ปัจจัยที่มีอิทธิพลต่อพฤติกรรมการสร้างเสริมสุขภาพของนักศึกษาระดับปริญญาตรี มหาวิทยาลัยรามคำแหง[*]

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บทคัดย่อ

จุดมุ่งหมายของการศึกษานี้คือ ต้องการศึกษาปัจจัยที่มีอิทธิพลต่อพฤติกรรมการสร้างเสริมสุขภาพของนักศึกษา มหาวิทยาลัยรามคำแหง

การศึกษานี้เป็นการสำรวจแบบภาคตัดขวาง ได้รวบรวมข้อมูลจากนักศึกษาปริญญาตรีจำนวน 329 คน ที่ลงทะเบียนเรียนในกระบวนวิชาที่เปิดสอนในภาควิชาพลานามัย คณะศึกษาศาสตร์ มหาวิทยาลัยรามคำแหง ในปีการศึกษา 2558 เครื่องมือที่ใช้เป็นแบบสอบถามโดยเก็บข้อมูลส่วนบุคคล และปัจจัยต่าง ๆ ได้แก่ พฤติกรรมการสร้างเสริมสุขภาพ ในอดีต การเห็นคุณค่าตนเอง การรับรู้ประโยชน์ การรับรู้อุปสรรค การรับรู้ความสามารถตนเอง อารมณ์ที่เกี่ยวข้องกับการ ปฏิบัติพฤติกรรมสุขภาพ การสนับสนุนทางสังคม สถานการณ์/สิ่งแวดล้อมในการปฏิบัติพฤติกรรมการสร้างเสริมสุขภาพ ความยึดมั่นในแผนการปฏิบัติการสร้างเสริมสุขภาพ และพฤติกรรมการสร้างเสริมสุขภาพ ความสัมพันธ์เชิงสาเหตุระหว่าง ตัวแปรในโมเดลถูกวิเคราะห์โดยใช้วิธีการวิเคราะห์เส้นทางความสัมพันธ์เชิงสาเหตุ ภายใต้กรอบแนวคิดของโมเดลการ สร้างเสริมสุขภาพของเพนเดอร์

ผลการศึกษา: โมเดลการสร้างเสริมสุขภาพที่ปรับในขั้นสุดท้ายมีค่าดัชนีความสอดคล้อง (fitness index) ตาม เกณฑ์ที่กำหนด ผลการศึกษาพบว่า ปัจจัยสำคัญที่มีอิทธิพลโดยตรงต่อพฤติกรรมการสร้างเสริมสุขภาพ (HPB) ได้แก่ การ รับรู้ความสามารถตนเอง (HEF) การรับรู้ประโยชน์ (HBF) พฤติกรรมการสร้างเสริมสุขภาพในอดีต (PHB) การสนับสนุน ทางสังคม (SS) ความยึดมั่นในแผนการปฏิบัติการสร้างเสริมสุขภาพ (CHP) และการรับรู้อุปสรรค (HBA) ซึ่งมีอิทธิพล ทางลบต่อพฤติกรรมการสร้างเสริมสุขภาพ สำหรับปัจจัยที่มีอิทธิพลทางอ้อมต่อพฤติกรรมการสร้างเสริมสุขภาพ ได้แก่ พฤติกรรมการสร้างเสริมสุขภาพในอดีต โดยผ่านปัจจัยการรับรู้ความสามารถตนเอง ผ่านปัจจัยการสนับสนุนทางสังคม และ ผ่านปัจจัยการรับรู้ประโยชน์ โดยภาพรวมปัจจัยทั้ง 6 สามารถอธิบายความแปรปรวนของพฤติกรรมการสร้างเสริมสุขภาพ ได้ร้อยละ 64 (R^2 = 0.64)

ผลการวิจัยของการศึกษานี้พบว่า โมเดลการสร้างเสริมสุขภาพของเพนเดอร์สามารถทำนายพฤติกรรมการสร้าง เสริมสุขภาพของนักศึกษาในระดับปริญญาตรีของมหาวิทยาลัยรามคำแหงได้ดี ข้อมูลจากผลการศึกษานี้ โดยเฉพาะข้อมูล ปัจจัยการรับรู้ความสามารถตนเอง และการรับรู้ประโยชน์ในการปฏิบัติพฤติกรรมการสร้างเสริมสุขภาพ จะเป็นประโยชน์ สำหรับอาจารย์ที่พัฒนาหลักสูตร และนักสุขศึกษา สามารถวางแผนในการพัฒนาโปรแกรมการสร้างเสริมสุขภาพที่ช่วย สนับสนุนให้นักศึกษาเห็นประโยชน์และมีความเชื่อมั่นในความสามารถตนเองที่จะปฏิบัติพฤติกรรมการสร้างเสริมสุขภาพ จนเป็นนิสัยที่ดี

คำสำคัญ: พฤติกรรมการสร้างเสริมสุขภาพ, โมเดลการสร้างเสริมสุขภาพของเพนเดอร์, มหาวิทยาลัยรามคำแหง

Factors Affecting Health Promoting Behaviors of Undergraduate Students in Ramkhamhaeng University[*]

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Abstract

The aim of this study was to determine the predictors of health-promoting behaviors among Ramkhamhaeng University students.

