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ORIGINAL ARTICLE

พฤติกรรมสร้างเสริมสุขภาพของนักศึกษากายภาพบำบัด มหาวิทยาลัยขอนแก่น

ธนากร ธนวัฒน์ [1*], น้อมจิตต์ นวลเนตร์ [2], วิชัย อึงพินิจพงศ์ [2]

บทคัดย่อ

การสร้างเสริมสุขภาพถือเป็นความรับผิดชอบของแต่ละบุคคลซึ่งนำไปสู่การมีสุขภาพที่ดี การปฏิบัติพฤติกรรมสร้างเสริมสุขภาพเป็นสิ่งที่ทุกคนพึงกระทำโดยเฉพาะอย่างยิ่งนักกายภาพบำบัดผู้มีบทบาทในการให้บริการด้านการสร้างเสริมสุขภาพแก่ประชาชน การให้ความสำคัญต่อการมีพฤติกรรมสร้างเสริมสุขภาพที่เหมาะสมนี้ควรส่งเสริมให้เกิดขึ้นแก่นักศึกษากายภาพบำบัด การศึกษานี้มีวัตถุประสงค์เพื่อประเมินพฤติกรรมสร้างเสริมสุขภาพของนักศึกษากายภาพบำบัด มหาวิทยาลัยขอนแก่น และเพื่อเปรียบเทียบเปรียบเทียบระดับพฤติกรรมสร้างเสริมสุขภาพของนักศึกษาแต่ละชั้นปี อาสาสมัครเป็นนักศึกษากายภาพบำบัดที่กำลังศึกษาในคณะเทคนิคการแพทย์ มหาวิทยาลัยขอนแก่น ปีการศึกษา 2551 จำนวน 144 คน (อายุเฉลี่ย 20.2 ± 1.3 ปี) การประเมินพฤติกรรมสร้างเสริมสุขภาพของอาสาสมัครทำโดยใช้แบบสอบถามพฤติกรรมสร้างเสริมสุขภาพฉบับภาษาไทย ประกอบด้วยคำถามทั้งหมด 52 ข้อ ซึ่งประเมินพฤติกรรม 6 ด้าน ได้แก่ ความรับผิดชอบต่อสุขภาพ กิจกรรมทางกาย โภชนาการ การพัฒนาทางจิตวิญญาณ สัมพันธภาพระหว่างบุคคล และการจัดการความเครียด ผลการศึกษาพบว่า พฤติกรรมสร้างเสริมสุขภาพโดยรวมของอาสาสมัครอยู่ในระดับพอใช้ ส่วนพฤติกรรมทั้ง 6 ด้านอยู่ในระดับดีถึงต่ำมาก โดยพฤติกรรมที่อยู่ในระดับดีที่สุดคือ ด้านสัมพันธภาพระหว่างบุคคล และระดับต่ำที่สุดคือ ด้านกิจกรรมทางกาย และพบความแตกต่างกันอย่างมีนัยสำคัญทางสถิติในพฤติกรรมของนักศึกษาแต่ละชั้นปีทั้งทางด้านความรับผิดชอบต่อสุขภาพ และกิจกรรมทางกาย ($P < 0.05$) ผลการศึกษานี้อาจใช้เป็นข้อมูลสำหรับผู้จัดทำหลักสูตรและผู้บริหารสถาบันผู้ผลิตนักกายภาพบำบัดในการกำหนดกลยุทธ์สำหรับการสร้างเสริมสุขภาพแก่นักศึกษา การสร้างสิ่งแวดล้อมที่เอื้อต่อสุขภาพ และการพัฒนาโปรแกรมสุขศึกษา เพื่อส่งเสริมให้นักศึกษากายภาพบำบัดมีวิถีชีวิตที่ดี

คำสำคัญ: พฤติกรรมสร้างเสริมสุขภาพ, นักศึกษากายภาพบำบัด

[1] นักศึกษาปริญญาโท สาขาวิชากายภาพบำบัด คณะเทคนิคการแพทย์ มหาวิทยาลัยขอนแก่น
[2] สายวิชากายภาพบำบัด คณะเทคนิคการแพทย์ มหาวิทยาลัยขอนแก่น
* ผู้รับผิดชอบบทความ

