FACTORS INFLUENCING HEALTH PROMOTING BEHAVIOR AMONG BUDDHIST MONKS IN BANGKOK METROPOLITAN

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A THESIS SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR
THE DEGREE OF MASTER OF SCIENCE(PUBLIC HEALTH)
MAJOR IN FAMILY HEALTH
FACULTY OF GRADUATE STUDIES
MAHIDOL UNIVERSITY
2005

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Entitled

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was submitted to the Faculty of Graduate Studies, Mahidol University
for the degree of Master of Science (Public Health)
Major in Family Health
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ACKNOWLEDGEMENTS

The present study would not have been completed without Associate Professor Chutichai Majeang, Associate Professor Dr. Phittaya Charupoonphol, Associate Professor Vajira Singhakajen, and Dr. Suporn Apinuntavech, M.D., thesis advisers, who all continuously provided guidance, support, and encouragement to me all through the process of my study.

I am grateful to Pra Srisitthimuni, Assistant President for Academic Affairs, Mahachulalongkornrajawittayalai University, an external committee member who kindly gave me numerous constructive comments during my study.

I am indebted to Associate Professor Dr. Somporn Triamchaisri, Dr. Patcharaporn Gerdmongkol, and Dr. Nitas Sirichoterat, the experts who helped me with validation and revision of the research instruments.

I would like to thank Associate Professor Pakorn Somethanurungul for his kind help with the data collection process as well as transportation to research sites.

My heartfelt thanks also go to the abbots of all the temples where data collection took place, as well as all monk subjects who willingly participated in the study.

My deepest gratitude goes to my beloved parents, whose immense sacrifice has led me to the success I am enjoying today. Without their love, affection, support, encouragement, and funding, the completion of this study would not have been possible.

I owe my younger brother, my aunt 'Numngern Thongwang' and her families, and all members of the 'Janbok' and 'Thongwang' families for their continuous love and support.

I wholeheartedly thank Ms. Aunchalee, Ms. Chutima, and Mr. Poonsak and all my classmates in the 25th, 26th, and 27th classes of Family Health Program who have never failed to lend me a helping hand when I am in need of help.

Last but not least, I thank Ms. Sujitta, a staff member of the Department of Family Health and all staff members of the library who kindly and willingly helped me during my study. I will also be grateful to a large number of people whose names I am not able to include here.

I dedicate all the merits of this thesis to my beloved father and brother, all members of 'Janbok' and 'Thongwang' familes whose support enabled me to come this far. I also dedicate all the merits of this thesis to my late mother who passed away before having a chance to witness my accomplishment today.

Janjira Janbok

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FACTORS INFLUENCING HEALTH PROMOTING BEHAVIOR AMONG BUDDHIST MONKS IN BANGKOK METROPOLITAN

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ABSTRACT

According to statistics regarding sicknesses of monks, monks are increasingly stricken with diseases caused by their health behaviors. Therefore, promoting health behaviors among monks is of critical importance. The present cross-sectional survey was conducted to investigate health promoting behaviors and factors influencing health promoting behaviors of monks residing in Bangkok. The conceptual framework of the study was adapted from Pender's health promoting concept. The sample consisted of 417 monks aged 20 to 75 years who had been ordained for at least one *vassa* (rainy season) and who had been residing in Bangkok for one year or longer.The subjects were recruited by means of stratified random sampling, and data were collected using a questionnaire. Descriptive statistics of frequency distribution and stepwise multiple regression were employed in data analysis.

The findings revealed that almost all subjects or 90.9%, had an overall health-promoting behavior at a level that required improvement, while 8.6% had their health-promoting behavior at a moderate level. When considering each aspect of health promoting behavior, about half, or 51.8%, should improve exercise behaviors, while 34.7% still smoked. Only 12% annual physical examinations. A multiple regression analysis indicated that monks' perceived self-efficacy, age, perceived health status, and perceived benefit of action were positively correlated with their health promoting behaviors. On the contrary, perceived barriers of action were negatively associated with monks' health promoting behaviors with statistical significance (p-value < 0.001). These variables could co-predict monks' health promoting behaviors by 29.8%, with perceived self-efficacy as the best predictor (Beta = 0.284).

Based on these findings, it is recommended that monks' health behaviors should be promoted to ensure that monks have perceived health status at a good level. Moreover, monks' awareness should be raised to increase their perceived self-efficacy and perceived benefits of action. Finally, measures should be found and implemented to reduce factors hindering monks from practicing health promoting behaviors so that they will pay more attention to planning for and carrying out their own health care and health promoting behaviors.

KEY WORDS : HEALTH PROMOTING BEHAVIORS / FACTORS AFFECTING HEALTH PROMOTING BEHAVIORS / BUDDHIST MONKS.

142 P. ISBN 974-04-5623-5

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(FACTORS INFLUENCING HEALTH PROMOTING BEHAVIOR AMONG BUDDHIST MONKS IN BANGKOK METROPOLITAN)

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บทคัดย่อ

จากสถิติการอาพาธของพระสงฆ์ในปัจจุบัน พบว่าป่วยด้วยโรคที่มีปัจจัยเสี่ยงมาจากการมีพฤติกรรมสุขภาพมีแนวโน้มเพิ่มขึ้น ดังนั้นพฤติกรรมส่งเสริมสุขภาพจึงมีความสำคัญและจำเป็นต่อภาวะสุขภาพของพระสงฆ์ การวิจัยเชิงสำรวจแบบภาคตัดขวางนี้ มีวัตถุประสงค์เพื่อศึกษาพฤติกรรมส่งเสริมสุขภาพและปัจจัยที่เกี่ยวข้องกับพฤติกรรมส่งเสริมสุขภาพของพระสงฆ์ในเขตกรุงเทพมหานคร โดยนำกรอบแนวคิดรูปแบบการส่งเสริมสุขภาพของเพนเดอร์มาประยุกต์ใช้ กลุ่มตัวอย่าง คือ พระสงฆ์ที่มีอายุระหว่าง 20-75 ปี บวชตั้งแต่ 1 พรรษา และอาศัยอยู่ในวัดในเขตกรุงเทพมหานคร 1 ปี ขึ้นไป จำนวน 417 รูปโดยการสุ่มแบบแบ่งชั้น เก็บข้อมูลโดยใช้แบบสอบถาม วิเคราะห์ข้อมูลโดยใช้สถิติพรรณา และการวิเคราะห์ถดถอยพหุคูณแบบขั้นตอน (Stepwise Multiple Regression)

ผลการศึกษาพบว่ากลุ่มตัวอย่างส่วนใหญ่มีพฤติกรรมส่งเสริมสุขภาพโดยรวมอยู่ในระดับควรปรับปรุงคิดเป็นร้อยละ 90.9 และร้อยละ8.6 อยู่ในระดับพอใช้ ในรายด้านพบว่า มีพฤติกรรมส่งเสริมสุขภาพด้านการออกกำลังกายควรปรับปรุงมากที่สุด ร้อยละ 51.8 และมีพฤติกรรมสูบบุหรี่ถึงร้อยละ 34.7 โดยมีพฤติกรรมการตรวจสุขภาพประจำปีเป็นประจำเพียง ร้อยละ 12.0 เมื่อวิเคราะห์ความสัมพันธ์ด้วยสถิติถดถอยพหุคูณแบบขั้นตอน พบว่า การรับรู้ความสามารถของตนเองต่อการปฏิบัติพฤติกรรม อายุ การรับรู้ภาวะสุขภาพ และการรับรู้ประโยชน์ของการปฏิบัติ พฤติกรรมมีความสัมพันธ์ทางบวกกับพฤติกรรมส่งเสริมสุขภาพ ส่วนการรับรู้อุปสรรคของการปฏิบัติพฤติกรรมมีความสัมพันธ์ทางลบกับพฤติกรรมส่งเสริมสุขภาพของพระสงฆ์อย่างมีนัยสำคัญทางสถิติ (p – value < 0.001) โดยสามารถร่วมทำนายพฤติกรรมส่งเสริมสุขภาพของพระสงฆ์ได้ร้อยละ 29.8 ซึ่งการรับรู้ความสามารถของตนเองต่อการปฏิบัติพฤติกรรมสามารถร่วมทำนายได้สูงสุด (Beta =0.284)

ดังนั้นควรมีการสนับสนุนให้พระสงฆ์มีการรับรู้ภาวะสุขภาพในระดับที่ดีขึ้นและควรกระตุ้นให้พระสงฆ์ตระหนักถึงการรับรู้ความสามารถของตนเองและประโยชน์ของการปฏิบัติพฤติกรรมส่งเสริมสุขภาพร่วมไปกับหามาตราการในการลดอุปสรรคต่อการปฏิบัติพฤติกรรมส่งเสริมสุขภาพ เพื่อให้พระสงฆ์มีพฤติกรรมการดูแลสุขภาพอย่างยั่งยืน

142 หน้า. ISBN 974-04-5623-5

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CHAPTER I
INTRODUCTION

Background and Significance of the Problem

Monks are one group of population belonging to the institution of Buddhism, an important institution in the Thai society. In general, Buddhist monks help the citizens in the community in many ways such as giving advice, developing the rural areas, conserving the environment, preserving cultures, or even promoting health. Even though at present people in the capital city have less association with temples and monks, there are still a group of people who still give significance to the religion. Besides, the relationship between temples and people in the rural areas remains the same. A study of Nantavisarn T. (1) found that monks become monk doctors who play a role in promoting health of people from inside and outside the community. Monk doctors and the community have mutual relationships, and they support each other. Grawanchid D. (2) discovered that monks also play a role in preserving the environment regarding conservation activities at a moderate level and teaching people about environmental protection at a high level. In addition, according to Buranapisut .T (3), temples still have a role and a relationship with the urban community in Bangkrak District in seven major aspects: 1) education, 2) tourism, 3) religious ceremonies, 4) social services, 5) recreational activities, 6) spiritual dependence, and 7) source of preservation of cultural heritage.

Monks are in adulthood or old age; that is, they are 20 years old or older. At this age, the body stops growing, but the cells are still supplemented to maintain full body capability and functions. When the monks grow older, cell functions begin to change. If they have good health behaviors such as having a good nutritional status; that is, having sufficient and appropriate food intake, the body will be strong and the changes of different cells in the body will take place naturally slowly and steadily. However, if they do not have a good nutritional status such as having insufficient food

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intake, the body will be weakened and cells will change rapidly, leading to physical sicknesses (4).

When considering groups that have less access to healthcare services and lack health promotion, it was found that monks are among them. There are about 267,818 monks in Thailand. As the capital city of the country, Bangkok, is the center of both cultural and technological advancements, people from rural areas flood into the capital city to find jobs. As a result, the problems of crowdedness and pollution follow. These are factors which can affect health status and health behaviors. According to existing statistics, there are 423 temples in Bangkok, with 11,862 monks living in these temples (5). It has been found that monks who are stricken with high blood pressure increased from 3,009 in 2001 to 3,133 in 2002, those with emphysema rose from 2,441 to 3,470, those with clogged artery from 1,456 to 1,898, and those with diabetes from 1,376 to 2,939 (6, 7). Evidently, these statistics show that the prevalence of monks' sicknesses caused by risk factors related to health behaviors tends to increase, and this has an effect not only on the monks themselves but also on the country's public health issues-economically, domestically, and socially. Put another way, the country has to spend a huge sum of budget each year to provide treatment. When the monks are sick, they create burdens on their family. Some may have to go back to stay at home, others who do not have relatives may be taken care of by the abbot or other fellow monks in the temple until they pass away. In terms of society, monks can actually cause changes in community members' behaviors (8) if they are good role models in health behaviors.

A study of Wimala S. (9) revealed that 58.6% of the monks had health promoting behavior regarding consumption at a low level, 63.7% had health promoting behavior regarding cessation of smoking at a high level, 36.66% had health promoting behavior regarding exercises at a moderate level, and 60.3% had health promoting behavior regarding annual physical check-ups at a low level. Furthermore, Pusanasuwansri D. and Tienvichit S. (10) found that the overall healthcare behaviors of monks were at a fair level and that exercising was only one healthcare behavior at a good level. Also, Mamuang S. (11) found that 53.52% of the higher ranked monks had over-nutritional status, and Srinual K. (8) and Nammuang S. (12) found that

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monks had smoking behaviors at moderate and high levels at 53.4% and 31.3%, respectively.

Thus, it could be seen that monks still do not have proper health promoting behaviors in some respects such as having food with high fat contents, smoking, and not having annual physical check-ups. These may be caused by various factors including health promoting behaviors which are behaviors individuals need to do to ensure good health. Therefore, health promoting behaviors are important and extremely necessary for the health status of monks. As Pender (13) has stated, health promoting behaviors are various activities carried out by individuals or groups of individuals with an aim to raise their standard of living physically, mentally, emotionally, socially, and spiritually or to ensure good health of individuals, families, and communities. In order for individuals to continuously perform health promoting behaviors until they become part of their living pattern, two factors are needed. The first factor is individual characteristics and experiences which consist of two sub-factors: 1) prior related behavior which has an indirect influence on health promoting behavior and 2) personal factors which have a direct influence on health promoting behaviors especially perceived health status, a major predictor of health promoting behaviors. Previous studies conducted by Wimala S. (9), Prompanjai P. (14) and Kanchanapibul N. (15) have indicated that perceived health status is positively associated with health promoting behaviors with statistical significance. The second factor is behavior-specific cognitions and affect which is important as it creates motivation and becomes a major core of the practice. It consists of perceived benefits of action, perceived barriers of action, perceived self-efficacy, activity-related affect, interpersonal influences, and situational influences.

A review of existing literature and research studies revealed that even though Pender's concept of health promoting behaviors has been applied widely in investigations conducted with Thai males with different professions (16, 17, 18), with results suggesting that perceived benefit of action, perceived self-efficacy, and perceived barriers or actions are related to health promoting behaviors with statistical significance, there is no study which has been conducted with monks. Therefore, the researcher was interested in examining factors which were associated with health promoting behaviors of monks living in Bangkok Metropolitan with an emphasis on

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personal factors, perceived benefit of action, perceived self-efficacy, and perceived barriers or actions so as to shed more light on health promoting behaviors regarding food consumption, smoking, exercising, and annual physical check-ups. It was expected that the data gathered in this study could be used as a guideline in planning educational programs to suit monks' specific needs to enable them to have appropriate health promoting behaviors, to maintain good health, and to become a good role model for people in the community.

Research questions

1. What are health promoting behaviors of monks in Bangkok Metropolitan like?
2. Are personal factors, perceived benefit of action, perceived self-efficacy, and perceived barriers or actions related to health promoting behaviors of monks in Bangkok Metropolitan?
3. Can personal factors, perceived benefit of action, perceived self-efficacy, and perceived barriers or actions co-predict health promoting behaviors of monks in Bangkok Metropolitan?

Research objectives

General objective

To study health promoting behaviors and related factors of monks in Bangkok Metropolitan.

Specific objectives

1. To study health promoting behaviors of monks in Bangkok Metropolitan;
2. To examine the relationship between personal factors and health promoting behaviors of monks in Bangkok Metropolitan;
3. To explore the relationship between perceived benefits of action and health promoting behaviors of monks in Bangkok Metropolitan;
4. To investigate the relationship between perceived barriers of action and health promoting behaviors of monks in Bangkok Metropolitan;

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5. To study the relationship between perceived self-efficacy and health promoting behaviors of monks in Bangkok Metropolitan;
6. To determine the extent to which personal factors, perceived benefit of action, perceived self-efficacy, and perceived barriers of actions can co-predict health promoting behaviors of monks in Bangkok Metropolitan.

Research hypothesis

1. Personal factors (age, the number of rainy seasons being ordained, status in the temple, common educational background, religious educational background, purpose of ordination, and financial status) are associated with health promoting behaviors of monks in Bangkok Metropolitan.

2. Perceived health status is associated with health promoting behaviors of monks in Bangkok Metropolitan.

3. Perceived benefit of action is associated with health promoting behaviors of monks in Bangkok Metropolitan.

4 Perceived barrier of action is associated with health promoting behaviors of monks in Bangkok Metropolitan.

5. Perceived self-efficacy is associated with health promoting behaviors of monks in Bangkok Metropolitan.

6. Personal factors, perceived benefit of action, perceived barrier of action, and perceived self-efficacy can co-predict health promoting behaviors of monks in Bangkok Metropolitan.

Study variables

1. There are two groups of independent variables as follows:

1.1 Personal factors which included age, the number of rainy seasons being ordained, status in the temple, common educational background, religious educational background, purpose of ordination, financial status and perceived health status

1.2 Behavior – Spicfic congnition and Affect including perceived benefits of health promoting behaviors, perceived barrier of health promoting behaviors, and perceived self-efficacy of health promoting behavior.

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2. Dependent variables in this study were monks' health promoting behaviors regarding food consumption, smoking, exercising, and annual physical check-ups.

Measuring level of variables

Age	was measured with a ratio scale.
Number of rainy seasons being ordained	was measured with a ratio scale.
Status in the temple	was measured with a nominal scale.
Common educational background	was measured with an ordinal scale.
Religious educational background	was measured with an ordinal scale.
Purpose of ordination	was measured with an ordinal scale.
Financial status	was measured with a ratio scale.
Perceived health status	was measured with an interval scale.
Perceived benefit of action	was measured with an interval scale.
Perceived barrier of action	was measured with an interval scale.
Perceived self-efficacy	was measured with an interval scale.
Health promoting behavior	was measured with an interval scale.

Definitions of terms

1. Health promoting behavior refers to actions or expressions of monks in doing or refraining from doing thinks which have an effect on their health to ensure good physical, mental, emotional, social, and spiritual health and to live peacefully and happily in society. In the present study, health promoting behavior was assessed by the questionnaire constructed by the researcher based on Pender's concept of health promotion and a review of related literature. It was a four - point rating scale with the scores higher than 80% indicating that monks had health promoting behavior at a good level. The questionnaire covered four aspects of health promoting behavior as follows:

1.1 Food consumption means practices about food and beverage intake which is suitable for the needs of the body to ensure that the body receives sufficient nutrition from the five food groups, in both quality and quantity. It also refers to practices of avoiding food with high fat content; uncooked food; food with too strong

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tastes such as too sweet, too salty, or too hot; and drinking tea, coffee, carbonated drinks, and drink with caffeine content.

1.2 Smoking means smoking or not smoking behavior of monks with the following criteria:

1.2.1 Smoking means cigarettes smoking behavior regularly as a habit either everyday or at irregular intervals.

1.2.2 Not smoking means no cigarettes smoking behavior at all .

1.2.3 Used to smoke means cigarettes smoking behavior in the past but now having already quit.

1.3 Exercising refers to practices or activities of monks that involved continuous body movement of 20 to 30 minutes more than three times per week such as walking in the morning to receive food in alms bowls, walking meditation, working out in the dwelling, gardening, watering plants, sweeping the temple ground, cleaning up the assembly hall, or doing other activities which are permissible according to the monks' rules and regulations.

1.4 Annual physical check-up refers to monks' practices involving receiving physical examination in the past year including blood pressure examination, weight and height measurement, blood test, lung x-ray, urine test, and other laboratory tests performed by medical staff.

2. Monks refer to those having become ordained according to the Doctrine-Discipline and rules and regulations of Thai monks as stated in the Seventh Rules and Regulations of Mahatera Samakom (B.E. 2536) and staying at a temple in Bangkok.

3. Age refers to the number of years starting from the day the monk subjects were born to the date of data collection.

4. Number of rainy seasons being ordained refers to the number of years, or rainy seasons (*vassa*), to be more exact, the monks had been ordained and become Buddhist monks.

5. Monk's status in the temple refers to the position of the monks in the temple abbot, vice abbot, assistant to the abbot, or ordinary monks.

6. Common educational background refers to the highest level of education the monks received before ordination divided into four levels: elementary education

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(grades 1 to 6/7), secondary education (grades 7 to 12), diploma, and undergraduate degree or higher.

7. Religious educational background refers to the highest level of Buddhist studies the monks received after ordination divided into five levels: no religious education; Dhamma levels one, two, or three; Pali studies levels 1 to 3; Pali studies levels 4 to 6; and Pali studies levels 7 to 9.

8. Purpose of ordination refers to the reasons that made the monks decided to be ordained such as to observe the tradition, to show gratitude to parents, to seek for ways to overcome sufferings, to study Buddhism, to escape problems in life, to seek a chance for further studies, to treat ill health, to pay back for the favors previously asked for from sacred beings, or other reasons.

9. Financial status refers to the monks' average income from the money donated by Buddhists and the money they received when being invited to perform religious ceremonies. However, if the monks were abbots or higher, they would receive allowances ranging based on their title and position.

10. Perceived health status refers to monks' opinions, ideas, and understanding about their own health which was assessed by using the perceived health status questionnaire adapted from Rojpaisalkij K. (19) divided into three levels with the scores of 80 or higher indicating good perceived health status**.**

11. Perceived benefit of action means monks' expectation of benefits or consequences which would result from their health promoting behavior. Such expectation was in fact an imagination of positive results or reinforcement which came from monks' direct experience and observation of others' experiences. This was assessed by the questionnaire developed by the researcher.

12. Perceived barrier of action refers to monks' estimation of obstacles in practicing different health promoting behaviors which affected monks' intention and actual practice. These obstacles may exist only in monks' imagination or they may actually exist in their real life. Perceived barrier of action was measured using the questionnaire developed by the researcher.

13. Perceived self-efficacy refers to monks' decision and beliefs in how much they are capable of doing various health-promoting behaviors including food consumption, smoking, exercising, and annual physical check-ups.

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Scope of the study

The present study was conducted with monks who had been ordained for at least one rainy season and had been living at a temple in Bangkok. It emphasized the investigation of factors affective these monks' health promoting behaviors based on Pender's concept. Only a group of variables of interest were selected for the present study as they were expected to have an effect on the dependent variables.

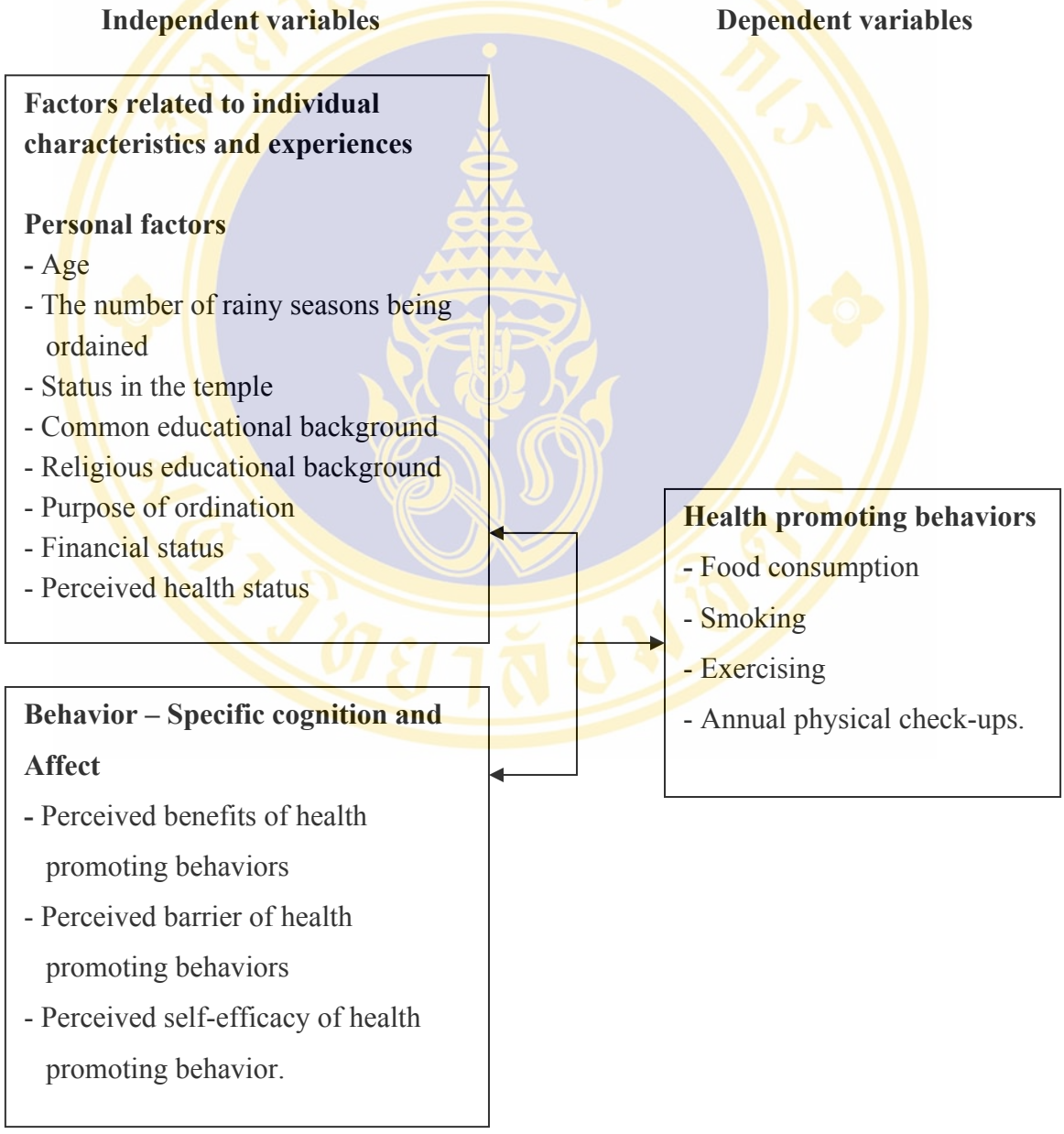

Figure 1 Conceptual Framework of the Study

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CHAPTER II
LITERATURE REVIEW

The present study investigated the factors influencing health promoting behaviors of monks in Bangkok. In this chapter, the related theories and research are reviewed in the following topics:

1. Background, concepts, and roles of monks
2. Conceptual theories related to health promoting behavior
3. Factors influencing health promoting behavior
4. Related research

Background, concepts, and roles of monks

Monks are those who continue and spread Buddhism for peace of mankind (20). Since 1932, changes have taken place with monks, both directly and indirectly, without any clear plans or guidelines to accommodate such changes. Thus, monks have begun to experience confusion with their roles and conducts. One obvious outcome is trials and errors which lack evaluation or feedback. There is also no punishment for those who have violated the *Discipline*. Confusion regarding what should be the best conducts, lack of understanding of how they should develop themselves to serve the people's and the society's needs, and lack of punishment all lead to monks' inappropriate behaviors and criticisms. At present, the conclusion of what monks should be like is based on the teaching of the Lord Buddha. That is, monks have a responsibility to study and practice *Dhamma*. In other words, monks study so as to be able to have correct practice and to advise others for purity of themselves and of the religious institution. As for their relationships with laypersons, monks are supposed to educate them, spread Buddhism, and give them assistance, which may require both secular and religious knowledge. Educating means monks teach and guide others to live a good life, while spreading Buddhism means monks help disseminate the practice of *Dhamma* in the society. Finally, giving assistance means monks provide helps as individuals needed with good intention and for the sake

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of these individuals' well being. All in all, monks have to perform their duties while preserving the honors, integrity, and purity of the religious institution (21).