This study was a cross-sectional survey. Data were collected from 329 undergraduate students who enrolled in the physical education courses in the Physical Education Department, Faculty of Education, Ramkhamhaeng University in academic year 2015. The instruments were questionnaires including a demographic section, prior health promoting behaviors, self esteem, perceived health benefits, perceived health barriers, perceived health self efficacy, affect related to health promoting behavior, social support, situation/environment to health promoting behavior, commitment to use of health promotion, and health promoting behaviors. All causal correlations among the variables in the model were examined using path analysis within Pender's health promotion modeling framework.

Results: The final health promotion model revealed a good model-data fit which followed the fitness index criteria. The results indicated that the important factors directly affected health promoting behaviors were perceived health self efficacy (HEF) perceived health benefit (HBF), prior health promoting behavior (PHB), social support (SS), commitment to use of health promotion (CHP), and perceived health barriers (HBA) which negatively affected health promoting behaviors. The factors indirectly influenced health promoting behaviors were prior health promoting behavior via perceived health self efficacy, via social support, and via perceived health benefits. In overall, the significant six factors could explain 64 percent of the variance in health promoting behaviors ($R^2 = 0.64$).

The findings of this study showed that Pender's health promotion model could predict health promoting behaviors among undergraduate Ramkhamhaeng University students well. The results provided information, especially, perceived health self efficacy and perceived health benefit, which are useful for curriculum planners, and health educators to develop health promotion programs that encourage students to learn the benefits and are confident in their own ability to practice good health habits.

Keywords: Health promoting behaviors, Pender's health promotion model, Ramkhamhaeng University

Introduction

From the UN World Bangkok in the year 2006 to world agenda (Global Agenda) for the country, the Bangkok Charter Thailand has packed into the UN World. All countries around the world accepted the concept and practice of collaboration in health seriously. Under the motto "Global Partnership of Action into the Future" to step into the wealth of the World Health in the future, the governments of every country must think "create health is an investment," and have to make investments in health promotion. (The Office of Policy and Strategy, the Ministry of Health, 2011). World Health Organization (2001) found that the average life expectancy increased by 10 percent to make the economic growth rate increased by 0.35 percent. It showed that a better health status would increase the production capacity of approximately 17 percent. The Health-Statistics Sub-Committee and Working Group (2014) reported that the causes of death of the Thailand population in the next five years (in 2019) are the most common cause chronic non-communicable diseases. Accidents, liver cancer including stroke are the causes of death in men. While diabetic, vascular brain and liver cancer are as the most common causes of death for women. In the first Health Statistical Development Plan in 2013-2015, it showed that non-communication diseases especially heart disease, cancer and diabetes are the major problems that make people died increasingly in Thailand. It corresponds to the reports of illness of Thai people which found that the trends of chronic non-communicable diseases, which could be prevented, increased continuously in the last two decades (The Health-Statistics Sub-Committee and Working Group, 2014). In Thailand, the important non-communicable diseases, diabetes, hypertension, and obesity are increasing, and are the problems of society in caring for these patients. However, these diseases are preventable by adjusting good health behaviors in daily life (Center of Disease Control, 2009).

Health promotion behavior in a group of teenagers are important factors related to the risk of disease and disability in later life as adults. (Racette et al., 2014, Hoyt, et al., 2012, Liu et al., 2012). Students in the University are the groups in the transitional period from teen to mature age, which has changed the entire body, mind, and society. Supports for students with good health promoting behaviors will help them become healthy adults in the future (Hoyt, et al., 2012). There were reports that most of the teen population in many countries have their behaviors that not support good health (WHO, 2004, Department of Health and Human Services, 2004, United Kingdom Department of Health, 2004, Center of Disease Control, 2009, Canadian Fitness and Lifestyle Research Institute, 2002).