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ORIGINAL ARTICLE

Health-promoting behaviors of physical therapy students in Khon Kaen University

Thanakorn Thanawat [1*], Nomjit Nualnetr [2], Wichai Eungpinichpong [2]

Abstract

Health promotion is the responsibility of each person to achieve good health. Health-promoting behaviors should be practiced regularly by every one, especially physical therapists who are health promotion providers. During the educational years of physical therapy training, greater emphasis should be placed on the important of an appropriate health-promoting behavior habit to the students. This study aimed to evaluate health-promoting behaviors of physical therapy students in Khon Kaen University and compare the behaviors among students in each educational year. Participants were 144 undergraduate physical therapy students (mean age 20.2 ± 1.3 years) who were studying at the Faculty of Associated Medical Sciences, Khon Kaen University in 2008. Their health-promoting behaviors were assessed by a self-completed questionnaire namely the Thai health promoting lifestyle profile II (HPLP-II). The questionnaire contains 52 items that evaluate behaviors regarding health responsibility, physical activity, nutritional habits, spiritual growth, interpersonal relations, and stress management. The results revealed that the participants' overall health-promoting behaviors were at a fair level. The 6 subscales of the behaviors ranged from good to very poor, with the highest and lowest levels in the interpersonal relations and physical activity, respectively. Significant differences in health-promoting behaviors among students in the 4 educational years were found in the health responsibility and physical activity ($P < 0.05$). These findings could be used as database for the curriculum planners and faculty administrators to set up a strategy of health promotion, structure healthier environments, and develop health education programs for encouraging physical therapy students to adopt healthy lifestyles.

Keywords: Health-promoting behaviors, Physical therapy students

[1] Master Degree Student, Department of Physical Therapy, Faculty of Associated Medical Sciences, Khon Kaen University
[2] Department of Physical Therapy, Faculty of Associated Medical Sciences, Khon Kaen University
* Corresponding author (e-mail: toptherapy_4@hotmail.com)

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Introduction

Health-promoting behavior is an expression of the human actualizing tendency that is directed toward optimal well-being, personal fulfillment, and productive living.[1] It is an integral part of an individual's lifestyle and an important determinant of health status.[2] Based on the Pender's health promotion model, health-promoting behaviors consist of 6 aspects of lifestyle, including health responsibility, physical activity, nutritional habits, spiritual growth, interpersonal relations, and stress management.[3]

Unhealthy health practices and behaviors during youth will continue to adulthood and jeopardize their health status in later life. Therefore, increased understanding of health practices and greater efforts toward promoting healthy behaviors and well-being among young adults are essential.[2] Young people, especially those who will be health care providers, should be challenged to take responsibility for their personal health and well-being.[3]

Physical therapy is a profession that deals with human regarding the assessment, diagnosis, and treatment of physical dysfunction which resulted from diseases or abnormal movements.[4] Physical therapists can play an important role in the education, motivation, and persuasion of their clients to initiate or continue a program to improve physical and mental conditions. Because of these professional responsibilities, it seems that physical therapists should be a good model for people regarding appropriate health-promoting behaviors. It is also recommended that positive attitudes in this regard should be encouraged to students who will be our future physical therapists.

Previous studies about health-promoting behaviors in health professional students, both in Thailand and foreign countries, were mostly focused on nursing students.[2,5-16] The results showed that most nursing students had a fair level of health-promoting behaviors. No study has been reported in physical therapy students. Therefore, this study was undertaken to evaluate health-promoting behaviors of physical therapy students in Khon Kaen University and compare the behaviors among the first, second, third and fourth year students.

Materials and Methods

Participants

Participants were undergraduate physical therapy students attending at Khon Kaen University in the academic year 2008. This study sample size was proportionally calculated from the numbers of students in each educational year based on the formula for the survey study[17], with the expected proportion of a good level of health-promoting behaviors of 0.21[10] and the precision of estimation of 0.04. Five percents of students in the 4 educational years were also added for accommodating drop out. Then, 144 students (124 females and 20 males, average age 20.2 + 1.3 years) were recruited through simple randomization. They consisted of 40, 38, 38, 28 from the first, second, third and fourth year students, respectively.

