Isfahan. Suinn's anxiety test-a 48 items 5 Likert scales were executed. Correlation and Chi Square test were 2 statistical procedures used to determine the significance of the study they found that female students had a higher level of anxiety test scores than male. Academic achievement was statistically significant. However, anxiety test with the academic year did not correlate. (32)

The research from Pakasit T. (2013) called Factors Affecting the Learning Anxiety of the Students in Tourism and Hotel Business Program: A Case Study of the 302 Students at Suan Dusit Rajabhat University. So the mean scores of both male and female were 3.114 and 3.165 respectively that were not significantly different at p=0.513. (33)

The research from Nitsaiyasuk B. (2006). the purpose of this research was to study factors Influencing Bangkok University 340 Students' Anxiety in Learning Fundamental Mathematics. The results showed that the mean scores of both male (2.924) and female (3.066) were significantly different at p=0.035. (34)

2.8.2 The relationship between anxiety and year

The research from Mingprasert A. The purpose of this research was to study, compare, and find the relationship between mental health and stress of students in Faculty of Pharmacy at Rangsit University. The samples were 277 students (The 1st, 2nd, 3rd, 4th and 5th was 54, 61, 58, 46 and 58 respectively.) Research result found that the different years. There was no statistically significant difference in stress. (p=0.73) Probably as a result of that age does not vary much. Study in a place where the atmosphere, the environment or the same learning style is no different. (35)

2.8.3 The relationship between anxiety and family income

The results from Fayegh Yousefi, Ma'rof Redzuan, Mariani B. et.al. were effects of Family Income on Test-Anxiety and Academic Achievement among Iranian High School students. The respondents of the study were 400 high school students (200 males and 200 females) age 15-19 years old. The data was collected by Test-Anxiety Inventory (TAI). ANOVA was employed to detect the significant differences between family income, test-anxiety and academic achievement. The result shows that family income significantly affected academic achievement (p=.00) and test-anxiety (p=.02). So the recommendation to improve academic achievement and anxiety test in the school setting, support strategies such as enhance the family income among families by the government. (36) Marii Paskov, Klarita Gërxhani, Herman G. Van de Werfhorst Use repeated cross-sectional data from the European Social Survey (ESS), which was collected from 2002-2010. The study found income inequality and status anxiety were the significant predictors of academic achievement. Moreover, they found that income inequality was associated with higher levels of status seeking. Thus, both the poor and the rich felt more anxious about their status in unequal societies. (37)

2.8.4 The relationship between anxiety and activity

The research of Pirate Wongsritrakoon studied the factors Affecting Stress and Anxiety of Students in Thonburi University. Students who did some activities could manage anxiety and stress themselves. Students did activities could control stress or anxiety effectively. Students could also train leadership as well. The result supported the Department of Mental Health study and found that participation in activities would create a sense of happiness and satisfaction. It would alleviate stress and anxiety. (38) However finding was contradict Bussaba Boonnawa who studied the factors affecting student stress of the undergraduates in Rajabhat Institute Pibulsongkram. He aimed to determine the stress level of students. Compare the difference between stress and personal factors that affect stress. Survey by questionnaire, data were collected from 330 samples. The results indicated that student activity was not related to students' stress or anxiety. (39)

2.8.5 Relationship between anxiety and resident

The relationships between stress and confront stress in public health students, at Nakhonratchasima college found student had different resident such as stay with their parent, condominium and dormitory in the campus affect to stress and confront stress. However, no significant statistics were found. (40)

2.8.6 Relationship between anxiety and friend support

The relationships between levels of stress, causes of stress and stress management in nursing students at Praboromarajchanok Institute for Health Workforce Development selected 330 nursing students. The results of the study showed that all aspects of stress had significant ($p < 0.01$) moderate positive relationships with participants' stress levels. The cause of stress in friend is related to stress levels of nursing students significantly ($r = +0.37$, $p=0.01$). (41) While the study of The Factors Affecting the Practicum Achievement of the Third – Year Nursing Students of Srinakharinwirot University. Researcher founded friend relationships had not significantly with Achievement ($r = -0.086$, $p>0.05$). (42)

2.8.7 Relationship between anxiety and support by family

The relationships between family relationships and anxiety was studied in students at Songkhla Rajabhat University. Researcher founded family relationships had a significantly negative correlation with anxiety to study ($p < 0.01$). Parents should understand their children, forcing children and hoping too much put children to anxiety. Children demanded love, respect and if they obeyed their parents this would make a good family relationship. (43) However finding was contradict Piyayodilokchai H. who studied Stress and stress coping of business information technology students of Rajamangala University of Technology Rattanakosin, Bophit Phimuk Chakkrawat. Researcher founded support by family relationships had not significantly with Stress ($p=0.084$). The mostest cause of business information technology students stress are Dysfunctional Family (Average score is 2.24) the second is the lack of freedom to live. (Average score is 2.22), Lack of people to consult or help solve problems. (Average score is 2.13) Father or mother often used emotions to teach. (Average score is 1.78) Living with other people so lack of privacy (Average score is 1.70) and his parents ended their relationship (Average score is 1.65) (44)

2.8.8 Relationship between anxiety and support by boy/girl-friend

Witthaya Pung-utha et.al. studied Learning anxiety and adjustment at Mahasarakham University. Disappointed from boy/girl-friend significantly negatively impacted academic achievement. (2.50-3.49). (45)

Chapter 3
Research Methodology

A cross-sectional survey study via questionnaire was performed between 4th January 2017 to 12th December 2017 from the first year to the fifth year pharmacy students at Burapha University 2017.

3.1. Method

3.1.1 Review related literature on factors affected to anxiety i.e. gender, family income, expense, resident, social support by friend, boy/girl-friend and family.

3.1.2 Choose an anxiety scale.

3.1.3 Modified and fine tuning scales (questionnaire)

3.1.4 As part of the planned pretest of this questionnaire, several faculty and 10 students completed the survey and were then interviewed to assess its face validity and content validity. Questionnaire format was modified – largely based on suggestions from these pretest subjects. The final survey instrument and sample methodology received formal approval from the committees.

3.1.5 Collected data from all Burapha pharmacy student 2017.

3.1.6 Data analysis using SPSS 17.

3.1.7 Interpret results

3.1.8 Conclusion and discussion.

3.2. Population frame

All Burapha University pharmacy students (the first year to the fifth year) in 2017 are in the population frame. Total 627 students were enlisted.

1. The first year pharmacy students	n1= 146	students
2. The second year pharmacy students	n2= 145	students
3. The third year pharmacy students	n3= 111	students
4. The fourth year pharmacy students	n4= 129	students
5. The fifth year pharmacy students	n5= 96	students
6. Total population	N = 627	students

Sample size

627 students in the population frame were selected as sample (census sampling)

According to Baffour B. “A census is the procedure of systematically acquiring and recording information about the members of a given population. It is a regularly occurring and official count of a particular population. The term is used mostly in connection with national population and housing censuses; other common censuses include agriculture, business, and traffic censuses.” (46)

3.3. Instruments

The 2 pages questionnaire was developed. It contained 2 scales.

