

การเปรียบเทียบคุณภาพชีวิตของนักศึกษาแพทย์ชั้นปีที่ 1 ถึง 6

คณะแพทยศาสตร์ศิริราชพยาบาล

Comparing the Quality of Life of the 1st - 6th Year Medical Students at
the Faculty of Medicine Siriraj Hospitalพัชดาพรรณ อุดมเพชร^{1*}Phachadapan Odompet^{1*}

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บทคัดย่อ

วัตถุประสงค์ของการวิจัยในครั้งนี้ เพื่อเปรียบเทียบคุณภาพชีวิตของนักศึกษาแพทย์ชั้นปีที่ 1 - 6 คณะแพทยศาสตร์ศิริราชพยาบาล จำแนกตามชั้นปี จำแนกตามรายของด้านคุณภาพชีวิต และเพื่อวัดระดับคุณภาพชีวิตของนักศึกษาแพทย์ชั้นปีที่ 1-6 กลุ่มตัวอย่างของการวิจัยผู้วิจัยคำนวณจำนวนกลุ่มตัวอย่างจากโปรแกรม G*Power ขนาดกลุ่มตัวอย่างจำนวน 324 คน กำหนดสัดส่วนผู้ตอบแต่ละชั้นปี โดยผู้ตอบมาจากความสมัครใจของผู้ให้ข้อมูล เครื่องมือที่ใช้ในการวิจัยใช้แบบสอบถามของกรมสุขภาพจิต (Department of Mental Health, 2002) ซึ่งพัฒนาเครื่องมือประเมินคุณภาพชีวิตชุดย่อ ฉบับภาษาไทย (WHOQOL-BREF-THAI) แบบสอบถามประเมิน 4 ด้าน ได้แก่ สุขภาพกาย จิตใจ ความสัมพันธ์ทางสังคมสิ่งแวดล้อม มีค่าความเชื่อมั่น Cronbach's alpha coefficient เท่ากับ 0.8406 ค่าความเที่ยงตรง เท่ากับ 0.6515 การเก็บข้อมูลผู้วิจัยเริ่มหลังจากได้รับการรับรองจากคณะกรรมการจริยธรรมการวิจัยในคน ขออนุญาตเก็บข้อมูลจากอาจารย์ผู้สอน หรือ ผู้ดูแลชั้นปี ซึ่งแจ้งกระบวนการในการทำวิจัยให้กับนักศึกษาแพทย์ผู้ให้ข้อมูลหลัก ได้รับทราบ สถิติที่ใช้ในการวิเคราะห์ข้อมูล ร้อยละ ค่าเฉลี่ย และการวิเคราะห์ทดสอบความแตกต่างค่าเฉลี่ย Analysis of Variance: ANOVA

ในการศึกษาครั้งนี้ คุณภาพชีวิตนักศึกษาแพทย์ชั้นปีที่ 1 มีค่าเฉลี่ยสูงสุดคุณภาพชีวิตโดยรวมสูงสุด คือ 91.50 ส่วน นักศึกษาแพทย์ชั้นปีที่ 6 มีค่าเฉลี่ยคุณภาพชีวิตโดยรวม น้อยที่สุด คือ 83.77 และผลการวิเคราะห์

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งานประชุมสัมมนาวิชาการ การวัดผลประเมินผล และวิจัยสัมพันธ์แห่งประเทศไทย ครั้งที่ 31 วันที่ 10-11 พฤษภาคม 2567

ความแปรปรวนเพื่อทดสอบความแตกต่างของค่าเฉลี่ยคุณภาพชีวิต โดยตัวแปรชั้นปี 1-6 มีนัยสำคัญทางสถิติที่ระดับ.05 ในด้านสุขภาพกาย ด้านจิตใจ ด้านสิ่งแวดล้อม และคุณภาพชีวิตโดยรวม มีความแตกต่างกันอย่างน้อย 1 คู่ จากการทดสอบ multiple comparison โดยวิธีการของ LSD

คำสำคัญ คุณภาพชีวิต นักศึกษาแพทย์

Abstract

The objectives of this research were to compare the quality of life of the medical students at the Faculty of Medicine Siriraj Hospital, in their first to sixth year, categorized by academic year and quality of life domains, and to measure the level of the quality of life of the first to sixth-year medical students. The sample size of 324 medical students was determined by the G*Power program. The proportion of the voluntary respondents for each academic year was specified. The research tool was a questionnaire developed by the Department of Mental Health (2002) as an abridged version of the World Health Organization Quality of Life Assessment (WHOQOL-BREF-THAI). The questionnaire assessed four domains: physical health, the mind, social relationships and environment, having Cronbach's reliability coefficient of 0.8406, and a validity coefficient of 0.6515. Data collection began after the Institutional Review Board's permission was obtained. Medical students received information about the research process and gave their consent, permission also was obtained from instructors and relevant staff to collect data from the medical students. The data analysis employed percentage, mean, and analysis of variance (ANOVA).