Health-promoting behavior evaluation

The Thai health-promoting lifestyle profile II (HPLP-II) questionnaire[18] was used to assess health-promoting behaviors of all participants. This self-completed questionnaire contains 52 items that evaluate behaviors regarding health responsibility (9 items: Items 1-9), physical activity (8 items: Items 10-17), nutritional habits (9 items: Items 18-26), spiritual growth (9 items: Items 27-35), interpersonal relations (9 items: Items 36-44), and stress management (8 items: Items 45-52). A reliability study revealed high test-retest reliability of 0.95 (ICC[3,1]) for the total items and 0.73-0.94 for the subscales.

Each of the participants was asked to indicate how often he/she adopted specific health-promoting behaviors or well-being habits on a 4-point Likert scale which

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included 1 (never: the participant never practices or thought of that behavior at all), 2 (sometimes: the participant practices or thought of that behavior occasionally or 3 times a week or less), 3 (often: the participant practices or thought of that behavior frequently or 4-6 times a week), and 4 (routinely: the participant practices or thought of that behavior everyday). The mean score ranges from 1 to 4, which could be classified into 5 levels of health-promoting behaviors: very poor (mean score 1.00-2.19), poor (mean score 2.20-2.59), fair (mean score 2.60-2.99), good (mean score 3.00-3.39), and excellent (mean score 3.40-4.00).[18]

Procedure and data analysis

At the research room visit, the participants were requested to give informed consent in accordance with the requirements of The Khon Kaen University Ethics Committee for Human Research. Then, they completed the HPLP-II questionnaire. The assessment took approximately 10 minutes.

Based on their answers, each of the participants was classified into one of 5 levels of health-promoting behaviors (very poor, poor, fair, good and excellent) as mentioned above. A difference in health-promoting behaviors among the first, second, third and fourth year students was evaluated using the analysis of variance followed by the post-hoc test for comparisons between more than 2 groups. Normality of the data set was assessed using the Shapiro-Wilk W test. All analyses were performed using the STATA statistical software package version 9.0. A value of $P < 0.05$ was used to decide the significance for all analyses.

Results

Table 1 presents the mean scores of overall health-promoting behaviors and each subscale obtained from the HPLP-II questionnaire. The mean score of the participants' overall health-promoting behaviors was 2.64 ± 0.28 and classified into a fair level. The group scored highest in interpersonal relations (3.15 ± 0.41) and lowest in physical activity (2.15 ± 0.44), with ascending scores on spiritual growth, stress management, nutritional habits, and health responsibility falling in-between. From these mean scores, it could be classified that the participants had a good level of behaviors in the dimensions of spiritual growth and interpersonal relations. The stress management and nutritional habits were at fair and poor levels, respectively. The very poor level of behaviors was found in the health responsibility and physical activity subscales.

The comparison of health-promoting behaviors among students in each educational year students demonstrated that the fourth year class significantly had the lowest health responsibility score among the four-studying year group **(Table 1)**. Additionally, the health responsibility of the second year students was significantly lower than that of the first year class. In contrast to the health responsibility subscale, the fourth year students had a significant higher score than did the second and third year students in the physical activity subscale. It was observed that there was a falling trend of the scores of the psychosocial well-being dimensions (spiritual growth, interpersonal relations and stress management) in the rising educational years.

When being asked about the major barriers for performing health-promoting behaviors, 72.2 % and 59 % of the participants mentioned to lack of time and motivation, respectively. One-fourth of them expressed that they were not aware of the health-promoting behaviors' importance. Ten percents of the students felt that it was difficult to perform health-promoting behaviors.

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Table 1 Mean (SD) scores of health-promoting behaviors of the participants.