3.3.1. Thai Spielberger’s Form form anxiety scale. The scale was modified and adapted from Spielberger’s scale. It was operationalized into 2 dimensions. Those were affective factors (emotional) and a cognitive factor (worry). A multidimensional Spielberger’s scale consisted of 14 measurement variables measured 2 constructs of anxiety concept. All Thai Spielberger’s Form measurement variables were measured by visual analogue scale whereas the original Spielberger’s scale was a 4 points Likert scale. The questionnaire consisted of seven positive questions (items 3,4,5,6,7,9,12), seven negative questions (items 1,2,8,10,11,13,14). We have defined the criteria for describing the meaning of information by defining the class interval of data was 3 levels.

$$\text{Class interval} = \frac{\text{Maximum of anxiety score - Minimum of anxiety score}}{\text{Number of class}}$$

$$= \frac{119.95 - 1.3}{3}$$

$$= 39.55$$

The criteria for describing the meaning of the information as follows:

< 39.56 scores	=	Low of anxiety score
39.56 - 79.10 scores	=	Moderate of anxiety score
> 79.11 scores	=	High of anxiety score

3.3.2. Demographic data consisted of 8 variables i.e. gender, years, family income, resident, activity and recreation, social support by friend, boy/girl-friend and family. The total question was 23.

3.3.3. Academic achievement was measured by student's midterm score. Academic achievement was measured by the scores of all courses students took in the first semester 2017.

3.4. Scale reliability and validity

3.4.1. Validity refers to how well a test measures what it is supposed to measure. Face validity was assessed by three experts to peruse, scrutinize and examine the appropriate variables. Content validity was examined by another three experts. Item ratings were used to calculate an index of item-objective congruence (IOC) for each item. The IOC score of more than 0.5 was considered to indicate good content validity. Experts were also invited to comment on the wording of items and response format, and to suggest other items to be added to the scale. (47)

3.4.2. Reliability in statistics and psychometrics is the overall consistency of a measure. (48) A measure is said to have a high reliability if it produces similar results under consistent conditions. "It is the characteristic of a set of test scores that relates to the amount of random error from the measurement process that might be embedded in the scores. Scores that are highly reliable are accurate, reproducible, and consistent from one testing occasion to another. That is, if the testing process were repeated with a group of test takers, essentially the same results would be obtained. Various kinds of reliability coefficients, with values ranging between 0.00 (much error) and 1.00 (no error), are usually used to indicate the amount of error in the scores." (49)

3.5. Data collection

3.5.1. The same questionnaires were distributed to all pharmacy students 2017 (the first year to the fifth year) in 2017 at two different time, on date 21/08/2017 and date 25/09/2017.

3.5.2. Clean data: Missing data and detectable error were executed.

3.6. Data analysis

Internal consistency (reliability) was used to assess the consistency of results across items within a test. Cronbach's alpha was the most famous indicator to determine the reliability of the questionnaire. Alpha coefficient ranges in value from 0 to 1. The higher the score, the more reliable the generated scale is. Nunnaly (1978) has indicated 0.70 to be an acceptable Cronbach's alpha reliability coefficient because R^2 would be not less than 0.50. It meant that more than 50% of true score was measured. (50) Internal consistency of Spielberger's scale and Tanawatsuggasere A.'s scale were measured by Cronbach's Alpha. They yielded 0.93 and 0.91 respectively.

3.7. Statistical procedure

Descriptive statistics: All nonmetric variables were demonstrated by frequency and percent and cross tabulation table. All metric variables were presented in means ± standard deviation.

Inference statistics: Alpha was set at 0.05 or 0.01. Pearson's product moment correlation was used to detect correlations between 2 ratio scales (anxiety and academic achievement). Academic achievement model was computed and presented via hierarchical stepwise multiple regression analysis.

Chapter 4
Results

A cross-sectional survey study via questionnaire was performed between 4th January 2017 to 12th December 2017 from the first year to the fifth year pharmacy students at Burapha University 2017. The results were divided into 3 parts as the following topics.

1. **Return rate and scale reliability**
2. **Descriptive statistics**
3. **Inference statistics**

Part 1. Return rate, scale reliability and validity

The questionnaires were distributed to all (627) Burapha pharmacy students between August 14, 2017, and October 23, 2017. Only 568 students participated in this study. The return rate was 90.59%.

The scale reliability of Thai Spielberger's Form was 0.849
The scale validity of Thai Spielberger's Form was 0.725

Part 2. Descriptive statistics

The majority of respondents were female 402 (70.80%) and male 166 (29.20%). These came from First year 145 (25.50%), Second year 132 (23.20%), Third year 107 (18.80%), Fourth year 93 (16.40%) and Fifth year 91 (16.00%). Respondent's parents profile was: 1) living together 474 (84.00%), 2) divorced but did not live together 39 (6.90%), 3) separated but not divorced 22 (3.90%), 4) widower 18 (3.20%), 5) divorced but living together 10 (1.80%) and 6) both dead 1 (0.20%). Respondents' housing characteristics were 1) stay alone at the dormitory 302 (53.40%), 2) living with friend at the dormitory 179 (31.60%), 3) lived with parents 73 (12.90%), 4) lived with relatives 7 (1.20%) and 5) other 5 (0.90%). Types of relationship with friend were 1) low friend 523 (95.60%), 2) medium friend 21 (3.80%) and 3) high friend 3 (0.50%). The characteristics of respondents' boy/girl-friend were 1) no boy/girl-friend 379 (67.20%) and 2) had boy/girl-friend 185 (32.80%). The anxiety score was Medium 396 persons (71.50%), High 129 persons (18.80%) and Low 46 persons (9.70%). The data were shown in table 4.1

Table 4.1 Demographic data of pharmacy students (nominal and ordinal scales).

Variables		Frequency	Percent
Gender	Female	402.00	70.80
	Male	166.00	29.20
Years	1st	145	25.50
	2nd	132	23.20
	3rd	107	18.80
	4th	93	16.40
	5th	91	16.00
Parents	Lived together	474.00	84.00
	Separated but not divorced	22.00	3.90
	Divorced but living together	10.00	1.80
	Divorced but did not live together	39.00	6.90
	Widower	18.00	3.20
	Both dead	1.00	0.20
Housing	Lived with parents	73.00	12.90
	Living with relatives	7.00	1.20
	Stay alone at the dormitory	302.00	53.40
	Living with friend at the dormitory	179.00	31.60
	Other	5.00	0.90
Friend support	Low	523.00	95.60
	Medium	21.00	3.80
	High	3.00	0.50

boy/girl-friend	No	379.00	67.20
	Yes	185.00	32.80
Anxiety	Low	46.00	9.70
	Medium	396.00	71.50
	High	129.00	18.80

Respondent characteristics were as the followings. The average age was 20.40±1.86 years. The average GPAX was 3.09±0.50. The student's expense (mode) was 10,000 baht/month and the mode of family income was 100,000 baht/month. Family support, friend support and boy/girl-friend support scores were 8.18±1.86, 8.06±1.64 and 7.98±1.48 respectively (table 4.2).

Table 4.2 Demographic data of pharmacy students (ratio scale).