Sophonwichetwong A. and Isriwan K. (22) point out that after ordination, Buddhist monks have to conform to the code of conducts specified in the *Doctrine-Discipline* as well as to fulfill their duties to the society.

Monks' duties as specified in the *Doctrine-Discipline*

This includes what is directly specified in the *Doctrine-Discipline* and what is specified by the monastic order. As a rule, monks need to comply with *Sila* or moral conducts, perform all their duties, study the Threefold Learning, administer the monastic order according to their positions, spread the religion both inside and outside the temple, restore the structures and buildings in the temple, and continue Buddhism. They can be monks for the rest of their lives, or they can be ordained for several *pansa* or rainy seasons before leaving their monkhood. They should help perform the ordination ceremony for those who have faith and want to become monks as well.

Monks' duties to society

Apart from their duties as specified in the *Doctrine-Discipline*, monks also have duties to society at large. This is because monks rely on society for their existence, and if society does not provide support to monks and the religion, the religion will finally disappear, as it was the case in some other countries. As regards monks' duties to society, monks have to teach society members to do only good deeds, stop doing bad deeds, having moral conducts, and apply religious teaching in their daily living. In addition, monks should organize medication and *Dhamma* practice sessions to help individuals achieve peace of mind and have enough wisdom to understand the truth of life. Monks should also support schools located on the temple ground and outside, perform religious ceremonies for individuals who come to the temple on religious holidays, and teach people to preserve historical sites and objects, develop their local community, and protect the fauna and flora in the environment.

A review of literature led to a conclusion that monks' duties as specified in the *Doctrine-Discipline* and their duties to society emphasize their significance as the representatives of the religion. If monks neglect to fulfill their duties, people will lose

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faith and respect in them and the religion, leading to deterioration of the religion in the society. This has already happened in some countries where Buddhism has been destroyed and disappeared. However, if monks strictly fulfill their duties as specified in the *Doctrine-Discipline* and contribute to society, Buddhism will become prosperous and indispensable. Monks will then become the spiritual center of society and the leader of spiritual and social activities in the community, and people will have strong faith in them. Inevitably, this leads to prosperity of Buddhism in society, as evidenced by religious structures and items which have been passed down from generation to generation. In short, monks are important as true representatives and the spreader of the religion.

Besides this, Sophonwichetwong A. and Isriwan K. (23) discuss monks' roles and duties to the people in different areas as follows:

1. Education

In the past, learning took place in palaces and temples only. In temples, monks were those who managed and provided education which was divided into three levels as follows:

1. Temple boys: This level was comparable to elementary education.
2. Novice monks: This level was comparable to secondary education.
3. Monks: This level was comparable to tertiary education. For this reason, after monks left monkhood, they would be called 'bandid' or 'tid' meaning 'graduates.' If they worked in letters in the palace, they were called 'rajbandid.'

Since the reign of King Rama VI, monks have been involved in provision of education for the people in a number of ways. For example, they let people use the buildings in the temple as a temporary school, they donate the land in the temple compound to build schools, they teach different subjects if there is shortage of teachers in the elementary level, they teach religious studies to students, they donate desks and other school necessities, and they provide room and board to poor students and let them study in the school. Also, monks set up and teach a religion school on Sundays for students and the general public to comply with the policy of the Ministry of Education.

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2. Physical and mental health

Monks constitute a group of people who play an important role is helping the people maintain their physical and mental well being. As for the former, they are traditional healers who provide herbal medicine to the people. This role continues to today especially in the remote communities where public healthcare is sparse. In addition, they also give advice on disease prevention and on maintenance of clean environment. As regards the latter, monks provide consultation to those who have sufferings or difficulties in life by teaching them ways to eliminate their sufferings or by telling them to consult academics, psychiatrists, lawyers, police officers, or government officials depending on the cases.

3. Ways of life

Monks provide help to people regarding their ways of life and professions. They teach them to appropriately perform their roles, to avoid gambling and drugs, and to do four good deeds of hard work, savings, selecting a good company, and not living life extravagantly. Monks are also a medium between the government and the public, providing cooperation in terms of being leaders in religious and traditional ceremonies in the community and providing venues for such ceremonies.

4. Community development

Monks are important persons who are able to provide assistance to the government and community members when it comes to community development. They are initiators and leaders in developing the community, acting as a coordinator by asking for assistance from the government and asking for donation from people's money and energy in constructing roads, digging wells, etc. They are also a medium who brings in facilities such as electricity and telephone connection into the villages for local development. Furthermore, monks recommend people to cooperate with the government to develop their quality of life by working hard, staying away from bad deeds, preserving the environment, and having unity in the community, etc.

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5. Social welfares and others

Monks are able to help people when it comes to social welfare. They use the temple as a temporary place of refuge for people who have been struck by natural disasters and giving them basic necessities. In addition, they provide opportunity for orphaned and underprivileged children to study in school. They teach workers how to be hardworking and faithful before they enter the workforce.

As for monks' duties, Lord Buddha taught monks to provide assistances to others in six ways:

1. Preventing them for committing a bad deed;
2. Teaching them to do only a good deed;
3. Providing help to others with loving kindness;
4. Giving them a chance to listen to what they have never listened to before;
5. Doing things that they have heard about before until clear understanding is achieved;
6. Directing them to heaven (teaching how to live their lives to reap consequences of good deeds and happiness).

Evidently, it can be concluded that the Lord Buddha had an intention to let monks work for the people with an aim to create happiness among them.

The frame of duties of Thai monks used at present was designated by the Sangha Supreme Council, and it was imposed as the Fourth Rules of the Sangha Supreme Council (B.E. 2506) regarding the administration of the monastic order. The amendments were done in 1972 and 1988 in items 9, 13, 17, and 21, designating the governing power of the Ecclesiastical Commune-Chief, the Ecclesiastical District Officer, the Ecclesiastical Provincial Governor, and the Ecclesiastical Regional Governor in item 2 to "control and support the maintenance of goodness and order, disseminate education and Buddhism, and provide public welfare." (24).

Based on this rule and regulation, the roles of monks can be divided into three aspects as follows:

1. Governing roles: administrating and taking care of monks, novice monks, and lay devotees within their governing district.

2. Educating roles: providing education to monks, novice monks, and laypersons.

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3. Disseminating roles: spreading the teaching of Lord Buddha among monks and the general public as well as restoring structures and buildings inside and outside the temple for the good of the general public.

In addition to this, Prarajvoramunee (Prayut Prayuto) (25) has suggested additional roles of monks based on the social condition and the teaching of Buddhism:

1. Cultural restoration and preservation roles: restoring and continuing cultural heritage of the country and supporting further development.

2. Environmental protection roles: solving pollution problems and doing things to restore and maintain natural balances.

Besides, Utto S. (26) studied the roles of monks in the next two decades and found that the roles of monks in the years to come should be the following:

1. Role to themselves: studying the *Doctrine-Discipline* until excellence is achieved.

2. Roles to the monk organization: keeping the temple quiet and clean appropriate for practice of the *Dhamma*, arranging a variety of activities in the temple, founding colleges to develop ecclesiastical administrative officers all over the country, and modernize the Monastic Order Act.

3. Roles to society: studying worldly subjects and the environment, teaching religion to people from all walks of life, providing consultation to people who have problems in life, educating and helping community members, coordinating with different groups to support and develop local intellects, and preserving the environment and natural resources.

As for appropriate roles monks should play in society in the next two decades, monks should learn about the social disciplines by seeking worldly knowledge, understanding changes in community and society, raising people's consciousness and teaching ethics to people from all social classes both inside and outside the temple, providing education to community members as needed, preserving natural resources and the environment, helping the underprivileged in the community, coordinating with people at different levels to support and develop local intellects, and support solving problems in groups.

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Monks' daily life activities (27)

When it comes to daily life activities, monks and novice monks have to comply with the *Discipline* which has been practiced for generations, which can be summarized as follows:

1. Paying respect to Buddha images before going to bed and after waking up;
2. Performing morning and evening chanting;
3. Listening to the Fundamental Precepts;
4. Listening to preaching of the *Dhamma*;
5. Studying to achieve understanding of the *Doctrine-Discipline*.

Regulations, orders, and announcements of the monastic order and the Sangha Supreme Council directly and indirectly related to monks' health promoting behaviors (24, 28)

1. The temple must control and support planting of trees in the temple and the monastery estate to create shadiness and peacefulness and to support the government's policy in preserving trees and jungles (Rules and orders of the Sangha Supreme Council, item 5, B.E. 2520).

2. Monks and novice monks are prohibited from using, taking, and injecting drugs whose ingredients and effects resemble those of alcohols and addictive drugs except for medical purposes as prescribed by doctors (Rules and orders of the Sangha Supreme Council, item 8, B.E. 2521).

3. Monks and novice monks are prohibited from performing the role of medical doctors (Announcement of the Monastic Order, item 10, B.E. 2499).

4. As for radio and television, monks are prohibited from listening to the radio or watching television too loudly; from listening to music, performances, boxing, or other entertainment which are forbidden according to the *Discipline* (Announcement of the Monastic Order, item 13, B.E. 2503).

5. Monks are prohibited from playing a musical instrument and watching entertainment (musical melodrama, movie, racy folk banter and song show, folk music, couple dance), which are considered an ecclesiastical offence in all cases, according to the monastic regulation, book 2, verse 14, page 6.

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6. Monks are prohibited from playing sports (boxing, chess), which are considered an ecclesiastical offence in all cases, according to the monastic regulation, book 2, verse 18, page 114.

7. Monks are prohibited from playing sepak-takraw, football, and weight lifting, according to the monastic regulation, book 2, verse 18, page 114.

8. Monks are prohibited from eating raw fish and a dish containing uncooked blood, according to the monastic regulation, book 2, verse 19, page 128-129.

In conclusion, it can be seen that some items in the regulations, orders, and announcement of the Monastic Order and the Sangha Supreme Council support health promoting behaviors of monks. However, there are some issues which are contradictory to health promotion in the present day society such as prohibition of sport activities or provision of traditional healings. At present, monks play an important role in giving healthcare to the general public, which is in congruence with the study of Nantavisarn T. (1) and the roles of monks in promoting the public's physical and mental well being as described by Sophonvichet A. and Israwan K.(23).

Concepts of Health Promoting Behaviors

Definition of concept of health promoting behaviors

Harris and Gluten (cited in 29) are the first persons to discuss health promoting behaviors. According to them, health behavior is a human behavior referring to activities or behaviors that individuals do on a regular basis to prevent diseases and promote health according to their belief to maintain good health and to show human potential.

Suwan P. and Suwan S. (30) define health behavior as general behaviors with an emphasis on health such as behaviors related to body cleaning such as taking a shower, brushing teeth, and washing hair, etc.

According to Palank (31), health behavior is a behavior individuals choose to do by themselves during each age group to maintain health and pride in themselves. Health prevention behaviors help decrease risks of diseases, while health promoting behaviors help increase health status.

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Anurak Y. et al. (32) define health behavior as practice or expression of individuals which involves doing or not doing what affects their health based on their knowledge, understanding, and practice which are appropriately related to one another.

Boonchuaykuekool J. (33) divides health behaviors into the following four aspects:

1. Promotive health behavior is a behavior individuals perform during a normal condition to promote their own good health.

2. Preventive health behavior is a behavior of an individual during a normal condition to prevent diseases and accidents.

3. Illness behavior is individuals' practices when they feel that something wrong has happened to them which can be divided into two phases: perceive phase, when they acknowledge what has happened to them, and take action phase, when they have responses to those abnormalities.

4. Sick role behavior is individuals' practice after they have learned of the diagnosis following the order or recommendations of healers to recover from the illness.

In summary, health behavior means individuals' behavior which aims at promoting and preventing bad effects on their health and making themselves healthy. There are different health behaviors, all of which are related to one another and are intended to maintain health.

Health promotion

The Ottawa Charter, World Health Organization, and health promotion scholars have defined health promotion as follows (34):

1. It is a process which increases individuals' ability to control different factors affecting health;

2. It empowers the people as it makes people have more power to make decisions and do activities which affect their health;

3. It is an organization of activities leading to changes in society, the environment, and economy so as to lessen the effects on public health and individuals;

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4. It is a system which enables utilization of resources related to education, society, and the environment to ensure individuals' good health behavior and to reduce risks of diseases.

Health promoting behaviors

Health promoting behaviors are defined differently as follows:

Gochman (cited in 35) defines health promoting behavior as overt behaviors of individuals to ensure good health regarding cigarette smoking, food intake, rest and relaxation, exercises, personality types, and drug use, etc. This also includes unobservable aspects that require other forms of assessments such as emotional states, beliefs, expectations, motivation, values, and perception, etc.

Kals and Cobb (36) point out that health promoting behavior refers to activities of those who believe that they have a good health to promote their health and prevent dangers.

According to Chantrapa W. (37), health promoting behavior is one behavior of human beings involving maintaining their body by having appropriate food intake and living in a hygienic state, knowing how to take care of and clean themselves, eating only useful food sufficiently, exercising appropriately, and having enough rest as the body needs.

Murry and Zentner (38) contend that health promoting behavior is an activity which individuals believe that will bring them good health and they actually do it. Doing those activities or having important behaviors to increase individuals' health status leads to happiness and utilization of highest potential of individuals, families, communities, and society.

Pender (13) states that health promoting behavior is activities of individuals or groups of individuals which aim at increasing individuals' quality of life—physically, mentally, socially, and spiritually—to ensure good health status of individuals, families, and communities.

Thus, it can be concluded that health promoting behaviors refer to activities of individuals which are done so as to promote good health status—physically, mentally, socially, and spiritually—that lead to happiness in life and highest potential of

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individuals, families, communities, and society, which are both observable and unobservable.

In the present study, health promoting behavior refers to practices or expressions of monks in doing or avoiding doing what affects their health to ensure good status physically, mentally, socially, and spiritually and to lead a good and happy life in the society. This was assessed with the Health Promoting Questionnaire developed by the researcher based on Pender's concept and a review of related literature involving four aspects of health, that is, food intake, smoking, exercises, and annual physical health check-ups.

Food intake

Food is one of the four basic necessities in life. Eating nutritious foods promotes health, and eating inappropriately can be harmful to health.

Monks are adults who are 20 years old and older. At this age, they have less physical development, but the body still needs sufficient nutrition—in both quality and quantity to strengthen and supplement the body and to give the body the energy it needs. If monks do not have sufficient food intake, they may experience malnutrition. On the other hand, if they have too much food intake, they may suffer from such diseases as heath disease, high blood pressure, and diabetes, etc. (39).

In Thailand, Nutrition Division, Health Department, Ministry of Public Health, and the Nutrition Research Institute, Mahidol University (40) have set up "Appropriate Food Intake for Good Health of the Thai People" as follows:

1. Eating all five food groups, with variation in each group, and keeping track on body weight.
2. Eating rice as a staple food, and eating other carbohydrates in some meals.
3. Eating a lot of vegetables, and eating fruits regularly.
4. Regularly eating fish, meat with no fat, egg, and dried beans.
5. Drinking milk as appropriate to age.
6. Eating fatty foods in a moderate amount.
7. Avoiding foods which are too sweet or salty.
8. Eating foods with no contamination.
9. Avoiding or lessening alcohol intake.

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A review of literature has led to a conclusion that monks should have the following food intake:

1. They should have all five food groups with appropriate quality and quantity because on each day monks are allowed to eat only two meals.

2. Monks should avoid foods high in fat content, especially fried foods or food containing coconut milk.

3. Monks should eat food high in fiber such as fruits and vegetables every day.

4. They should avoid foods with high sugar and salt content, as well as foods which can cause diseases such as uncooked meat.

5. Monks should not drink anything that contains alcohol and caffeine such as tea, coffee, energy drink, and carbonated drinks.

Smoking

There are a large number of monks who smoke, and smoking has become a lot of monks' habit. Some started smoking when they were laypersons because they wanted to try or wanted to be like their peers. Others became addicted to cigarette smoking because they have a lot of free time after becoming monks, because people offer cigarette to them, and because they do not have any food intake after noon. A study of Chanprateep W. and Pattasawat K. (41) found that 69.6% of sick monks smoked everyday, 16.8% smoked 2-3 times a day, 42.3% smoked 6-10 cigarettes a day, 30.9% smoked 1-5 cigarettes a day, and 25.9% smoked more than 11 cigarettes a day. On average, monks smoked 10 cigarettes a day. In addition, 76.8% started smoking when they were 14-23 years old, and 15.1% started smoking when they were 7-13 years old. On average, they started smoking when they were 18 years old. Moreover, 28.3% had been smoking for more than 31 years, 25.3% had been smoking for 21-30 years, and on average they had been smoking for 25 years. In terms of cessation of smoking, 18.6% never tried to quit smoking, while 81.4% had tried to quit smoking to no avail. Finally, 61.7% of them had a family member who also smoked. Nammuang S. (12) found that 40% of sick monks and novice monks had smoking behavior at a moderate level, 31.3% at a high level, and close to half, or 41.88%, smoked 10-19 cigarettes per day. Furthermore, 38.8% of them ranged in age from 41 to 60 years old, 30.6% were older than 60 years old, and 25.6% had been smoking for

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less than 10 years. When considering age groups, it was found that 74.4% had been smoking for more than 10 years, and a quarter of them had been smoking for more than 40 years. Also, 81.25% had been successful quitting smoking. As for influential factors, 58.1% wanted to quit smoking on their own, but most of them were able to quit smoking for six or seven months before they resumed the habit. A study of Wongkraisrithong K. (42) found that 53.5% of monks in Bangkok smoked cigarettes. The most influential factor which was related to their smoking habits before ordination was having a family member who smoked. After ordination, it was found that monks who practiced *Dhamma* smoked less than those who did not have such practice. Finally, Srinual K. (8) found that most of the monks started smoking before ordination because they wanted to try and because they had a family member who smoked.

In the present study, the smoking habit of monks was studied, and it was divided into smoking, not smoking, and used to smoke.

Exercises

Even though monks cannot exercise like other people due to the controlling rules and regulations, a review of literature indicated that there are many activities monks can regularly perform which involve continuously moving their body for more than 20 minutes for more than three times a week. These activities include walking, asking for food in alms bowls, scraping and cleaning the ground, gardening and watering plants, cleaning the shrine, etc. Ajarn Monkol Chaidee, Head of Sports for Health Division, Sport Sciences Department, the Sports Authority of Thailand, and Ajarn Rachel Daipholthanya, Head of Research, Sports Development and Support, the Sports Authority of Thailand, state that these activities can be considered exercises for health (9). In the present study, practices or activities of monks which involved bodily movement for more than 20-30 minutes for more than three times a week were studied as they could positively affect monks' health.

Annual physical examination

Monks are adults who are unable to avoid sickness and physical deterioration. It can be seen that at present a large number of monks are sick because of inappropriate health behaviors. Therefore, an annual physical examination is

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necessary for every monk, even though there is no rule or regulation on this. An annual physical examination indicates signs of abnormality, resulting in early prevention. However, some monks still have a misunderstanding that an annual physical examination is difficult, inconvenient, and time-consuming. A study of Wimala S. (9) found that 60.3% of monks have this health behavior at a low level. Therefore, this was selected as one of the variables in the present study. In this study, monks' behavior in seeking a physical examination in the previous year would be studied, and this included blood pressure measurement, weight measurement, height measurement, blood test, chest x-ray, and urine test done by medical personnel.

Theories used in the present research

Many researchers share interests in behaviors related to health, especially health promoting behaviors. One thing that can lead to health promoting behavior is health adaptation. As such, a number of researchers have proposed theories which can be sued in health adaptation such as the Health Belief Model, explaining the factors influencing disease prevention behavior; the Health Action Model, explaining the factors which influence general health behaviors; and the PRECEDE-PROCEDE model, explaining the factors influencing health behavior and health planning. These models all emphasize disease prevention or only one aspect of human behaviors, but they do not cover all behaviors of individuals. However, a study of Pender's health promotion model revealed that this model proposes an explanation of all human behaviors rather than any aspect in particular. Its concept combines nursing sciences and behavioral sciences, and it recognizes the biopsychosocial factor in explaining human behaviors comprehensively and holistically. This is because individuals are seen as a composition of body and mind which interacts with various environments in the society. It also emphasizes individuals' need to exist to maximize happiness, health, and quality of life, and this is an important motivation for individuals to develop health promoting behavior, not because they want to avoid diseases. Thus, Pender's Health Promotion Model was selected as a conceptual framework in the present study, with its detail as follows:

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Health Promotion Model

A Health Promotion Model of Nola J. Pender has been developed since 1980. A health promotion pattern was first introduced in 1987 (29). Generally speaking, it is a combination of nursing sciences and behavioral sciences aiming at explaining and predicting individuals' health promoting behavior. Its influences include the Social Learning Theory which emphasizes the significance of the thinking process, intellectuality, and perception of individuals in changing behaviors and the Expectancy-Value Theory which indicates that individuals will change when they realize that such change is valuable or useful to them. Pender believes that health promoting behavior results from motivation to increase one's health status. Also, whether individuals will practice health promoting behavior continuously until it becomes part of their living pattern depends on three factors: 1) the cognitive-perceptual factor, 2) the modifying factor or background factor, and 3) cues to action. As for health promoting behavior, Pender has developed the Lifestyle and Health-Habits Assessment (LHHA) to assess ten aspects of behaviors: general competence in self-care, nutrition practices, physical or recreational activity, sleep patterns, stress management, self-actualization, sense of purpose, relationship with others, environment control, and use of healthcare system. After the development of the health promotion model, Pender found that individuals still lacked motivation to perform health promoting behaviors and that the model could not be used with individuals in all age groups. Also, some concepts contained in the model could not explain certain phenomena relating to health promoting behavior. In 1996, Pender, therefore, revised and improved a new health promoting model based on research findings on factors influencing health promoting behaviors in different groups of population which has become a foundation for the current health promotion model as follows (43):

1. Individuals try to create living condition for good health of all.

2. Individuals have an ability to think or reflect to get to know themselves better and to assess their own capability.

3. Individuals value positive growth and try to maintain balance between changes and stability.

4. Individuals try and are eager to adjust their behavior.

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5. Individuals is a holistic being of body, mind, society, and spirit, all of which interact with the environment and change the environment to suit them, while at the same time they are changed by the environment as well.

6. Healthcare personnel are part of the individual environment which has an influence on individuals during different phases of life.

7. In adjusting their behaviors, individuals need to initiate their interactive pattern with the environment.

Such beliefs suggest that service users are those who play a significant role in determining and maintaining health behavior and in adjusting the environment to suit health promoting behaviors (34).

Main factors in the health promotion model

The health promotion model consists of the following three main factors (13, 34, 43):

1. Factors related to individual characteristics and experiences: Each individual has his or her own characteristics and experiences which affect the following actions. This consists of two sub-factors:

1.1 Prior related behavior is the behavior that individuals used to have in the past. It can have both direct and indirect influence on health promoting behavior. As for direct influences, it may result from becoming a habit making the individuals develop and have such behavior automatically without paying too much attention to the details of the practice. The more individuals have such behavior, the more the behavior becomes ingrained. As for indirect influences, it affects health promoting behavior through perceived benefits of action, perceived barriers of action, perceived self-efficacy, and related emotions. This can be explained based on a social learning theory that practical behavior and feedback from such behavior are important sources of information that enable individuals to perceive their own capability. Moreover, expected benefits or the actual benefits of the practice of such behavior are outcome expectation. If the benefits are short-term and immediate, individuals tend to perform the behavior repeatedly. In addition, in order to perform the behavior successfully, individuals need to overcome obstacles they used to have and they have memorized. In terms of emotion, it was found that any practices or behaviors tend to

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be accompanied by some form of emotion, either positive or negative, which may take place before, during, or after the action. These emotions will be recorded in individuals' memory as data which will be drawn upon when the behaviors are considered later on.