Health-promoting behaviors (score range 1-4)	Physical therapy students				
	First year (n = 40)	Second year (n = 38)	Third year (n = 38)	Fourth year (n = 28)	Total (n = 144)
Overall	2.73 (0.25)	2.62 (0.29)	2.64 (0.29)	2.54 (0.29)	2.64 (0.28)
Health responsibility	2.38 (0.36)	2.11 (0.42)*	2.34 (0.51)	1.79 (0.42)**	2.18 (0.48)
Physical activity	2.14 (0.32)	2.04 (0.35)	2.08 (0.53)	2.39 (0.49)#	2.15 (0.44)
Nutritional habits	2.66 (0.37)	2.57 (0.51)	2.60 (0.40)	2.44 (0.48)	2.58 (0.44)
Spiritual growth	3.11 (0.43)	3.01 (0.45)	2.96 (0.47)	2.88 (0.48)	3.00 (0.46)
Interpersonal relations	3.20 (0.42)	3.20 (0.46)	3.11 (0.34)	3.08 (0.42)	3.15 (0.41)
Stress management	2.80 (0.33)	2.71 (0.43)	2.65 (0.46)	2.69 (0.38)	2.71 (0.40)

* $P < 0.05$, compared with the score of the first year students
** $P < 0.05$, compared with the scores of the first, second and third year students
\# $P < 0.05$, compared with the scores of the second and third year students

Discussion

The current study revealed that the physical therapy students in Khon Kaen University had good health-promoting behaviors in the dimensions of spiritual growth and interpersonal relations, but fairly bad in the health responsibility and physical activity behaviors. Overall, health-promoting behaviors of the students were at a fair level. These results are similar to those of nursing students in Thailand and other countries.[6,9-10,12,15-16] The findings may imply a gap between the client's expectation and the physical therapist's real model performance. Physical therapy educators as well as physical therapy students themselves should raise the concern about health-promoting behaviors.

Most students expressed that the main barriers for performing good health-promoting behaviors were lack of time, and motivation. In Thailand, the traditional way to judge a student's achievement is by academic performance. Then, the students have to devote most of their time to academic activities. Apart from this, in view of the undergraduates' age and health status, the students may not consider the lack of health-promoting lifestyles to be an imminent threat to their health in the future. This claim could be confirmed by the finding that about one-fourth of the students have not yet been aware of the importance of health-promoting behaviors. Although some students are aware of the threat, they may not anticipate much to change their health-promoting lifestyles due to peer influence[6]. Many of college students also believed that they were satisfied with their health and did not pay much attention to their health.[19]

The physical therapy students in this study performed well in spiritual growth and interpersonal relations. Their stress management behavior was also fairly good. When compared with nursing students in the Pattawe's study[15] that used the Thai HPLP-II questionnaire for evaluating health-promoting behaviors, the physical therapy students showed higher scores of these 3 psychosocial well-being dimensions of health-promoting behaviors. Although the physical therapy students had to be preoccupied with

09 272 10/16/09, 2:30 PM
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their studies and participate in many extra curriculum activities, they could find the ways for releasing their mental stress such as sleeping, shopping, reading, or listening to the radio. These findings may indicate that the students could cope well with stress and have well-being in mind as well as confidence in social and communication skills, which are the prerequisites for effective work in physical therapy career. These skills are essential to facilitate a physical therapist's role in health teaching. When a physical therapist is easily approachable, a health-promoting message has a greater chance to be passed on to a client. Therefore, it was pleased to see the students could get a relatively high score in these psychosocial well-being dimensions of health-promoting behaviors. Although a falling trend of the scores of these dimensions was observed in senior class students, interpretation of such data should be cautious as the current study was a cross-sectional design. Further studies with a longitudinal study manner are essential to obtain entire information on changes of these health-promoting behaviors of physical therapy students during a 4-year study period.

On the other hand, the student's weakest point was on participating in physical activity. This finding is in accord with that of nursing students[6-7,10,12,15-16]. The students relatively few engaged in exercise, especially among the second and third year classes which were the hardest educational years of the physical therapy curriculum. The major barrier was claimed as lack of time. The low score on physical activity indicated inadequate physical activity that might create future health problems for these undergraduate students. The lack of regular physical exercise on the part of physical therapy students may be an obstacle to these students later encouraging their clients regarding physical exercise. Attention is thus urgently required to strengthen the emphasis on physical activity to the students. Compared with young adults in general, university students are more likely to be absorbed in their studies, which take up much of their time and energy, preventing them from participating in regular exercise programs.[2] Therefore, consideration may need to be given to curriculum review. The class timetable may have to be revised to accommodate a scheduled exercise program organized within the university. An increment in time for physical activity course is also suggested. Nevertheless, it was pleased to see that the highest score of physical activity was presented among the students of the fourth year because they would soon be graduating as physical therapists and were expected to inspire clients to practice health-promoting behaviors by their example. Evaluating this group of students about their knowledge of exercise before graduating is thus recommended to ensure that they will propagate their prominent health-promoting behaviors to the clients efficiently.