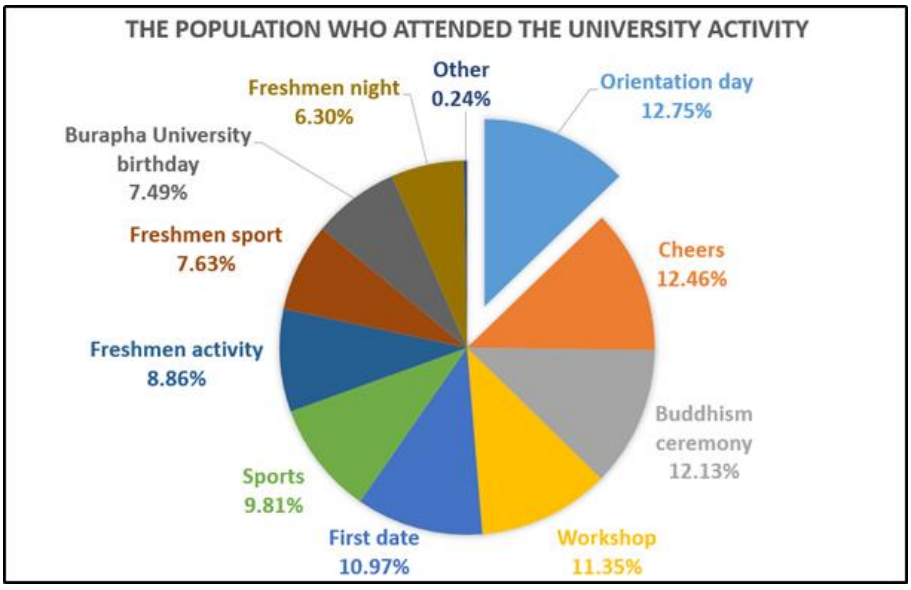
Variables	Mean	SD	Mode
GPAX	3.09	0.50	2.76
Age	20.40	1.86	20.00
Student's expense	9,364.89	4,838.63	10,000.00
Family income	121,276.77	441,380.81	100,000.00
Family support	8.18	1.86	10.00
Friend support	8.06	1.64	10.00
Boy/girl-friend support	7.98	1.48	10.00
Anxiety	69.31	20.10	70.00

Students participated in activities as the followings. 1) Orientation day 528 (12.75%), 2) Cheers 516 (12.46%), 3) Buddhism ceremony 502 (12.13%), 4) Workshop 470 (11.35%), 5) First date 454 (10.97%), 6) Sports 406 (9.81%), 7) Freshmen activity 367 (8.86%), 8) Freshmen sports 316 (7.63%), 9) Burapha University birthday 310 (7.49%) 10) Freshmen night 261 (6.30%), and 11) other 10 (0.24%) respectively. (table 4.3, graph 4.1)

Table 4.3 Student's activities.

Activities	Frequency	Percent
Orientation day	528	12.75
Cheers	516	12.46
Buddhism ceremony	502	12.13
Workshop	470	11.35
First date	454	10.97
Sports	406	9.81
Freshmen activity	367	8.86
Freshmen sports	316	7.63
Burapha University birthday	310	7.49
Freshmen night	261	6.30
Other	10	0.24

Figure 4.1 The pie chart displayed student's activities.

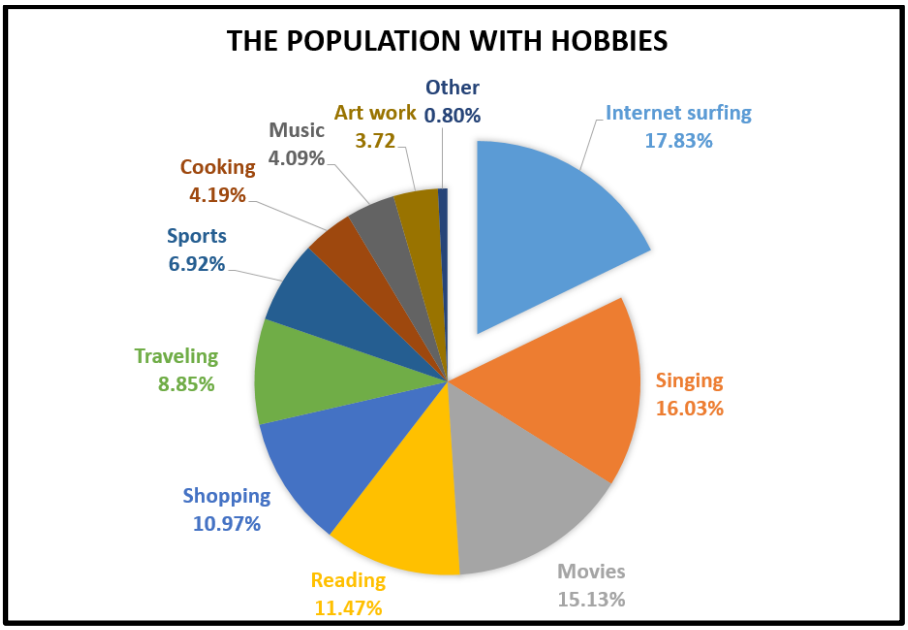


Student's hobbies were 1) internet surfing 536 (17.83%), 2) singing 482 (16.03%), 3) movies 455 (15.13%), 4) reading 345 (11.47%), 5) shopping 330 (10.97%), 6) traveling 266 (8.85%), 7) sports 208 (6.92%), 8) cooking 126 (4.19%), 9) music 123 (4.09%), 10) art work 112 (3.72%) and 11) other 24 (0.80%) respectively. (table 4.4, graph 4.2)

Table 4.4 Student's hobbies.

Student's hobbies	Frequency	Percent
Internet surfing	536	17.83%
Singing	482	16.03%
Movies	455	15.13%
Reading	345	11.47%
Shopping	330	10.97%
Traveling	266	8.85%
Sports	208	6.92%
Cooking	126	4.19%
Music	123	4.09%
Art work	112	3.72%
Other	24	0.80%

Figure 4.2 The pie chart displayed student's hobbies.



Part 3. Inference statistics

Paired t-test was employed to identify the significance between the means of family, friend and boy/girl-friend support at August 14, 2017, and October 23, 2017. (tabe 4.5)

Table 4.5 Paired t-test of support from family, friend and boy/girl-friend.

Variables	Mean 1	SD 1	Mean 2	SD 2	p value
Family support	8.18	1.86	7.94	4.62	0.19
Friend support	8.06	1.64	7.95	2.24	0.23
Boy/girl-friend support	7.99	1.50	7.71	1.52	0.37

The means of family, friend and boy/girl-friend supports were not significantly different when measure on August 14, 2017, and October 23, 2017 (p-value=0.19, 0.23, and 0.37 respectively)

The means of the 1st year to 5th year pharmacy students were 62.83 ± 17.55, 71.46 ± 15.04, 64.29 ± 18.29, 70.14 ± 17.65 and 68.57 ± 20.45 respectively. (table 4.6, graph 4.3).