1.2 Personal factors are a predictor of target behavior which are adjusted and considered naturally. They are influential factors which directly affect the emotions and thinking specifically related to the behaviors and health promoting behavior, which are divided into three aspects:

1.2.1 Personal biological factors include age, gender, body weight, body mass index, reproductive state (such as teenage, menopause), ability to work continuously, strength, agility, and balance, etc.

1.2.2 Personal psychologic factors are self-esteem, motivation, personal capacity, health definition, and perceived health status, etc.

1.2.3 Personal sociocultural factors include race, ethnicity, citizenship, cultural identity, education, economic status, and social status, etc.

According to Pender, individual factors have direct influence on emotions and ideas specifically related to behavior and health promoting behavior. However, some individual factors are unable to adjust, so they are not used in changing health behavior of individuals. In addition, some actors have an influence only on some behaviors. Thus, the selection should include only the factors that have theoretical support confirming their ability to explain or predict health promoting behavior. In the present study, only some of the factors were selected: personal biological factors (age, number of years being ordained, status in the temple), personal sociocultural factors (educational background, level of religious studies, financial status), and personal psychologic factors (reasons for ordination and perceived health status).

2. Behavior-Specific Cognition and Affect Factors are factors which cause the most motivation leading to adaptation of health behaviors. They consist of the following:

2.1 Perceived benefit of action. When individuals plan to do any behavior, they tend to estimate the benefits they will receive or the outcomes that may result from such behavior. Such estimation is the expectation of the positive outcomes or the reinforcing outcomes of such behavior based on individuals' direct experience or

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individuals' observation of others' experiences. It is likely that individuals will adopt such behavior if they feel that it will yield positive effects. These benefits include inner benefits such as increased eagerness and reduced exhaustion and outer benefits including rewards or social interaction. Perceived outer benefit is an important stimulus of individuals to adopt a behavior, while perceived inner benefit is a stimulus that enables individuals to continue such behavior incessantly. Thus, perceived benefit of action has both direct and indirect effects on health promoting behavior. As for direct effect, it motivates individuals to perform health promoting behavior; as for indirect effect, it influences individuals to continue the behavior as planned. However, the extent of the influence depends on the importance of such perceived benefit, the duration during the practice, and the actual benefit received.

2.2 Perceived Barrier of Action is an estimation of different obstacles that hinder the practice of health promoting behavior which affects individuals' intention and actual practice. These obstacles may be what individuals imagine or may actually exist such as inappropriateness, inconvenience, expenses, difficulty, waste of time, etc. Perceived barrier of action stimulate individuals to avoid practice health promoting behavior especially when they lack readiness for practice and when they have high perceived barrier of action. However, if they have high readiness and low perceived barrier of action, they are more likely to perform such practice. Perceived barrier of action has a direct influence on health promoting behavior as it hinders the practice of such behavior. It also has an indirect influence as it decreases the commitment to a plan of action.

2.3 Perceived self-efficacy is a judgement of individuals' ability to successfully perform an action regardless of individuals' skills for such action. Instead, it is a consideration which behaviors individuals are able to perform. The judgement of individuals' ability can be seen from outcome expectation. In other words, perceived self-efficacy is a judgement of individuals in successfully completing a behavior, while outcome expectation is a judgement of the outcomes that will result from such behavior. Perceived self-efficacy is an important motivation for individuals to perform the target behavior. Individuals who have perceived self-efficacy are more able to perform target behavior than those who do not. Perceived self-efficacy of individuals is based on four factors: 1) such action can reach the

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standard individuals set or is responded to by others; 2) an observation of others' behaviors and responses received can be used to draw individuals' own conclusion; 3) others' persuasion enables individuals to draw on their own capability to do such activity; and 4) physical conditions such as anxiety, fear, anger, and calmness can be used by individuals to judge their own capability. According to the health promoting model, emotions relating to behavior is an factor that directly influences perceived self-efficacy. If individuals have more positive feelings or emotions, they are likely to have higher perceived self-efficacy. In addition, perceived self-efficacy has a direct influence on perceived barrier of action. The more perceived self-efficacy individuals have, the less perceived barrier of action they have. Perceived self-efficacy also has both direct and indirect influences on health promoting behavior through perceived barrier of action and a commitment to a plan of action.

2.4 Activity-related affect is individuals' emotion or feeling which takes place before, during, and after performing a behavior. These emotions are defined according to individuals' knowledge and understanding, and they are stored in individuals' memory, which will affect their ideas about such behavior later on. Emotional responses to the behavior of individuals are composed of three components: 1) activity related responses, 2) self-related responses, and 3) the environment while doing such behavior. Emotions or feelings which take place as a result of the behavior can be either positive or negative, which can affect individuals' choice of repeating or not doing such behavior again. That is, individuals will practice the behavior that is related to positive emotions again, while avoiding the behavior related to negative emotions. Activity-related affect has both direct and indirect influences on health promoting behavior through commitment to a plan of action.

2.5 Interpersonal influences are feelings related to behaviors, beliefs, and attitudes of others. These feelings may or may not resemble the truth. The most important sources of interpersonal influences affecting individuals' health promoting behaviors are families, friends, and healthcare personnel, as well as social norms, social support, and models. Social norms specify practice standard that most people accept or do not accept. Social support is a resource which supports the maintenance of behavior, while the model can point out the sequence of health behavior, and it is also a significant strategy needed in changing behaviors. Interpersonal influences

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have direct effect on health promoting behavior. They also have indirect influence through social pressure or stimulation to perform the behavior as planned. These vary among individuals in terms of sensitivity to desire, models, and praises from others. However, if there is enough motivation, individuals will practice what is congruent with the influence of others, most of which are those praised and supported by society.

2.6 Situational influences are perceptions and thinking of individuals about the situation or context related to behavior which can promote or hinder practice of the behavior including perception of available options, characteristics of needs, and environmental pleasure which lead to such behavior. Situational influences have both direct and indirect influences on health promoting behavior through commitment to a plan of action.

3. Behavioral outcomes. Intention to plan for action is the origin of behavior. Intention is what motivates individuals to start and complete the behavior unless there is some form of intervention which individuals cannot avoid or which individuals find more desirable, preventing them from practicing the behavior as planned including:

3.1 Commitment to a plan of action is a factor which pushes individuals to initiate and carry on the behavior until the end except they have other needs. Commitment to a plan of action is a process which requires knowledge and thinking of: 1) an intention to perform a specific behavior in the specified time and place with others or alone without thinking of other things, and 2) an idea about definite strategies or ways to successfully perform and reinforce the behavior, which is necessary as an intention alone without any appropriate method may not result in successful practice of behavior.

3.2 Immediate competing demands and preferences refer to optional behaviors which immediately intervene before individuals perform health behavior as planned. They are different from barriers because they are unexpected or unplanned depending on external needs or coincidences in the environment over which individuals do not have much control such as urgent work or family care which individuals need to comply with to prevent bad consequences on themselves or others. Other preferences, on the other hand, refer to optional behaviors which have more powerful force or yield better outcomes, thus causing individuals to quit doing health promoting behaviors. However, individuals can gain considerable control over their other preferences based

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on their ability of self-control which varies among individuals. Immediate demands and preferences directly affect individuals' chances to practice health promoting behaviors and their commitment to a plan of action. However, if individuals have strong commitment to a plan of action, they may be able to eventually complete the behaviors despite their immediate demands and preferences.

3.3 Health promoting behaviors are the final target or outcomes in the health promotion model. If individuals can continuously practice health promoting behaviors by integrating them into their daily lifestyle, they will be able to maintain a good health for the rest of their life, as shown in Figure Two.

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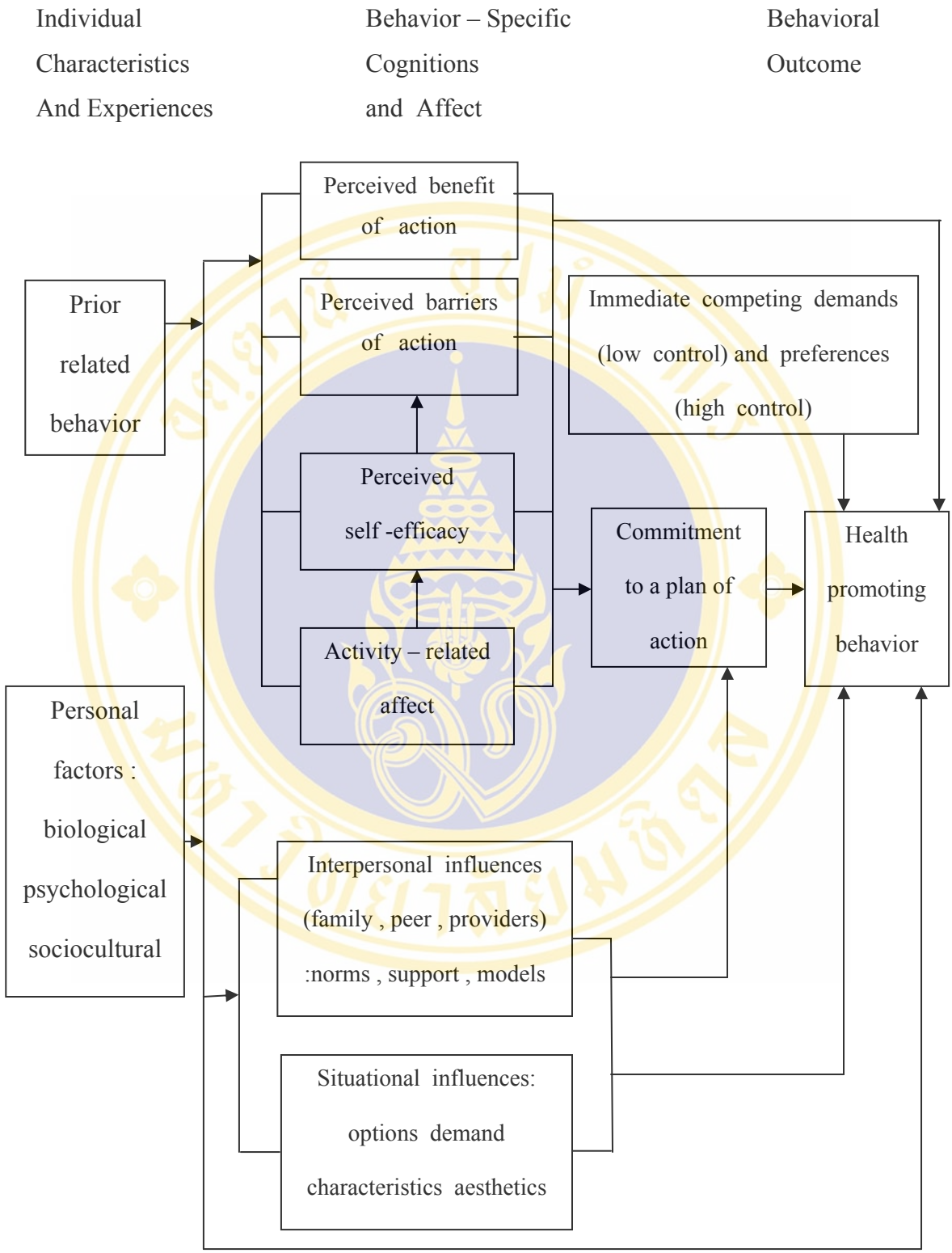

Figure 2 Pender's Health Promotion Model

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Factors affecting health promoting behavior

In the present study, the researcher chose to study different factors which affect monks' health promoting behavior based on Pender's concept. As for demographic characteristics and experiences of the subjects, only some of the individual factors which theoretical support that they can explain or predict health promoting behavior were selected: personal biological factors (age, gender, number of years being ordained, status in the temple), personal sociocultural factors (educational background, level of religious study, economic status), and personal psychologic factors (reasons for ordination and perceived health status), as well as factors related to ideas and feelings toward behavior (perceived benefit of action, perceived barrier of action, and perceived self-efficacy). Each of them is discussed in detail as follows:

Age

Age is a fundamental factor which indicates differences in developmental stage-physically and mentally. Age is an indicator of maturity and interest in handling the environment, mental state, and perception. Age also influences individuals' ability to take care of themselves, which increases to the maximum when individuals become full-grown and starts to decline when individuals reach their old age (44). A study of Petchthong J. (16) which investigated factors influencing health promoting behaviors of provincial police officers in Suphanburi Province revealed that age was related to health promoting behavior and could co-predict health promoting behaviors of the subjects. In addition, Pusanasuwansri D. and Tienvichit T. (10) examined healthcare behaviors of monks who furthered their studies at Mahamongkut Royal College and Jittapawan College and found that those who were 40 years old or older had better health promoting behaviors than those who were younger than 40 years of age with statistical significance at the 0.05 level. Moreover, Chaisamesang N. (17) investigated factors influencing health promoting behaviors of military officials stationed in Lopburi Province and found that age was associated with health promoting behaviors. A statistically significant relationship between age and health promoting behaviors was also confirmed in a study of Sukkasem P.(18) exploring health promoting behaviors of employees of insurance companies in Bangkok ($p < 0.05$). Besides this, Nammuang S. (11) studied factors associated with smoking behavior of sick monks

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and novice monks seeking treatment at the Monk Hospital and discovered that age was associated with smoking behavior of monks. In addition to these studies, Muchlencamp and Broerman (45) found that age had a slight indirect effect on lifestyle promoting health. However, Srinual K. (8) explored factors influencing smoking behaviors of monks residing in Ratchburi Province and found that age was not associated with health promoting behaviors. Likewise, Wimala S. (9) conducted a study on factors influencing health promoting behaviors of monks in Chiang Mai Province and found no relationship between smoking and health promoting behavior. Chaitham A. (46) also found no relationship between age and health promoting behaviors of patients with high blood pressure seeking treatment at Chaturapakpiman Hospital in Roi Et Province. Finally, Kanchanapibul N. (15) studied a relationship between individual factors, perceived health status, and health promoting behaviors of old males living in a slum in Khlong Toey District, Bangkok, and found no relationship between age and health promoting behaviors.

Number of years being ordained

Srinual K. (8) carried out a study on factors affecting smoking behavior of monks in Ratchburi Province and found that the number of years being ordained was associated with smoking. This finding was in congruence with the finding of Nammuang S. (11) who investigated factors related to smoking behavior of sick monks and novice monks seeking treatment at Monk Hospital. In contrast, Wimala S. (9) found a contradictory result in his study of factors influencing health promoting behaviors of monks residing in Chiang Mai Province.

Status in the temple

The status in the temple indicates monks' responsibilities toward other monks who share their residence. In general, individuals play the role according to their perception and the value given by the society. This leads to individuals' development of self-esteem, a basic foundation of self-concept leading to satisfaction or dissatisfaction, strength or weakness, and achievement. Thomas et al. (cited in 43) conducted a study with 323 secondary students and found that female students were more concerned with self-concept and acceptance than male students, and these were

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related to dissatisfaction and stress. Similarly, Parent and Whall (cited in 47) found that the elderly people who had high self-esteem realized the significance of good health more. Put another way, variation in individuals' roles and responsibility may be one factor which makes individuals manage the time they have available in each day, and this means that they have less time to rest and relax. As such, they have less time to practice health behaviors, hence a factor hindering health promotion.

Educational background

Educational background has different influences on individuals' health behaviors. In general, highly educated individuals tend to have more knowledge and correct practice than those who have a lower level of education (48). According to Ruth (49), individuals who are not highly educated tend to have problem understanding the diseases and healthcare. Muhlenkamp (50) also found a positive relationship among social support, self-esteem, and health promoting lifestyle. Likewise, Lusk, Kere, and Ronis (51) discovered that individuals with college education had higher scores on health responsibilities, exercises, food intake, and stress coping than those with a lower level of education. Support can be found in a study of Srinual K. (8) who indicated that educational background and level of religious studies were associated with smoking behavior of monks in Ratchburi Province. Petchthong J. (16) studied factors affecting health promoting behaviors of provincial police officers in Suphanburi Province and found that educational background was related to health promoting behavior of police officers and could co-predict their health promoting behaviors. In addition, Pusanasuwansri D. and Tienvichit S. (10) examined healthcare behaviors of monks who furthered their studies at Mahamongkut Royal College and Jittapawan College and found that those who completed secondary education or higher had better food intake behavior than those who graduated from elementary school or lower with statistical significance at the 0.05 level. Chaitham A. (46) also found a statistically significant positive relationship between educational background and health promoting behaviors of patients with high blood pressure seeking treatment at Chaturapakpiman Hospital in Roi Et Province ($p = 0.05$ level). Moreover, Kanchanapibul N. (15) studied a relationship between individual factors, perceived health status, and health promoting behaviors of old

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males living in a slum in Khlong Toey District, Bangkok, and found the same positive relationship. This finding was congruent with the finding of Nammuang S. (11) who investigated factors related to smoking behavior of sick monks and novice monks seeking treatment at Monk Hospital. However, Wimala S. (9) found no relationship between education background and health promoting behaviors of monks residing in Chiang Mai Province.

Financial status

Financial status is an important factor which influences individuals' potential to perform self-care. Individuals who are well-off are better able to take care of themselves such as finding sufficient quality food for themselves, gaining access to different health services, and buying materials to facilitate their own self-care (52). As a consequence, those who have problems earning their income tend to have problems maintaining and promoting their health; thus, they are more likely to be stricken with bad health or sickness (53) . Also, when they are sick, they may not have enough money to find treatment and restore their health, hence further health deterioration. A study of Suppanyu O. (54) indicated that income was positively associated with health promoting behavior with statistical significance. Furthermore, Chaisamesang N. (17) investigated factors influencing health promoting behaviors of military officials stationed in Lopburi Province and found that income was associated with health promoting behaviors and was one co-predictor of health promoting behaviors. Similar findings were found in a study of Chaitham A. (46) who examined factors affecting health promoting behaviors of patients with high blood pressure seeking treatment at Chaturapakpiman Hospital in Roi Et Province ($p = 0.05$ level). On the contrary, Petchthong J. (16) studied factors affecting health promoting behaviors of provincial police officers in Suphanburi Province and found that income was not related to health promoting behavior of police officers. Likewise, Promlai J. (55) conducted a study to explore factors affecting health promoting behavior of officials working in District 3, Community Development Department, Ministry of Interior, and discovered that there was no relationship between income and health promoting behavior. This finding was in agreement with the finding of Nammuang S. (11) who

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investigated factors related to smoking behavior of sick monks and novice monks seeking treatment at Monk Hospital.

Reasons for ordination

Wimala S. (9) studied factors influencing health promoting behaviors of monks residing in Chiang Mai Province and found that reasons for ordination were associated with health promoting behaviors with statistical significance at the 0.05 level.

This finding was in agreement with that of Pannengpetch Y. (56) investigated monks' consumption of the four basic factors of life and discovered that there was a relationship between consumption of the four basic factors of life and reasons for ordination.

Perceived health status

Individuals' perceived health status is a foundation which leads to ways of practice and a significant factor determining health behavior. Pender (29) explains that perceived health status is an important component related to frequency and attention in doing health promoting behavior. Individuals who have good perceived health status tend to have more health promoting behavior than those who think that they do not have a good health. A study of Promtanjai P. (14) on factors affecting health promoting behaviors of industrial factory workers revealed that there was a positive relationship between perceived health status and health promoting behaviors. In addition to this, Wimala S. (9) studied factors influencing health promoting behaviors of monks residing in Chiang Mai Province and found that perceived health status was positively associated with health promoting behaviors with statistical significance at the 0.05 level. Similarly, Promlai J. (55) conducted a study to explore factors affecting health promoting behavior of officials working in District 3, Community Development Department, Ministry of Interior, and discovered that there was a relationship between perceived health status and health promoting behavior , Charoensuk B. (57) examined the relationship between selected factors and health promoting behaviors of middle-age population in the municipality of Suphanburi Province and found that there was a relationship between perceived health status and health promoting behaviors. A similar finding was found in a study of Chaisamesang

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N. (17) on factors influencing health promoting behaviors of military officials stationed in Lopburi Province . Also, Phasuk L. (58) found a positive relationship between perceived health status and health promoting lifestyle of professional nurses working in public hospitals in Bangkok. Moreover, Kanchanapibul N. (15) studied a relationship between individual factors, perceived health status, and health promoting behaviors of old males living in a slum in Khlong Toey District, Bangkok, and found a positive relationship between perceived health status and health promoting behaviors. As for studies conducted in other countries, Horgan (59) studied a relationship between perceived health status and health behaviors of the elderly and found that correct perceived health status made the elderly had correct health behaviors. Finally, in a study on perceived health status and activity levels of the elderly who were able to perform self-care, Magnani (cited in 60) found that perceived health status was positively related to levels of activity with statistical significance at the $p < 0.01$ level.

Perceived benefit of action of health promoting behavior

Perceived benefit of action of health promoting behavior refers to individuals' ideas or understanding of positive outcomes of practicing health promoting behaviors. Individuals plan for any behaviors when they consider the benefits and expect to reap such benefits, thus creating the motivation to practice such behaviors (43). A study of Ngoakasem S. (61) studied a relationship between selected factors and health promoting lifestyle of professional nurses of Public Health Service Center, Health Office, Bangkok Metropolitan, and discovered that perceived benefit of action of practicing health promoting behavior was positively related to nurses' health promoting lifestyle with statistical significance at the 0.01 level. Petchthong J. (16) studied factors affecting health promoting behaviors of provincial police officers in Suphanburi Province and found that perceived benefit of action was positively related to health promoting behavior of police officers and could co-predict health promoting behavior of police officers. Similarly, Limprasut P. et al. (62) investigated health status and health promoting behaviors of the elderly in Pitsanuloke Province and found a positive relationship between perceived benefit of action and health promoting behaviors of the elderly. Similar findings were found in a study of Chaitham A. (46) who examined factors affecting health promoting behaviors of patients with high

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blood pressure seeking treatment at Chaturapakpiman Hospital in Roi Et Province (p = 0.05 level). In addition, Sukkasem P. (18) explored health promoting behaviors of employees of insurance companies in Bangkok and found that perceived benefit of action was positively related to health promoting behaviors and was the variable that could best predict health promoting behavior. Finally, Nammuang S. (11) investigated factors related to smoking behavior of sick monks and novice monks seeking treatment at Monk Hospital and discovered that perceived benefit of action was statistically significantly related to smoking behavior of monks at the 0.05 level.

Perceived barrier of action of health promoting behaviors

Pender (43) has proposed the concept of perceived barrier of action of health promoting behaviors, stating that it is influenced by the Health Belief Model which contends that individuals will perform health promoting behaviors after they have considered existing perceived benefit of action and perceived barrier of action. If they find that health promoting behavior will lead to more benefits, they will then decide to perform such behavior. A study of Pathaisophon S. (63) on health promoting behaviors of public health officials in Uthathani Province indicated that perceived barrier of action was statistically significantly associated with health promoting behaviors of these officials. Moreover, Petchthong J. (16) studied factors affecting health promoting behaviors of provincial police officers in Suphanburi Province and found that perceived barrier of action was related to health promoting behavior of police officers and was the best predictor variable of health promoting behavior of these police officers. A similar finding was found in a study of Chaisamesang N. (17) on factors influencing health promoting behaviors of military officials stationed in Lopburi Province. Also, Limprasut P. et al. (62) investigated health status and health promoting behaviors of the elderly in Pitsanuloke Province and found a positive relationship between perceived barrier of action and health promoting behaviors of the elderly subjects. Likewise, a study of Chaitham A. (46) which examined factors affecting health promoting behaviors of patients with high blood pressure seeking treatment at Chaturapakpiman Hospital in Roi Et Province showed that perceived barrier of action was negatively associated with health promoting behavior with statistical significance (p = 0.05 level). In addition, Sukkasem P. (18) explored health

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promoting behaviors of employees of insurance companies in Bangkok and found that perceived barrier of action was positively related to health promoting behaviors. Finally, Nammuang S. (11) investigated factors related to smoking behavior of sick monks and novice monks seeking treatment at Monk Hospital and discovered that perceived barrier of action was statistically significantly related to smoking behavior of monks at the 0.05 level.

Perceived self-efficacy

Perceived self-efficacy links individuals' knowledge about problem solving with their attempt to solve the problems (64). Thus, even though individuals realize the significance of certain behaviors, they will not perform such behaviors if they lack confidence. In addition to practice, perceived self-efficacy also affects individuals' attempt and perseverance to perform the behavior. Yamchanchai W. (65) studied a relationship among perceived self-efficacy, perceived health status, and health promoting behaviors of the elderly and found that perceived self-efficacy was related to the elderly's health promoting behaviors. Furthermore, Petchthong J. (16) studied factors affecting health promoting behaviors of provincial police officers in Suphanburi Province and found that perceived self-efficacy was related to health promoting behavior of police officers and was the best predictor of health promoting behavior of these police officers. These findings were in agreement with Weitzei (66) who used the perceived self-efficacy questionnaire to assess perceived self-efficacy in practicing health promoting behaviors of university employees and discovered that perceived self-efficacy could predict health promoting behaviors of the subjects. The findings of Sherer et al. (67) also showed that perceived self-efficacy was the most important factor which could predict health promoting lifestyle of each group of subjects. In addition to this, Promlai J. (55) conducted a study to explore factors affecting health promoting behavior of officials working in District 3, Community Development Department, Ministry of Interior, and discovered that there was a relationship between perceived self-efficacy and health promoting behavior. A similar finding was found in a study of Chaisamesang N. (17) on factors influencing health promoting behaviors of military officials stationed in Lopburi Province. In this study, perceived self-efficacy was also found to be the best predictor of health promoting

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behaviors. Likewise, Limprasut P. et al. (62) investigated health status and health promoting behaviors of the elderly in Pitsanuloke Province and found a positive relationship between perceived self-efficacy and health promoting behaviors of the elderly. Finally, Sukkasem P. (18) explored health promoting behaviors of employees of insurance companies in Bangkok and found that perceived self-efficacy was positively related to health promoting behaviors and was the variable that could best predict health promoting behavior.