Pender (1996) pointed out that health promoting behaviors are practical activities to strengthen health continuously until it becomes habit and lifestyle which can indicate the ability of a person to retain or enhance the health and welfare in the highest aim in life. Health promoting behaviors are essential and will require continued operating until it becomes a part of daily life, such as exercise, hygenic diet, personal relationship and relieve stress properly. It will help raise the quality of life to be happy.

Non-communicable diseases are the leading cause of death disability worldwide (WHO, 2005, Alikhani, et al., 2009). In addition to that, non-communicable diseases are responsible for the loss of economic output in developing countries, an estimated US$ 84 billion of economic production would be lost between 2006 and 2015 if no action taken to reduce the risk of non-communicable diseases (Abegunde, et al. 2007). World Health Organazation (2005) has estimated that the elimination of major risk factors of non-communicable diseases will prevent at least 80 percent of all heart diseases, stroke, and type 2 diabetes mellitus. Despite the high prevalence and cost of non-communicable diseases, most of these diseases are preventable by simple and affordable ways. Health-promotion is a major strategy to promote health and prevent illness (Center of Disease Control, 2009).

Ramkhamhaeng university is a university which offers undergraduate, graduate, and professional programs. In the year 2014, the university had 46,723 undergraduate students in Bangkok campus (Office of Academic Assessment and Testing Services, Ramkhamhaeng University, 2015). University students are going through transition period from childhood to adulthood characterized by physical, psychological, social, and sexual development. Promoting healthy behaviors during this period will increase their chances to be healthy adults in the future (Hoyt, et al., 2012). Although the benefits of health promoting behaviors are well known, Ramkhamhaeng university students have unhealthy lifestyle, such as physical inactivity, inappropriate food habits. The statistical reports of out-patient treatments in Health Office of Ramkhamhaeng university (2015) showed that 7,674 students or 16.58 percent of all students in 2013 and 6,552 or 13.95 percent of all students in 2014 received health care and ill treatments. It is evident that promoting healthy behaviors among university students are essential to decrease disease risk later in adulthood. The researcher as a health education lecturer has a role in providing a curriculum in health promotion program for undergraduate Ramkhamhaeng university students. The researcher was interested to investigate the students' health promoting behaviors and to determine what important factors associate with their health behavior lifestyles. The information findings

from the study could be useful to design guidelines for structuring a healthier campus and developing health promotion program that supports healthy choices among students.

Objective

The aim of this study was to determine the predictors of health promoting behaviors among Ramkhamhaeng university students.

Conceptual Framework of Study

The theoretical framework for this study was based on Pender's Health Promotion Model (Pender, 1996), in which health promoting behavior is an expression of the human actualizing tendency toward maintaining or increasing one's level of well-being, self-actualization, and personal fulfillment. This model, derived from self efficacy and social learning theory, attempts to explain individuals' participation in health promoting behaviors and posits that cognitive-perceptual factors influence health promoting behavior. The cognitive-perceptual factors consist of perceived self-efficacy, perceived benefits and perceived barriers to health promoting behaviors. With the exceptions of the perceived barriers to health promoting behaviors, all of these factors are expected to positively related to the behavior. Modifying factors include self esteem, interpersonal influence, and situational and behavioral factors. The health promotion model (HPM) as tested in this study was illustrated in Figure 1.
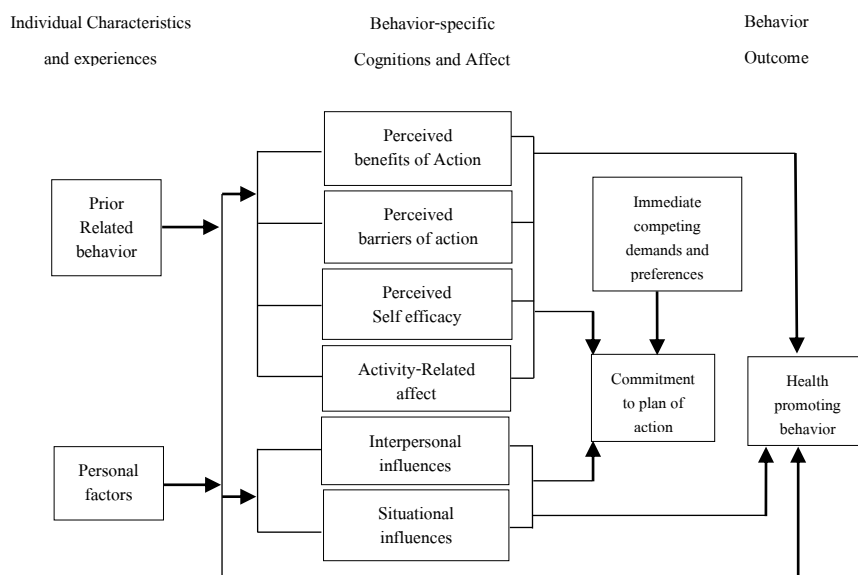