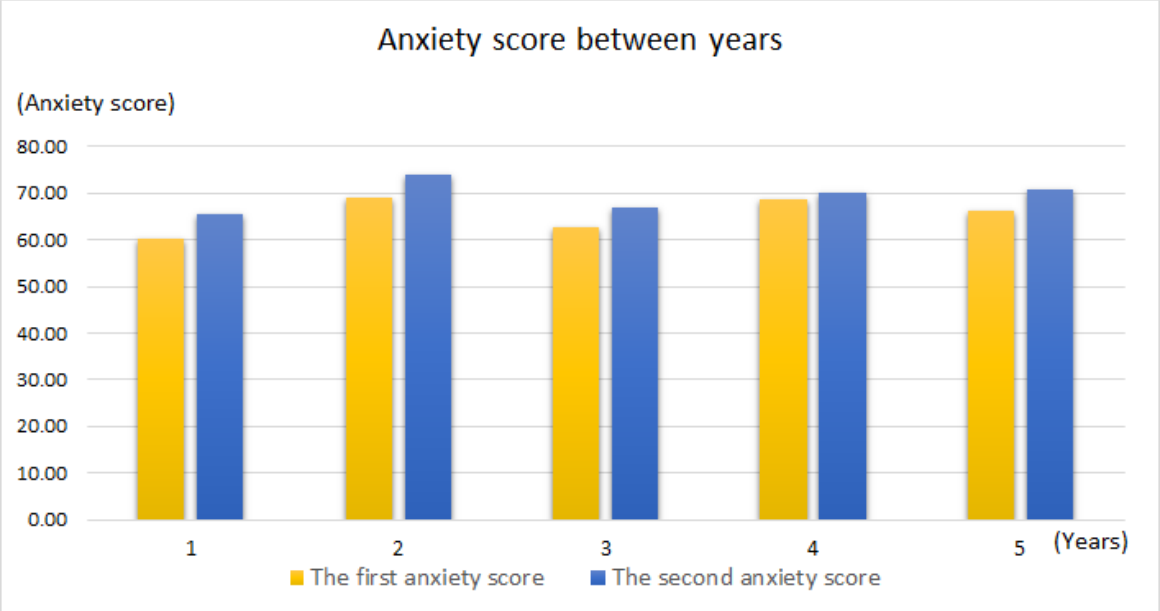
Table 4.6 The F-test of mean of anxiety score among all years of students.

Year	Mean	SD	F-test	p-value
2	71.46	15.04	5.61	0.00**
4	70.14	17.65		
5	68.57	20.45		
3	64.29	18.29		
1	62.83	17.55		

**p<0.01

The F-test indicated that at least one group mean is significantly different from the other means (p=0.00, One way ANOVA). After running post hoc analysis by Dunnett, the 2nd year pharmacy students' anxiety was the biggest and significantly bigger than the 1st year pharmacy students' anxiety. The 2nd year pharmacy students' anxiety was significantly bigger than the 3rd year pharmacy students' anxiety. (p-value=0.000 and 0.013 respectively)

Figure 4.3 Anxiety scores between years



Paired t-test showed that the mean score of 1st anxiety score was 65.13 ± 19.02 and 2nd anxiety score was 69.32 ± 20.07 so the results showed that both anxiety were statistically significantly different at $p < 0.05$. (Table 4.7)

Table 4.7 Paired t-test of 1st anxiety score and 2nd anxiety score.

Variables	Mean of 1st anxiety score	SD	Mean of 2nd anxiety score	SD	p value
Anxiety	65.13	19.02	69.32	20.07	0.00

Anxiety and Academic Achievement

The correlation between the anxiety score measured on August 14, 2017, and October 23, 2017 and academic achievement were presented in table 4.8.

Table 4.8 Correlations of anxiety and academic achievement.

	GPAX	1st anxiety score	2nd anxiety score	mean of anxiety score
GPAX	1.000			
1st anxiety score	-0.140**	1.000		
2nd anxiety score	-0.029	0.694**	1.000	
mean of anxiety score	-0.084*	0.916**	0.925**	1.000

**p<0.01
*p<0.05

The 1st anxiety score and academic achievement significantly correlated with r= -0.140, (R^2 = 0.020). The 2nd anxiety score and academic achievement no significantly correlated with r= -0.029, (R^2 = 0.001). Mean of anxiety score and academic achievement significantly correlated with r= -0.084, (R^2 = 0.007). The 1st anxiety score, the 2nd anxiety score significantly correlated with r= +0.694, (R^2=0.482). The 1st anxiety score, mean of anxiety score significantly correlated with r= +0.916, (R^2=0.926). The 2st anxiety score, mean of anxiety score significantly correlated with r= +0.925, (R^2=0.856). (Table 4.8)

Hierarchical Stepwise Multiple Regression Analysis model.

Correlations statistic showed that the significantly negative relationship between gender and academic achievement with 0.128 (R^2 = 0.016, p<0.01). It implied that male had low academic achievement.

The correlation between family support and academic achievement was significantly positive relationship with 0.156 (R^2 = 0.024, p<0.01). It means the higher family support, the academic achievement was increased.

The correlation between friend support and academic achievement was significantly positive relationship with 0.167 (R^2 = 0.028, p<0.01). It implied the higher friend support, the academic achievement was increased.

The correlation between anxiety and academic achievement was significantly negative relationship with 0.084 (R^2 = 0.007, $p<0.05$). It implied the higher anxiety, the academic achievement was decreased.

The correlation between gender and family support was significantly negative relationship with 0.153 (R^2 = 0.023, $p<0.01$). It implied that male had low family support.

The correlation between gender and friend support was significantly negative relationship with 0.147 (R^2 = 0.022, $p<0.01$). It implied that male had low friend support.

The correlation between family support and friend support was significantly positive relationship with 0.368 (R^2 = 0.135, $p<0.01$). It means the higher family support, the friend support was increased.

The correlation between family support and boy/girl-friend support was significantly positive relationship with 0.184 (R^2 = 0.034, $p<0.05$). It means the higher family support, the boy/girl-friend support was increased.

The correlation between family support and anxiety was significantly negative relationship with 0.187 (R^2 = 0.035, $p<0.01$). It implied the higher family support, the anxiety was decreased.

The correlation between friend support and boy/girl-friend support was significantly positive relationship with 0.247 (R^2 = 0.061, $p<0.01$). It means the higher friend support, the boy/girl-friend support was increased.

The correlation between friend support and anxiety was significantly negative relationship with 0.168 (R^2 = 0.028, $p<0.01$). It implied the higher friend support, the anxiety was decreased.

The correlation between boy/girl-friend support and anxiety was significantly positive relationship with 0.235 (R^2 = 0.055, $p<0.01$). It implied the higher boy/girl-friend support, the anxiety was increased. (Table 4.9,appendix)

Table 4.9 Correlations matrix and academic achievement.

	GPAX	Male	Parents	Family support	Friend support	Boy/girl-friend support	Anxiety
GPAX	1.000						
Male	-0.128**	1.000					
Parents	-0.033	-0.058	1.000				
Family support	0.156**	-0.153**	0.033	1.000			
Friend support	0.167**	-0.147**	-0.044	0.368**	1.000		
Boy/girl-friend support	-0.024	0.008	-0.136	0.184*	0.247**	1.000	
Anxiety	-0.084*	-0.037	-0.027	-0.187**	-0.168**	0.235**	1.000
Mean	3.087	0.290	1.420	8.178	8.056	7.977	67.183
SD	0.505	0.455	1.056	1.860	1.641	1.480	18.018

**p<0.01
*p<0.05

Table 4.10 Coefficients.

	b	SE	Beta	t	p-value
(Constant)	2.735	0.226		12.086	0.000**
Boy/girl-friend	0.030	0.021	0.061	1.450	0.148
Friend support	0.023	0.009	0.109	2.570	0.010*
Anxiety	0.009	0.004	0.092	2.172	0.030*
Family support	0.000	0.001	-0.017	-0.401	0.688
Parents	-0.021	0.109	-0.008	-0.193	0.847
Male	-0.135	0.044	-0.128	-3.057	0.002**

**p<0.01
*p<0.05

Dependent variable Academic achievement

Total 41 percent variance of academic achievement could be explained by the variance of boy/girl-friend, friend support, family support, anxiety, parents and gender. (R square =0.410)

Finally, 2 prediction equations were established.

