

Resilience Quotient among Dental Students at Clinical Level, Faculty of Dentistry, Khon Kaen University, Thailand

Wilawan Weraarchakul DDS*, Wiboon Weraarchakul MD**,
Natthapol Thinsathid DDS*, Chakrit Chapawang DDS*

* Department of Community Dentistry, Faculty of Dentistry, Khon Kaen University, Khon Kaen, Thailand

** Department of Pediatrics, Faculty of Medicine, Khon Kaen University, Khon Kaen, Thailand

Background and Objective: Resilience Quotient (RQ) refers to an individual's capacity to spring back in the face of adversity. The objectives of this study were to explore resilience quotient among fourth to sixth year dental students and explore factors related with resilience quotient among fourth to sixth year dental students, Faculty of Dentistry, Khon Kaen University.

Material and Method: This cross-sectional study was conducted in 2013. Two hundred thirty seven fourth to sixth year dental students were well informed about the research and volunteered to participate in this study. Data were collected from questionnaires and were analyzed by descriptive statistics as percentage, mean, and standard deviation. Multiple linear regression was used to explore factors related with resilience quotient among fourth to sixth year dental students. The level of statistical significance was set at p -value <0.05 .

Results: The average age among the fourth to sixth year dental students was 22.9 ± 1.0 years old (range, 21-27 years). The majority of the resilience quotient level among subjects were within norms (72.6%), followed by the lower than normal level (19.4%) and higher than normal (8%), respectively. A factor related positively with resilience quotient scores was marital status (married family but their parents were living separately) with statistically significant at p -value <0.05 . Factors related negatively with resilience quotient scores was stress and authoritarian parental style with statistically significant at p -value <0.05 .

Conclusion: The majority of the resilience quotient level among subjects was within norms. Factors related with resilience quotient scores among fourth to sixth year dental students were stress, authoritarian parental style, and marital status.

Keywords: Resilience quotient, Dental students at clinical level

J Med Assoc Thai 2016; 99 (Suppl. 5): S148-S154

Full text. e-Journal: <http://www.jmatonline.com>

Dentistry is one of the most stressful health professions⁽¹⁾. Stress in dental practice include time and scheduling pressures, managing nervous patients, financial and business issues, patients' unfavorable perception of dentists, staff and equipment problems, and the extremely fine and exacting nature of the work⁽²⁾. Stress-related illnesses, together with musculoskeletal disorders, are the main factors that influence dentists' early retirement⁽³⁾. A literature review on potential stressors and coping techniques in dentistry suggests that this stress begins in dental school⁽⁴⁾. Typical sources of stress for dental students include frequent examinations, examination phobia, reduced leisure time, demanding curricula, requirements to perform specified types and numbers of procedures, anxious patients,

time limits, complicated treatments, possible conflicts with patients, fellow students, staff and faculty, lack of self-confidence, and the differences between the students expectations and reality⁽⁵⁾. Results of previous investigations have shown that psychological stress was highest in final year students and lowest in first year students^(6,7). It has been reported that stress negatively affects the academic performance and health of dental students. Long-term exposure to stress has been associated with other psychological problems such as burnout, which can influence mental health⁽⁸⁻¹⁰⁾.

There has been a recent report that was interested in resilience strategies in medical education for coping stress⁽¹¹⁾. Resilience quotient (RQ) is defined as a dynamic process where in individuals that display bounce back or recover from stress and can adapt to stressful circumstances⁽¹²⁾. Resilience quotient also includes other factors such as the capacity to make realistic plans, having self-confidence and a positive

Correspondence to:

Weraarchakul W, Department of Community Dentistry, Faculty of Dentistry, Khon Kaen University, Khon Kaen 40002, Thailand.
Phone: +66-89-8419615
E-mail: wilwee@kku.ac.th

self-image, developing communication skills, and the capacity to manage strong feelings and impulses⁽¹³⁻¹⁴⁾. These are important to judge individual's variation in response and to know how much is one prone to the disorders that also affect the quality of life.