Figure 1 Pender's Health Promotion Behavior Model (Pender, et al., 2011)

Methods

Design and sample

A cross-sectional survey design was used in this study. The study population was comprised of undergraduate students enrolled in the physical education courses in the Physical Education Department, the Faculty of Education, Ramkhamhaeng University. Using the program of a-priori sample size calculation for structural equation model, statistic calculators version 3.0 (2015), using $\alpha = 0.05$ two tail level of significance, effect size = 0.14 (medium), power = 0.85, at least 298 students were needed for this study. A total of 353 students were invited to participate in the study and a final 329 questionnaires were completely returned.

Variables

There were two groups of the variables, two exogenous and eight endogenous variables.

Exogenous variables were prior health promoting behavior (PHB) and self esteem (SE).

Endogenous variables were perceived health benefits (HBF), perceived health barriers (PBA), perceived health self efficacy (HEF), affect related to health promoting behavior (AHB), social support (SS), situation/environment to health promoting behavior (SHB), commitment to use of health promotion (CHP), and health promoting behavior (HPB).

Definition of the Variables (Pender, 2011)

Health promotion can be defined as the process of empowering people to make healthy lifestyle choices and motivating them to become better self-managers.

Prior health promoting behavior (PHB) means frequency of the same or similar health promoting behavior in the past.

Self esteem (SE) means a person's overall subjective emotional evaluation of his or her own worth.

Perceived health benefits (HBF) mean perceptions of the positive or reinforcing consequences of undertaking a health promoting behavior.

Perceived health barriers (HBA) mean perceptions of the blocks, hurdles, and personal costs of undertaking a health promoting behavior.

Perceived health self efficacy (HEF) means judgment of personal capability to organize and execute a particular health promoting behavior; self confidence in performing the health promoting behavior successfully.

Affect related to health promoting behavior (AHB) means subjective feeling states or emotions occurring prior to, during and following a specific health promoting behavior.

Social support (SS) means perceptions concerning the behaviors, beliefs, attitudes of relevant others in regard to engaging in a specific behavior.

Situation/environment to health promoting behavior (SHB) means the situation or environment with engaging in a specific health promoting behavior.

Commitment to use of health promotion (CHP) means intention to carry out a particular health promoting behavior including the identification of specific strategies to do successfully.

Health Promoting Behavior (HPB) means the desired behavior end point or outcome of health decision-making and preparation for action.

Instruments

The instruments were questionnaires consisted of two sections which were specifically designed for the study. The first section contained questions on demographic characteristics (gender, age, year of study, faculty of study). The second section consisted of the questions of ten variables; the prior health promoting behavior, self esteem, perceived health benefits, perceived health barriers, perceived health self efficacy, affect related to health promoting behavior, social support, situation/environment to health promoting behavior, commitment to use of health promotion, and health promoting behaviors. All questionnaires using to collect the variables in health promotion model included mean scores and alpha reliability were listed in Table 1.

Procedure

Data were collected using self-administered questionnaires between September and October 2015. Data collectors explained study purpose to students and distributed the questionnaires to students who agree to participate. Students filled the questionnaires and returned them to the research assistants. Prior to data collection, ethical approval was obtained from the Research Committee at the researcher faculty and the Research Ethical Committee at the Deanship of Academic Research at the Ramkhamhaeng University. A written informed consent was obtained from each student prior to data collection

Data analysis

Data were analyzed using the software statistical program IBM SPSS (IBM SPSS, 2010). Preliminary data screening was done prior to the analysis to identify any potential problems and remedy

them. Descriptive statistics (percentage, mean, standard deviation) were used for demographic and all variables in the health promotion model. Causal correlations among the variables in health promotion model were analyzed using the LISREL program student version 8.80 (Joreskog & Sorbom, 2011).