Unstandardized equation

GPAX = 2.735** + 0.030 Boy/girl-friend + 0.023 Friend support* + 0.009 Anxiety* + 0.000 Family support - 0.021 Parents - 0.135 Male**

Standardized equation

GPAX = 0.061 Boy/girl-friend + 0.109 Friend support* + 0.092 Anxiety* - 0.017 Family support - 0.008 Parents - 0.128 Male**

Chapter 5
Conclusion

Straight to the points we could obtain the answers of three objectives we set. Those were the followings.

1) To assess the first year to the fifth year pharmacy student's anxiety.

We found that the anxiety measured by Thai Spielberger Form of the first year to fifth year were 62.83 ± 17.55, 71.46 ± 15.04, 64.29 ± 18.29, 70.14 ± 17.65 and 68.57 ± 20.45 respectively. The internal consistency of the scale was 0.849. The 2nd year pharmacy students' anxiety was the biggest and significantly bigger than the 1st year pharmacy students' anxiety. The 2nd year pharmacy students' anxiety was significantly bigger than the 3rd year pharmacy students' anxiety.

Objective 2) To identify relationship between anxiety and academic achievement of the first year to the fifth year pharmacy students.

We found significantly negatively relationship between anxiety and academic achievement. Therefore, anxiety could precisely predict academic achievement. Anxiety was measured by 1st anxiety score and 2nd anxiety score had significant difference by paired t-test.

Objective 3) To establish academic achievement prediction model by Thai Spielberger's Form by relevant factors 1. Emotionality, 2. Worry and 3. Student demographic background.

Two prediction equations were finally verified. Those were

Unstandardized equation
GPAX = 2.735** + 0.030 Boy/girl-friend + 0.023 Friend support* + 0.009 Anxiety* + 0.000 Family support - 0.021 Parents - 0.135 Male**

Standardized equation
GPAX = 0.061 Boy/girl-friend + 0.109 Friend support* + 0.092 Anxiety* - 0.017 Family support - 0.008 Parents - 0.128 Male**

Total 41 percent variance of academic achievement could be explained by the variance of boy/girl-friend, friend support, family support, anxiety, parents and gender. (R square =0.410)

Conclusion: Gender had the biggest impact on academic achievement and 3 significant predictors of Academic Achievement model were gender, friend support and anxiety.

References

1. David L. Rosenhan, Martin Seligman, Elaine F. Walker. Abnormal Psychology. 4th ed. New York 2000.
2. Paul Prabhu MS. Anxiety among Primary Caregivers of Patients with Mental Disorders. Journal of Nursing and Health Science. 2016; 5(3): PP 28-31.
3. Association AP. Diagnostic and Statistical Manual of Mental Disorders (DSM-5®). 5 ed. Arlington, VA: American Psychiatric Publishing; 2013.
4. Ruedrich S. Psychiatric and Behavioural Disorders in Intellectual and Developmental Disabilities, 2nd edition, edited by Nick Bouras and Geraldine Holt. Journal of Mental Health Research in Intellectual Disabilities. 2008;1(1):48-51.
5. Barker P. Psychiatric and Mental Health Nursing: The craft of caring. UK: Hodder Arnold; 2009.l
6. Saraceno B. Pharmacological treatment of mental disorders in primary health care. France: World health organization; 2009. 68.
7. Testa A, Giannuzzi R, Daini S, Bernardini L, Petrongolo L, Gentiloni Silveri N. Psychiatric emergencies (part III): psychiatric symptoms resulting from organic diseases. European Review for Medical and Pharmacological Sciences. 2013; 17:86-99.
8. Testa A, Giannuzzi R, Daini S, Bernardini L, Petrongolo L, Gentiloni Silveri N. Psychiatric emergencies (part III): psychiatric disorders coexisting with organic diseases. European Review for Medical and Pharmacological Sciences. 2013; 17:65-85.
9. Testa A, Giannuzzi R, Daini S, Bernardini L, Petrongolo L, Gentiloni Silveri N. Psychiatric emergencies (part I): psychiatric disorders causing organic symptoms. European Review for Medical and Pharmacological Sciences. 2013; 17(Suppl 1):55-64.
10. Jersild AT. When Teachers Face Themselves. Teacher and Expert In Child Psychology. 1995:27-9.
11. Sarason, Pierce. The sense of acceptance and the role of relationships. Social Support: An Interactional View. 1990:97-128.
12. Prima Vitasari MNAW, Ahmad Othmanc, Tutut Herawand, Suriya Kumar Sinnaduraie. The Relationship between Study Anxiety and Academic Performance among Engineering Students. Procedia Social and Behavioral Sciences. 2010:490–7.

13. Jintaweeporn Paenkaew, Chayanisa Kethmatus. Effects of Modeling on Anxiety Reduction of the Nursing Students Prior to Principles and Techniques in Nursing Practicum. 2553
14. Nawkij P, Sungkeao A, Thammarak P. Exercise and Factor Influence Mental Health of Undergraduated Students Burapha University; 2014.
15. Sawittree Thayansin. National Institute for Child and Family Development, Mahidol University; 2009
16. Treepatee C. The form and extent of the relationship between friends and boyfriend Saraburiwitthayakhom school2013 [cited 2017 Mar 23]. [Available from: https://sites.google.com/site/30297sau/home/reuxng-thi-3-rup-baeb-laea-khxbkhet-khxng-khwam-samphanth-baeb-pheuxn-snith-laea-baeb-khurak.
17. Sukomol N. Values and Importance of Student Activities. Basic Skills for Student Activities. 2000.
18. The Royal Institute. Dictionary of the Royal Institute 2011. 2 ed. bangkok: The Royal Institute; 2013.
19. Tippawan K. General psychology. Vol. 2. Phitsanulok. Department of Social Sciences, Faculty of Humanities and Social Sciences, Naresuan University, 2000.
20. Ampaipan P. Psychiatric and Mental Health, Nursing Guidelines for pathology. Bangkok. V.J. printing. 2000
21. Donald E. Powers. Test anxiety and the GRE general test GRE Board Professional Report No 83-17P. 1986:16-39.
22. Spielberger C.D. State-Trait Anxiety Inventory. Bibliography. 1989.
23. Tanawatsuggasere A. Anxiety in the second year medical student Chulalongkorn University; 2008.
24. Vidya.Bhagat. Extroversion and Academic Performance of Medical Students. International Journal of Humanities and Social Science Invention. 2013; 2(3):55-8.
25. Mahmood N. The Relationship between Test Anxiety and Academic Achievement. Bulletin of Education and Research. 2010; 32:63-74.
26. Mohammad Nadeem AA, Saira Maqbool, Syeda Uzma Zaidi. Impact of Anxiety on the Academic Achievement of Students Having Different Mental Abilities at University level in Bahawalpur (Southern Punjab) Pakistan. International Online Journal of Educational Sciences. 2012; 4(3):519-28.
27. Dawood E, Ghadeer HA, Mitsu R, Almutary N, Alenezi B. Relationship between Test Anxiety and Academic Achievement among Undergraduate Nursing Students. Journal of Education and Practice. 2016;7(2):57-65.