The study by Zwack and Schweitzer in an issue of academic medicine illustrates that promoting resilience is possible for medical students and practicing clinicians alike⁽¹⁵⁾. These alarming data on dental student distress have fostered awareness for the necessity of prevention. Resilience quotient promoting programs should also encourage them to adjust and recover after confronting problems and help them go through the problems and continue living happily, having positive outlook to the problems and mental immunity when facing new problems and barriers. Developing dental student resilience is critical not only for students themselves but also for the patients they serve⁽¹⁶⁾.

The dental education system in Faculty of Dentistry, Khon Kaen University, Thailand is a hierarchical system, in which there is an initial preparatory General Science year, followed by five years of dental school education in which the first and second year include both basic sciences, medical, and dental courses. The third year introduces the students to the clinical disciplines, while the fourth and fifth year is mainly clinical oriented courses. There is no information on dental student resilience quotient. The objectives of this study were to explore resilience quotient among fourth to sixth year dental students and explore factors related with resilience quotient among in the fourth to sixth year dental students, Faculty of Dentistry, Khon Kaen University.

Material and Method

Study design and subjects

This cross-sectional study was conducted between January and August 2013, at Faculty of Dentistry, Khon Kaen University. Two hundred thirty seven fourth to sixth year dental students were well informed about the research and volunteered to participate in this study.

Questionnaires

A questionnaire was developed to collect information on socio-demographic characteristics. The RQ questionnaire (20 items) produced by Mental Health Department, Ministry of Public Health was used as well. It contained query elements regarding resilience quotient in three areas, security and emotional (bear),

motivation (resolve), and coping (fight)⁽¹⁶⁾. The Suanprung Stress Test-20⁽¹⁷⁾ was also used.

Measurement of resilience quotient

Resilience quotient was assessed with the 20-items produced by Mental Health Department, Ministry of Public Health⁽¹⁶⁾. It contained query elements regarding resilience quotient in three areas, security and emotional (bear) 10-items, motivation (resolve) 5-items, and coping (fight) 5-items. Each item is scored on a 4-point Likert scale, ranging from 1 (disagree) to 4 (strongly agree). The overall score ranges from 0 to 80. The score was categorized as a) lower than normal level (< 55 scores), b) normal level (55-69 scores), and c) higher than normal level (> 69 scores). In current study, the Cronbach's alpha value for this scale was 0.83.

Measurement of stress

The 20-items Suanprung Stress, developed by Mahatnirunkul et al⁽¹⁷⁾, was used to measure the perception of stress among the students. Each item is scored on a 5-point Likert scale, ranging from 1 (never true) to 5 (always true). The overall score ranges from 0 to 100. In current study, the Cronbach's alpha value for this scale was 0.94. Interpretation of scores: 0 to 24 scores = low stress, 25 to 42 scores = moderate stress, 43 to 62 scores = high stress, >63 scores = most perceived stress.

Ethics approval

Participation in the study was voluntary and involved fourth to sixth year dental students who signed informed written consent before their participation. The current study was approved by the Khon Kaen University Ethics Committee for Human Research, based on the stipulations of the Declaration of Helsinki and the ICH Good Clinical Practice Guidelines (HE 561321).

Data analysis

A descriptive analysis was performed. Results are hereafter presented as percentages or means and standard deviation (SD). Multiple linear regression was used to explore factors related with resilience quotient among fourth to sixth year dental students. The level of statistical significance was set at p -value <0.05.

Results

Characteristics of subjects

Among the 237 students, 82 (34.6%) were males, while 155 (65.4%) were females. The mean age of

these subjects was 22.9 ± 1.0 years old (range, 21-27 years). The majority of subjects had monthly income of 3,000 to 5,000 baht (34.6%), marital status was married (87.8%), authoritative parents (83.6%), and had underlying disease (16.9%) (Table 1).

Resilience quotient scores

Resilience quotient scores of subjects was 60.3 ± 6.8 (range, 6-84). The majority of the resilience quotient level among subjects were within norms (72.6%), followed by the lower than normal level (19.4%), and higher than normal (8%), respectively.