In this study, the highest overall quality of life was found in the first-year medical students, with an average score of 91.50, while the lowest was in the sixth-year medical students, with an average score of 83.77. The results of the analysis of variance showed significant differences in the mean scores of the quality of life from the first to the sixth year at the .05 level across physical health, the mind, environmental domains, and overall quality of life. The multiple comparison test with the LSD method revealed differences in at least one pair.

Keywords: quality of life, medical student

Introduction

Higher education students are the generation that is entering adulthood, requiring readiness in various aspects of life including academics, social adaptation, and increased responsibility. Consequently, students experience stress and difficulties, especially in programs with demanding academic requirements. Particularly, medical education programs may entail higher stress levels due to the admissions process and the long duration of study, which typically spans six years with both theoretical and practical components. It is a big responsibility to study medicine.

The researcher realized the quality of life for medical students from the first to sixth year is important. Additionally, the World Health Organization (WHO) has developed tools for assessing quality of life, including the World Health Organization Quality of Life Assessment (WHOQOL-100) and its short version (WHOQOL-BREF). These instruments are questionnaires designed to assess people's perceptions of culture, society, and environment. Additionally, according to Tengtrisorn et al. (2013), conducted research on the quality of life of medical residents in Songklanagarind Hospital, and demonstrated that medical residents' quality of life is moderate. Therefore, a holistic approach to improving the quality of life is necessary.

Furthermore, no comparison studies of medical students' quality of life from first to sixth year have been conducted. Poomjan, P. (2017) conducted a study on the quality of life of preclinical-level medical students (the first year to the third year) in terms of university services received, academic life, social life, and living accommodations. Medical students had a good quality of life, while their relationships with others were moderate. When testing hypotheses, it was found that: (1) Preclinical-level medical students (the first year to the third year) with varying academic years had significantly different levels of quality of life in terms of academic life, social life, and living accommodations at a statistically significant level of 0.05. (2) Preclinical-level medical students (the first year to the third year) with varying cumulative grade point averages had significantly different levels of quality of life in terms of relationships with others at a statistical significance level of 0.05. (3) Preclinical-level medical students (the first year to the third year) with varying living accommodations had significantly different levels of quality of life in terms of living accommodations at a statistical significance level of 0.05.

Sithai, W., & Jangboon, N. (2020) studied the quality of life of medical students at the clinical level (years 4-6) and found that, overall, clinical-level medical students' quality of life was good, with a mean score of 84.87 and a standard deviation of 10.16. When examining each component individually, it falls within the moderate quality of life range. Specifically, in terms

of environment, the mean score was 26.57 with a standard deviation of 1.71. For physical health, the mean score was 21.31 with a standard deviation of 2.84. For mental health, the mean score was 19.80 with a standard deviation of 2.59. Lastly, in terms of social relationships, the mean score was 10.97 with a standard deviation of 1.17.

Therefore, the researcher was interested in comparing the quality of life of medical students from the first to sixth year at the Faculty of Medicine Siriraj Hospital to understand their degree of quality of life and quality of life's domains. After completion of the study, the researchers determined the quality of life and living conditions of medical students in years 1 through 6. This information is presented as an overview to the educational department's executives and relevant stakeholders. Educational department executives may consider utilizing this information for relevant development aspects if necessary, particularly concerning the quality of life of medical students.

Objectives

1. To measure the degree of quality of life of medical students from the first year to the sixth year at the Faculty of Medicine Siriraj Hospital.
2. To compare the quality of life of medical students from the first year to the sixth year at the Faculty of Medicine Siriraj Hospital, categorized by academic year.
3. To compare the quality of life of medical students from the first year to the sixth year at the Faculty of Medicine Siriraj Hospital, categorized by domain of quality of life.

Methods

1. Population and sample

The population of the study is medical students from the first year to the sixth year at the Faculty of Medicine Siriraj Hospital, a total of 1,703 students

In the sampling of the study, the researcher determined sample size by using the G*Power program by setting the following parameters: Power (1-err prob) = 0.95, Effect size $f = 0.25$, and err prob = 0.05. The sample size was 324 students.