28. Barrows J, Dunn S, Lloyd CA. Anxiety, Self-Efficacy, and College Exam Grades. Universal Journal of Educational Research. 2013;1(3):204-8.
29. Mohammad H. Academic anxiety of male and female secondary school students in relation to their academic achievement. An International Journal of Education and Applied Social Sciences. 2016; 7(1):31-7.
30. Dorcas Ibukun Adeoye-Agboola HE. The Relationship between Anxiety and Academic Performance of Postgraduate International Students in a British University: A Cross-Sectional Quantitative Design Science Journal of Public Health. 2015; 3:331-338.
31. McKnight J, McKnight MA. Gender and Anxiety: A Comparison of Student Anxiety Levels in Face-to-Face and Video Conferencing Courses. Scientific Research. 2011; 3(1):92-5.
32. Rezazadeh M, Tavakoli M. Investigating the Relationship among Test Anxiety, Gender, Academic Achievement and Years of Study: A Case of Iranian EFL University Students. English Language Teaching. 2009; 2(4):68-74.
33. Pakasit, T. (2013). Factors Affecting the Learning Anxiety of the Students in Tourism and Hotel Business Program: A Case Study of the Students at Suan Dusit Rajabhat University. Naresuan University. 1: 434-442.
34. Nitsaiyasuk B. (2006) Factors Influencing Bangkok University Students' Anxiety in Learning Fundamental Mathematics. 1: 35-46.
35. Mingprasert, A. (2013). An Affecting Factors on the anxiety students in Faculty of Pharmacy at Rangsit University. Chandrakasem Rajabhat. 19: 67-74.
36. Yousefi F, Sanandaj-Iran, Redzuan Mr, Bte M, Juhari RB, Talib MA. The Effects of Family Income on Test-Anxiety and Academic Achievement among Iranian High School Students. Asian Social Science. 2010; 6(6):89-93.
37. Paskov M, Gërxhani K, Werfhorst HGvd. Income Inequality and Status Anxiety. GINI Discussion Paper 90. 2013:1-46.
38. Pirat Wongsritrakoon. Educational Factors Affecting Stress and Anxiety of Students in Thonburi University. Report on academic conferences and presentation of research results in 2004. 2554:124-35.
39. Bussaba Boonnawa. Students with problems of stress. Journal of Vocational and Technical Education. 2554; 1(1):64-70.
40. Whangkhoklang S. Study of relationship between stress and coping stress of public health undergraduate students in faculty of Public health and Health technology at Nakhonratchasima college; 2554.

41. Khamwong W, Plangpongpan S, Yamboonruang T. The relationships between levels of stress, causes of stress and stress management in nursing students of nursing colleges under the jurisdiction of Praboromarajchanok Institute for Health Workforce Development. Journal of health science research. 2016; 10(1):78-87.
42. Klaharn, R. (2014). The Factors Affecting the Practicum Achievement of the Third – Year Nursing Students of Srinakharinwirot University. Journal of the Royal Thai Army Nurses. 15(3): 412-420.
43. Puttarak P. The Relationship among Family Relationship and Learning Expectation, the Effects of Anxiety on Learning and Coping Strategy of Students in Songkhla Rajabhat University. 2557:53.
44. Piyayodilokchai, H. (2014). Stress and stress coping of business information technology students of Rajamangala University of Technology Rattanakosin, Bophit Phimuk Chakkrawat. 1: 32-44.
45. Pungutha V, Wongsrijun P, Singsome S, Wintasombut W, Bumrungta P, Tairuakhum S. Learning anxiety and adjustment of Mahasarakham University students. Journal of Education, Mahasarakham University (Special Issue).2014; 605-19.
46. Bernard Baffour TK, Paolo Valente. The Modern Census: Evolution, Examples and Evaluation. International Statistical Review. 2013; 81(3):407-25.
47. Turner C, Mulvenon W, Thomas P, Balkin S. Computing Indices of Item Congruence for Test Development Validity Assessments. SUGI 27. 2003:255-27.
48. Trochim WMK. Research Methods Knowledge Base. 2 ed. 2006.
49. National Council on Measurement in Education. Glossary of Important Assessment and Measurement Terms Philadelphia, PA: NCME professionally managed by Fernley & Fernley, Inc. [cited 2017 Mar 23]. [Available from: http://www.ncme.org/ncme/NCME/Resource_Center/Glossary/NCME/Resource_Center/Glossary1.aspx?hkey=4bb87415-44dc-4088-9ed9-e8515326a061#anchorR.]
50. Nunnally. Psychometric theory. 2nd, editor. New York. 1978.

Appendix

Questionnaire

Part 1: Information

1. Year.....

2. Gender .....Male .....Female

3. Age.....

4. The relationship of your parents

..... Lived together ..... Separated but not divorced

..... Divorced but living together ..... Divorced but did not live together

..... Widower ..... Both dead

5. Resident

..... Living with parents ..... Living with relatives

..... Stay alone at the dormitory ..... Living with friend at the dormitory

..... Other, please specify.....

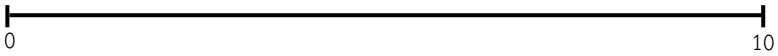
6. Your monthly expenses .....Baht

7. The average monthly income of the family.....Baht

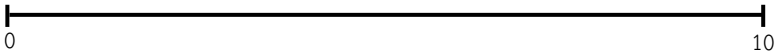
Part 2: Study and teaching environment in Faculty of Pharmacy

8**.** Relationship with Family **(**family support**)**

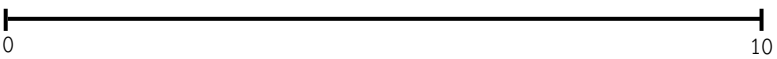
8.1 When you have problems. Your family always helps you.



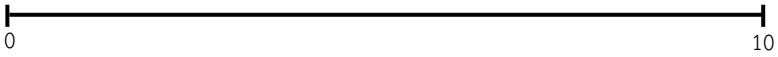
8.2 When you have problems. You always consult your family



8.3 Your family can help you decide the issue.



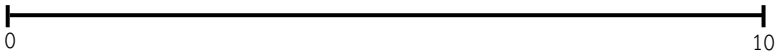
8.4 You can discuss problems with your family.



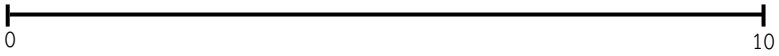
9**.** Relationship with friend **(**friend support**)**

9.1 How many close friend do you have? ……..

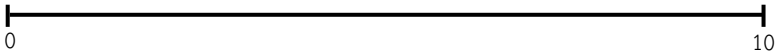
9.2 When you have problems. Your friend try to help you



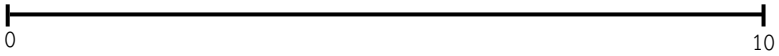
9.3 You trust your friend.



9.4 You can discuss problems with friend.



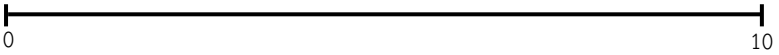
9.5 You always have friend beside you.