Stress scores

Stress scores of the subjects was 45.4 ± 15.45 (range, 43-79). It was high stress level.

Factors related with resilience quotient

A factor related positively with resilience quotient scores was marital status (married family but their parents were living separately) with statistically significant at p -value < 0.05 . Factors related negatively with resilience quotient scores among fourth to sixth year dental students were authoritarian parental style and stress with statistical significance at p -value < 0.05 (Table 2).

Discussion

The present study showed that the majority of the resilience quotient level among subjects were within norms. Resilient individuals could drive them to cope and achieve healthy lifestyles and were better equipped to meet challenges. They recovered easier from illness, trauma, burnout, and adverse events. In addition, they had high levels of self-esteem, self-efficacy, and problem solving skills^(18,19).

Stress score of these subjects was high. The stress scores of the fourth year dental students was the highest followed by the sixth year dental students and the fifth year dental students, respectively. Total course of dentistry in Faculty of Dentistry, Khon Kaen University, is of six years duration. The first year is general science, the second and third year are preclinical, and the fourth, fifth and sixth year are clinical. Each year was further divided into two semesters of six months each. The students have to pass through many tests. The academic overload is due to short semester coupled with too many assignments, tests, and preparation of final semester examination. In addition to this, they have to fulfill clinical training. The clinical part of their training require

that students found their patients, be responsible for their care, and perform irreversible dental treatments on those patients, in addition to their clinical requirements and examination. The students cited too much work to be accomplished within short time that left them with no time to enjoy their social life^(5,20). It has been shown that the clinical years were more stressful than the preclinical years; however, clinical instructors create more stress than the treatment of patients. Al-Samadani and Al-Dharab reported that the fourth-year students were more tense due to fear of exposure to the initial clinics, applying their clinical skills to treating patients at an early stage, and having to simultaneously deal with both academic and clinical requirements⁽²¹⁾.

Resilience is a successful outcome of healthy adaptations during stressful life events⁽²²⁾. Resilience is often viewed in the psychological context inasmuch as it refers to cognitive capacity to avoid psychopathology despite difficulties⁽²³⁾. The present study showed that factors related negatively with resilience quotient scores among fourth to sixth year dental students were parental style (authoritarian) and stress. It was similar to the study in nursing students in Suan Dusit Rajabhat University, Thailand, which showed that the significantly negative factor related to resilience quotient was authoritarian parenting⁽²⁴⁾. Milevsky et al reported that adolescents from most Caucasian authoritarian families had been found to present poor social skills, low levels of self-esteem, and high levels of depression⁽²⁵⁾. A study in Turkey showed that self-esteem was a significant predictor of resilience in adolescents. Adolescents who had low level of self-esteem reported less resilience⁽²⁶⁾.

A study by Wilks examined the relationship between academic stress and perceived resilience among social work students. Results revealed that there was a negative relation of academic stress with social support and resilience⁽²⁷⁾. It was similar to this present study. However, there is huge variation in an individual's responses to the academic stresses and adversities. Mechanisms of coping, resilience quotient are important to judge individual's response in these stresses. Steinhardt and Dolbier also showed that the resilience program might be useful in managing as well as in preventing the stress among college students. Research had indicated that people with high resilience employed positive emotions to reduce the effect of stress and showed different physiological reactions while dealing with stress. When they came across stressors, they bounce back very fast as well as becoming stronger

Table 1. Resilience quotient scores and stress scores among 4th-6th year dental students