Table 1 The characteristics of all scales in health promotion model and scale reliabilities

Scale	Response Category	Description	Range (Min-Max)	Mean (SD)	Reliabilities (Alpha)
Prior health promoting behavior (PHB)	3 point scale 1 (never) to 3 (routinely)	23 items	44-69	58.70 (5.34)	0.81
Self esteem (SE) (Nirattharadorn, et al., 2005)	4 point scale 1 (strongly disagree) to 4 (strongly agree)	10 items	19-40	29.14 (4.06)	0.71
Perceived health benefits (HBF)	5 point scale 1 (strongly disagree) to 5 (strongly agree)	27 items	75-135	113.65 (15.83)	0.95
Perceived health barriers (HBA)	5 point scale 1 (strongly disagree) to 5 (strongly agree)	12 items	12-60	36.53 (10.88)	0.90
Perceived health self efficacy (HEF)	5 point scale 1 (strongly disagree) to 5 (strongly agree)	24 items	58-120	96.71 (13.47)	0.92
Affect relate to health promoting behavior (AHB)	4 point scale 1 (strongly disagree) to 4 (strongly agree)	6 items	6-24	16.50 (4.05)	0.84
Social support (SS)	5 point scale 1 (strongly disagree) to 5 (strongly agree)	6 items	8-30	23.90 (4.19)	0.86
Situation/environment to health promoting behavior (SHB)	5 point scale 1 (strongly disagree) to 5 (strongly agree)	4 items	4-20	17.71 (4.49)	0.82
Commitment to use of health promotion (CHP) (Committed Action Questionnaire, CAQ-8)	5 point scale 1 (strongly disagree) to 5 (strongly agree)	8 items	8-40	21.62 (5.55)	0.83
Health promoting behavior (HPB)	5 point scale 1 (never) to 5 (routinely)	20 items	50-100	77.96 (11.66)	0.92

Results

      A total of 329 students were the studied samples in this study. The mean age of the students was 23.36 years (SD = 4.36) (range 18-45 years) and about 51% (n = 169) of the students were male. Most of the students studied in the faculty of education   (n = 300, 91%) and the rest studied in various faculties with 1 to 3% (law, sciences, humanities, political sciences, and business administration). The students studied in different grades ranging from the first year to more than 5 years (10% to 20%). Table 2 illustrated demographic characteristics of study participants.

Table 2. The demographic characteristics of students (N = 329)

Characteristic	Frequency	Percent
Gender		
Male	169	51.37
Female	160	48.63
Age (year)		
17-20	28	8.50
21-25	243	73.90
26-30	35	10.60
31-35	12	3.60
36-40	8	2.40
41-45	3	0.90
Mean = 23.36 years (SD = 4.36)		
Faculty of Study		
Education	300	91.19
Law	10	3.04
Sciences	7	2.12
Humanities	5	1.52
Political Sciences	4	1.22
Business Administration	3	0.91
Grade		
1st year	33	10.03
2nd year	65	19.76
3rd year	64	19.45
4th year	74	22.49
5th year	89	27.05
More than 5th year	4	1.22

Correlations for scores of the variables of health promotion model were presented in Table 3.

Table 3 Correlations of the variables of health promotion model

	PHB	SE	HBF	HBA	HEF	AHB	SS	SHB	CHP	HPB
PHB	1									
SE	.21**	1								
HBF	.36**	.33**	1							
HBA	-.01	.34**	.07	1						
HEF	.44**	.31**	.94**	-.03	1					
AHB	.05	.43**	.24**	.57**	.17**	1				
SS	.36**	.12*	.38**	-.21**	.49**	-.05	1			
SHB	.10	.04	.19**	-.16**	.17**	-.06	.15**	1		
CHP	.08	.12*	.16**	-.07	.17**	.04	.13*	.03	1	
HPB	.55**	.18**	.51**	-.22**	.64**	-.05	.60**	.17**	.28**	1

* $p < 0.05$, ** $p < 0.01$

Path analysis using maximum likelihood estimation was conducted. An initial examination was performed on the hypothesized model depicted in Figure 2. The model was tested to fit the index criteria, i.e. chi-square (χ^2, non-significance), root mean square error of approximation (RMSEA $\leq$ 0.05), the goodness-of- fit index (GFI $\geq$ 0.90), and adjusted goodness-of-fit index (AGFI $\geq$ 0.90) (Diamantopoulos & Siguaw, 2000, pp. 82-97).

The root mean square error of approximation (RMSEA) is generally regarded as one of the most informative indices and is calculated as $(F_0/DF)^{1/2}$, where F_0 is the population discrepancy function value (i.e. the estimated value of the fitting function when a model is fitted to the population covariance matrix) and DF are the degrees of freedom. The RMSEA shows how well would the model, with unknown but optimally chosen parameter values, fit the population covariance matrix if it were available. Values less than 0.05 are indicative of good fit, between 0.05 and under 0.08 of reasonable fit, between 0.08 and 0.10 of mediocre fit and >0.10 of poor fit (Browne & Cudeck, 1993, pp.137-138).

The goodness-of-fit index (GFI) is an indicator of the relevant amount of variances and covariances accounted for by the model and thus shows how closely the model comes to perfectly reproducing the observed covariance matrix. (Diamantopoulos & Siguaw, 2000, p. 87).