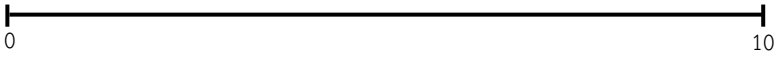
10**.** Relationship with boy**/**girl**-**friend **(**boy**/**girl**-**friend support**)**

10.1 Do you have a boy/girl-friend ……Yes ……No (If you choose yes, please answer 10.2-10.5.)

10.2 You have a boy/girl-friend beside you. When you need help.

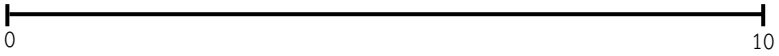


10.3 You can consult with your boy/girl-friend.



10.4 Your boy/girl-friend always cares for you.

10.5 You always disagreement or argument with your boy/girl-friend.



11**.** Activities

11.1 What did you do in the university? (You can select more than one item)

.....Never ..... Burapha University birthday .....First date

..... Orientation day .....Workshop ..... Buddhism ceremony

..... Cheers ..... Freshmen activity ..... Freshmen game

..... Freshmen night ..... Sports .....Other ……

11.2 Hobbies (You can select more than one item)

.....Never ..... Sports ..... Music ..... Singing

..... Internet surfing ..... Art work .....Shopping .....Movies

.....Travel ..... Reading .....Cooking .....Other……

12. Student's reason to entrance to the faculty of pharmacy

12.1 The reason is that the impetus for you to study at the Faculty of Pharmacy. (You can select more than one item)

..... You want to learn. ..... Parents want you to study.

..... Friend persuade you. ..... Teachers at the school recommended.

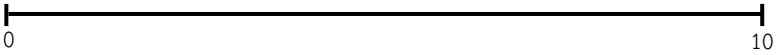
..... It is an honorable and glorious profession.

..... It is a profession that is stable in the future.

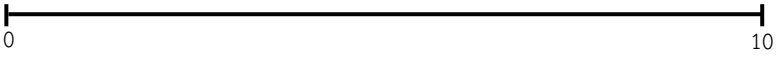
..... You will be able to help others.

..... Other……

12.2 How much did you enjoy living in the Faculty of Pharmacy?



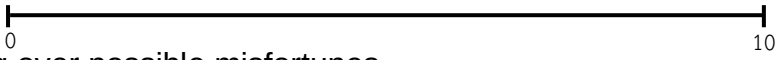
12.3 If you could go back in time. Do you think you will study the Faculty of Pharmacy?



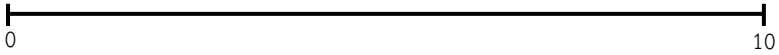
Your feelings in the past month (August)

1. You feel fatigue.
2. You feel nervous.
3. You feel proud of yourself.
4. You feel calm.
5. You have self-confidence.
6. You are relaxed.
7. You feel happy.
8. You are tense.

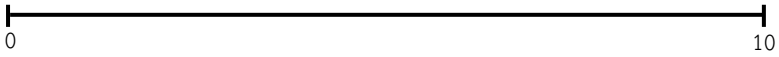
9. You feel pleasant.



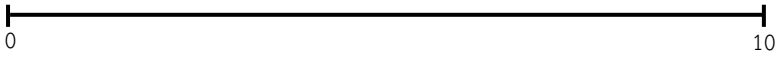
10. You are presently worrying over possible misfortunes.



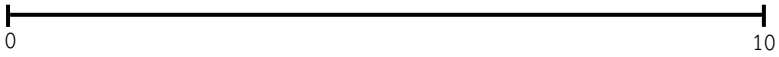
11. You feel excited.



12. You feel comfortable.



13. You have hesitate.



14. You feel confused.

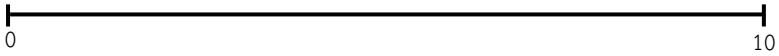


Table 1. IOC score obtained from the assessment of 4 experts.

Question	Sum	IOC
1. Year?	4	1.00
2. Gender?	4	1.00
3. Age?	3	0.75
4. The relationship of your parents?	4	1.00
5. Resident?	2	0.50
6. Your monthly expenses?	3	0.75
7. The average monthly income of the family?	1	0.25
8.1 When you have problems. Your family always helps you	4	1.00
8.2 When you have problems. You always consult your family	4	1.00
8.3 Your family can help you decide the issue.	4	1.00
8.4 You can discuss problems with your family.	2	0.50
9.1 How many close friend do you have?	3	0.75
9.2 When you have problems. Your friend try to help you	3	0.75

9.3 You trust your friend.	2	0.50
9.4 You can discuss problems with friend.	4	1.00
9.5 You always have friend beside you.	2	0.50
10.1 Do you have a boy/girl-friend?	4	1.00
10.2 You have a boy/girl-friend beside you. When you need help.	2	0.50
10.3 You can consult with your boy/girl-friend.	3	0.75
10.4 Your boy/girl-friend always cares for you.	1	0.25
10.5 You always disagreement or argument with your boy/girl-friend.	3	0.75
11.1 What did you do in the university?	3	0.75
11.2 Hobbies	4	1.00
12.1 The reason is that the impetus for you to study at the Faculty of Pharmacy.	4	1.00
12.2 How much did you enjoy living in the Faculty of Pharmacy?	3	0.75
12.3 If you could go back in time. Do you think you will study the Faculty of Pharmacy?	4	1.00
Anxiety		
1. You feel fatigue.	3	0.75
2. You feel nervous.	3	0.75
3. You feel proud of yourself.	1	0.25
4. You feel calm.	3	0.75
5. You have self-confidence.	2	0.50
6. You are relaxed.	3	0.75
7. You feel happy.	3	0.75

8. You are tense.	3	0.75
9. You feel pleasant.	2	0.50
10. You are presently worrying over possible misfortunes.	3	0.75
11. You feel excited.	3	0.75
12. You feel comfortable.	2	0.50
13. You have hesitate.	2	0.50
14. You feel confused.	3	0.75
IOC score of our questionnaire	**116**	**0.73**

Table 2. Student's reason to entrance to the faculty of pharmacy.

Student's reason to entrance to the faculty of pharmacy	Frequency	Percent
It is a profession that is stable in the future.	426	25.39%
Parents want you to study.	328	19.55%
You want to learn.	312	18.59%
You will be able to help others.	285	16.98%
It is an honorable and glorious profession.	263	15.67%
Teachers at the school recommended.	19	1.13%
Friend persuade you.	18	1.07%
Other	27	1.61%

Figure 1. The pie chart displayed student's reason to entrance to the faculty of pharmacy.