Related researches

Related research on health promoting behavior of monks

A review of literature showed that there were a small number of studies conducted on health promoting behavior of monks, and these studies emphasized only certain aspects of the behavior. Some examples of existing research studies are as follows:

Chantrapanon A. et al. (68) investigated food consumption of Buddhist monks in 1974 to determine how the food offered to the monks could appropriately promote the monks' health. The subjects were monks resided in 54 temples in Bangkok and other provinces. Of the 236 monk subjects, 96 resided in 24 temples in the northern, northeastern, eastern, and southern parts of the country, while the other 140 monks lived in 30 temples in Bangkok. A laboratory test on nutritional values of the food was conducted with 20% of the weight of each type of food consumed by monks was collected as sample. As for drinks, information was recorded in a form which included explanation. Body weight and height measurement was also conducted at 11:00 a.m. before mealtime or in the evening. Monks were also requested to record all activities they performed during the 24 hours of each day in the form for all day activities. The findings of this study were as follows:

1. The food monks ate each day had higher calories than what the body needed according to their age, body weight, and their daily activities, ranging from 467 to 2,362 kilocalories. These excess calories were stored as body fat, making their body weights increased by 67-337 grams per day or 0.47 to 2.36 kilograms per week if the eating, drinking, and energy exerting pattern continued. Most of the energy came from drinks, especially the drinks the monks had after noontime, which was equal to

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1,385 kilocalories per monk on average. A calculation of the energy from food the body needed based on each monk's age, body weight, and 24-hour activities indicated that each monk needed only 1,860 kilocalories a day on average. This meant that the energy from the drinks taken after 12:00 p.m. was equal to 74.5% of the total energy the body needed in one day.

2. The foods monks ate were high in carbohydrates but low in protein.

3. The foods monks ate lacked various nutritional values that promote health such as protein, calcium, vitamin A, thiamine, and riboflavin.

4. The food monks ate consisted mainly of rice, rice products, and sugar, with a low content of meat, egg, vegetables, and fruits.

Wongkraithongsri W. (42) studied factors affecting the smoking habit of 603 monks residing at a temple in Bangkok in 1985. The findings revealed that more than half, or 53.6%, of the monks were between 35 and 39 years of age. Most started smoking when there were teenagers aged15-19 years old. Most of them smoked more before becoming monks. The study also found that the factors related to smoking before ordination were marital status, parents' occupation, own occupation, and having a family member of smoked. On the other hand, the factors related to smoking after ordination were practice of *Dhamma* and morning and evening chanting. In particular, monks who practiced *Dhamma* smoked less those who did not have such practice. By the same token, monks who performed morning and evening chanting more frequently smoked less than others. All in all, the main reasons for smoking both before and after ordination were wanting to try and wanting to be like friends. As for smoking cessation behavior, for those who smoked, they smoked 10 to 14 cigarettes everyday. Also, 84.9% tried to quit smoking to no avail because of smoking had become an ingrained habit and they would become easily irritable when trying to quit. For those who were able to quit smoking, the reasons for their success included their beliefs that cigarettes were addictive and harmful and the habit cost a lot of money. The most successful technique to quit smoking was to control their own mind.

Srinual K. (8) conducted a survey study to examine factors affecting smoking habits of monks in Ratchburi Province in 1993. The subjects were 266 monks, and the data gathering method was administration of questionnaires by mail or by hand-delivery. The findings revealed that 53.4% of the monks smoked, they smoked 6 to 10

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cigarettes a day, and most started smoking before becoming a monk, at the age of 16 to 20 years because they wanted to try. The factors which were found to be associated with smoking were predisposing factors (duration of ordination, educational background, level of religious study, knowledge, attitude, beliefs, and values related to smoking) and reinforcing factors (having a family member who smoked, acceptance or rejection of smoking by the abbot or other monks in the temple), the latter of which had a relationship with smoking behavior with the statistical significance at the $p < 0.05$ level. However, enabling factors (spending free time and being offered cigarettes by devotees) were not associated with smoking behavior.

Wimala S. (9) conducted a cross-sectional survey research study to investigate factors influencing health promoting behaviors of monks in Chiang Mai Province in 1997. The sample was obtained by means of stratified random sampling, totaling 350 monks. Data were collected by means of a questionnaire developed by the researcher to elicit the information concerning the five aspects of health promoting behaviors of: food consumption, cessation of smoking, exercises, stress management, and annual physical examination. It was found that 52.3% of the monk subjects had a moderate level of health promoting behaviors, while 45.4% had a low level of health promoting behaviors. When considering each aspect, 58.6% had the health promoting behavior of food intake at a low level, 63.7% had the health promoting behavior regarding not smoking at a high level, 36.6% had a health promoting behavior of exercising at a moderate level, 60.9% had a health promoting behavior regarding stress coping at a moderate level, and 60.3% had a health promoting behavior regarding annual physical examination at a low level. As regards factors associated with health promoting behaviors, it was found that predisposing factors were reasons for ordination, knowledge, attitudes, perceived health status, and perceived rules and regulations of monks. Enabling factors were the environment in the temple and monks' leisure time, while reinforcing factors were information received from different media and support from the abbot. All of the factors were statistically significantly associated with health promoting behaviors ($p < 0.05$). In addition, the three groups of factors were able to predict health promoting behaviors by 25.5%, with monks' leisure time being the best variable to predict monks' health promoting behavior, followed by attitudes toward health promoting behavior. Based on these findings, the researcher suggested that

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both public and private agencies involved should cooperate with each other to plan and implement work to promote health of monks. Also, monks should be educated on how to perform health promoting behavior, and clinics should be set up to specifically provide healthcare services to monks to ensure the widespread provision of healthcare services among monks.

Pannengpetch Y. (56) investigated monks' consumption of the four basic necessities in life. Food consumption of 103 monks in Chiang Mai Province was explored to shed light on actual consumption of monks at present. Consumption of four basic necessities of robe, food, residence, and medication was surveyed in relation to reasons for ordination divided into ordination to comply with tradition, ordination to show gratitude, ordination to search for ways to relieve sufferings, ordination to study *Dhamma*, and ordination to further studies. The findings were as follows:

1. As for food, 64.06% of monks obtained food from people who offered it in the alms bowl, while 30.12% had devotees who came to the temple to offer them food. Only the monks who became ordained so as to further their studies bought their own food.

2. When monks received a large amount of food, 51.44% shared it with other monks, 29.11% gave it to devotees, while others stored it in the temple's kitchen. Only the monks who became ordained to further their studies stored the food in their refrigerator.

3. When dried or preserved foods were offered to them, 78.63% received them and shared them with other monks in the temple. Only the monks who became ordained to search for ways to relieve their sufferings did not accept dried or preserved foods and did not store food for themselves.

In a survey study, Pusanasuwansri D. and Tienvichit S. (10) compared healthcare behaviors of 213 monks who furthered their studies at Mahamongkut Royal College and Jittapawan College in March of 1998 based on their age and level of studies. The monk subjects were asked to complete a self-administered questionnaire developed by the researchers to elicit information on four aspects of healthcare behavior regarding food intake, exercise, smoking, and personal hygiene care. The findings were as follows: 1. The healthcare behavior of monks categorized based

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on age and level of studies was similar, that is, overall it was at a fair level. When considering each aspect of healthcare behavior, only exercise was at a good level; the others were at a fair level. Also, healthcare behavior regarding drinking tea and coffee needed to be improved.

2. A comparison of healthcare behavior of monks revealed that overall monks' behavior was not statistically significantly different at the 0.05 level when considering their age and level of studies. However, when considering each aspect of healthcare behavior, it was found that there was a statistically significant difference when it came to personal hygiene care ($p < 0.05$). That is, monks who were 40 years old or older had better behavior than those who were younger than 40 years old. With regard to food intake, the monks who graduated from high school or higher had a better behavior than those who completed elementary education or lower.

Based on these findings, the following recommendations were made by the researchers:

1. As for food intake, monks should be advised to reduce or avoid foods and drinks that can be harmful to health such as salty food, tea and coffee, carbonated drinks, energy drinks, and uncooked food.

2. As regards exercise, monks should work out regularly to maintain their strength. In actuality, daily activities of monks including asking for food in the alms bowl and developing the temple are not enough to exert energy and the excess energy they have left may be detrimental to health.

3. With regard to smoking, related agencies should set up a campaign to convince monks to quit smoking as a large number of monks smoke. The most important target group is the abbots of each temple as they are leaders and should be a role model for other monks. They can also play an important role in a no-smoking campaign.

4. Concerning personal hygiene care, monks should be advised to take good care of their personal hygiene regularly including washing their hands before meals, washing their robes, and cleaning their bedding. In addition, they should be taught not to share a razor with other monks and not to drink their own urine which can be harmful to their health. Moreover, monks should be advised to have an annual physical examination and a dental check-up, especially those who are younger than 40

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years old and those who completed only elementary education or lower. In addition, training and dissemination of education should be carried out by taking monks' specific needs into consideration.

Mamuang S. (11) conduced to descriptive study on nutritional status and eating behavior of 71 monks studying at Chulalongkorn Royal College, Chiang Mai Campus, in 2002. In this study, body mass index and nutritional status were calculated using the criteria devised by the World Health Organization. The data obtained from the questionnaire revealed that the average age of monks was 36.34 years. Of the total subjects, 53.52% had an overnutrition status, while 45.97% had a normal nutritional status. Only 1.41% had a nutritional status lower than they should. As for food intake, monks ate only two meals a day—breakfast and lunch. The main staple was rice, and they drank drinks and sodas as snacks. They obtained protein from fish, chicken, and pork, and the fat came from vegetable oil. The vegetables they mainly ate were morning glory, Chinese cabbage, and tomato, while the fruits they regularly had were orange, banana, and papaya. Moreover, monks had desserts one to two times a week, and they used fish sauce, salt, and sodium glutamate as seasonings. It was found that the monks' nutritional status was associated with their behaviors of eating pork with fat, lean pork, and orange. Finally, it was recommended that knowledge on nutrition and proper exercise should be disseminated among monks to ensure desirable nutritional status.

Nammuang S. (12) conducted descriptive research to investigate smoking and factors related to smoking of 320 sick monks and novice monks who sought treatment at the Monk Hospital in 2003. The subjects were divided into two groups: those who smoked (160 monks) and those who did not smoke (160 monks). Random sampling was used, and data were collected by means of a questionnaire. The findings indicated that most of the subjects were between 41 and 60 years of age, and 40% of them had smoking behavior at a moderate level, while 31.3% at a high level. Furthermore, 41.88% smoked 10 to 19 cigarettes a day, and 25.6% and 25% smoked for less than 10 years and more than 40 years, respectively. Also, 81.25% tried to quit smoking and were successful before, yet they resumed the habit after six or seven months due to different reasons including included lack of strong will and stress and irritability. The factors which were related to smoking were biosocial factors of age, number of years

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being ordained, educational background, and level of religious studies, all of which were statistically significantly associated with smoking ($p < 0.05$). However, income from performing ceremonies and current sickness were not related to smoking. Besides, predisposing factors of perceived risk, perceived severity, perceived benefit, perceived barrier, and expected self-efficacy were statistically significantly related to smoking ($p < 0.05$). Likewise, enabling factors of access to cigarette sales, use of free time, and spending money on smoking were statistically significantly related to smoking ($p < 0.05$), while cigarettes offered was not. Finally, the reinforcing factors of information from a smoking member of the family, information from other monks who smoked, rules and regulations of the temple, and advice from doctors and nurses were statistically significantly related to smoking ($p < 0.05$), whereas information received from different media was not. Based on these findings, it was recommended that activities should be carried out to solve smoking problems among monks and novice monks by public health officials, community members, and the monks and novice monks themselves, especially the abbots, to ensure good quality of life of monks and novice monks.

Related researches on Pender's Health Promotion Concept Conducted among Thai Males and Working Population

Pethcthong J. (16) surveyed factors affecting health promoting behavior of provincial police officers in Suphanburi Province in 1997. Of the 619 subjects, 169 were high ranked officers and 450 were low ranked officers. For the former, variables including age, educational background, values, attitudes, perceive self-efficacy, perceived benefit of action, and perceived barrier of action, information from friends, and advice from others could co-predict health promoting behaviors by 75%, with perceived benefit of action and perceived barrier of action being the best predictors. As for the latter, age, educational level, use of healthcare services, attitudes, perceived self-efficacy, and perceived benefit of action could co-predict health promoting behavior by 36.3%, with perceived self-efficacy being the best predictor. Based on these findings, the researcher recommended that knowledge of health promoting behavior should be increased among these police officers. In addition to this, various activities should be organized to promote these officers' perceived self-efficacy and perceived benefit of action while decrease factors hindering practice of health

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promoting behavior. To be more specific, a health corner should be set up in office to disseminate information, a sport club should be formed to encourage exercises and to demonstrate correct ways to work out, and place and exercise equipment should be arranged. Also, they should coordinate with other agencies to arrange physical examinations and diagnoses of diseases. Finally, mobile healthcare service units should be founded to ensure widespread healthcare services among police officers.

Promlai J. (55) conducted a survey to explore factors affecting health promoting behavior of officials working in District 3, Community Development Department, Ministry of Interior in 1998. The total of 304 subjects were recruited by means of multi-staged random sampling, and data were collected by means of a self-administered questionnaire. The findings suggested that pattern of healthcare service use, health promoting facilities, experience with health promoting behavior, perceived self-efficacy, and perceived health status were statistically significantly related to health promoting behavior ($p < 0.05$). On the contrary, values, attitudes, perceived benefit of action, and perceived barrier of action were not statistically significantly related to smoking ($p < 0.05$). Also, a statistically significant relationship among information received from different sources, advice from close persons, and health promoting behavior was also found ($p < 0.05$). These three groups of factors could best co-predict health promoting behavior regarding food intake by 40.7%, with gender as the best predictor variable.

Chaisamesang N. (17) investigated factors influencing health promoting behaviors of military officials stationed in Lopburi Province in 2000. The subjects were selected by means of multi-staged random sampling. Of the 580 subjects, 215 subjects were high ranked officials and 365 were low ranked officials. Data were collected by means of a self-administered questionnaire. According to the data collected in the study, the factors which were statistically related to health promoting behaviors were co-factors (age, occupation group, marital status, income, body mass index, and educational level), psychological factors (values, attitudes, perceived self-power, perceived self-efficacy, perceived health status, perceived benefit of action, and perceived barrier of action), and practice inducing factors (information from different media and advice or support from individuals). Further analyses revealed that occupation group, income, value, perceived self-efficacy, perceived benefit of

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action, perceived barrier of action, information from different media, and advice or support from individuals could co-predict health promoting behavior by 52.9%, with perceived self-efficacy as the best predictor variable. The researcher recommended that military officials should be educated about health promoting behavior by organizing various training activities to increase perceived benefit of action and decrease factors obstructing health promotion practice.

Kanchanapibul N. (15) conducted a descriptive study to explore a relationship between individual factors, perceived health status, and health promoting behaviors of 200 males aged 20 to 59 years living in a slum in Khlong Toey District, Bangkok, in 2001. She found that these male subjects had health promoting behavior at a moderate level, with the exercise and responsibility for health aspects at a poor level. Moreover, the subjects perceived that their health status was a moderate level. Finally, marital status, educational level, type of work, family income, and perceived health status were found to be statistically significantly associated with health promoting behavior, while no relationship between age and health promoting behavior was found.

Sukkasem P. (18) investigated health promoting behaviors and factors affecting health promoting behavior of 375 employees of insurance companies in Bangkok in 2002 in a cross-sectional survey. The subjects were selected by means of a multi-staged random sampling, and data were collected by means of a self-administered questionnaire. The findings revealed that 36% of the subjects had health promoting behavior at a moderate level and that gender, age, experience with health promoting behavior, values, perceived self-efficacy, perceived benefit of action, perceived barrier of action, and advice and support from individuals were statistically significantly related to health promoting behavior ($p < 0.05$). Further analyses indicated that co-factors could predict health promoting behavior by 22.8% ($Bata^2 = 0.228$), and the most influential predictor variable was experience with health promoting behavior. In addition, knowledge and perception factors could predict health promoting behavior by 75.4%, with perceived benefit of action being the most influential predictor variable ($Bata^2 = 0.514$), while the practice inducing factor (advice and support from related individuals) could predict health promoting behavior by 2% (Multiple $R^2 = 0.02$, $Bata^2 = 0.02$). Finally, all variables could predict health promoting behavior by 73.1% (Multiple $R^2 = 0.731$), with perceived benefit of action

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being the most influential predictor variable. Based on these findings, the researcher recommended that a health promotion program should be established with an emphasis on perceived benefit of action to ensure appropriate practice of health promoting behavior among employees of insurance companies.

Conclusion

A review of literature and related research has led to a conclusion that most of the existing research studies investigated only some of the variables related to health promoting behavior. This may be because the health promotion model is a complicated concept, so it is impossible to examine all related variables in a single study. It is also found that the variables selected in these studies varied according to the specific characteristics of the selected subjects. In the present study, individual concepts of individual factors, perceived benefit of action, perceived barrier of action, perceived self-efficacy, and health promoting behavior based on Pender's Health Promotion Model (13) were selected as the conceptual framework of the study. According to Pender, health promoting behavior refers to various activities individuals or groups of individuals perform to increase their quality of life or to bring about positive changes in their health. Health behavior consists of four aspects of behavior—food intake, smoking, exercise, and annual physical examination, all of which are very important because when regularly performed, they lead to a good health status of individuals. In Pender's Health Promotion Model, various factors affecting health promoting behavior of individuals are discussed. However, in the present study, only the factors expected to affect health promoting behavior of monks were chosen. The selection criteria were a consideration of the actual problems and a review of other researchers' studies. As such, the selected factors were personal factors including personal biological factors (age, number of years being ordained, status in the temple), personal sociocultural factors (educational background, level of religious study, and financial status), and personal psychologic factors (reasons for ordination, perceived health status, perceived benefit of action, perceived barrier of action, and perceived self-efficacy), all of which were believed to be associated with monks' practice of health promoting behavior as these factors can motivate monks to practice health promoting behavior or hinder them from practice health promoting

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behavior. Besides, personal factors are factors which have direct influence on individuals' emotions and ideas related to health promoting behavior, while perceived benefit of action and perceived barrier of action have direct influence on health promoting behavior as they motivate individuals to have the practice. Finally, perceived barrier of action directly influences health promoting behavior as it hinders individuals' practice of health promoting behavior. The health promotion concept is summarized in the table below.

Table 2.1 Summary of Pender's Health Promotion Model

Pender	Present Study
The health promotion model consists of three concepts: 1.Individual characteristics and experiences consist of two sub-factors: 1.1 Prior related behavior 1.2 Personal factors which are further divided into three aspects: 1.2.1 Personal biological factors such as age, gender, body weight, body mass index, reproductive status (teenage, menopausal), ability to work continuously, strength, agility, and balance, etc. 1.2.2 Personal psychologic factors such as self-esteem, motivation, personal capability, health definition, and perceived health status, etc. 1.2.3 Personal sociocultural factors including ethnicity, citizenship, cultural characteristics, education, economic status, social status, etc.	Based on a review of existing literature and related research, the present study selected only some of the personal factors as the study variables. Only the variables which have theoretical support to explain or predict health promoting behavior of individuals were chosen as follows: personal biological factors—age, number of years being ordained, and status in the temple; personal psychologic factors—reasons for ordination and perceived health status; personal sociocultural factors—educational background, level of religious study, and financial status. All of these factors are considered personal factors which have direct influences on emotions and ideas related to behaviors and health promoting behaviors.

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Table 2.1 Summary of Pender's Health Promotion Model (cont.)

Pender	Present Study
2. Behavior-specific cognitions and affect including: 2.1 perceived benefit of action 2.2 perceived barrier of action 2.3 perceived self-efficacy 2.4 activity-related affect 2.5 interpersonal influences 2.6 situational influences 3. Behavioral outcomes comprising: 3.1 commitment to a plan of action 3.2 immediate competing demands and preferences 3.3 health promoting behavior	In the present study, the researcher selected only the factors expected to affect health promoting behavior of monks. The selection criteria included a consideration of the actual problems and a review of existing research. The selected variables were perceived benefit of action, perceived barrier of action, and perceived self-efficacy, all of which were expected to be related to monks' health promoting behavior, creating motivation to practice health promoting behavior or hindering the practice of health promoting behavior. Perceived benefit of action and perceived barrier of action have direct influence on health promoting behavior as they motivate individuals to have the practice, while perceived barrier of action directly influences health promoting behavior as it hinders individuals' practice of health promoting behavior. Health promoting behavior consists of four aspects: food intake, smoking, exercise, and annual physical examination.

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CHAPTER III
RESEARCH METHODOLOGY

The present study was a cross-sectional survey research which aimed at investigating factors affecting health promoting behaviors of monks in Bangkok.

Population and Sampling

The population of the study was monks who had been ordained for at least one rainy season and lived at a temple in Bangkok.

The subjects were selected based on the following inclusion criteria:

1. They had been monks for at least one *vassa* (rainy season) and resided at a temple in Bangkok;
2. They were able to read and write the Thai language;
3. They were between 20 and 75 years old; and
4. They were willing to participate in the study.

Sampling Method

1. The sample size was calculated using a statistical formula of Daniel W.W.(69):

$$n = \frac{Z^2_{\alpha/2}\, N\pi\,(1-\pi)}{Z^2_{\alpha/2}\,\pi\,(1-\pi) + (N-1)\,d^2}$$

When N = the exact size of the population, or 11,862 monks

n = the sample size when the exact population was known

Z = the standard statistics under the normal curve equal to 1.96

D = the accepted maximum absolute deviation value or 0.05

π = the unknown ratio of the population estimated with the sample ratio (P) (which in this study was derived from the study of Wimala S. (9): (p = 0.55). The formula used was as follows:

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$$n = \frac{(1.96)^2 (11{,}862)(0.55)(0.45)}{(1.96)^2 (0.55)(0.45) + (11{,}861)(0.05)^2}$$

$$= \frac{11{,}278.342}{29.657378}$$

$$= 380.2879$$

Therefore, the sample size obtained was 381 monks. However, in this study, data were collected from 400 monks as there were a number of variables in the analysis, and according to the agreement .

2. The sampling method used in this study was the probability sampling with stratified random sampling. That is, the monks under the Mahanigaya Sect and Dhammayutika Sect living in Bangkok were divided into three groups according to the classification of the Division of Urban Planning, Bangkok Metropolitan Administration (70): inner city, urban fringe, and suburb as follows:

2.1. The inner city consists of 22 districts: Pranakhorn, Pomprabsatrupai, Sampanthawongse, Patumwan, Rajtevee, Bangrak, Dusit, Phyathai, Bangplad, Bangkok Noi, Bangkok Yai, Satorn, Yannawa, Bangkolaem, Bangsue, Klongsan, Thonburi, Chatujak, Huaykwang, Dindaeng, Klongtoey, and Wattana.

2.2. The urban fringe is composed of 22 districts divided into 14 districts in the east, namely, Don Muang, Lak Si, Bangkhen, Saimai, Ladprao, Bangkapi, Bung Kum, Wangthonglang, Kannayao, Saphansoong, Suan Laung, Praves, Pra Kanong, and Bangna, and eight districts in the east, namely, Talingchan, Taweewattana, Paseecharoen, Bang Kae, Nong Kham, Ratburana, Toongkaru, and Jomthong.

2.3. The suburb covers six districts, four in the east: Meenburi, Klong Sam Wa, Ladkrabang, and Nong Jok, and two districts in the west: Bang Khun Tien and Bang Bon.

2.4. The research sample size was determined by proportional allocation with the number of population in each division using the following formula (71):

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$$nh = \frac{Nh \times n}{N}$$

When n = sample size

Nh = population size in each district

N = population size

nh = sample size in each district

The number of monks in each division was as follows:

The inner city = 6,341 monks

The urban fringe = 4,689 monks

The suburb = 832 monks

The sample size in each division was then calculated using the formula, and the results obtained were shown in the table below.

Table 3.1 Number of monk population and sample in each division

Division	**Population size (monks)**	**Sample size (monks)**
Inner city	6,341	214
Urban fringe	4,689	158
Suburb	832	28
Total	10,619	400

3. The sample was then selected using stratified random sampling by cluster sampling technique to select the temples from both the *Dhammayutika* Sect and *Mahanigaya* Sect in each division as shown in Figure Three.