The adjusted goodness-of-fit index (AGFI) is simply the GFI adjusted for the degrees of freedom in the model. Values of the GFI and AGFI should range between 0 and 1 and values >0.90 are usually taken as reflecting acceptable fits (Diamantopoulos & Siguaw, 2000, p. 87).
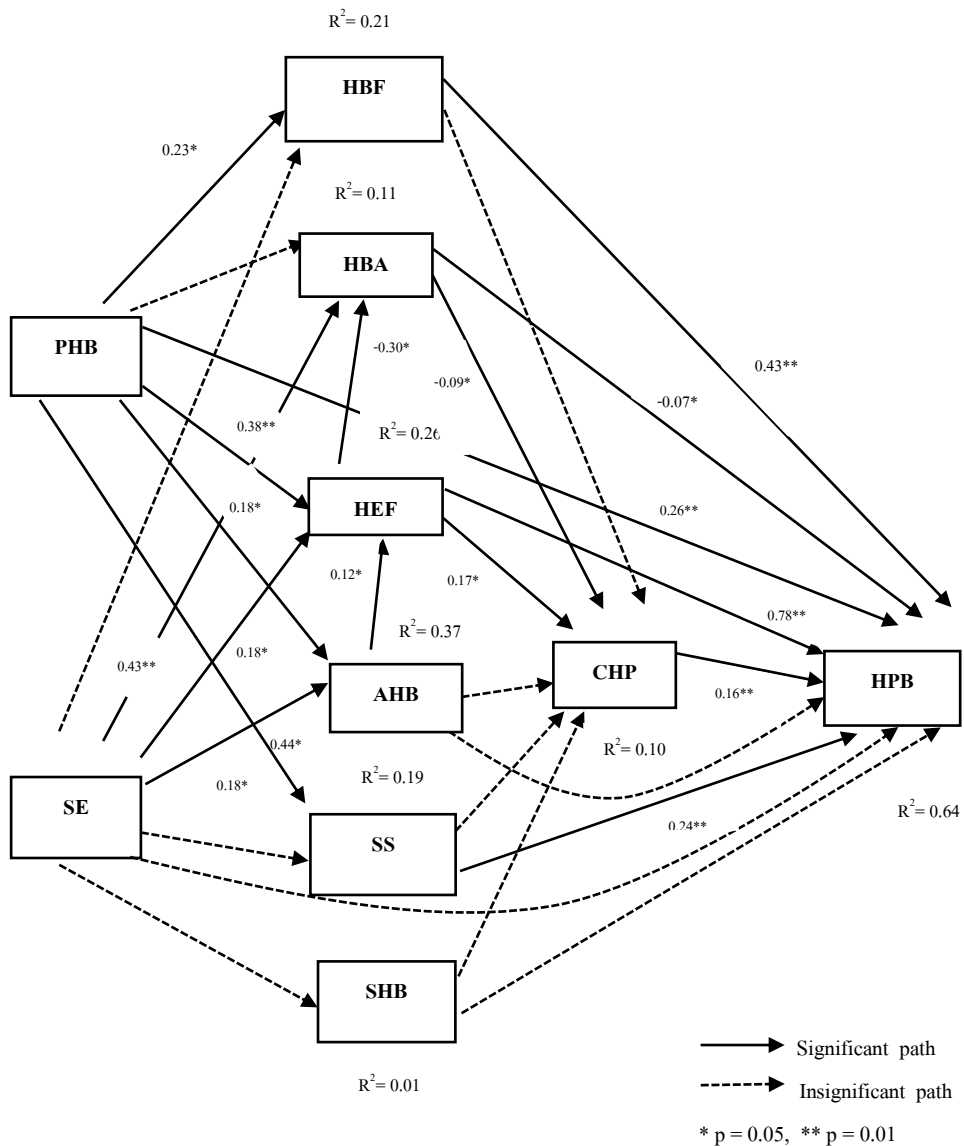
Testing the hypothesized model, the results revealed that the χ^2 value was 504.00, (df = 16, p-value = 0.00). None of the indices conformed to the required minimum for accepting a model showing a weak model fit (RMSEA = 0.31, GFI = 0.76, and AGFI = 0.19). Then, the hypothesized model was modified. Figure 3 indicated that the final path model of health promoting behaviors fitted the data well (χ^2 = 17.46, df = 15, p = 0.29, ns., RMSEA = 0.022, GFI = 0.99, and AGFI = 0.96).