The students, particularly the fourth year, also had a low level of health responsibility. As mentioned earlier, in view of the undergraduates' age, young people were being considered free of illness and did not concern about their own health.[19] However, the lowest health responsibility score among the students of the final year may not reflect their 'real' health responsibility behaviors. When determining the HPLP-II questionnaire in detail, we could see that some items included in the health responsibility subscale are related to "being educated about health" and "seeking professional assistance when necessary". As these senior students are going to be physical therapists in the near future, they may have already had body of knowledge of personal health care or self-care, and do not need help from other health professionals. This claim could be seen from the finding that the fourth year students had a higher score of the physical activity than did the younger year classes. They informed that they tried to exercise regularly, by walking, jogging or aerobic dancing at least 20 minutes a day, in order to have a good health and be a proper model for

09 273 10/16/09, 2:30 PM
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people in the future. Therefore, when being asked how often they adopt specific health responsibility behaviors by the questionnaire, they may indicate on the scale 1 (never) or 2 (sometimes), leading to the low total score of this subscale. This finding may indicate that the health responsibility subscale in the HPLP-II is not appropriate for assessing such aspect of lifestyles of senior class students as well as graduate health personnel. Some items may need to be re-designed.

A low level of health responsibility was also presented by the second year students. Their physical activity score was the lowest one too. In the physical therapy curriculum, the second year students always have to face with trying to adapt to changes in academic workloads and extra curriculum activities. Thus, they may have to concentrate on their studies more than manage their health or engage in regular exercise.

The students fairly adopt good nutritional habits. Some of them rarely had breakfast because of time limitation. Some denied eating plenty of vegetables. This information agrees with a finding of unsatisfying nutritional habits in Thai students.[20] One of the reasons for such nutritional habits of physical therapy students may be their extensive theoretical and practical class schedules.

It was noticeable that the physical therapy students had lower scored of health responsibility, physical activity and nutritional habits, compared with nursing students in the previous study.[15] Based on these findings, it could be suggested that, in addition to pursuing their studies, the physical therapy students should be encouraged to balance their lifestyles including rest, exercise, nutritional intake, and psychosocial needs. Furthermore, because health-promoting behaviors are seen as desirable behaviors for comprehensively educated health personnel[9], there is a need to integrate health promotion course into the physical therapy curriculum. Provisions of sound information to physical therapy students early in the professional training may encourage them to participate in health-promoting behaviors. A carryover of such positive lifestyles after graduation from university will be beneficial to the 'physical' image of the profession.

However, since this study recruited students from a single university, the findings may not be generalized to the population of physical therapy students in Thailand. Future studies in other physical therapy schools as well as a longitudinal design are essential. Such researches could reflect the health-promoting behaviors of all physical therapy students in the country, and demonstrate whether there is a difference in the students'behaviors among each school and during 4 studying years. Early identification of at-risk behaviors and health status among physical therapy students can contribute to the development and implementation of programs by faculty that encourages healthy lifestyles throughout the lifespan.[5]

In addition, to explore in-depth understanding of the health-promoting behaviors as well as their problems and barriers of physical therapy students, further studies with a qualitative manner are suggested.

In conclusion, the overall health-promoting behaviors of physical therapy students were considered at a fair level. The 6 subscales of the behaviors ranged from good to very poor, with the highest and lowest levels in the interpersonal relations and physical activity, respectively. Significant differences in health-promoting behaviors among students in the 4 educational years were demonstrated in the health responsibility and physical activity subscales. These findings could be used as database for the curriculum planners and faculty administrators to set up a strategy of health promotion, structure healthier environments, revise class timetable, integrate health promotion course into the curriculum,

09 274 10/16/09, 2:30 PM
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and develop health education programs for supporting healthy choices among the physical therapy students and encouraging them to adopt healthy lifestyles.

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