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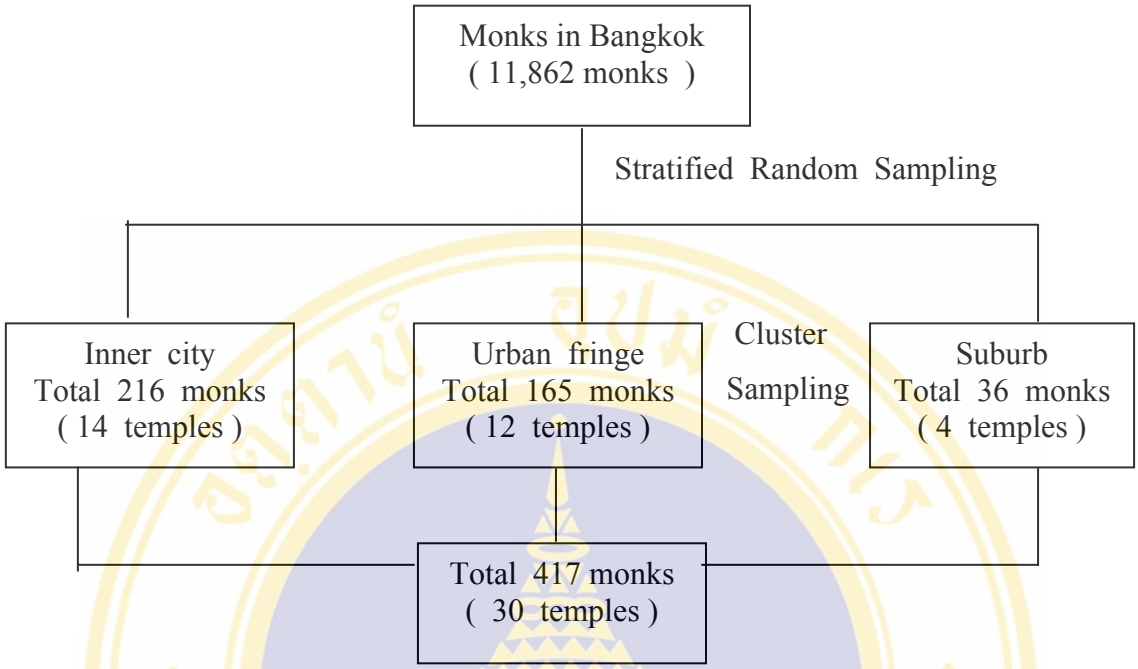

Figure 3 Stratified Random Sampling by Cluster

Research Instruments

The research instrument used in the present study was constructed by the researcher based on the conceptual framework and the research objectives. The analysis and interpretation was conducted in accordance with the criteria of Rajroj S. (72)

In the present study, the above criteria was adjusted into three levels:

Low level	scores lower than 60%
Moderate level	scores between 60% and 80%
High level	scores higher than 80%

These criteria were used in the analysis of perceived health status, perceived benefits of action, perceived barriers of action, perceived self-efficacy, and health promoting behaviors according to the data obtained from the research instruments which were divided into six parts as follows:

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Part I: Demographic Characteristic Questionnaire. This questionnaire was designed by the researcher based on the conceptual framework and the objectives of the research to elicit information regarding the monks' age, number of rainy seasons being ordained, position in the temple, common educational background before ordination, religious educational background, reasons for ordination, and financial status. The subjects responded to the choices given and specified the answers.

Part II: The Perceived Health Status Questionnaire was a self-administered questionnaire the researcher adapted from the questionnaire designed by Rojpaisalkij K. It consisted of nine items eliciting the monks' perceived health status in a four-point rating scale. The scoring criteria were as follows:

Responses	**Positive items**	**Negative items**
Absolutely yes	4	1
Yes	3	2
No	2	3
Absolutely no	1	4

The scores ranged between 9 and 36 by rating scale divided into three levels:

Poor	(lower than 60%)	scores between 1.00 and 2.79 points
Fair	(between 60% and 80%)	scores between 2.80 and 3.40 points
Good	(higher than 80%)	scores between 3.41 and 4.00 points

Part III: The Perceived Benefits of Action Questionnaire was a questionnaire constructed by the researcher based on the conceptual framework and the objectives of the research and a review of related literature. It consisted of 18 items eliciting the monks' perceived benefits of action in a four-point rating scale. The scoring criteria were as follows:

Responses	**Positive items**	**Negative items**
Strongly agree	4	1
Agree	3	2
Disagree	2	3
Strongly disagree	1	4

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The scores ranged between 18 and 72 by rating scale divided into three levels:

Low level	(lower than 60%)	scores between 1.00 and 2.79 points
Moderate level	(between 60% and 80%)	scores between 2.80 and 3.40 points
High level	(higher than 80%)	scores between 3.41 and 4.00 points

Part IV: The Perceived Barriers of Action Questionnaire was a questionnaire the researcher constructed based on the conceptual framework and the objectives of the study and a review of existing literature. It was composed of 15 items eliciting the monks' perceived barrier of actions in a four-point rating scale. The scoring criteria were as follows:

Responses	**Positive items**	**Negative items**
Strongly agree	1	4
Agree	2	3
Disagree	3	2
Strongly disagree	4	1

The scores ranged between 15 and 60 by rating scale divided into three levels:

Low level	(lower than 60%)	scores between 1.00 and 2.79 points
Moderate level	(between 60% and 80%)	scores between 2.80 and 3.40 points
High level	(higher than 80%)	scores between 3.41 and 4.00 points

Part V: The Perceived Self-Efficacy Questionnaire was a questionnaire designed by the researcher based on the conceptual framework and the objectives of the research and a review of related literature. It consisted of 17 items eliciting the monks' perceived self-efficacy in a four-point rating scale. The scoring criteria were as follows:

Responses	**Positive items**	**Negative items**
Strongly agree	4	1
Agree	3	2
Disagree	2	3
Strongly disagree	1	4

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The scores ranged between 17 and 68 by rating scale divided into three levels:

Low level	(lower than 60%)	scores between 1.00 and 2.79 points
Moderate level	(between 60% and 80%)	scores between 2.80 and 3.40 points
High level	(higher than 80%)	scores between 3.41 and 4.00 points

Part XI: The Health Promoting Behavior Questionnaire was a questionnaire developed by the researcher based on the conceptual framework and the objectives of the research and a review of related literature. It was composed of 20 items eliciting the monks' health promoting behaviors in a four-point rating scale. The scoring criteria were as follows:

Response	**Positive items**	**Negative items**
Always	4	1
Usually	3	2
Sometimes	2	3
Never	1	4

The scores ranged between 20 and 80 by rating scale divided into three levels:

Poor	(lower than 60%)	scores between 1.00 and 2.79 points
Fair	(between 60% and 80%)	scores between 2.80 and 3.40 points
Good	(higher than 80%)	scores between 3.41 and 4.00 points

As for the part elicited information regarding the monks' smoking behavior, there were responses given and the monks were asked to specify the responses they wanted.

Construction and validation of the instruments

1. Related texts, literature, theories, research studies, and documents were reviewed and used together with advice and suggestions from thesis advisors.

2. The structure and scope of the questionnaire were determined, and the scoring criteria were set in accordance with the research objectives and hypotheses.

3. The questionnaires were examined by three experts for content validity and language appropriateness. They were then revised based on the experts' comments and recommendations before they were tried out.

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4. The instruments were tried out with 25 - 30 monks who shared similar characteristics with the subjects of the study. The data were then used to analyze the reliability of the instruments using Chronbach's Alpha Coefficient with the following results obtained: Perceived Health Status Questionnaire = 0.81 , Perceived Benefits of Action Questionnaire =0.74, Perceived Barriers of Action Questionnaire = 0.87, Perceived Self-Efficacy Questionnaire = 0.80 and Health Promoting Behavior Questionnaire = 0.73

Data Collection

The data collection proceeded in the following sequence:

1. An introduction letter from the School of Graduate Studies, Mahidol University, was sent to the chief monk of each administrative district to ask for permission and collaboration in data collection by informing the abbots of the selected temples of the study.

2. The researcher prepared the research assistants by informing them of research objectives, sample, techniques and steps in data collection, interpretation of data, and recording of data to ensure accuracy, consistency, and uniformity.

3. The researcher and research assistants traveled to each temple and introduced themselves to the abbot or the assigned monks to explain the research objectives and to ask for permission to collect data from the monk subjects.

4. The researcher and research assistants collected data by explaining the objectives of the research, distributing the questionnaires to the subjects, and giving them a chance to ask questions in case they did not understand anything about the questionnaires. The researcher and research assistants collected the questionnaires after the monks finished responding to them.

Data Analysis

After data collection was completed, data were then checked for completion, accuracy, and consistency. Each questionnaire was scored and coded, and the data were then analyzed statistically using a computer program with the significance level set at 0.05. The statistics used in the present study were as follows:

1. Descriptive statistics

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1.1 Frequency distribution, namely percentage, mean, and standard deviation, was used to analyze demographic characteristics of the subjects.

1.2 Percentage, mean, and standard deviation were used to analyze the monk subjects' perceived health status, perceived benefits of action, perceived barriers to action, perceived self-efficacy, and health promoting behaviors.

2. Analytical statistics

2.1 Chi-square test and Pearson's Product Moment Correlation Coefficient were applied to determine the relationship among personal factors, perceived health status, perceived benefits of action, perceived barriers to action, perceived self-efficacy, and health promoting behaviors.

2.2 Stepwise Multiple Regression was used to determine the predictability of the influence of each factor on monks' health promoting behaviors.

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CHAPTER IV
RESULTS

Research finding from this present research, data were collected from 417 monks who lived in Bangkok. When checking for completeness of the returned questionnaire, it was found that 417 questionnaires were completely filled out, so all 417 of them were used in the data analysis. The questionnaires were analyzed using a computer statistical analysis package, and the findings are discussed in this chapter under different sections as follows:

1. Data regarding personal factors consisting of demographic characteristics of the subjects including age, number of *vasssa* being ordained, status in the temple, educational background, religious studies (*Dhamma*), religious studies (*Pali*), reasons for ordination, income from donation, and perceived health-status.

2. Data regarding Behavior – Specific cognition and Affect toward health promoting behaviors including perceived benefits of action, perceived barriers of action, and perceived self-efficacy of action.

3. Data regarding health-promoting behaviors of monks.

4. Data regarding the relationship among personal factors, Behavior – Specific cognition and Affect toward health promoting behaviors, and health promoting behaviors of monks.

5. Data regarding predictive power of personal factors and factors of Behavior – Specific cognition and Affect toward health promoting behaviors in predicting health promoting behaviors of monks.

1. Demographic characteristics of the monks

1.1 Age: The largest group of monks, or 37.2%, aged between 20 and 30 years old**,** followed by about a quarter (24.2%) who were 31 to 40 years old, with the mean age of 38.76 years. The minimum age was equal to 20 years, and the maximum age was 75 years.

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1.2 Number of *vassa* being ordained: Close to half of the subjects, or 42.7%, had been ordained for less than five years, while about a quarter, or 23.5%, had been monks for 6 to 10 years. The average was about 2-3 years.

1.3 Number of *vassa* being ordained as novice monks: More than half, or 60.4%, had never been ordained as novice monks. Of those who used to be novice monks, 20.9% were novice monks for 6 to 10 years, whereas 17.3% were novice monks for 1 to 5 years.

1.4 Educational background: Close to half, or 47.7%, completed secondary education before becoming monks, while a quarter, or 25.7%, graduated from elementary schools. Approximately one-fourth of the subjects held a diploma or higher.

1.5 Level of religious studies (*Dhamma)*: More than half of the monks, or 59.5%, completed the highest level of *Dhamma* studies, whereas 21.6% completed the lowest level.

1.6 Level of religious studies (*Pali*): More than half, or 51.6%, did not pursue *Pali* studies. As for those who did, 21.8% completed the lowest level, while 17.5% completed the highest level.

1.7 Financial income from donation: The median of monks' financial income for the money donated in return of their performing religious ceremonies was equal to 1,500 baht per month. About 90% of the subjects in this study had income no more than 5,000 baht per month.

1.8 Status in the temple: Almost all of the subjects, or 92.7%, were regular monks, while a mere 7.3% were ecclesiastical officials.

1.9 Reasons for ordination: Close to half of the subjects, or 41.2%, chose to be monks as a way to show gratitude to their parents, 23% became monks to continue the tradition, and only 10% decided to be ordained so as to further studies the religion It is worth noting that 1.2% of the subjects became ordained because of their poor health.

The detail is illustrated in Table 1 below.

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Table 1 Number and percentage of monks as categorized according to their demographic characteristics (n = 417)

Demographic characteristics	Number	Percentage
Age (years)		
20 – 30	155	37.2
31 – 40	101	24.2
41 – 50	65	15.6
51 – 60	53	12.7
> 60	43	10.3
$\bar{x}$ = 38.7602; S.D. = 14.0334		
Min = 20; Max = 75		
Number of *vassa* being ordained		
1 – 5	178	42.7
6 – 10	98	23.5
11 – 15	54	12.9
16 – 20	31	4.7
21 – 25	17	3.1
26 – 30	13	3.1
> 30	26	6.2
$\bar{x}$ = 2.4101; S.D. = 1.7656		
Min = 1; Max = 50		
Number of *vassa* being ordained as novice monks		
None	252	60.4
1 – 5	72	17.3
6 – 10	87	20.9
11 – 15	6	1.4
$\bar{x}$ = 2.3180; S.D. = 3.4407		

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Table 1 Number and percentage of monks as categorized according to their demographic characteristics(n = 417) (cont) .

Demographic characteristics	**Number**	**Percentage**
Educational background	110	26.4
Elementary	199	47.7
Secondary	28	6.7
Diploma	80	19.2
Undergraduate or higher		
Level of religious studies (*Pali)*	215	51.6
No *Pali* study	91	21.8
Levels 1-3	13	9.1
Levels 4-6	38	17.5
Levels 7-9		
Highest level of *Dhamma* studies		
None	42	10.1
Lowest levels 1 – 3	91	21.8
Middle levels 4 – 6	37	8.9
Highest levels 7 –9	247	59.2
Financial income from donation (baht/month)		
< 1,000	168	40.2
1,000 – 5,000	220	52.8
5,001 – 9,999	17	4.1
≥ 10,000	12	2.9
$\bar{x}$ = 2,290.41; S.D. = 2,472.80		
Median = 1,500		
Min = 100; Max = 25,000		

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Table 1 Number and percentage of monks as categorized according to their demographic characteristics (cont).

Demographic characteristics	Number	Percentage
Religious status		
Ecclesiastical officials	30	7.3
Ordinary monks	387	92.7
Reason for ordination		
To show gratitude to parents	172	41.2
To comply with tradition	96	23.0
To further studies of *Dhamma*	42	10.1
To seek enlightenment	33	7.9
To get a chance to further studies	32	7.7
To seek enlightenment	17	4.1
To avoid problems facing	11	2.6
To continue Buddhism	9	2.1
To tend to bad health	5	1.2

*Ecclesiastical officials refer to abbots, vice abbots, and assistant abbots

1.10 Perceived health status

The findings revealed that close to two-thirds of the subjects, or 60.7%, had their overall health status at a fair level. On the other hand, 23% and 16.3% had their perceived health status at a good level and a poor level, respectively. The mean score of perceived health status of the monk subjects was 2.73, with the standard deviation of 0.35 (Table 2).

When considering each item of perceived health status, the item which received the lowest mean score was “You think that in the future you may have a personal/chronic illness,” followed by “You think you are one of the people who have a good health” and “You think you understand the cause of illnesses.” Moreover, the items which received the mean score at a fair level were “You think your body has a

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good resistance to diseases" and "Your health is as good as that of other monks you know," followed by "In the past year you had been so sick that you thought you would die" and "You think you are one of the people who take quite a good care of your health," respectively (Table 3).

Table 2 Number and percentage of monks as categorized according to their perceived health status (n = 417)

Level of perceived health status	Number	Percentage
Good	93	23
Fair	253	60.7
Poor	68	16.3
$\bar{x}$ = 2.7392 ; S.D. = 0.3585		

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Table 3 Percentage, mean, and standard deviation of monks' perceived health status as categorized by each item (n = 417)

Item	Strongly Agree	Agree	Disagree	Strongly Disagree	$\bar{x}$	S.D.	Level of perceive health status
1. In the past year you had been so sick that you thought you would die. (-)	12.5	21.3	37.2	29.0	2.83	0.99	Fair
2. You think you are one of the people who have a good health. (+)	10.1	55.6	29.0	5.3	2.71	0.72	Poor
3. Your health is as good as that of other monks you know. (+)	12.9	60.0	21.3	5.8	2.80	0.73	Fair
4. You think that in the future you may have a personal/chronic illness. (-)	14.4	42.7	31.7	11.3	2.40	0.87	Poor
5. You think you are one of the people who take quite a good care of your health. (+)	15.1	64.3	19.4	1.2	2.93	0.62	Fair
6. If you are sick, you are ready to follow the doctor's advice (+)	44.4	53.2	1.9	0.5	3.41	0.56	Good

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Table 3 Percentage, mean, and standard deviation of monks' perceived health status as categorized by each item (cont) .

Item	Strongly Agree	Agree	Disagree	Strongly Disagree	$\bar{x}$	SD	Level of Perceive health status
7. You think your body has a good resistance to diseases. (+)	16.1	53.0	26.1	4.8	2.80	0.76	Fair
8. You think you understand the cause of illnesses. (+)	14.6	55.2	24.9	5.3	2.79	0.75	Poor
7. You accept that sometimes you have to become sick. (+)	40.3	54.9	3.1	1.7	3.34	0.62	Good

(+) = positive items; (-) = negative items

2. Behavior – Specific cognition and Affect toward health promoting behaviors of monks

2.1 Perceived benefits of action of health promoting behaviors

The findings revealed that more than half of the monks, or 53.5%, had the scores of perceived benefits of action at a high level, followed by those whose scores were at a moderate level, accounting for another 46%. The mean score of overall perceived benefits of action was equal to 3.34, with the standard deviation of 0.34 (Table 4).

When considering each item of perceived benefits of action, it was found that the two items for which the monks received low means scores were "Eating burned or grilled food is not harmful to your body as no nutrition has been lost" and "People

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who smoke have a chance to develop lung cancer as much as those who do not smoke." Furthermore, the three items which received the first three highest mean scores in the moderate level were "Drinking energy drinks makes your body fresh and energized," "Eating spicy food is bad to your body," and "Avoiding fatty meat or fatty food regularly helps reduce blood cholesterol level," respectively. (Table 5).

Table 4 Number and percentage of monks as categorized according to perceived benefits of action of health promoting behaviors (n = 417)

Level of perceived benefits of action	Number	Percentage
High	223	53.5
Moderate	192	46.0
Low	2	0.5
$\bar{x}$ = 3.3421; S.D. = 0.3434		

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Table 5 Percentage, mean, and standard deviation of monks' perceived benefits of action of health promoting behaviors as categorized by each item(n = 417)

Item	Strongly Agree	Agree	Disagree	Strongly Disagree	$\bar{x}$	SD	Level of perceived benefits of action
1. Eating all five food groups everyday makes your body get all nutrition. (+)	62.6	35.3	1.9	0.2	3.60	0.54	High
2. Avoiding fatty meat or fatty food regularly helps reduce blood cholesterol level. (+)	32.1	52.8	10.3	4.8	3.12	0.78	Moderate
3. Eating food with fibers everyday helps prevent high blood cholesterol, heart disease, and helps make bowel movement normal. (+)	56.1	41.7	1.4	0.7	3.53	0.57	High
4. Eating burned or grilled food is not harmful to your body as no nutrition has been lost. (-)	20.6	40.8	26.9	11.8	2.70	0.93	Low
5. Drinking at least one glass of milk a day makes your bones strong. (+)	37.4	54.7	6.7	1.2	3.28	0.64	Moderate
6. Drinking energy drinks makes your body fresh and energized. (+)	4.3	17.7	51.3	26.6	3.00	0.79	Moderate
7. Eating spicy food is bad to your body. (+)	28.8	56.6	11.8	2.9	3.11	0.71	Moderate
8. Exercising at least three days a week 20-30 minutes a day makes you strong. (+)	40.3	56.1	2.9	0.7	3.36	0.58	Moderate

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Table 5 Percentage, mean, and standard deviation of monks' perceived benefits of action of health promoting behaviors as categorized by each item (n = 417) (cont.)

Item	Strongly Agree	Agree	Disagree	Strongly Disagree	$\bar{x}$	SD	Level of perceived benefits of action
9. Moving your body, walking, or doing activities involving body movement reduce aching muscles. (+)	27.1	66.7	5.3	1.0	3.20	0.57	Moderate
10. Doing walking meditation, walking to receive food offered by people, or doing activities to develop the temple 20-30 minutes a day make your body fresh and energized. (+)	43.2	55.2	1.2	0.5	3.41	0.54	High
11. Exercising regularly helps stimulate the lungs and heart to function better. (+)	54.2	44.8	0.7	0.2	3.53	0.53	High
12. Exercising 20-30 minutes a day helps secrete waste from the body making the brain fresh and energized. (+)	44.4	53.0	2.2	0.5	3.41	0.56	High
13. Doing meditation or having a peaceful mind is good for your health. (+)	61.2	37.4	1.2	0.2	3.59	0.53	High
14. Smoking helps reduce stress. (-)	2.6	14.1	34.8	48.4	3.29	0.81	Moderate
15. Smoking helps increase confidence. (-)	1.9	5.5	35.3	57.3	3.48	0.69	High

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Table 5 Percentage, mean, and standard deviation of monks' perceived benefits of action of health promoting behaviors as categorized by each item (n = 417) (Cont.)

Item	Strongly Agree	Agree	Disagree	Strongly Disagree	$\bar{x}$	SD	Level of perceived benefits of action
16. People who smoke have a chance to develop lung cancer as much as those who do not smoke. (-)	12.7	27.8	35.7	23.7	2.71	0.97	Low
17. Having annual physical examinations at least once a year is good for your health. (+)	51.3	48.5	2.2	0.7	3.84	0.58	High
18. Having annual physical examinations at least once a year enables you to solve health problems in time. (+)	38.1	54.4	6.5	1.0	3.30	0.63	Moderate

(+) = positive items; (-) = negative items

2.2 Perceived barriers of action of health promoting behaviors

The findings indicated that close to two-thirds of monks, or 64.3%, had mean scores of perceived barriers of action at a moderate level, while 35.3% at a low level, with the mean score of 2.81 and the standard deviation of 0.34 (Table 6).

When considering each item, it was found that the first three items for which the subjects received the mean scores at a moderate level were "You cannot eat all five food groups everyday because you cannot choose what you eat," "You cannot avoid fatty food because you do not have a chance to choose," and "You have a good health so you do not need annual physical examinations," respectively (Table 7).

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Table 6 Number and percentage of monks as categorized according to perceived barriers of action of health promoting behaviors (n = 417)

Level of perceived barriers of action	Number	Percentage
High	2	0.5
Moderate	268	64.3
Low	147	35.3
$\bar{x}$ = 2.8112; S.D. = 0.3476		

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Table 7 Percentage, mean, and standard deviation of monks' perceived barriers of action of health promoting behaviors as categorized by each item (n = 417)

Item	Strongly Agree	Agree	Disagree	Strongly Disagree	$\bar{x}$	SD	Level of perceived barriers of action
1. You cannot eat all five food groups everyday because you cannot choose what you eat. (+)	30.0	54.9	10.8	4.3	3.11	0.76	Moderate
2. Food offered by people tends to lack vegetable and fruit so you do not have a chance to eat a lot of it. (+)	17.3	43.4	32.1	7.2	2.71	0.84	Low
3. Drinking energy drink is not wrong as it makes you fresh and full of energy. (-)	20.6	54.4	20.1	4.8	2.09	0.77	Low
4. It is not possible to avoid spicy food because it will make you lose appetite. (-)	5.8	30.9	51.8	11.5	2.31	0.75	Low
5. You do not drink milk everyday because you do not like its taste. (-)	5.3	31.2	48.7	15.1	2.27	0.78	Low
6. You do not know which type of food is high in calcium. (-)	10.1	32.4	44.4	13.2	2.39	0.84	Low
7. You cannot avoid fatty food because you do not have a chance to choose. (+)	18.2	44.6	31.7	5.5	2.81	0.81	Moderate
8. You are not able to exercise because there is no place for exercises. (-)	17.7	39.6	35.3	7.4	2.68	0.85	Low

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Table 7 Percentage, mean, and standard deviation of monks' perceived barriers of action of health promoting behaviors as categorized by each item (n = 417) (cont.)

Item	Strongly Agree	Agree	Disagree	Strongly Disagree	$\bar{x}$	SD	Level of perceived barriers of action
9. You are not able to exercise because you do not know how to exercise properly. (+)	11.0	32.4	43.4	13.2	2.41	0.85	Low
10. Exercising to promote health is complicated in practice. (-)	11.3	50.4	29.3	9.1	2.64	0.80	Low
11. Exercising is not appropriate for you.(-)	12.2	44.8	33.8	9.1	2.80	0.81	Moderate
12. It is difficult to quit smoking because it is addictive. (+)	19.4	45.8	22.1	12.7	2.72	0.92	Low
13. It is difficult to quit smoking because smokers cannot force themselves to quit. (+)	25.7	43.2	21.1	10.1	2.84	0.92	Moderate
14. You do not have an annual physical examination because it takes time and is expensive. (+)	14.9	37.9	39.3	7.9	2.60	0.84	Low
15. You have a good health so you do not need annual physical examinations. (-)	15.1	54.4	21.8	8.6	2.81	0.81	Moderate

(+) = positive items; (-) = negative items

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2.3 Perceived self-efficacy of action of health promoting behaviors

The findings suggested that approximately two-thirds of the monks, or 65.7%, had the scores of perceived self-efficacy of action at a moderate level, while 30.2% had the scores at a high level. The mean score of overall perceived self-efficacy of action was equal to 3.00, and the standard deviation was 0.36 (Table 8).

When considering each item, it was found that the items for which the subjects received the mean scores of perceived self-efficacy of action at a low level were "You can eat all five food groups everyday" and "You can avoid fatty meat or fatty food." On the other hand, the three items for which the subjects received the mean scores of perceived self-efficacy at a moderate level were "You are able to refrain from drinking tea and coffee," "You are able to refrain from eating spicy food," and "You are able to refrain from drinking energy drinks," respectively (Table 9).