The findings in Figure 3 showed that prior health promoting behavior (PHB) directly affected five factors, i.e. perceived health benefit (HBF) (β = 0.23, p < 0.05), perceived health efficacy (HEF) (β = 0.38, p < 0.01), affect related to health promoting behavior (AHB) (β = 0.18, p < 0.05), social support (SS) (β = 0.18, p < 0.05), and health promoting behaviors (HPB) (β = 0.26, p < 0.01). The factor of self esteem directly influenced four factors, i.e. perceived health barriers (HBA) (β = 0.43, p < 0.01), perceived health self efficacy (HEF) (β = 0.18, p < 0.05), affect related to health promoting behavior (AHB) (β = 0.44, p < 0.01) and social support (SS) (β = 0.12, p < 0.05). Perceived health benefit (HBF) was the important predictor of health promoting behaviors (HPB) (β = 0.43, p < 0.01). Perceived health barriers (HBA) were a major inverse predictor of commitment to use of health promotion (CHP) (β = -0.09, p < 0.05) and health promoting behaviors (HPB) (β = -0.07, p < 0.05). Perceived health self efficacy (HEF) negatively affected 3 factors, i.e. perceived health barriers (HBA) (β = -0.30, p < 0.05), commitment to use of health promotion (CHP) (β = 0.17, p < 0.05), and health promoting behaviors (HPB) (β = 0.78, p < 0.01). Also, the factors of commitment to use of health promotion (CHP) and social support (SS) were the significant predictors of health promoting behaviors (HPB) with the values of standardized path coefficients of β = 0.16, p < 0.05 and β = 0.24, p < 0.01, respectively. Considering another aspects, the factors indirectly influenced health promoting behaviors were prior health promoting behavior via perceived health self efficacy, via social support, and via perceived health benefit. In overall, commitment to use of health promotion, social support, perceived health self efficacy, perceived health barriers, perceived health benefit and prior health promoting behavior were the important predictors in explaining 64 percent of the variance in health promoting behaviors (HPB) (R^2 = 0.64).
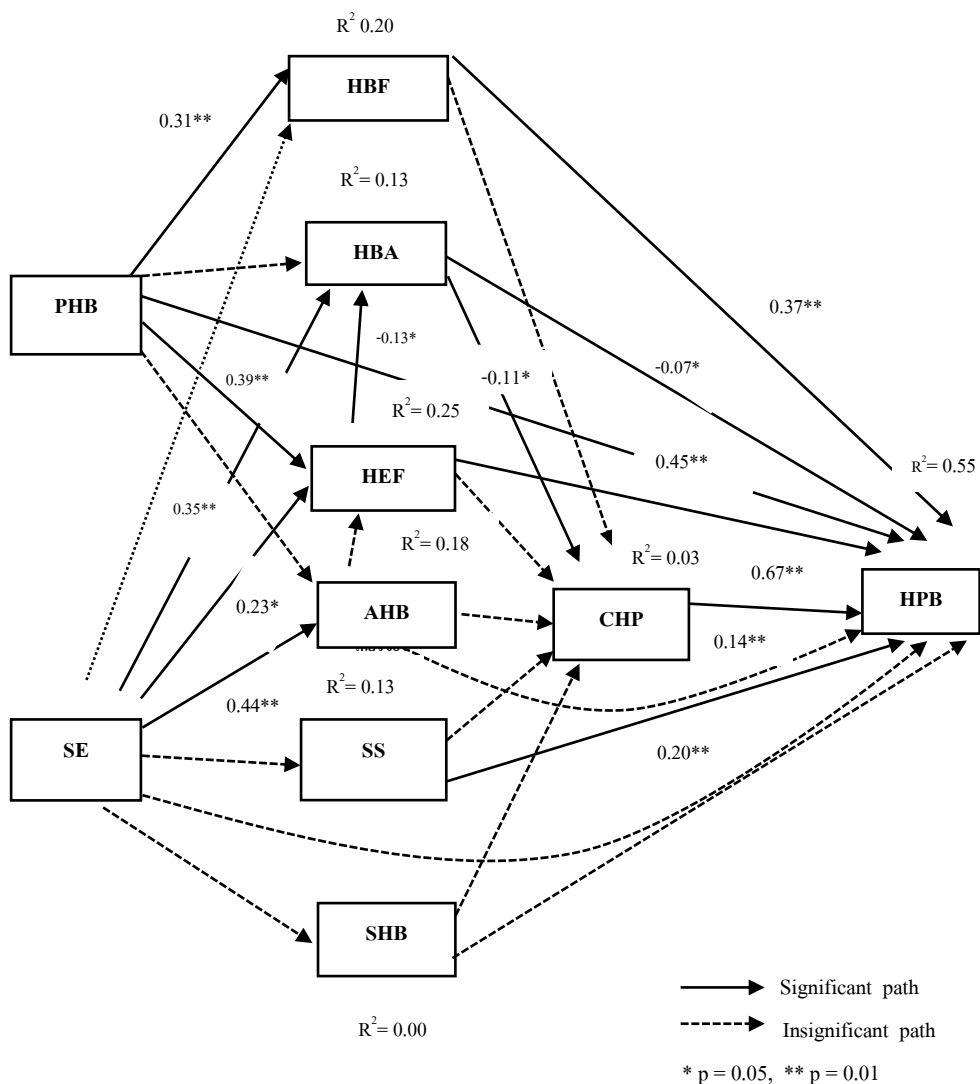
Chi-Square = 504.00, df =16, p-value = 0.000, RMSEA = 0.306, GFI = 0.76, AGFI = 0.19