2. Research Instrument

The questionnaire consists of 2 parts, part 1 of the questionnaire is for general information, while Part 2 is for measuring quality of life. The researchers utilized a questionnaire referenced from the Department of Mental Health (2002), which is an

abbreviated version of the World Health Organization Quality of Life Assessment (WHOQOL-BREF). This instrument is a questionnaire designed to assess people's perceptions of culture, society, and environment. The questionnaire includes 4 domains which are physical health, psychological, social relationships, and environmental domains, as well as an overall assessment of quality of life.

The questionnaire, which serves as a tool for measuring the quality of life developed by the Department of Mental Health (2002), originated from the short version of the World Health Organization Quality of Life Assessment (WHOQOL-BREF) in the Thai language. This tool was adapted from the 100-item WHOQOL instrument by selecting one question from each of the 24 facets, as well as two additional questions about overall quality of life and general health. Subsequently, The WHOQOL-BREF instrument was then refined further by reviewing and adjusting the language, which was then tested for language comprehension among people from various backgrounds. The problematic items were updated based on feedback and evaluated again over three rounds of studies. The instrument's reliability was assessed using a Cronbach's alpha coefficient of 0.8406 for internal consistency and a coefficient of 0.6515 for test-retest reliability, compared to the Thai version of the WHOQOL-100 instrument officially recognized by the World Health Organization.

3. Data collection

3.1 Data collection began after the Institutional Review Board (IRB) from The Faculty of Medicine Siriraj Hospital gave its clearance.

3.2 Before collecting data, the researcher asked permission from the instructors and relevant staff, explained the research process to the medical students who gave the data, provided contact information for any inquiries, and verbal consent was requested to preserve data providers' rights. The researcher refrained from disclosing specific personal identities. Furthermore, the researcher allowed medical students to ask additional questions until they were satisfied and had time to reflect before agreeing to participate in taking the questionnaire. Data explanation and collection took place before or after class to avoid disrupting study time, and the questionnaire took no more than 10 minutes to complete. Participation in the questionnaire was completely voluntary.

3.3 In the case of returning questionnaires, the questionnaire collection boxes were placed at classroom entrances and educational department offices at the Faculty of Medicine Siriraj Hospital and Mahidol University. Pens will be provided as a token of appreciation.

4. Data Analysis

4.1 Descriptive data were tabulated and analyzed using basic statistical analysis including percentage, and mean.

4.2 Using Hypothesis testing analysis which involves analyzing differences in means, which is Analysis of Variance (ANOVA).

4.3 The interpretation of scores and quality of life across different domains can be found in tables 1 and 2.

Table 1 The interpretation of scores

| Range of Score | Interpretation |
|----------------|--------------------------|
| 26 – 60 | Poor quality of life |
| 61 – 95 | Moderate quality of life |
| 96 – 130 | Good quality of life |

Table 2 The interpretation for scores of quality of life across different domains

| Domain | Poor quality of life | Moderate quality of life | Good quality of life |
|--------------------------------|----------------------|--------------------------|----------------------|
| 1. Physical health domain | 7 – 16 | 17 – 26 | 27 - 35 |
| 2. Psychological domain | 6 – 14 | 15 – 22 | 23 - 30 |
| 3. Social relationships domain | 3 – 7 | 8 – 11 | 12 - 15 |
| 4. Environment domain | 8 – 18 | 19 – 29 | 30 – 40 |
| Overall quality of life | 26 – 60 | 61 – 95 | 96 - 130 |

Results

Table 3 The number of respondents

| Academic year | Frequency | Percentage |
|---------------|------------|---------------|
| 1 | 70 | 19.70 |
| 2 | 70 | 19.70 |
| 3 | 70 | 19.70 |
| 4 | 52 | 14.60 |
| 5 | 37 | 10.40 |
| 6 | 57 | 16.00 |
| Total | 356 | 100.00 |

Table 3 shows that there were 356 students that responded to the questionnaire. The distribution is as follows: the respondents from Years 1, 2, and 3 was the same, with 70 respondents in each group or 19.70% of the total respondents in each group. There were 52

respondents from Year 4 (14.60%). Year 5 had 37 respondents (10.40%), whereas Year 6 had 57 responders (16.00%).