Table 8 Number and percentage of monks as categorized according to perceived self-efficacy of health promoting behaviors (n = 417)

Level of perceived self-efficacy	Number	Percentage
High	126	30.2
Moderate	274	65.7
Low	17	4.1

$\bar{x}$ = 3.0087; S.D. = 0.3675

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Table 9 Percentage, mean, and standard deviation of monks' perceived self-efficacy of health promoting behaviors as categorized by each item (n = 417)

Item	Strongly Agree	Agree	Disagree	Strongly Disagree	$\bar{x}$	SD	Level of perceived self-efficacy of action
1. You can eat all five food groups everyday. (+)	11.5	43.9	39.8	4.8	2.62	0.75	Low
2. You can avoid fatty meat or fatty food. (+)	11.0	59.7	25.4	3.8	2.78	0.69	Low
3. You can eat vegetable and fruit everyday. (+)	23.5	57.1	17.5	1.9	3.02	0.70	Moderate
4. You can avoid grilled or burned food. (+)	21.1	58.0	19.4	1.4	2.99	0.68	Moderate
5. You can drink at least one glass of milk per day. (+)	22.8	57.3	16.5	3.4	3.00	0.73	Moderate
6. You are able to refrain from drinking energy drinks. (+)	30.9	55.6	10.3	3.1	3.14	0.72	Moderate
7. You are able to refrain from drinking carbonated drinks. (+)	21.8	57.8	17.0	3.4	2.98	0.72	Moderate
8. You are able to refrain from drinking tea and coffee. (+)	17.0	51.6	26.1	5.3	2.80	0.78	Moderate
9. You are able to refrain from eating spicy food. (+)	18.5	55.2	21.8	4.6	2.88	0.76	Moderate

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Table 9 Percentage, mean, and standard deviation of monks' perceived self-efficacy of health promoting behaviors as categorized by each item (n = 417) (cont.)

Item	Strongly Agree	Agree	Disagree	Strongly Disagree	$\bar{x}$	SD	Level of perceived self-efficacy of action
10. You are able to refrain from uncooked or raw food. (+)	39.3	45.8	8.9	6.3	3.18	0.83	Moderate
11. You are able to exercise at least 20-30 minutes per day 3 days a week. (+)	20.6	60.2	16.8	2.4	2.99	0.69	Moderate
12. You are able to do activities to develop the temple such as sweeping the ground or cleaning the assembly hall or the residence for 20-30 minutes each time. (+)	43.4	54.0	2.2	0.5	3.40	0.46	Moderate
13. You are able to spare time for exercises. (+)	17.7	65.2	14.1	2.9	2.98	0.66	Moderate
14. You are able to exercise in your residence. (+)	22.1	65.5	8.4	4.1	3.06	0.68	Moderate
15. You are able to avoid places where people are smoking. (+)	25.7	57.3	13.7	3.4	3.05	0.73	Moderate
16. You are able to quit smoking. (+)	45.1	54.4	12.9	5.3	3.22	0.86	Moderate

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Table 9 Percentage, mean, and standard deviation of monks' perceived self-efficacy of health promoting behaviors as categorized by each item (n = 417) (cont.)

Item	Strongly Agree	Agree	Disagree	Strongly Disagree	$\bar{x}$	SD	Level of perceived self-efficacy of action
17. You are able to see the doctor for an annual physical examination once a year. (+)	27.1	54.4	15.6	2.9	3.06	0.73	Moderate

(+) = positive items; (-) = negative items

3. Health promoting behaviors of monks

According to the findings, almost all of the monks, or 90.9%, had their overall health promoting behaviors at a poor level, indicating that their health promoting behaviors needed to be improved. Only 8.6% of them had their overall health promoting behaviors at a fair level. The mean score of health promoting behaviors of monks was equal to 2.16, with the standard deviation of 0.44. When considering each domain of health promoting behaviors, it was discovered that 51.8% needed to improve their exercise habits, 37.4% still smoked, and only 12% had annual physical examination on a regular basis (Table 10).

Besides, when considering each item of health promoting behaviors, it was found that the items whose mean scores suggested improvement were "In the past three years you have had at least one physical examination a year," "You do walking mediation at least 20 minutes each time You do walking mediation at least 20 minutes each time," "You exercise at least 20-30 minutes more than 3 times a week," "You exercise in your residence," "You drink one glass of milk everyday," "You drink tea and coffee," and "You eat all five food groups," respectively (Table 11).

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Table 10 Number and percentage of monks as categorized according to health promoting behaviors by overall and by each item (n = 417)

Level of health promoting behaviors	Number	Percentage
Food consumption		
Good	27	6.5
Fair	267	64.0
Poor	123	29.5
$\bar{x}$ = 2.9400		
Exercises		
Good	73	17.5
Fair	128	30.7
Poor	216	51.8
$\bar{x}$ = 2.7526		
Smoking		
No	184	44.1
Yes	156	37.4
Used to	77	18.5
$\bar{x}$ = 2.10		
Annual physical examination		
Every year	50	12.0
Some years	193	47.3
Never	174	41.7
$\bar{x}$ = 1.95		
Overall domains of health promoting behaviors		
Good	2	0.5
Fair	36	8.6
Poor	378	90.6
$\bar{x}$ = 2.1615		

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Table 11 Percentage, mean, and standard deviation of monks' health promoting behaviors as categorized by each item (n = 417)

Item	Always	Often	Sometimes	Never	$\bar{x}$	SD	Level of practice
1. You eat all five food groups.	10.3	37.5	50.4	3.6	2.53	0.73	Poor
2. You have breakfast.	52.5	22.5	21.6	3.4	3.24	0.90	Fair
3. You eat vegetable and fruit.	29.5	41.2	29.3	0.0	3.00	0.77	Fair
4. You drink coffee or tea.	20.6	18.5	49.6	11.3	2.52	0.94	Poor
5. You drink one glass of milk a day.	15.6	29.0	46.5	8.9	2.51	0.86	Poor
6. You drink fatty food.	3.8	20.1	67.1	8.9	2.81	0.64	Fair
7. You eat burned or grilled food.	1.0	7.0	62.4	29.7	3.21	0.60	Fair
8. You eat rich desserts.	7.2	18.7	67.9	6.2	2.73	0.68	Poor
9. You eat very salty food.	4.3	11.0	55.2	29.5	3.10	0.75	Fair
10. You drink carbonated drink.	5.0	12.9	67.4	14.6	2.92	0.69	Fair
11. You drink energy drink.	3.4	7.2	60.2	29.3	3.15	0.69	Fair
12. You eat raw or uncooked food.	1.2	3.8	32.6	62.4	3.56	0.63	Good
13. You exercise at least 20-30 minutes more than 3 times a week.	14.9	25.2	48.7	11.3	2.44	0.88	Poor
14. You do walking mediation at least 20 minutes each time.	12.9	20.9	54.0	12.2	2.35	0.86	Poor
15. You mediate.	25.2	35.5	36.0	3.4	2.82	0.85	Fair
16. You exercise in your residence.	14.4	28.1	46.3	11.3	2.46	0.87	Poor

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Table 11 Percentage, mean, and standard deviation of monks' health promoting behaviors as categorized by each item (n = 417)(cont.)

Item	Always	Often	Sometimes	Never	$\bar{x}$	SD	Level of practice
17. You join activities to develop the temple such as sweeping the ground or cleaning the assembly hall for at least 20 minutes each time.	37.2	39.3	22.3	1.2	3.12	0.79	Fair
18. You clean your residence, grow plants, or water plants for at least 20 minutes each time.	33.3	37.4	27.6	1.7	3.02	0.82	Fair
19. You exercise by considering your age and body condition.	21.1	43.4	30.2	5.3	2.80	0.82	Fair
20. In the past three years you have had at least one physical examination a year.	12.0	12.9	33.3	41.7	1.95	1.01	Poor

4. Relationships among personal factor, Behavior – Specific cognition and Affect toward health promoting behaviors factor, and health promoting behaviors of monks

The present study investigated the relationship between two dependent variables (Bivariate) which is called correlation. Pearson's product moment correlation coefficient was used in the analysis, represented by the symbol 'r' which ranges in values from -1.00 to 1.00

1. If the relationship between the variables increases or decreases in accordance with each other, the correlation efficient signifies a positive relationship.

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2. If the relationship between the variables increases or decreases in the opposite direction to each other, the correlation efficient signifies a negative relationship.

3. If the relationship between the variables does not have a fixed pattern, the correlation coefficient is low in value or is equal to zero.

The degree of the relationship between the two variables can be concluded based on the coefficient correlation as follows:

1. When r is 0.8 or higher, the relationship is strong.
2. When r is between 0.6 and 0.8, the relationship is rather strong.
3. When r is between 0.4 and 0.6, the relationship is at a moderate level.
4. When r is between 0.2 and 0.4, the relationship is rather weak.
5. When r is lower than 0.2, the relationship is weak.

In this study, the analysis of the relationship is as follows:

4.1 The relationship between personal factors and monks' health promoting behaviors.

The relationship among personal factors of age, number of *vassa* being ordained, financial income from donation, and perceived health status and health promoting behaviors was examined. As these variables were considered interval scales, Pearson's product moment correlation coefficient was used. On the other hand, the other personal factors were considered nominal scales, so they were analyzed using the Chi-square(X^2 - test).

The findings revealed that financial income from donation was not related to health promoting behaviors of monks. However, age, number of *vassa* being ordained, and perceived health status were all related to health promoting behaviors of monks with statistical significance (p-value < 0.001). The age variable had the highest level of positive relationship with health promoting behaviors (r = 0.261), followed by perceived health status and number of *vassa* being ordained (r = 0.247 and r = 0.234, respectively). These three variables had a positive relationship at a rather low level. This could be explained that monks who were older, had been ordained for a longer period of time, and had perceived health status at a good level had good health promoting behaviors (Table 12).

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However, educational background, level of religious studies (*Dhamma*), level of religious studies (*Pali*), status in the temple, and reasons for ordination were not statistically significantly related to health promoting behaviors of monks (Table 12).

Table 12 Relationship between personal factors and health promoting behaviors

Variable	X^2- test	df	r	p-value
Age	-	-	0.261	< 0.001*
Number of *vassa* being ordained	-	-	0.234	< 0.001*
Income from donation	-	-	0.052	0.288
Perceived health status	-	-	0.247	< 0.001*
Educational background	10.046	6	-	0.123
Religious studies (*Dhamma*)	4.838	3	-	0.184
Religious studies (*Pali*)	6.509	6	-	0.369
Status in the temple	1.046	1	-	0.357
Reason for ordination	3.396	2	-	0.183

The results of the analysis of each of the variables are presented below.

4.1.1 Age: Age was found to be positively related to three domains of health promoting behaviors of food consumption, exercises, and annual physical examination with statistical significance (p-value < 0.05). Only smoking was not found to be related to age. This can be explained that the older monks had better health promoting behaviors of food consumption, exercises, and annual physical examination than those who were younger. However, monks had the same behaviors of smoking regardless of their age.

4.1.2 Number of *vassa* being ordained: There was a statistically significant relationship between the number of *vassa* being ordained and health promoting behaviors of monks (p-value < 0.05). In fact, the number of *vassa* being ordained was positively associated with three domains of health promoting behaviors—food consumption, exercises, and annual physical examination, and it was negatively

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associated with smoking. Thus, the longer the monks had been ordained, the better their health promoting behaviors of food consumption, exercises, and annual physical examination and the less they smoked.

4.1.3 Financial income from donation: There was no relationship between financial income from donation and all domains of health promoting behaviors.

4.1.4 Perceived health status was found to be positively related to three domains of health promoting behaviors of food consumption, exercises, and annual physical examination. In contrast, it was not related to smoking. This finding suggested that monks with a higher level of perceived health status had better health promoting behaviors of food consumption, exercises, and annual physical examination. However, they were not different when it came to smoking.

4.1.5 Educational background: The findings revealed that monks who held a diploma or higher (20.7%) had a good level of health promoting behaviors, as well as those who completed elementary education (13.6%) (Appendix C). When considering each aspect of health promoting behaviors, it was found that educational background was related to three domains of health promoting behaviors of food consumption, exercises, and smoking (p-value < 0.05). Only annual physical examination was not related to monks' educational background. This can be explained that monks who had a higher level of education had better health promoting behaviors of food consumption, exercises, and smoking. However, there was no difference when it came to annual physical examination.

4.1.6 Level of religious studies (*Dhamma)*: It was found that monks who completed the third, second, and first levels of *Dhamma* studies had a good level of health promoting behaviors (16.7%, 13.5%, and 8.5%, respectively). On the other hand, monks who did not pursue *Dhamma* studies had a good level of health promoting behaviors (11.9%) (Appendix C). The analysis of each domain of health promoting behaviors indicated that level of religious studies (*Dhamma)* was associated with only one domain of health promoting behaviors, namely smoking (p-value < 0.05). This can be explained that monks who had pursued *Dhamma* studies smoked less than those who did not. However, they were not different in other domains of health promoting behaviors regardless of their *Dhamma* studies.

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4.1.7 Level of religious studies (*Pali*): It was discovered that monks who completed levels 1-3, levels 4-6, and levels 7-9 had a good level of health promoting behaviors (8.8%, 6.8%, and 10.5%, respectively). As for monks who did not pursue *Pali* studies had a good health promoting behaviors (13.5%) (Appendix C). An analysis of each domain of health promoting behaviors indicated that it was related to only two domains of health promoting behaviors of smoking and annual physical examination (p-value < 0.05). This can be explained that monks who pursued *Pali* studies had more physical examinations and smoked less than those who did not study *Pali*. However, there were not different when it came to food consumption and exercises.

4.1.8 Status in the temple: Monks who were ecclesiastical officials had a good level of health promoting behaviors (16.7%) and monks who were ordinary monks in the temple with no rank had health promoting behaviors at a good level (10.6%) (Appendix C). When considering each domain of health promoting behaviors, it was found that status in the temple was related to three domains of health promoting behaviors of exercises, smoking, and annual physical examinations. Only food consumption was not associated with monks' status in the temple. According to these findings, ecclesiastical monks had better exercises and annual physical examinations than those who were ordinary monks. They smoked less than ordinary monks as well. However, monks had the same food consumption behaviors regardless of their title or position in the temple.

4.1.9 Reasons for ordination: Monks who had a religious purpose for ordination had a good level of health promoting behaviors (14.5%), while monks with a worldly purpose for ordination had a good level of health promoting behaviors (10.2%) (Appendix C). An analysis of each domain of health promoting behaviors indicated that monks' reason for ordination was associated with two domains of health promoting behaviors—food consumption and exercises. This can be explained that monks who had a religious purpose for ordination ate better and exercised more than those who became monks with a worldly purpose. However, monks were not different when it came to their smoking and annual physical examination regardless of their reasons for ordination (Table 13).

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Table 13 Relationship between personal factors and health promoting behaviors in each domain (n = 417)

Behavior or Variable	X^2- test	df	r	p-value
Food consumption				
Age	-	-	0.219	< 0.001*
Number of *vassa* being ordained	-	-	0.194	< 0.001*
Income from donation	-	-	0.017	0.732
Perceived health status	-	-	0.168	0.001*
Educational background	17.359	6	-	0.008*
Religious studies (*Dhamma*)	6.146	6	-	0.407
Religious studies (*Pali*)	9.254	6	-	0.160
Status in the temple	3.736	2	-	0.154
Reason for ordination	8.896	2	-	0.012*
Smoking				
Age	-	-	0.092	0.061
Number of *vassa* being ordained	-	-	-0.190	< 0.001*
Income from donation	-	-	-0.014	0.779
Perceived health status	-	-	0.051	0.304
Educational background	33.868	6	-	< 0.001*
Religious studies (*Dhamma*)	43.896	6	-	< 0.001*
Religious studies (*Pali*)	2.192	6	-	< 0.001*
Status in the temple	9.500	2	-	0.009*
Reason for ordination	0.701	2	-	0.704
Exercise				
Age	-	-	0.143	0.003*
Number of *vassa* being ordained	-	-	0.139	0.005*
Income from donation	-	-	0.052	0.290
Perceived health status	-	-	0.222	< 0.001*
Educational background	13.188	6	-	0.041*
Religious studies (*Dhamma*)	10.945	6	-	0.090
Religious studies (*Pali*)	1.609	6	-	0.925
Status in the temple	10.180	2	-	0.006*
Reason for ordination	10.545	2	-	0.005*

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Table 13 Relationship between personal factors and health promoting behaviors in each domain (n = 417) (cont.)

Behavior Or Variable	X^2- test	df	r	p-value
Annual physical examination				
Age	-	-	0.230	< 0.001*
Number of *vassa* being ordained	-	-	0.207	< 0.001*
Income from donation	-	-	0.085	0.082
Perceived health status	-	-	0.109	0.026*
Educational background	7.137	6	-	0.308
Religious studies (*Dhamma*)	10.194	6	-	0.117
Religious studies (*Pali*)	15.960	6	-	0.041*
Status in the temple	12.498	2	-	0.002*
Reason for ordination	2.667	2	-	0.264

4.2 Relationship between Behavior – Specific cognition and Affect toward health promoting behaviors and health promoting behaviors of monks

Pearson's product moment correlation coefficient was used to analyze the relationship between perception of and feeling toward health promoting behaviors and health promoting behaviors of monks which consisted of perceived benefits of action, perceived barriers of action, and perceived self-efficacy of action, all of which were interval scales.

The findings revealed that perceived benefits of action, perceived barriers of action, and perceived self-efficacy of action were all related to health promoting behaviors of monks with statistical significance (p-value < 0.001). In fact, perceived benefits of action and perceived self-efficacy of action were positively related to health promoting behaviors of monks, whereas perceived barriers of action was negatively related to health promoting behaviors of monks with statistical significance. The degree of relationship between these three variables and health promoting behaviors of monks was considered at a rather low level (Table 14). This can be explained that monks who had perceived benefits of action and perceived self-efficacy

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of action at a high level but perceived barriers of action at a low level had health promoting behaviors at a good level.

Table 14 Relationship between Behavior – Specific cognition and Affect toward health promoting behaviors and monks' health promoting behaviors (n = 417)

Perception and feeling factors	Correlation Coefficient (r)	p-value
Perceived benefits of action	0.265	< 0.001*
Perceived barriers of action	- 0.261	< 0.001*
Perceived self-efficacy	0.387	< 0.001*

The detail of an analysis of the relationship of each study variable and each domain of health promoting behaviors is as follows:

4.2.1 There was a statistically significant relationship between perceived benefits of action and three domains of health promoting behaviors (p-value < 0.05) which are food consumption, smoking, and exercises. In particular, there was a positive relationship between perceived benefits of action and exercises and perceived benefits of action and food consumption, while there was a negative relationship between perceived benefits of action and smoking. There was no relationship between perceived benefits of action and annual physical examination. This can be explained that monks who had a high level of perceived benefits of action would have health promoting behaviors of food consumption and exercises at a good level, and they would smoke cigarettes less than those who did not have a high level of perceived benefits of action. However, there was no difference when it came to having annual physical examinations.

4.2.2 There was a statistically significant negative relationship between perceived barriers of action and three domains of health promoting behaviors of monks (p-value < 0.05), namely, food consumption, annual physical examination, and

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exercises, with the exception of smoking. This suggested that monks who had perceived barriers of action at a low level will have a better level of health promoting behaviors of food consumption, annual physical examination, and exercises than those of individuals who had a high level of perceived barriers of action. However, there was no difference in relation to smoking.

4.2.3 There was a statistically significant relationship between perceived self-efficacy and all domains of health promoting behaviors (p-value < 0.05) exercises, food consumption, and annual physical examination, etc. In particular, there was a positive relationship between monks' health promoting behaviors and three domains of health promoting behaviors—exercises, food consumption, and annual physical examination, while there was a negative relationship between health promoting behaviors of smoking and monks' health promoting behaviors. This can be explained that monks who had a high level of perceived self-efficacy of action would have a high level of health promoting behaviors of food consumption, exercises, and annual physical examination, and they smoked less than those who had a low level of perceived self-efficacy of action, as shown in Table 15 below.

Table 15 Relationship between Behavior – Specific cognition and Affect toward health promoting behaviors and monks' health promoting behaviors by each item (n = 417)

Behavior Or variable	Food consumption		Smoking		Exercise		Physical examination	
	r	p-value	r	p-value	r	p-value	r	p-value
Perceived benefits of action	0.167	0.001*	-0.189	<0.001*	0.258	<0.001*	0.082	0.094
Perceived barriers of action	-0.251	<0.001*	0.032	0.520	-0.149	0.002*	-0.165	0.001*
Perceived self-efficacy	0.281	<0.001*	-0.146	0.003*	0.326	<0.001*	0.166	0.001*

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5. Predictive power of personal factors and Behavior – Specific cognition and Affect toward health promoting behaviors factors

In this study, stepwise multiple regression analysis was conducted to determine the predictive power of personal factors and perception of and feeling toward health promoting behaviors factors. Altogether 5 variables were entered into the analysis, all of which were chosen as they had a statistically significant relationship with health promoting behaviors of monks as depicted in Tables 12 and 14. These five variables were age, perceived health status, perceived benefits of action, perceived barriers of action, and perceived self-efficacy of action.

The findings indicated that the factors which had the highest correlation with monks' health promoting behaviors based on the Beta value was perceived self-efficacy of action. This was followed by age, perceived barriers of action, perceived health status, and perceived benefits of action (Beta = 0.284, 0.251, -0.255, 0.166, and 0.118, respectively) (Table 16) with statistical significance (p-value < 0.01). These five variables could co-predict health promoting behaviors of monks by 29.8%.

Table 16 Stepwise multiple regression between predictor variables and monks' health promoting behaviors (n = 417)

Step	Predictor	R^2	B	Std. Error (B_0)	Beta	t	p-value
1	Perceived self-efficacy	0.148	0.293	0.047	0.284	6.207	< 0.001
2	Perceived barriers of action	0.059	-0.242	0.045	-0.255	-5.365	< 0.001
3	Age	0.056	0.144	0.019	0.251	6.011	< 0.001
4	Perceived health status	0.026	0.339	0.085	0.166	3.980	< 0.001
5	Perceived benefits of action	0.009	0.130	0.051	0.118	2.537	0.012

B = 30.156; Std. Error (B_0) = 4.159; R = 0.554; R^2 = 0.298; F = 36.371; Sig. F = < 0.001; df = 5

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Table 17 Summary of hypothesis testing

Hypothesis	Level of confidence (p- value)	Accepted/ Rejected H_1
1. Age is related to health promoting behaviors of monks.	< 0.001*	Accepted
2. Number of *vassa* being ordained is related to health promoting behaviors of monks.	< 0.001*	Accepted
3. Status in the temple is related to health promoting behaviors of monks.	0.357	Rejected
4. Educational background is related to health promoting behaviors of monks.	0.123	Rejected
5. Religious studies (*Dhamma*) is related to health promoting behaviors of monks	0.184	Rejected
6. Religious studies (*Pali*) is related to health promoting behaviors of monks.	0.369	Rejected
7. Reason for ordination is related to health promoting behaviors of monks	0.183	Rejected
8. Income from donation is related to health promoting behaviors of monks.	0.288	Rejected
9. Perceived health status is related to health promoting behaviors of monks.	< 0.001*	Accepted
10. Perceived benefits of action is related to health promoting behaviors of monks.	< 0.001*	Accepted

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Table 17 Summary of hypothesis testing (Cont.)

Hypothesis	Level of confidence (p- value)	Accepted/ Rejected H_1
11. Perceived barriers of action is related to health promoting behaviors of monks.	< 0.001*	Accepted
12. Perceived self-efficacy is related to health promoting behaviors of monks.	< 0.001*	Accepted

*Significance level p-value < 0.05

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CHAPTER V
DISCUSSION OF FINDINGS

In this chapter, the discussion of findings is divided into two parts:
Part I: Discussion of research methodology
Part II: Discussion of research findings

Part I: Discussion of research methodology

Research design: The present study was a cross-sectional survey which aimed at investigating the factors influencing health promoting behaviors of monks residing in Bangkok. The cross-sectional design was a design which is generally used to gather initial or fundamental information of the population and to describe the relationship among variables of interest. It can also be used to study events which are taking place at the present to gather immediate information. In this study, it was selected as it enabled the researcher to determine the relationships among study variables. Cross-sectional research is also convenient, economical, and not time-consuming (73). However, the information it yields is one-time information which is quantitative in nature and is rather superficial.

Sample size: The statistical formula used in calculating the sample size indicated that 381 subjects were needed. However, the total subjects of this study were 417 monks residing at a temple in Bangkok who completed and returned a self-administered questionnaire to the researcher after data collection ended. The screening process was conducted to ensure the completeness of all 417 questionnaires. In fact, the sample size was 10% larger than what was signified by the statistical formula. However, it was deemed appropriate as it is generally believed that the larger the sample size, the less the chance any error will occur (74). Thus, a large sample size was used in the present study to minimize errors.

Sample: The subjects were 417 monks aged between 20 and 75 years. They had been monks for than one year, and they resided at a temple in Bangkok for at least one year. They were selected by means of multi-stage random sampling according to

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the zoning of the City Planning Office of Bangkok Metropolitan Administration inner city, urban fringe, and suburb. The subjects were then recruited from 31 temples located in these three zones. For this reason, they were considered representative of monks residing in Bangkok.