| Variables | n = 237 frequency (%) | Resilience quotient scores (total = 80) (mean ± SD) | | | | Stress scores total = 100 (mean SD) |
|--|-----------------------------|---|----------|----------|----------|--|
| | | Bear | Resolve | Fight | Total | |
| Sex | | | | | | |
| Male | 82 (34.6) | 28.6±3.9 | 16.3±2.6 | 14.8±2.3 | 59.7±7.4 | 44.3±15.0 |
| Female | 155 (65.4) | 29.3±3.5 | 16.6±2.1 | 14.6±2.0 | 60.5±6.5 | 46.0±15.7 |
| Class | | | | | | |
| Fourth year | 82 (34.6) | 28.6±3.9 | 16.2±2.3 | 14.3±2.3 | 59.2±7.5 | 46.7±16.0 |
| Fifth year | 77 (32.5) | 29.5±3.8 | 16.7±2.3 | 14.9±2.1 | 61.3±6.6 | 44.2±14.0 |
| Sixth year | 78 (32.9) | 29.0±3.2 | 16.5±2.3 | 14.9±1.9 | 60.4±6.2 | 45.3±16.4 |
| Monthly income (bath/month) | | | | | | |
| 3,000-5,000 | 82 (34.6) | 29.0±3.9 | 16.5±2.5 | 14.2±2.3 | 59.7±7.8 | 46.8±14.1 |
| 5,001-10,000 | 77 (32.5) | 29.3±3.7 | 16.7±2.2 | 14.9±2.0 | 61.0±6.5 | 45.4±15.7 |
| >10,000 | 78 (32.9) | 28.5±3.5 | 16.0±2.4 | 14.4±2.3 | 58.9±6.8 | 44.9±15.5 |
| Marital status | | | | | | |
| Married | 208 (87.8) | 29.06±3.6 | 16.5±2.3 | 14.6±2.2 | 60.2±6.8 | 45.4±15.5 |
| Separated | 4 (1.7) | 34.3±3.3 | 18.7±1.3 | 16.0±1.6 | 69.0±4.3 | 42.5±8.3 |
| Divorced | 15 (6.3) | 28.3±3.8 | 16.5±2.5 | 15.5±1.7 | 60.2±6.5 | 41.2±8.3 |
| Widowed | 10 (4.2) | 28.3±3.6 | 15.6±2.6 | 14.9±1.9 | 58.8±6.0 | 53.7±20.6 |
| Parenting Styles | | | | | | |
| Authoritative Parenting | 198 (83.6) | 29.3±3.7 | 16.7±6.8 | 14.8±2.1 | 60.9±6.8 | 44.6±15.5 |
| Authoritarian Parenting | 20 (8.4) | 16.7±2.2 | 14.4±4.3 | 13.9±2.1 | 55.0±4.3 | 53.5±15.8 |
| Permissive Parenting | 18 (7.6) | 28.4±3.7 | 15.9±7.2 | 14.7±1.9 | 59.0±7.2 | 46.7±13.1 |
| Uninvolved Parenting | 1 (0.4) | 34.0±0.0 | 16.5±0.0 | 16.0±0.0 | 66.0±0.0 | 35.0±0.0 |
| Underlying disease | | | | | | |
| Yes: migraine, anemia, peptic ulcer and asthma | 40 (16.9) | 29.0±3.2 | 16.5±2.7 | 14.4±0.0 | 59.9±0.0 | 46.9±7.2 |
| No | 197 (83.1) | 29.0±3.7 | 16.5±2.2 | 14.8±2.1 | 60.3±0.0 | 45.4±15.5 |

Table 2. Factors related with resilience quotient among in 4th-6th year dental students analyzed by multiple linear regression

| Variables | Unstandardized coefficients | | Standardized coefficients | t | p-value |
|---|-----------------------------|----------------|---------------------------|-------|---------|
| | B | Standard Error | Beta | | |
| Stress scores | -1.55 | 0.51 | -0.19 | -3.08 | 0.003* |
| Parenting styles: authoritarian parenting | -4.86 | 1.53 | -0.19 | -3.17 | 0.002* |
| Marital status: separated | 8.28 | 3.26 | 0.16 | 2.54 | 0.012* |
| Constant | 64.59 | 1.39 | | 46.59 | <0.001* |

* Statistical significant, $p < 0.05$, $R^2 = 0.12$

Dependent variable = resilience quotient scores; Independent variable = sex, class, monthly income, underlying disease, GPA, marital status, stress scores and parenting styles

during the course⁽²⁸⁾.