Table 4 The degree of quality of life

| Domain | Poor quality of life | | Moderate quality of life | | Good quality of life | |
|--------------------------------|----------------------|-----------|--------------------------|------------|----------------------|-----------|
| | Score | Frequency | Score | Frequency | Score | Frequency |
| 1. Physical health domain | 7 – 16 | 2 | 17 – 26 | 256 | 27 - 35 | 98 |
| 2. Psychological domain | 6 – 14 | 17 | 15 – 22 | 263 | 23 - 30 | 76 |
| 3. Social relationships domain | 3 – 7 | 11 | 8 – 11 | 161 | 12 - 15 | 184 |
| 4. Environment domain | 8 – 18 | 7 | 19 – 29 | 196 | 30 – 40 | 153 |
| Overall quality of life | 26 – 60 | 5 | 61 – 95 | 263 | 96 - 130 | 88 |

Table 4 demonstrates that the quality of life scores in terms of physical health, psychological, environmental domains, and overall quality of life from questionnaire responses, indicated a moderate level. However, the domain of social relationships indicated a good level.

Table 5 The analysis of variance results of academic year

| Domain | Source of Variation | Sum of Squares | df | Mean Square | F | Sig. |
|--------------------------------|---------------------|----------------|-----|-------------|-------|------|
| 1. Physical health domain | Between Groups | 181.395 | 5 | 36.279 | 3.209 | .008 |
| | Within Groups | 3957.077 | 350 | 11.306 | | |
| | Total | 4138.472 | 355 | | | |
| 2. Psychological domain | Between Groups | 118.034 | 5 | 23.607 | 2.350 | .041 |
| | Within Groups | 3516.514 | 350 | 10.047 | | |
| | Total | 3634.548 | 355 | | | |
| 3. Social relationships domain | Between Groups | 26.748 | 5 | 5.350 | 1.402 | .223 |
| | Within Groups | 1335.014 | 350 | 3.814 | | |
| | Total | 1361.761 | 355 | | | |
| 4. Environment domain | Between Groups | 308.347 | 5 | 61.669 | 2.596 | .025 |
| | Within Groups | 8314.372 | 350 | 23.755 | | |
| | Total | 8622.719 | 355 | | | |
| Overall | Between Groups | 2112.960 | 5 | 422.592 | 3.172 | .008 |
| | Within Groups | 46628.793 | 350 | 133.225 | | |
| | Total | 48741.753 | 355 | | | |

The analysis of variance results for the mean quality of life scores over academic years 1- 6 showed statistical significance for the physical health, psychological, environmental domains, and overall quality of life at the .05 level. There were differences observed in at least one pair from the multiple comparison test using the LSD method. The LSD results indicated statistically significant differences in the quality of life among students from years 1 - 6 at the .05 significance level, as detailed in the table 5.

Table 6 Pair comparison between academic year and physical health domain

| Physical health domain | Mean | 1 | 2 | 3 | 4 | 5 | 6 |
|------------------------|-------|-------|-------|-------|-------|-------|---|
| Year 1 | 25.10 | - | | | | | |
| Year 2 | 24.55 | .340 | - | | | | |
| Year 3 | 25.08 | .980 | .353 | - | | | |
| Year 4 | 24.88 | .727 | .595 | .744 | - | | |
| Year 5 | 24.70 | .561 | .831 | .576 | .802 | - | |
| Year 6 | 23.01 | .001* | .011* | .001* | .004* | .018* | - |

According to the results, the quality of life in terms of physical health domain of the sixth-year students was different from first- to fifth-year students at the .05 significance level. First-year students had the highest average score at 25.10, followed by third-year students at 25.08, and sixth-year students at 23.01, who had the lowest average score.

Table 7 Pair comparison between academic year and the psychological domain

| Psychological domain | Mean | 1 | 2 | 3 | 4 | 5 | 6 |
|----------------------|-------|-------|-------|------|------|------|---|
| Year 1 | 21.02 | - | | | | | |
| Year 2 | 20.52 | .351 | - | | | | |
| Year 3 | 20.11 | .089 | .440 | - | | | |
| Year 4 | 19.92 | .058 | .297 | .742 | - | | |
| Year 5 | 19.72 | .045* | .216 | .551 | .777 | - | |
| Year 6 | 19.26 | .002* | .026* | .133 | .278 | .486 | - |

The results indicate that the quality of life in terms of the psychological domain of the sixth-year students was different from first- and second-year students, as well as the fifth-year students, who differed from the first year at the .05 significance level. The first year had the highest average score (21.02), followed by the second year (20.52), and the sixth year (19.26), which has the lowest average score.

Table 8 Pair comparison between academic year and social relationships domain

| Social relationships domain | Mean | 1 | 2 | 3 | 4 | 5 | 6 |
|-----------------------------|-------|-------|------|-------|------|------|---|
| Year 1 | 11.80 | - | | | | | |
| Year 2 | 11.30 | .131 | - | | | | |
| Year 3 | 11.67 | .927 | 2.61 | - | | | |
| Year 4 | 10.96 | .002* | .344 | .048* | - | | |
| Year 5 | 11.43 | .355 | .739 | .548 | .263 | - | |
| Year 6 | 11.33 | .181 | .924 | .333 | .322 | .810 | - |

According to the results, the quality of life in terms of the social relationships domain of the fourth-year students was different from first- and third-year students at the .05 significance level. The first year had the highest average score (11.80), followed by the third year (11.67), and the fourth year (10.96), which has the lowest average score.