Research instrument: In this study, a closed-ended and open-ended questionnaire consisting of six parts was used. It was composed of demographic characteristics questionnaire, perceived health status questionnaire, perceived benefits of action of health promoting behaviors questionnaire, perceived barriers of action of health promoting behaviors questionnaire, perceived self-efficacy of action of health promoting behaviors questionnaire, and health promoting behaviors questionnaire. All parts of the questionnaire were validated for content validity by three experts. When they were tried out with 25 monks who shared similar characteristics with the subjects of the main study, the reliability coefficients of different parts of the questionnaire were as follows: the reliability of the perceived health status questionnaire was equal to 0.81, that of the perceived benefits of action of health promoting behaviors questionnaire was 0.74, that of the perceived barriers of action of health promoting behaviors questionnaire was 0.87, that of the perceived self-efficacy of action of health promoting behaviors questionnaire was 0.80, and that of the health promoting behaviors questionnaire was 0.73. The detail for each part of the questionnaire was as follows:

Part I: The demographic characteristic questionnaire was constructed by the researcher based on the conceptual framework and objectives of the study. The items in the questionnaire were closed-ended items with alternatives provided for the subjects to choose from, which were easy to answer.

Part II: The perceived health status questionnaire was adapted from the questionnaire of Rojpaisalkij K. consisted of nine items arranged in a rating scale with four possible responses given for each item, “Absolutely yes,” “Yes,” “No,” and “Absolutely no” to which the subjects could respond according to their own opinions.

Part III: The perceived benefits of action of health promoting behaviors questionnaire was developed by the researcher based on the conceptual framework of the study and a review of related research literature. There were altogether

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. There were a total of 128 items in the questionnaire, which took about 30 to 45 minutes to complete. The items were arranged in a rating scale which was easy to understand. Four possible responses were given, ranging from “Strongly agree,” “Agree,” “Disagree,” to “Strongly disagreed” which could be chosen by the subjects based on their opinions.

Part IV: The perceived barriers of action of health promoting behaviors questionnaire was designed by the researcher based on the conceptual framework and objectives of the research as well as a review of related studies. It consisted of 15 items arranged in a four-point rating scale of “Strongly agree,” “Agree,” “Disagree,” and “Strongly disagreed” to be chosen by their subjects to reflect their opinions.

Part V: The perceived self-efficacy of action of health promoting behaviors questionnaire was constructed by the researcher based on the conceptual framework and objectives of the research as well as a review of existing research. It consisted of 17 items arranged in a four-point rating scale of “Strongly agree,” “Agree,” “Disagree,” and “Strongly disagreed” to be chosen by their subjects to reflect their opinions.

Part VI: The health promoting behaviors questionnaire was developed by the researcher based on the conceptual framework and objectives of the research as well as a review of related research literature. It was composed of 20 items arranged in a four-point rating scale of “Always,” “Often,” “Sometimes,” and “Never” to be selected by their subjects according to their opinions.

Data collection: The researcher collected data by distributing the questionnaire to the subjects for self-administration. The researcher clearly explained to the subjects how to respond to the questionnaire and gave the subjects an opportunity to ask questions to clarify their understanding so as to ensure the accuracy of the responses. There was no time limitation in responding to the questionnaire, but it generally took the subjects 30 to 45 minutes to complete the questionnaire. After the subjects returned the questionnaire, the researcher and research assistants checked the questionnaire for completeness before proceeding to data analysis.

Data analysis: Descriptive statistics were used to describe demographic characteristics of the subjects, perceived health status, perceived benefits of action of health promoting behaviors, perceived barriers of action of health promoting

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behaviors, perceived self-efficacy of action of health promoting behaviors, and health promoting behaviors in terms of frequency, percentage, mean, and standard deviation. Moreover, Pearson's product moment correlation coefficient and Chi-square test were used to analyze the relationship among personal factors, perceived health status, perceived benefits of action of health promoting behaviors, perceived barriers of action of health promoting behaviors, perceived self-efficacy of action of health promoting behaviors, and health promoting behaviors. Finally, stepwise multiple regression analysis was employed to determine the predictive power of the variables. All statistical analyses were used according to the initial agreements of each of the analyses and were appropriate in attempting to answer the research questions.

Part II: Discussion of research findings

The findings of this study are discussed in accordance with research objectives and hypotheses.

1. Perceived health status

The findings revealed that more than half of the monks (60.7%) had overall perceived health status at a fair level, while 23.0% and 16.3% had perceived health status at good and poor levels, respectively (see Table 2). When considering each aspect, it was found that the lowest mean score was for item 4, "You think that in the future you may have a personal/chronic illness" ($\bar{x}$ = 2.40), followed by item 2, "You think you are one of the people who have a good health" ($\bar{x}$ = 2.71) (Table 3). These findings indicated that the subjects did not have perceived health status at a good level. One plausible explanation is that as a monk, the subjects had been taught about letting go and accepting everything that happens in their lives, especially the idea of birth, aging, sickness, and death as an unavoidable natural phenomenon. For this reason, their perceived health status scores were only at a moderate level.

2. Behavior – Specific cognition and Affect toward health promoting behaviors

2.1 As regards perceived benefits of action, the findings revealed that more than half of the subjects (53.5%) had perceived benefits of action at a high level, followed by a moderate level (46.0%) (Table 4). This can be explained that the

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subjects understood the advantages of performing health promoting behaviors. At present, one trend in society is the being health-conscious. The government has also come up with a proactive strategy to promote holistic healthcare of people. However, such strategy has not been seriously implemented, with only information disseminated. However, if the health promotion plan of the government was carried out more actively and extensively, the subjects may have more chance to receive health information.

2.2 With regard to perceived barriers of action, more than half of the subjects, or 58.3%, had perceived barriers of action at a moderate level, while 37.2% had perceived barriers of action at a low level (Table 6). These findings suggested that the subjects realized the obstacles hindering or preventing them from performing health promoting behaviors. This may be caused by some rules and regulations for monks which did not facilitate performing some behaviors to promote health.

2.3 As for perceived self-efficacy of action, it was shown that about two-thirds of monks, or 65.7%, had the mean scores of perceived self-efficacy of action at a moderate level, whereas close to one-third, or 30.2%, had their mean scores at a high level (Table 8). This means that the subjects acknowledged their own efficacy to successfully perform health promoting behaviors at a moderate level to a high level. This may be because most of the subjects were in their adulthood, which came with full maturity enabling them to understand, learn, and handle different events and situations in life. Thus, they had more chances to acquire life experiences, especially those resulting from the accomplishments, so they may have a high level of perception of their efficacy.

3. Health promoting behaviors of monks

An analysis of the overall health promoting behaviors of monks showed that almost all of the subjects, or 90.9%, had their health promoting behaviors at a poor level which meant that their health promoting behaviors needed to be improved. This finding suggested that in their daily lives, the subjects did not practice health promoting behaviors on a regular basis. This may be because they had their perceived self-efficacy at a moderate level, while they had perceived benefits of action at a high level. In general, individuals who know that they are able to perform a behavior and

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expect the advantages they will receive from doing so should have a determination to do it. In other words, if individuals know that developing such a behavior is good to their health, they should have a high level of motivation to do it. In the present study, the subjects had perceived barriers of action at a moderate level, and these obstacles could be arousals causing them to not do what they believe is beneficial for them. Besides, the subjects had their mean scores regarding exercises at a poor level and food consumption at a fair level, and 34.7% of them smoked, while only 12% had annual physical examinations on a regular basis (Table 10). Thus, their overall health promoting behaviors means scores were at a level that signified improvement. This could be further discussed in detail below.

Food consumption: The findings revealed that 64% of the subjects had food consumption behavior at a moderate level. Further analysis pointed out that between 5.91% and 7.08% of the subjects had food consumption behavior at a good level. This meant that the monk subjects did not regularly eat nutritious food. Likewise, Wimala S. (9) found that most of the monks had food consumption behavior at a low level, accounting for more than half or 58.6%. In addition, Chandrapanont A. et al. (68) found that the foods monks eat are high in calories. It is generally high in carbohydrates but low in protein, and it lacks important nutrition to enrich health. Monks receive foods offered to them by Buddhists, so they do not have a chance to choose what they eat. In addition to this, most of the people by ready-made food for monks instead of cooking by themselves, so sometimes the foods monks receive are very low in quality. For this reason, the subjects of this study had the food consumption behavior at a moderate level only.

Smoking: The findings indicated that 37.4% of the subjects smoked, and this was statistically significantly related to the number of years they had been novice monks (p-value < 0.001). Half of the subjects who had never been novice monks, or 50.6%, smoked, and 68% of these began smoking when they were teenagers aged 15 to 19 years. Furthermore, the subjects who were 50 years old or older smoked the most, accounting for 25.6%. They gave reasons that they smoked because they were lonely and stressful (Appendix C). Further analyses suggested that 36.97% to 37.02% of monks smoked. These findings were similar to those of Wongkraisrithong W. (42) which revealed that 53.6% of monks smoked. They started the habits when there were

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15 to 19 years old, and they did so because they wanted to try it and to be like their peers. Similarly, Srinaul K. (8) found that 53.4% of monks smoked, and they began smoking before becoming monks, between the age of 16 and 20 years, because they wanted to try it. Support can also be found in the study of Nammuang S. (12) which suggested that most of the subjects ranged in age from 41 to 60 years, and 40% of them smoked at a moderate level, while 31.3% at a high level. In addition, about one-quarter had been smoking for fewer than 10 years, while another quarter had been smoking for more than 40 years. Also, as high as 81.25% once successfully quit smoking, but most resumed the habit after 6 to 7 months for various reasons including not being mentally strong enough or becoming irritable. This can be explained that the subjects smoked even before they became monks, so smoking had become an ingrained habit. When they did not smoke, they became moody and felt that they were deprived of something. Moreover, 95.5% (see Appendix C) were able to buy cigarettes by themselves, and they felt that they could not quit as they were unable to control their craving (see Table 7, item 13), so they had smoking behavior at a rather high level.

Exercises: About half of the subjects, or 51.8%, had exercise mean scores at a low level indicating the need for improvement. Only 30.7% had exercise mean scores at a moderate level. An analysis of population ratio showed that 3.64% to 18.88% of monks had exercise behavior at a good level. These findings were congruent with the findings of Wimala S. (9) which found that 36.6% of monks had exercise behaviors at a moderate level. One explanation is that monks had to walk to a certain distance in the morning to accept food offered by people, and they had to do various activities to develop the temple where they lived such as sweeping the ground or cleaning the assembly hall. Therefore, they may have felt that they did not need to exercise more. Also, some may have believed that exercises were not appropriate for monks, so they did not exercise on a regular basis.

Annual physical examinations: According to the study findings, only 12% of the subjects had an annual physical examination on a regular basis, while 41.7% of monks had never had physical examinations. An analysis of population ratio indicated that between 10.98% and 13.01% of monks had physical examinations regularly. Similarly, Wimala S. (9) found that 60.3% of monks had annual physical exercises at

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a low level. This may be because the subjects misunderstood that if they did not have health problems, or if they were physically strong, they did not have to have a physical examination which could be inconvenient and time-consuming. Sometimes, they may have felt that having to wait for the doctor's examination with laypersons was not convenient for them. For these reasons, this particular health promoting behavior of the monks was at a low level.

4. Hypothesis testing

4.1 Hypothesis 1: There was a relationship between personal factors (age, number of *vassa* being ordained, status in the temple, educational background, *Dhamma* studies, *Pali* studies, reasons for ordination, and financial income) and health promoting behaviors of monks living in Bangkok.

Age: Age was positively associated with and health promoting behaviors with statistical significance (p-value < 0.01, r = 0.261). Thus, Hypothesis 1 was accepted. Orem (44) contends that age is a fundamental factor which reflects differences in physical and mental development. It also indicates individuals' maturity and ability to deal with the environment, mental conditions, and perception. In addition, age has an influence on individuals' ability to perform self-care, which will increase until its fullest when individuals become full-grown adults. These findings supported the findings of Petchthong J. (16) who investigated factors influencing health promoting behaviors of provincial police officers in Suphanburi Province and found that age was associated with health promoting behaviors and could co-predict health promoting behaviors of police officers. Likewise, Pusanasuwansri D. and Thienvichit S. (10) studied health promoting behaviors of monks who were furthering their studies at Mahamongkulrajwittayalai University and Jittapawan College and found that monks who were 40 years old or older had better health promoting behaviors than those who were younger with statistical significance at the 0.05 level. Moreover, Nammuang S. (11) examined factors related to smoking behaviors of sick monks and novice monks seeking medical treatment at Monks' Hospital and found that age was related to smoking behaviors of monks. However, these findings were incongruent with the findings of Srinual K. (8) who studied factors influencing smoking behavior of monks in Ratchburi Province which indicated that there was no relationship between age and

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health promoting behaviors. Wimala S. (9) investigated factors influencing health promoting behaviors of monks in Chiang Mai Province and also found that age was not related to health promoting behaviors. Finally, Kanchanapibul N. (15) carried out a study on relationships among personal factors, perceived health status, and health promoting behaviors of middle-age men in the Khlong Toey slum area in Bangkok. Her findings showed that age was not associated with health promoting behaviors.

Number of *vassa* being ordained: The findings revealed that there was a positive relationship between number of *vassa* being ordained and health promoting behaviors with statistical significance (p-value < 0.001, r = 0.234). Thus, Hypothesis 1 was accepted. Support for this finding can be found in a study of Srinual K. (8) which investigated factors affecting monks' smoking behaviors in Ratchburi Province and found that the length of ordination was associated with smoking. Similarly, Nammuang S. (11) studied factors associated with smoking behaviors of sick monks and novice monks seeking medical treatment at Monks' Hospital and found that the duration of ordination was related to monks' smoking habits. In contrast, Wimala S. (9) examined factors influencing health promoting behaviors of monks and found no relationship between duration of ordination and health promoting behaviors. This may be because the number of *vassa* is like individuals' age. The longer the monks have been ordained, the better they have developed their ability to manage their lives and the environment as well as the higher the perception they have about their own behaviors, resulting in good health promoting behaviors.

Status in the temple: The findings showed that there was no relationship between monks' status in the temple and their health promoting behaviors. Thus, Hypothesis 1 was not accepted. A review of literature revealed that there was no study which particularly investigated the influence of monks' status in the temple on their health promoting behaviors. However, Parent & Whall (cited in 47) point out that older people who have a high level of self-esteem tend to realize the value of having a good health. On the other hand, when individuals have different duties and responsibilities, they have to manage the time they have in one day to do different things. As a result, they have less time for rest and relaxation, implying that the time they have for self-care activities will also be reduced. This can be seen as one obstacle of developing health promoting behaviors. Nevertheless, in this study, the differences

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in health promoting behaviors of subjects with different statuses in the temple were found. One plausible explanation is that almost all of the subjects, or 92.7%, (Table 1) were ordinary monks with no official ranking. They were supposed to have similar duties and responsibilities. For this reason, they were not different when it came to their health promoting behaviors. Also, the data obtained were not distributed enough and showed a high degree of skewness, so the differences in monks' health promoting behaviors could not be detected.

Educational background, religious studies (*Dhamma)*, and religious studies (*Pali*): There was no relationship between educational background and health promoting behaviors of monks, and there was no relationship between religious studies (*Dhamma and Pali*) and health promoting behaviors of monks. Therefore, Hypothesis 1 was not accepted. Similar findings can be found in a study of Wimala S. (9) who examined factors influencing health promoting behaviors of monks and found no relationship. In contrast, Srinual K. (8) investigated factors affecting monks' smoking behaviors in Ratchburi Province and found that their secular and religious studies were associated with their smoking habits. Similarly, Kanchanapibul N. (15) carried out a study on relationships among personal factors, perceived health status, and health promoting behaviors of middle-age men in the Khlong Toey slum area in Bangkok. Her findings showed that level of education was positively associated with health promoting behaviors. Finally, Nammuang S. (11) studied factors associated with smoking behaviors of sick monks and novice monks seeking medical treatment at Monks' Hospital and found that both worldly and religious educational background was related to monks' smoking habits.

The reason why no relationship was found in this study may be that the monk subjects were rather homogeneous when it came to their studies (see Table 1), so they had similar ability to search for knowledge and learn about health promoting behaviors. Thus, educational background could not explain health promoting behaviors of monks.

Financial income from donation: Monks' income from the money donated by Buddhists was found to have no relationship with health promoting behaviors. Thus, Hypothesis 1 was not accepted. A study of Petchthong J. (16) investigated factors related to health promoting behaviors of provincial police officers in Suphanburi

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Province and found that monthly income was not associated with health promoting behaviors of police officers. Similar findings can be found in a study of Promlai J. (55) which explored factors influencing health promoting behaviors of developer working in District 3, Department of Community Development, Ministry of Interiors. The findings showed that income was not related to health promoting behaviors. Moreover, Nammuang S. (11) studied factors affecting smoking behaviors of monks and novice monks seeking medical treatment at the Monks' Hospital and discovered that there was no statistically significant relationship between income and smoking behaviors of monks. On the contrary, Suppanyu O. (54) found a positive relationship between income and health promoting behaviors. Finally, Chaisamesang N. (17) explored factors influencing health promoting behaviors of military officials stationed in Lopburi Province and found that income was associated with health promoting behaviors, and it could co-predict health promoting behaviors of military officials. One explanation is that the subjects of the present study did not have consistent income, and they could not ask for money from anybody as it would be against the monks' *Disciplines*, so they had no chance to buy materials to promote their health. For this reason, income could not determine differences in monks' health promoting behaviors.

Reason for ordination: The findings indicated that reason for ordination was not related to health promoting behaviors of monks. Thus, Hypothesis 1 was not accepted. This finding was in contrast with the findings of Wimala S.(9) who explored factors affecting health promoting behaviors of monks residing in Chiang Mai Province and discovered that the reason for ordination was associated with health promoting behaviors with statistical significance at the 0.05 level. Furthermore, Pannengpetch Y. (56) conducted a study to examine the consumption behaviors of four basic necessities of monks in Chiang Mai Province. The findings suggested that the consumption of the four basic necessities in life was associated with monks' reasons for ordination. This may be because the subjects in the present study were rather homogeneous when it came to their reasons for ordination - which were more worldly than religious (Appendix C). Consequently, the data obtained were not distributed extensively enough and showed a high degree of skewness, so the differences in monks' health promoting behaviors could not be detected.

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4.2 Hypothesis 2: There is a relationship between perceived health status and health promoting behaviors of monks residing in Bangkok.

According to the study findings, perceived health status was positively related to health promoting behaviors with statistical significance (p-value < 0.001, r = -0.247). Therefore, Hypothesis 2 was accepted.

According to Pender (29), individuals' perceived health status is a driving force that stimulates individuals to take action. It is also a crucial factor in determining healthcare behaviors of individuals. Wimala S. (9) investigated factors influencing health promoting behaviors of monks in Chiang Mai Province and also found that perceived health status was positively related to health promoting behaviors. By the same token, Charoensuk B. (57) examined the relationship between selected factors and health promoting behaviors of middle-age population in the municipality of Suphanburi Province and found that there was a relationship between perceived health status and health promoting behaviors. In addition, Chaisamesang N. (17) explored factors influencing health promoting behaviors of military officials stationed in Lopburi Province and found that perceived health status was associated with health promoting behaviors, and it could co-predict health promoting behaviors of military officials. Finally, Kanchanapibul N. (15) carried out a study on relationships among personal factors, perceived health status, and health promoting behaviors of middle-age men in the Khlong Toey slum area in Bangkok. Her findings showed that perceived health status was positively associated with health promoting behaviors. Thus, it could be concluded that perceived health status is an important factor which creates individuals' understanding and realization of practicing health promoting behaviors. For this reason, if individuals have a good level of perceived health status, they will have good health promoting behaviors.

4.3 Hypothesis 3: There is a relationship between perceived benefits of action and health promoting behaviors of monks residing in Bangkok.

The findings revealed that perceived benefits of action was positively related to health promoting behaviors of monks residing in Bangkok with statistical significance (p-value < 0.001, r = 0.265). Thus, Hypothesis 3 was accepted.

According to Pender (43), perceived benefits of action refer to individuals' concept or understanding of the advantages of practicing health promoting behaviors.

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Individuals plan for behaviors when they anticipate to gain benefits from the action, creating motivation for doing such action. Petchthong J. (16) conducted a study to investigate the factors affecting health promoting behaviors of provincial police officers in Suphanburi Province and found that perceived benefits of action were associated with health promoting behaviors of high-ranked officers with college degrees and were one of the predictors of health promoting behaviors. Similar findings can be found in a study of Chaisamesang N. (17) which explored factors influencing health promoting behaviors of military officials stationed in Lopburi Province and found that perceived benefits of action were associated with health promoting behaviors, and it could co-predict health promoting behaviors of military officials. Likewise, Limprasutra P. et al. (62) studied health status and health promoting behaviors of the elderly in Phitsanulok Province. They found that there was a positive relationship between perceived benefits of action and health promoting behaviors of the elderly subjects. In addition to these studies, Sukkasem P. (18) studied factors influencing health promoting behaviors of insurance company employees in Bangkok and found that perceived benefits of action were positively associated with health promoting behaviors, and it was also one of the co-predictors of health promoting behaviors. Finally, Nammuang S. (11) studied factors affecting smoking behaviors of monks and novice monks seeking treatment at the Monks' Hospital and discovered that there was a statistically significant relationship between perceived benefits of action and smoking behaviors of monks at the 0.05 level. Thus, these findings led to a conclusion that the higher the individuals' realize the advantages of practicing health promoting behaviors, the higher the individuals will have awareness and motivation to continue their health promoting behaviors.

4.4 Hypothesis 4: There is a relationship between perceived barriers of action and health promoting behaviors of monks in Bangkok.

The findings pointed out that perceived barriers of action were negatively related to health promoting behaviors with statistical significance (p-value < 0.001, $r = -0.261$). Therefore, Hypothesis 4 was accepted.

According to Pender (43), individuals will practice health promoting behaviors only when they have assessed the benefits of action and barriers of action available to them. If they find that health promoting behaviors lead to more benefits, they will

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decide to develop such behaviors. Pathaisophon S. (63) studied health promoting behaviors of public health officials in Utaithani Province and found that perceived barriers of action was statistically significantly related to health promoting behaviors. Also, Petchthong J. (16) conducted a study to investigate the factors affecting health promoting behaviors of provincial police officers in Suphanburi Province and found that perceived barriers of action were associated with health promoting behaviors of high-ranked officers with college degrees and were the best predictor of health promoting behaviors. Similar findings can be found in a study of Jaitham A. (46) which investigated factors influencing health promoting behaviors of patients with high blood pressure in Jaturapakiman Hospital, Roi Et Province. The findings showed that there was a negative relationship between perceived barriers of action and health promoting behaviors with statistical significance at the 0.05 level. Finally, Nammuang S. (11) studied factors affecting smoking behaviors of monks and novice monks seeking treatment at the Monks' Hospital and discovered that there was a statistically significant relationship between perceived barriers of action and smoking behaviors of monks at the 0.05 level. These findings led to a conclusion that if there is very little or no barrier in performing health promoting behaviors, individuals will decide to practice health promoting behaviors to ensure good health.

4.5 Hypothesis 5: There is a relationship between perceived self-efficacy of action and health promoting behaviors of monks in Bangkok.

The findings indicated that perceived self-efficacy of action was positively related to health promoting behaviors with statistical significance (p-value < 0.001, $r = 0.265$). Thus, Hypothesis 5 was accepted.

According to Bandura (64), perceived self-efficacy is a link between individuals' knowledge and attempt to solve a problem. In addition to influence on action, perceived self-efficacy also has an influence on individuals' attempt and perseverance to continue carrying on an action. Petchthong J. (16) examined factors influencing health promoting behaviors of provincial police officers in Suphanburi Province and discovered that their perceived self-efficacy of action was associated with health promoting behaviors and was the best predictor variable of health promoting behaviors. Likewise, Weitzei (66) used a perceived self-efficacy scale to measure self-efficacy of university employees and found that perceived self-efficacy

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could predict health promoting behaviors of the subjects. Moreover, Sherer et al. (67) found that perceived self-efficacy was the most important factor predicting health promoting lifestyle of each group of subjects, while Chaisamesang N. (17) explored factors influencing health promoting behaviors of military officials stationed in Lopburi Province and found that perceived self-efficacy was associated with health promoting behaviors, and it was the best predictor of health promoting behaviors. Finally, Sukkasem P. (18) studied factors influencing health promoting behaviors of insurance company employees in Bangkok and found that perceived self-efficacy of action was positively associated with health promoting behaviors, and it was also the best predictor of health promoting behaviors. Thus, it can be seen that the higher the perceived self-efficacy individuals have and their realization that they are capable of doing such behavior, the more they will try to practice health promoting behaviors until they have become their ingrained habits and a crucial part of their lives.

4.6 Hypothesis 6: Personal factors, perceived benefits of action of health promoting behaviors, perceived barriers of action of health promoting behaviors, and perceived self-efficacy of action of health promoting behaviors could predict health promoting behaviors of monks residing in Bangkok.

Stepwise multiple regression analysis was conducted to determine predictive power of independent variables and dependent variables. The analysis results showed that there were five variables which could predict health promoting behaviors of monks, which were age, perceived health status, perceived benefits of action of health promoting behaviors, perceived barriers of action of health promoting behaviors, and perceived self-efficacy of action of health promoting behaviors, which could co-predict health promoting behaviors of monks by 29.8%. Perceived self-efficacy was the factor that had the highest level of relationship with health promoting behaviors, so it was chosen as the first variable to enter the equation (Beta = 0.284). This was followed by age, perceived barriers of action, perceived health status, and perceived benefits of action (Beta = 0.251, -0.225, 0166, and 0.118, respectively) (Table 16). Therefore, Hypothesis 6 was accepted.