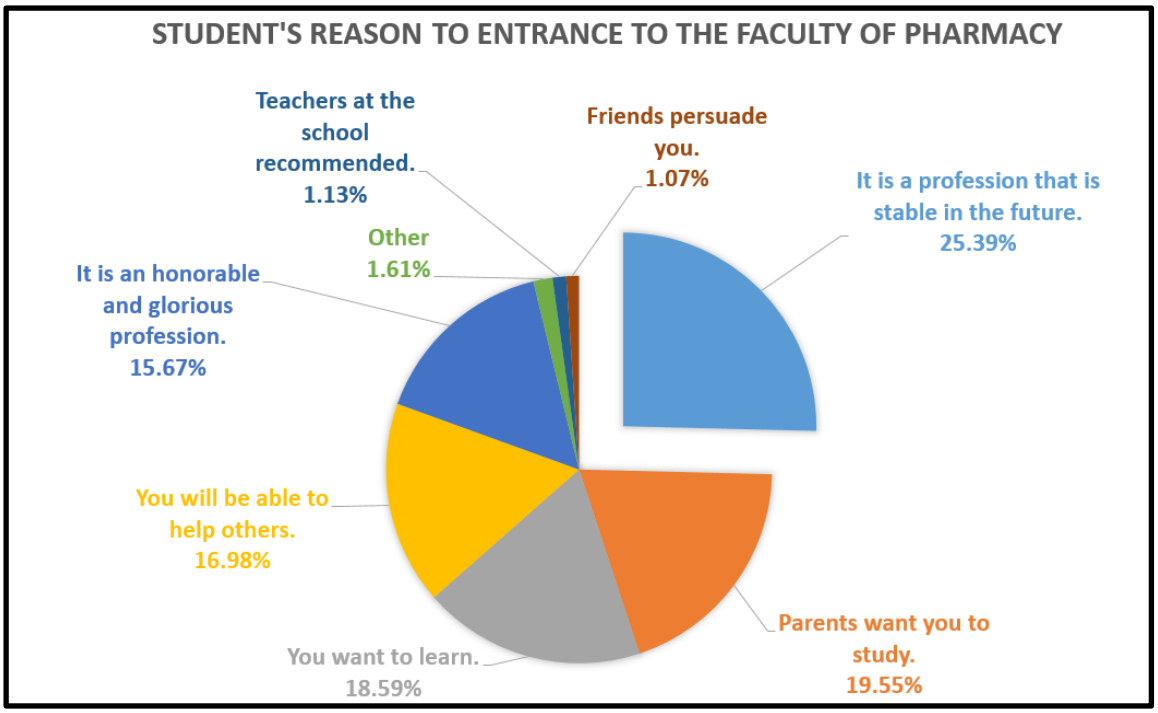


Table 3. The mean and standard deviation of the relationship's scores between family support, friend support, boy/girl-friend, and overall living conditions in the Faculty of Pharmacy.

Variables	Mean	SD
When you have problems. Your family always helps you (Q8.1)	8.85	1.70
When you have problems. You always consult your family. (Q8.2)	7.34	2.61
Your family can help you decide the issue. (Q8.3)	8.39	1.99
You can discuss problems with your family. (Q8.4)	8.12	2.29
Frequency of friend. (Q9.1)	6.80	4.91
When you have problems. Your friend try to help you. (Q9.2)	8.02	1.77

You trust your friend. (Q9.3)	8.17	1.68
You can discuss problems with friend. (Q9.4)	8.04	1.74
You always have friend beside you. (Q9.5)	7.99	2.00
You have a boy/girlfriend beside you. When you need help. (Q10.2)	8.58	1.69
You can consult with your boy/girlfriend. (Q10.3)	8.68	1.55
Your boy/girlfriend always cares for you. (Q10.4)	8.60	1.63
You always disagreement or argument with your boy/girlfriend. (Q10.5)	6.10	3.19
How much did you enjoy living in the Faculty of Pharmacy? (Q12.2)	6.71	2.15
If you could go back in time. Do you think you will study the Faculty of Pharmacy (Q12.3)	6.64	4.76

Table 4. The mean and standard deviation of the feeling.

	1st anxiety score		2nd anxiety score		Paired t test
Variables	Mean	SD	Mean	SD	p-value
You feel fatigue (Q13.1)	7.06	2.39	7.24	2.33	0.114
You feel nervous (Q13.2)	5.18	2.64	5.60	2.70	0.000**
You feel proud of yourself (Q13.3)	3.14	2.10	3.29	2.00	0.059
You feel calm (Q13.4)	4.58	2.26	4.47	2.16	0.273
You have self-confidence (Q13.5)	3.72	2.13	3.83	2.02	0.125
You are relaxed (Q13.6)	4.41	2.15	4.66	2.26	0.007**
You feel happy (Q13.7)	3.42	2.05	3.79	3.64	0.017**
You are tense (Q13.8)	5.80	2.52	6.60	2.43	0.000**

You feel pleasant (Q13.9)	3.93	2.05	4.30	2.08	0.000**
You are presently worrying over possible misfortunes (Q13.10)	5.06	2.76	5.53	4.24	0.005**
You feel excited (Q13.11)	5.37	2.57	5.31	2.49	0.453
You feel comfortable (Q13.12)	3.80	1.95	4.08	3.82	0.084
You have hesitate (Q13.13)	4.97	2.43	5.28	2.40	0.004**
You feel confused (Q13.14)	4.66	2.66	5.16	2.61	0.000**

**p<0.05

Table 5. ANOVA between years and anxiety.

mean of anxiety score					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	7000.826	4	1750.207	5.607	0.000
Within Groups	174178.421	558	312.148		
Total	181179.248	562			

Table 6. Test of Homogeneity of Variances of mean of anxiety score.

Levene Statistic	df1	df2	Sig.
2.421	4	558	0.047

Table 7. Multiple Comparisons.

Dependent Variable: mean of anxiety score.							
	(I) year	(J) year	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower bound	Upper Bound
Tukey HSD	1	2	-8.628	2.125	0.001	-14.444	-2.811
		3	-1.459	2.258	0.967	-7.638	4.720
		4	-7.309	2.379	0.019	-13.820	-0.798
		5	-5.745	2.363	0.108	-12.212	0.721
	2	1	8.628	2.125	0.001	2.811	14.444
		3	7.169	2.304	0.017	0.863	13.475
		4	1.319	2.423	0.983	-5.313	7.951
		5	2.882	2.407	0.753	-3.706	9.470
	3	1	1.459	2.258	0.967	-4.720	7.638
		2	-7.169	2.304	0.017	-13.475	-0.863
		4	-5.850	2.540	0.145	-12.801	1.102
		5	-4.286	2.525	0.436	-11.196	2.624
	4	1	7.309	2.379	0.019	0.798	13.820

		2	-1.319	2.423	0.983	-7.951	5.313
		3	5.850	2.540	0.145	-1.102	12.801
		5	1.563	2.634	0.976	-5.645	8.772
	5	1	5.745	2.363	0.108	-0.721	12.212
		2	-2.882	2.407	0.753	-9.470	3.706
		3	4.286	2.525	0.436	-2.624	11.196
		4	-1.563	2.634	0.976	-8.772	5.645
Dunnett T3	1	2	-8.628	1.959	0.000	-14.155	-3.101
		3	-1.459	2.298	0.999	-7.954	5.036
		4	-7.309	2.372	0.023	-14.025	-0.592
		5	-5.745	2.593	0.245	-13.095	1.604
	2	1	8.628	1.959	0.000	3.101	14.155
		3	7.169	2.206	0.013	0.927	13.410
		4	1.319	2.283	1.000	-5.154	7.792
		5	2.882	2.512	0.943	-4.247	10.012
	3	1	1.459	2.298	0.999	-5.036	7.954
		2	-7.169	2.206	0.013	-13.410	-0.927

		4	-5.850	2.580	0.218	-13.154	1.454
		5	-4.286	2.784	0.732	-12.172	3.600
	4	1	7.309	2.372	0.023	0.592	14.025
		2	-1.319	2.283	1.000	-7.792	5.154
		3	5.850	2.580	0.218	-1.454	13.154
		5	1.563	2.846	1.000	-6.500	9.627
	5	1	5.745	2.593	0.245	-1.604	13.095
		2	-2.882	2.512	0.943	-10.012	4.247
		3	4.286	2.784	0.732	-3.600	12.172
		4	-1.563	2.8456	1.000	-9.627	6.500