This result showed a factor related positively with resilience quotient scores was marital status (married family but living separately from their parents) with statistically significant at p -value < 0.05 . It also concluded that average resilience scores was high in students who grow up with separated family. A legal separation refers to people who were not living with their spouse, but remain married. During the time, they are living apart. Al-Samadani and Al-Dharab revealed that generally, father and mother are the two main bases of a family. Changes in family structure and the absence of a parent in a family environment disrupted its balance and put the children in unfavorable and undesired conditions⁽²¹⁾. There were only four dental students who had a separated family and they had high resilience quotient scores in this study. This result was different from the previous study⁽²⁹⁾, perhaps because these students had met various crisis situations. They had learned to have real expectations and goals. They had self-confidence and a positive self-image. They developed their communication skills and flexibility⁽¹³⁾.

Sex, class, monthly income, underlying disease, and grade point average did not relate with resilience quotient scores in this present study. In a study outside of the dental school context, Southwick et al in 2005 had identified additional resilience factor such as religious faith, social support, and optimism that helped reduce the effects of stressful events on well-being. The resilience being more in students with good relations with colleagues proves that the social support is a positive factor in the development of resilience⁽³⁰⁾.

Limitation of this study was the inability to

assess causal factors, due to the cross sectional design. In addition, the study was limited to 237 dental students of a faculty of dentistry in Thailand. Thus, the results may also be affected by the academic environment of that particular dental school. Future multi-center longitudinal studies are needed to explore these relationships.

Conclusion

The majority of the resilience quotient level among subjects was within norms. Factors related with resilience quotient scores among fourth to sixth year dental students were stress, authoritarian parental style, and marital status (married family but their parents were living separately).

What is already known on this topic?

This present study shows the first study of resilient quotient in clinical dental students. Assessing resilient quotient is important to determine the students at risk and to develop resilient quotient intervention programs for them.

Acknowledgements

The authors thank the fourth to sixth year dental students for participating in the study, the Center of Cleft lip-Cleft palate and Craniofacial Deformities, Khon Kaen University, in association with Tawanchai Project for supporting this publication, and Mr. Bryan Roderick Hamman for assistance with the English language presentation.

Potential conflicts of interest

None.