Table 9 Pair comparison between academic year and the environment domain

| Environment domain | Mean | 1 | 2 | 3 | 4 | 5 | 6 |
|--------------------|-------|-------|-------|-------|------|------|---|
| Year 1 | 29.62 | - | | | | | |
| Year 2 | 28.91 | .387 | - | | | | |
| Year 3 | 28.88 | .368 | .971 | - | | | |
| Year 4 | 27.96 | .063 | .286 | .301 | - | | |
| Year 5 | 28.02 | .107 | .371 | .387 | .950 | - | |
| Year 6 | 26.75 | .001* | .013* | .015* | .197 | .217 | - |

According to the results, the quality of life in terms of the environment domain in the sixth year was different from the first through third years at the .05 significance level. A student's average score was highest in the first year (29.62), followed by the second year (28.91), and lowest in the sixth year (26.75).

Table 10 Pair comparison between academic year and the overall quality of life

| Overall quality of life | Mean | 1 | 2 | 3 | 4 | 5 | 6 |
|-------------------------|-------|-------|-------|-------|------|------|---|
| Year 1 | 91.50 | - | | | | | |
| Year 2 | 89.18 | .236 | - | | | | |
| Year 3 | 89.54 | .316 | .855 | - | | | |
| Year 4 | 87.36 | .051 | .390 | .304 | - | | |
| Year 5 | 87.51 | .090 | .476 | .388 | .952 | - | |
| Year 6 | 83.77 | .000* | .009* | .005* | .105 | .126 | - |

According to the findings, in terms of overall quality of life, the sixth year was different from the first through third years at the .05 significance level. The first year had the highest average with an average score of 91.50, followed by the third year with an average of 89.54, while the lowest is in the sixth year with an average score of 83.77.

Discussion

The analysis of variance results for the mean quality of life scores over academic years from the first year to the sixth year showed statistical significance for the physical health, psychological, and environmental domains, and overall quality of life at the .05 level. There were differences observed in at least one pair from the multiple comparison test using the LSD method. The LSD results indicated statistically significant differences in the quality of life among students from the first year to the sixth year at the .05 significance level, with the following details: In terms of physical health, sixth-year students were different from those in the first through fifth years. Regarding the psychological domain, sixth-year students were different from those in the first and second years. Social relationships domain, fourth-year students were different from those in the first through third years. When considering the environmental domain, sixth-year students were different from those in the first and third years. Overall, the quality of life for sixth-year students was different from that of students in the first through third years, which aligns with the experiences gained from studying in medical programs in Thailand that require students to study for a minimum of six years. Students study basic medical science courses in their first year. They begin studying about medicine in their second year. By their third year, medical students start studying different diseases and abnormalities in the human body. In the fourth year, they start experiencing ward duties and patient care throughout the year. In the fifth year, ward duties and patient care experience become more intense. Finally, in the sixth year, students enter real clinical practice. During this period, first-year medical students had the greatest overall quality of life with an average score of 91.50, while sixth-year medical students had the lowest overall quality of life, with an average score of 83.77. This is because the sixth year, which is the final year of medical education, demands students apply all of their knowledge to work in real-world settings, including patient examination under the supervision of medical teachers. They also undergo internships at hospitals and must pass medical licensing exams. As a result, the sixth year was recognized as the most stressful due to increased duties and time management requirements.

This aligns with a study by Sithai & Jangboon (2020), which found that the quality of life for clinical-level medical students was a moderate level. It also aligns with another study by Poomjan (2017), which found that the quality of life for pre-clinical level medical students at the Faculty of Medicine Siriraj Hospital was a good level.

Recommendation

1. Implication for practice

Based on the findings of this study, the researcher gained insight into the quality of life and living conditions of medical students from the first to the sixth year. This includes determining whether the quality of life was poor, moderate or good. The details also include domains such as physical health, psychological, social relationships, and environmental domains. The researcher presented a summary of the findings to the educational department's executives and relevant stakeholders. The educational department considers utilizing the data for developing aspects related to the quality of life of medical students.

2. Recommendation for future research

Future research may use a mixed methods approach, integrating quantitative and qualitative methodologies to gather a comprehensive understanding of medical students' quality of life.

Translate Thai References

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