Figure 2 The hypothesized model of health promoting behaviors

$R^2 = 0.21$

HBF

$R^2 = 0.11$

0.23*

HBA

PHB

-0.30*

-0.09*

0.43**

0.38**

-0.07*

$R^2 = 0.26$

0.18*

HEF

0.26**

0.12*

0.17*

0.43**

0.18*

$R^2 = 0.37$

CHP

HPB

AHB

0.78**

0.16**

0.18*

0.44*

$R^2 = 0.19$

$R^2 = 0.10$

SE

$R^2 = 0.64$

SS

0.24**

SHB

→ Significant path

- - -→ Insignificant path

* p = 0.05, ** p = 0.01

$R^2 = 0.01$

Chi-Square = 17.46, df =15, p-value = 0.292, RMSEA = 0.022, GFI = 0.99, AGFI = 0.96

Figure 3 Final path model of health promoting behaviors

Discussion

The final model provided a good fit to the data. The findings lend support to the capacity of the Pender's health promotion model in Ramkhamhaeng university students. The results of the study indicated that perceived health self efficacy, perceived health benefit, prior health promoting behaviors, social

support and commitment to use of health promotion played a significant role in health promoting behaviors. Perceived health self efficacy was the strongest predictor of health promoting behaviors. This result was consistent with the findings of previous studies (Wu & Pender, 2003, Chang, 2004, Wu & Jwo, 2005, Kwong & Kwan, 2007, Pongsupa, 2009, Polnil, 2012, and Sridapeng & Moonmuang, 2013). The path analysis in Figure 3 revealed that perceived health self efficacy has played important role on perceived health barriers, commitment to use of health promotion, and health promoting behaviors. The student who has high perceived health self efficacy tends to have low perceived health barriers and high commitment to use of health promotion lending to have high health promoting behaviors. The study reported by Shin et al. (2005) indicated that perceived health self efficacy and perceived health barriers causal correlated to commitment to use of health promotion. Perceived health barriers had an direct negative affect on health promoting behaviors. Review of literatures revealed that the perceived barriers were important determinants of health promoting behaviors in 79% of the studies using the health promotion model (Butts, et al., 2011). Perceived health benefit was the second significant predictor of health promoting behaviors. This factor was reported as the determinant of health promoting behaviors in many studies (Wu & Pender, 2003, Chang, 2004, Kwong & Kwan, 2007, Pongsupa, 2009, Polnil, 2012, and Sridapeng & Moonmuang, 2013). In this study, it was noted that there were two variables in the health promotion model which did not causal correlate with health promoting behaviors. They were self esteem and situation/environment to health promoting behavior. This finding was not consistent with previous study (Motl, et al., 2011). Further investigation, in-depth interview and longitudinal study should be conducted in order to point out the weakness of these variables and their causal correlations.

Conclusion

The findings of this study provided information about health promoting behaviors and its determinants in undergraduate Ramkhamhaeng university students, which could help faculty administrators, curriculum planners, and health educators design guidelines for structuring a healthier campus and developing health promotion programs that support healthy choices among students. Perceived health self efficacy should be considered when developing a student health promotion program. Bandura (1994, 2004) suggested that self-efficacy is a generative capability in which cognitive, social, emotional, and behavioral sub-skills are organized and that it influences effort and persistence in actions through cognitive, motivational, and affective processes as well as through the choices the individual makes. To date,

noteworthy studies have demonstrated that student health self-efficacy beliefs can be enhanced using student-centered learning approaches to increase their problem-solving, critical thinking, and communication skills (Goldenberg, et al., 2005; Dory, et al., 2009). The health promotion programs should be developed that encourage students to learn the benefits and are confident in their own ability to practice good health habits.

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