References

- Boran A, Shawaheen M, Khader Y, Amarin Z, Hill Rice V. Work-related stress among health professionals in northern Jordan. *Occup Med (Lond)* 2012; 62: 145-7.
- Kay EJ, Scarrott DM. A survey of dental professionals' health and well-being. *Br Dent J* 1997; 183: 340-5.
- Burke FJ, Main JR, Freeman R. The practice of dentistry: an assessment of reasons for premature retirement. *Br Dent J* 1997; 182: 250-4.
- Alaujan AH, Alzahem AM. Stress among dentists. *Gen Dent* 2004; 52: 428-32.
- Heath JR, Macfarlane TV, Umar MS. Perceived sources of stress in dental students. *Dent Update* 1999; 26: 94-8, 100.
- Abu-Ghazaleh SB, Rajab LD, Sonbol HN. Psychological stress among dental students at the University of Jordan. *J Dent Educ* 2011; 75: 1107-14.
- Uraz A, Tocak YS, Yozgatligil C, Cetiner S, Bal B. Psychological well-being, health, and stress sources in Turkish dental students. *J Dent Educ* 2013; 77: 1345-55.
- Abu-Ghazaleh SB, Sonbol HN, Rajab LD. A longitudinal study of psychological stress among undergraduate dental students at the University of Jordan. *BMC Med Educ* 2016; 16: 90.
- Alzahem AM, Van der Molen HT, De Boer BJ. Effect of year of study on stress levels in male undergraduate dental students. *Adv Med Educ Pract* 2013; 4: 217-22.
- Peker I, Alkurt MT, Usta MG, Turkbay T. The evaluation of perceived sources of stress and stress levels among Turkish dental students. *Int Dent J* 2009; 59: 103-11.
- Passi V. Developing resilience throughout the continuum of medical education. *Perspect Med Educ* 2014; 3: 329-31.
- Smith BW, Dalen J, Wiggins K, Tooley E, Christopher P, Bernard J. The brief resilience scale: assessing the ability to bounce back. *Int J Behav Med* 2008; 15: 194-200.
- Linzer M, Visser MR, Oort FJ, Smets EM, McMurray JE, de Haes HC. Predicting and preventing physician burnout: results from the United States and the Netherlands. *Am J Med* 2001; 111: 170-5.
- Henning M, Krageloh C, Hawken SJ, Zhao Y, Doherty I. Quality of life and motivation to learn: A study of medical students. *Issues Educ Res* 2010; 20: 244-56.
- Zwack J, Schweitzer J. If every fifth physician is affected by burnout, what about the other four? Resilience strategies of experienced physicians. *Acad Med* 2013; 88: 382-9.
- Department of Mental Health, Ministry of Public Health, Thailand. Change evil to be good: resilience quotient. Bangkok: Department of Mental Health; 2009.
- Mahatnirunkul S, Pumpaisanchai W, Tarpunya P. Suanprung Stress Test-20, SPST-20. Bangkok: Department of Mental Health Ministry of Public Health; 2002.
- Oz F, Bahadyr-Yylmaz E. A significant concept in protecting mental health: resilience. *H.U. Saolyk Bilimleri Fakultesi Hemptirelik Dergisi* 2009; 16: 82-9. [inTurkish]
- Eley DS, Cloninger CR, Walters L, Laurence C, Synnott R, Wilkinson D. The relationship between resilience and personality traits in doctors: implications for enhancing well being. *Peer J* 2013; 1: e216.
- Kaewsutha N. The policy of the country: nailing, good, happiness, How do it relate with Thai qualifications framework for higher education? The direction of dentist producing in the future. In: Paphangkorak J, editor. Network of learning, creative happiness. Planning of the happiness dental school: happy book. Khon Kaen: Kungnanawittaya; 2554: 3-4.
- Al-Samadani KH, Al-Dharrab A. The Perception of Stress among Clinical Dental Students. *World J Dent* 2013; 4: 24-8.
- Rutter M. Psychosocial resilience and protective mechanisms. In: Rolf J, Masten AS, Cicchetti D, Nuchterlein KH, Weintraub S, editors. Risk and protective factors in the development of psychopathology. New York: Cambridge University Press; 1990: 181-214.
- Tugade MM, Fredrickson BL, Barrett LF. Psychological resilience and positive emotional granularity: examining the benefits of positive emotions on coping and health. *J Pers* 2004; 72: 1161-90.
- Wachiradilok P. Predictive factors of Resilience Quotient (RQ) of nursing students in Suan Dusit Rajabhat University. *J Psychiatr Nurs Ment Health* 2014; 28: 17-30.
- Milevsky A, Schlechter M, Netter S, Keehn D. Maternal and paternal parenting styles in adolescents: Associations with self-esteem,

- depression and life-satisfaction. J Child Fam Stud 2007; 16: 39-47.
26. Wilks SE. Resilience amid academic stress, the moderating impact of social support among social work students. Adv Soc Work 2008; 9: 106-25.
 27. Karatas Z, Cakar FS. Self-esteem and hopelessness, and resiliency: an exploratory study of adolescents in Turkey. Int Educ Stud 2011; 4: 84-91.
 28. Steinhardt M, Dolbier C. Evaluation of a resilience intervention to enhance coping strategies and protective factors and decrease symptomatology. J Am Coll Health 2008; 56: 445-53.
 29. Pappa VS. Relationships between parents' Marital status and the psychological well-being of adolescents in Greece. J Psychol Psychother 2013; 3: 110.
 30. Southwick SM, Vythilingam M, Charney DS. The psychobiology of depression and resilience to stress: implications for prevention and treatment. Annu Rev Clin Psychol 2005; 1: 255-91.

ความยืดหยุ่นทางอารมณ์และจิตใจของนักศึกษาทันตแพทย์ชั้นคลินิก คณะทันตแพทยศาสตร์ มหาวิทยาลัยขอนแก่น ประเทศไทย

วิลาวัลย์ วีระอาชากุล, วิบูลย์ วีระอาชากุล, ณัฐพล ถินสถิตย์, ชาศริต ขาปะวัง

ภูมิหลังและวัตถุประสงค์: ความยืดหยุ่นทางอารมณ์และจิตใจ (resilience quotient) เป็นความสามารถในการปรับตัวและฟื้นตัวหลังจากเผชิญกับความยากลำบากหรือภาวะวิกฤตในชีวิต วัตถุประสงค์ของการวิจัยครั้งนี้ คือ 1) เพื่อศึกษาความยืดหยุ่นทางอารมณ์และจิตใจของนักศึกษาทันตแพทย์ชั้นปีที่ 4-6 คณะทันตแพทยศาสตร์ มหาวิทยาลัยขอนแก่น, 2) ศึกษาปัจจัยที่มีความสัมพันธ์กับความยืดหยุ่นทางอารมณ์และจิตใจของนักศึกษาทันตแพทย์ชั้นปีที่ 4-6 คณะทันตแพทยศาสตร์ มหาวิทยาลัยขอนแก่น

วัสดุและวิธีการ: เป็นการศึกษาวิจัยแบบตัดขวาง ปีการศึกษา พ.ศ. 2556 ในนักศึกษาทันตแพทย์ชั้นปีที่ 4-6 คณะทันตแพทยศาสตร์ มหาวิทยาลัยขอนแก่น ทั้งหมด 237 คน ที่ได้รับคำชี้แจงเกี่ยวกับรายละเอียดของโครงการวิจัยและยินยอมเข้าร่วมในการวิจัยครั้งนี้ เก็บรวบรวมข้อมูลโดยใช้เป็นแบบสอบถาม วิเคราะห์ข้อมูลโดยใช้สถิติพรรณนา เช่น ร้อยละ ค่าเฉลี่ย ส่วนเบี่ยงเบนมาตรฐาน และใช้สถิติความถดถอยเชิงเส้นแบบพหุในการวิเคราะห์หาปัจจัยที่มีความสัมพันธ์กับความยืดหยุ่นทางอารมณ์และจิตใจของนักศึกษาทันตแพทย์ชั้นปีที่ 4-6 กำหนดระดับนัยสำคัญทางสถิติที่ $p\text{-value} < 0.05$

ผลการศึกษา: อายุเฉลี่ยของนักศึกษาทันตแพทย์ชั้นปีที่ 4-6 เท่ากับ 22.9 ± 1.0 ปี อยู่ในช่วงอายุ 21-27 ปี ความยืดหยุ่นทางอารมณ์และจิตใจของกลุ่มศึกษาส่วนใหญ่อยู่ในเกณฑ์ปกติ (ร้อยละ 72.6) รองลงมาคือ ต่ำกว่าเกณฑ์ปกติ (ร้อยละ 19.4) และสูงกว่าเกณฑ์ปกติ (ร้อยละ 8.0) ตามลำดับ มีหนึ่งปัจจัยที่พบว่ามีความสัมพันธ์เชิงบวกกับคะแนนความยืดหยุ่นทางอารมณ์และจิตใจคือ สถานภาพสมรสของพ่อแม่ (พ่อแม่เป็นคู่แต่แยกกันอยู่) อย่างมีนัยสำคัญทางสถิติที่ระดับ $p\text{-value} < 0.05$ และปัจจัยที่มีความสัมพันธ์เชิงลบกับคะแนนความยืดหยุ่นทางอารมณ์และจิตใจคือ ความเครียดและการได้รับการเลี้ยงดูแบบควบคุมอย่างมีนัยสำคัญทางสถิติที่ระดับ $p\text{-value} < 0.05$

สรุป: ระดับความยืดหยุ่นทางอารมณ์และจิตใจของกลุ่มศึกษาส่วนใหญ่อยู่ในเกณฑ์ปกติ ปัจจัยที่มีความสัมพันธ์กับความยืดหยุ่นทางอารมณ์และจิตใจคือ ปัจจัยความเครียด การได้รับการเลี้ยงดูแบบควบคุม และสถานภาพสมรสของพ่อแม่