According to Pender, personal factors and perception of and feeling toward health promoting factors have both direct and indirect effects on health promoting behaviors and are related to health promoting behaviors. In this study, the factors

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influencing the four domains of health promoting behaviors were investigated, and these four domains had different degree of difficulty in practice. Therefore, when analyzed together, they yielded the predictive power of only 29.8%. In particular, perceived self-efficacy of action and perceived benefits of action had a rather low positive relationship with health promoting behaviors, while perceived barriers of action had a low negative relationship with health promoting behaviors. Besides, the subjects had perceived benefits of action at a high level, perceived self-efficacy of action and perceived barriers of action at a moderate level. Consequently, the findings of this study only partially supported Pender's theory. However, for individuals to develop appropriate health promoting behaviors, they may need to rely on various factors which were not included in the present study such as individuals' experiences, individual factors, and past behaviors. It is worth noting that in this study only personal factors were included. Also, there were perception of health promoting behaviors factors which were not included in this study such as emotional factors, interpersonal influences, and situational influences. Only the aforementioned factors were examined in this study based on a review of literature and due to the time limitations of the study.

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CHAPTER VI
CONCLUSIONS AND RECOMMENDATIONS

The present study was cross-sectional survey research which aimed to 1) investigate factors affecting health promoting behaviors of monks in Bangkok in four aspect - food consumption, smoking, exercises, and annual physical examination, 2) examine the relationships among personal factors and Behavior – Specific cognition and Affect toward health promoting behaviors, and 3) determine the predictive power of the two factors to predict health promoting behaviors of monks. The subjects in this study consisted of 417 monks who ranged in age from 20 to 75 years. They had been monks for more than one *vassa* (or rainy season), and had been living at a temple in Bangkok for more than one year. Data were collected by means of self-administered questionnaires, and data collection took place from July 11 to August 27, 2004. Data analysis involved percentage, mean, standard deviation, Chi-square test, Pearson's product moment correlation coefficient, and stepwise multiple regression analysis.

Summary of findings

1. Demographic characteristics of monks

The mean age of the subjects was 38.76 years. The largest group of subjects, or 37.2%, consisted of those 20 to 30 years old. Close to half, or 42.7%, had been monks for less than five years, with the mean duration of 2.41 years. Moreover, 60.4% of them had never been novice monks before becoming monks. As for those who used to be novice monks, 20.9% were novice monks for six to ten years. When it comes to secular education, almost half of the monks, or 47.7%, graduated from high school, while a quarter completed elementary education. As regards *Dhamma* studies, 59.5% of the monks completed the highest of the three levels of *Dhamma* studies. With regard to *Pali* studies, more than half of monks, or 51.6%, did not pursue *Pali* studies, and for those who did, the largest group or 21.8% completed the lowest three grades. Furthermore, monks received donation from performing religious ceremonies

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for people, and almost all, or 90%, received no more than 5,000 baht a month, with the average of 1,500 baht. Regarding the subjects' status in the temple, 92.7% were ordinary monks, whereas only 7.3% were acclesiastical officials. In addition, close to half, or 41.2%, became monks because they wanted to show gratitude to their parents, 23.10% complied with the tradition, and 10% wanted to seriously pursue the study of the *Dhamma*. In other words, 80.1% had worldly reasons to become monks, while 19.9% had religious reasons (Table 1 and Appendix C). Finally, when considering perceived health status, 60.7% of the monks had overall perceived status at a fair level. The item which received the lowest mean score of perceived health status was item 4, "You think that you may have a personal or chronic health problem in the future" ($\bar{x}$ = 2.40) (Table 3).

2. Behavior – Specific cognition and Affect toward health promoting behavior

More than half of the subjects, or 53.5%, had the scores of overall perceived benefits of action of health promoting behavior at a high level (Table 4), and about two-thirds, or 65%, had the scores of perceived barriers to action of health promoting behavior and perceived self-efficacy to practice health promoting behavior at a moderate level (Tables 6 and 8).

3. Health promoting behaviors of monks

Almost all of the monk subjects, or 90.9%, had overall health promoting behavior at a poor level, with the mean scores of 2.16. An analysis of each aspect of health promoting behaviors revealed that the subjects had the lowest mean score of health promoting behaviors regarding exercises, accounting for 51.8%, and as many as 37.4% of the subjects smoked, while only 12% of monks had annual physical examination (Table 10). When considering each item, it was discovered that item 20, "In the past three years you had at least one physical examination a year," received the lowest mean score ($\bar{x}$ = 1.95) (Table 11).

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4. Relationships among personal factors, Behavior – Specific cognition and Affect toward health promoting behaviors, and health promoting behaviors of monks

4.1 Relationships between personal factors and health promoting behaviors of monks

4.1.1 The personal factors which are related to health promoting behaviors of monks with statistical significance were age (p-value < 0.001, r = 0.261), number of *vassa* being ordained (p-value < 0.001, r = 0.234), and perceived health status (p-value < 0.001, r = 0.247)**.**

4.1.2 The factors which had no relationship with health promoting behaviors of monks were religious status, educational background, religious studies (*Dhamma*), religious studies (*Pali*), reasons for ordination, and financial income from donation.

4.2 Relationships between Behavior – Specific cognition and Affect toward health promoting behaviors and health promoting behaviors of monks

4.2.1 Perceived benefits of action was positively related to health promoting behaviors of monks with statistical significance (p-value < 0.001, r = 0.265).

4.2.2 Perceived barriers of action was negatively related to health promoting behaviors of monks with statistical significance (p-value < 0.001, r = -0.261).

4.2.3 Perceived self-efficacy was positively related to health promoting behaviors of monks with statistical significance (p-value < 0.001, r = 0.387).

5. Factors predicting health promoting behaviors of monks (Table 16)

Stepwise multiple regression analysis revealed that perceived self-efficacy, perceived barriers of action, age, perceived health status, and perceived benefits of action could co-predict health behaviors of monks by 29.8%.

Implication of the Findings

1. The findings should be disseminated among those who work closely with monks to increase their understanding about the factors influencing monks' health promoting behaviors so that they can plan for ways to help promote monks' health status. These individuals and agencies include monks, committee of the temple, public health officials in Bangkok, Ministry of Public Health, and families of monks.

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2. Monks' perceived health status should be promoted as the findings revealed that in general monks had perceived health status at a fair level only. The findings also confirmed the positive relationship between perceived health status and health promoting behaviors. Thus, a proactive health promoting plan should be devised by related agencies. Monks themselves should also be taught and advised on how to promote their health to raise their awareness, knowledge, and interest in their own health. They should be encouraged to develop a positive attitude about their perceived health status as well.

3. According to the study findings, perceived self-efficacy, perceived barriers of action, and perceived benefits to actions were factors which promote monks' health behaviors. Thus, in organizing health services, encouraging monks to develop perceived self-efficacy and benefits of action while learning to assess barriers to actions should be taken into account. Advice and suggestions should be provided to directly serve their needs also.

4. As it was found that the majority of monks had overall health promoting behaviors at a fair level, which signified improvement, the four aspects of health promoting behaviors—food consumption, smoking, exercises, and annual physical examination—should be promoted among monks as follows:

4.1 As for food consumption, monks should be taught how to reduce or avoid food which can be harmful to their health such as spicy food. They should also try to avoid drinking tea, coffee, carbonated drinks, and energy drinks. In fact, people should be told to avoid offering these food and drinks to monks. Also, there should be an agency which control and monitor the standard of food sold by traders to ensure the quality of food which will be donated to monks.

4.2 As regards smoking, both the temples and related agencies should organize anti-smoking campaigns among monks. Monks are also considered role models of people in society, so they can be a good example on how to perform health promoting behaviors.

4.3 With regard to exercises, 51.8% of monks in this study should improve their exercises routine. For this reason, advice should be given among monks to encourage them to have regular and appropriate exercises to strengthen their health. Merely walking out of the temples in the morning for food offering ceremonies and

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doing various activities to develop the temples they live may not make them exert enough energy and their health can be harmed by lack of physical exercises.

4.4 Regarding annual physical examination, only 10 to 13% of the subjects in this study had regular annual physical examination. Most of the monks seemed to have misunderstanding that annual physical examination was inconvenient, difficult, and time-consuming. They also seemed to believe that as long as they did not experience any physical problem, physical examination was not necessary. Thus, related agencies should seriously plan to disseminate the necessary knowledge and information among monks and help facilitate monks who want to have a physical examination to raise monks' awareness of the necessity of self-care behaviors.

Recommendations for Future Research

1. Studies should be conducted to investigate health promoting behaviors of monks using different data gathering methods such as analysis of health record forms, observations, and in-depth interviews to obtain richer information regarding actual health promoting behaviors of monks and factors influencing such behaviors.

2. Studies should be carried out to explore health promoting behaviors among novice monks so that a comparison of findings can be made to use as a basis in planning for policy to effectively and uniformly promote health behaviors among both monks and novice monks.

3. This study has shed light on basic information reflecting factors promoting health behaviors of monks. An experimental study should then be conducted to come up with effective health education programs which can subsequently be used to promote health behaviors among monks.

Other Recommendations

1. Coordination should be well planned for between the researcher and the sample group. Put another way, the researcher should ask for assistance from a coordinator who is a monk in the temple as monks constantly have activities to do and it may be difficult to approach them individually.

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2. The researcher should realize the significance of thoroughly explaining the research objectives to the sample when asking for their cooperation to participate in the study.

3. In planning for data collection together with other activities, the researcher should inform the temple before the date of data collection to avoid having overlapping schedules with the activities of the temples which can adversely affect the data collection process.

4. If physical touch is necessary, and the examiner is female, the researcher should ask for cooperation from the related authority such as the Sangkha Supreme Council in informing the monk subjects of the necessity to have females perform physical examination and in asking for monks' cooperation.

5. The communication should be established among stakeholders such as monks , temple staff , surrounding peoples and authorized person etc. for ongoing plan to strengthen the health promoting pattern in all temples for being improved the quality of life of Buddhist monks and Thai society as a whole.

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APPENDIX

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รายนามผู้ทรงคุณวุฒิ

1. รองศาสตราจารย์ ดร. สมพร เตรียมชัยศรี
   ภาควิชาเอกพยาบาลสาธารณสุข คณะสาธารณสุขศาสตร์
   มหาวิทยาลัยมหิดล
2. อาจารย์ ดร. พัชราภร เกิดมงคล
   ภาควิชาเอกพยาบาลสาธารณสุข คณะสาธารณสุขศาสตร์
   มหาวิทยาลัยมหิดล
3. อาจารย์ ดร. นิทัศน์ ศิริโชติรัตน์
   ภาควิชาสุขศึกษาและพฤติกรรมศาสตร์ คณะสาธารณสุขศาสตร์
   มหาวิทยาลัยมหิดล

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แบบสอบถามเพื่อการวิจัย

เรื่อง ปัจจัยที่มีอิทธิพลต่อพฤติกรรมส่งเสริมสุขภาพของพระสงฆ์ในเขตกรุงเทพมหานคร

คำชี้แจงในการตอบแบบสอบถาม

1. แบบสอบถามชุดนี้มีจุดมุ่งหมายเพื่อการศึกษาเท่านั้น ซึ่งเป็นส่วนหนึ่งของการศึกษาหลักสูตรวิทยาศาสตร์มหาบัณฑิต (สาธารณสุขศาสตร์) สาขาวิชาเอกอนามัยครอบครัว บัณฑิตวิทยาลัย มหาวิทยาลัยมหิดล

2. กรุณาอ่านคำชี้แจงในการตอบแบบสอบถามแต่ละส่วนให้เข้าใจก่อนตอบ

3. กรุณาตอบแบบสอบถามให้ครบทุกส่วนและทุกข้อ ผู้วิจัยจะเก็บคำตอบของท่านเป็นความลับและนำเสนอผลการวิจัยในลักษณะภาพรวม ซึ่งจะไม่ส่งผลกระทบต่อตัวท่านแต่อย่างใด ผลการวิจัยจะเป็นประโยชน์ต่อตัวท่าน และผู้ที่เกี่ยวข้องในอนาคต

รายละเอียดของแบบสอบถาม

แบบสอบถามฉบับนี้แบ่งออกเป็น 6 ส่วน คือ

ส่วนที่ 1 ข้อมูลทั่วไปด้านคุณลักษณะประชากร

ส่วนที่ 2 การรับรู้ภาวะสุขภาพ

ส่วนที่ 3 การรับรู้ประโยชน์ของการปฏิบัติพฤติกรรรมส่งเสริมสุขภาพ

ส่วนที่ 4 การรับรู้อุปสรรคของการปฏิบัติพฤติกรรรมส่งเสริมสุขภาพ

ส่วนที่ 5 การรับรู้ความสามารถของตนเองต่อการปฏิบัติพฤติกรรรมส่งเสริมสุขภาพ

ส่วนที่ 6 พฤติกรรมส่งเสริมสุขภาพ

ผู้วิจัยขอกราบนมัสการและขอกราบขอบพระคุณพระสงฆ์ทุกรูปที่ให้ความอนุเคราะห์ในการตอบแบบสอบถามและให้ความช่วยเหลือในการวิจัยครั้งนี้เป็นอย่างดียิ่งมา ณ โอกาสนี้ด้วย

นางสาวจันทร์จิรา จันทร์บก
นักศึกษาปริญญาโท ภาควิชาเอกอนามัยครอบครัว
คณะสาธารณสุขศาสตร์ มหาวิทยาลัยมหิดล

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หมายเลขแบบสอบถาม

☐☐☐ 1-3

วัด .....

แบบสอบถาม

ปัจจัยที่มีอิทธิพลต่อพฤติกรรมส่งเสริมสุขภาพของพระสงฆ์ในเขตกรุงเทพมหานคร

ส่วนที่ 1 ข้อมูลทั่วไปและข้อมูลทางด้านคุณลักษณะประชากร

คำชี้แจง โปรดทำเครื่องหมาย √ ลงใน ☐ หน้าข้อความที่ตรงกับความเป็นจริงในปัจจุบันมากที่สุดเพียงข้อเดียวหรือเติมข้อความลงในช่องว่างให้สมบูรณ์ สำหรับผู้วิจัย

G 1 – G11 = 1-10

1 . ปัจจุบันท่านมีอายุ ..... ปี ( ) 1

2. ท่านบวชเป็นพระสงฆ์มานานประมาณ ..... ปี (พรรษา) ( ) 2

ถ้าท่านเคยบวชเป็นสามเณรมาก่อน โปรดระบุด้วยว่าท่านได้บวชเป็นสามเณรมาประมาณ ..... ปี (พรรษา) ( ) 3

3. ปัจจุบันท่านจำพรรษาอยู่ในวัดนี้ในฐานะ / โดยมีสภาพเป็น ( ) 4

☐ เจ้าอาวาส ☐ รองเจ้าอาวาส

☐ พระลูกวัด ☐ ผู้ช่วยเจ้าอาวาส

4. ท่านจบการศึกษาทางสายสามัญชั้นสูงสุด ( ) 5

☐ ไม่ได้เรียน ☐ ประถมศึกษา

☐ มัธยมศึกษา ☐ อนุปริญญา

☐ ปริญญาตรีขึ้นไป

5. ท่านได้รับการศึกษาปริยัติธรรม แผนกธรรม ชั้นสูงสุด ( ) 6

☐ ไม่ได้เรียน ☐ นักธรรมชั้นตรี

☐ นักธรรมชั้นโท

☐ นักธรรมชั้นเอก

6. ท่านได้รับการศึกษาปริยัติธรรม แผนกบาลี ชั้นสูงสุด ( ) 7

☐ ไม่ได้เรียน

☐ เปรียญธรรม ..... ประโยค

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สำหรับผู้วิจัย

7. กรุณาระบุ วัตถุประสงค์ครั้งแรกที่ท่านบวชเป็นพระสงฆ์ โดยนำตัวเลข 1, 2, 3 ใส่ใน □ เรียงลำดับความสำคัญจากมากไปหาน้อย ( ) 8

- □ บวชตามประเพณี
- □ บวชเพื่อทดแทนบุญคุณบิดามารดา
- □ บวชเพื่อแสวงหาความพ้นทุกข์
- □ บวชเพื่อต้องการศึกษาหลักธรรมให้ลึกซึ้ง
- □ บวชเพื่อจะได้มีโอกาสศึกษาต่อ
- □ บวชเพื่อหนีปัญหาที่กำลังประสบอยู่
- □ บวชเพราะสุขภาพไม่ดี
- □ บวชเพื่อแก้บน
- □ บวชเพื่อสืบสานพระพุทธศาสนา
- □ อื่นๆ โปรดระบุ .....

8. ปัจจัยที่ได้รับจากกิจนิมนต์ การบริจาค นิตยภัต และปัจจัยเนื่องจากกิจอื่นๆ ( ) 9
โดยประมาณเดือนละ ..... บาท

9. ท่านจำพรรษาในวัดนี้มานาน ..... พรรษา ( ) 10

10. ท่านเคยจำพรรษาที่วัดอื่นก่อนมาอยู่วัดนี้หรือไม่ ( ) 11

- □ ไม่เคย
- □ เคย ระบุวัด.....
  จังหวัด.....
  นานประมาณ .....พรรษา

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ส่วนที่ 2 การรับรู้ภาวะสุขภาพ

คำชี้แจง โปรดทำเครื่องหมาย √ ลงในช่องท้ายข้อความที่ตรงกับความเป็นจริงของท่านในปัจจุบันมากที่สุดเพียงช่องเดียว โดยแต่ละช่องมีความหมายดังนี้

ใช่แน่นอน หมายถึง มีการรับรู้ภาวะสุขภาพตามข้อความมากที่สุด

ใช่ หมายถึง มีการรับรู้ภาวะสุขภาพตามข้อความมาก

ไม่ใช่ หมายถึง มีการรับรู้ภาวะสุขภาพตามข้อความนั้นเล็กน้อย

ไม่ใช่แน่นอน หมายถึง ไม่มีการรับรู้ภาวะสุขภาพตามข้อความนั้นเลย

ข้อที่	ข้อความ	ใช่แน่นอน	ใช่	ไม่ใช่	ไม่ใช่แน่นอน
1	ที่ผ่านมาท่านเคยป่วยหนักจนท่านคิดว่าเกือบตาย				
2	ท่านคิดว่าท่านเป็นคนหนึ่งที่มีสุขภาพดี				
3	ท่านมีสุขภาพดีพอๆกับพระรูปอื่นๆที่ท่านรู้จัก				
4	ท่านคิดว่าในอนาคต ท่านอาจมีโรคประจำตัว / โรคเรื้อรัง				
5	ท่านเป็นคนหนึ่งที่ดูแลสุขภาพของตนเองได้ค่อนข้างดี				
6	หากท่านป่วย ท่านพร้อมที่จะปฏิบัติตนตามคำแนะนำของแพทย์				
7	ท่านคิดว่าร่างกายของท่านมีความต้านทานโรคดี				
8	ท่านคิดว่าท่านมีความเข้าใจเกี่ยวกับสาเหตุของการเจ็บป่วย				
9	ท่านยอมรับว่าบางครั้งท่านจะต้องเกิดการเจ็บป่วย				

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ส่วนที่ 3 การรับรู้ประโยชน์ของการปฏิบัติพฤติกรรมส่งเสริมสุขภาพ

คำชี้แจง โปรดทำเครื่องหมาย √ ลงในช่องท้ายข้อความที่ตรงกับความคิดเห็นของท่านในปัจจุบันมากที่สุดเพียงช่องเดียว โดยแต่ละช่องมีความหมายดังนี้

เห็นด้วยอย่างยิ่ง หมายถึง มีการรับรู้ประโยชน์ของการปฏิบัติพฤติกรรมตามข้อความมากที่สุด

เห็นด้วย หมายถึง มีการรับรู้ประโยชน์ของการปฏิบัติพฤติกรรมตามข้อความมาก

ไม่เห็นด้วย หมายถึง มีการรับรู้ประโยชน์ของการปฏิบัติพฤติกรรมตามข้อความนั้นเล็กน้อย

ไม่เห็นด้วยอย่างยิ่ง หมายถึง ไม่มีการรับรู้ประโยชน์ของการปฏิบัติพฤติกรรมตามข้อความนั้นเลย

ข้อความ	เห็นด้วยอย่างยิ่ง	เห็นด้วย	ไม่เห็นด้วย	ไม่เห็นด้วยอย่างยิ่ง
1. การฉันอาหารให้ครบ 5 หมู่เป็นประจำทุกวันจะทำให้ร่างกายได้รับสารอาหารประเภทต่างๆอย่างครบถ้วน				
2. การงดฉันอาหารประเภทเนื้อสัตว์ติดมันหรืออาหารที่มีไขมันเป็นประจำจะช่วยทำให้ระดับไขมันในเลือดลดลง				
3. การฉันอาหารประเภท ผักและผลไม้เป็นประจำทุกวันจะช่วยป้องกันภาวะไขมันในเลือดสูง โรคหัวใจ และทำให้การขับถ่ายเป็นปกติได้				
4. การฉันอาหารประเภทปิ้ง ย่างที่ไหม้เกรียมไม่ก่อให้เกิดโทษต่อร่างกายเนื่องจากไม่มีการสูญเสียคุณภาพของอาหารที่ได้รับ				
5. การดื่มนมอย่างน้อยวันละ 1 แก้วช่วยทำให้กระดูกแข็งแรง				
6. การดื่มเครื่องดื่มประเภทชูกำลัง จะทำให้ร่างกายสดชื่นกระปรี้กระเปร่า				

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ข้อความ	เห็นด้วยอย่างยิ่ง	เห็นด้วย	ไม่เห็นด้วย	ไม่เห็นด้วยอย่างยิ่ง
7. การฉันอาหารที่มีรสจัด จะทำให้เกิดโทษต่อร่างกาย				
8. การออกกำลังกายอย่างน้อยสัปดาห์ละ 3 วันๆ ละ 20-30นาที จะทำให้ร่างกายแข็งแรง				
9. การขยับกาย เดินเร็วหรือทำกิจกรรมให้ร่างกายเคลื่อนไหวจะช่วยผ่อนคลายอาการปวดเมื่อยของกล้ามเนื้อได้				
10. การเดินจงกรม การเดินบิณฑบาต หรือการทำกิจกรรมพัฒนาวัดครั้งละ 20-30 นาทีต่อวันจะช่วยทำให้ร่างกายสดชื่น				
11. การออกกำลังกายอย่างสม่ำเสมอ ช่วยกระตุ้นกล้ามเนื้อปอด และหัวใจให้ทำงานได้ดีขึ้น				
12. การออกกำลังกายครั้งละ 20-30 นาทีจะช่วยขับของเสียออกจากร่างกาย ทำให้สมองปลอดโปร่ง และกระฉับกระเฉงขึ้น				
13. การนั่งสมาธิหรือทำจิตให้สงบเป็นประโยชน์ต่อสุขภาพของท่าน				
14. การสูบบุหรี่ช่วยลดความเครียดได้				
15. การสูบบุหรี่ช่วยเพิ่มความมั่นใจได้				
16. คนที่สูบบุหรี่จะมีโอกาสเป็นมะเร็งปอดเท่าๆกับคนที่ไม่สูบบุหรี่				
17. การตรวจสุขภาพประจำปีอย่างน้อยปีละ 1 ครั้งเป็นประโยชน์ต่อสุขภาพของท่าน				
18. การตรวจสุขภาพประจำปีอย่างน้อยปีละ 1 ครั้งจะทำให้แก้ปัญหาโรคต่างๆได้ทันท่วงที				

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ส่วนที่ 4 การรับรู้อุปสรรคของการปฏิบัติพฤติกรรมส่งเสริมสุขภาพ

คำชี้แจง โปรดทำเครื่องหมาย √ ลงในช่องท้ายข้อความที่ตรงกับความคิดเห็นของท่านในปัจจุบันมากที่สุดเพียงช่องเดียว โดยแต่ละช่องมีความหมายดังนี้

เห็นด้วยอย่างยิ่ง หมายถึง ไม่มีความสะดวกหรือไม่มีแนวทางการปฏิบัติพฤติกรรมนั้นมากที่สุด

เห็นด้วย หมายถึง ไม่มีความสะดวกหรือไม่มีแนวทางการปฏิบัติพฤติกรรมนั้นมาก

ไม่เห็นด้วย หมายถึง มีความสะดวกหรือมีแนวทางการปฏิบัติพฤติกรรมนั้นมาก

ไม่เห็นด้วยอย่างยิ่ง หมายถึง มีความสะดวกหรือมีแนวทางการปฏิบัติพฤติกรรมนั้นมากที่สุด

ข้อความ	เห็นด้วยอย่างยิ่ง	เห็นด้วย	ไม่เห็นด้วย	ไม่เห็นด้วยอย่างยิ่ง
1. ท่านไม่สามารถฉันอาหารให้ครบ 5 หมู่ทุกวันได้เพราะไม่มีโอกาสเลือกชนิดอาหารเองได้				
2. การรับบิณฑบาตมักขาดอาหารประเภทผักและผลไม้ทำให้มีโอกาสฉันได้น้อย				
3. การดื่มเครื่องดื่มชูกำลังเป็นเรื่องไม่เสียหายเพราะทำให้สดชื่นและไม่เพลีย				
4. การงดฉันอาหารรสจัดไม่สามารถทำได้เพราะทำให้ไม่อยากอาหาร				
5. ท่านดื่มนมไม่ทุกวันเพราะไม่ชอบรสชาด				
6. ท่านไม่ทราบว่าอาหารที่มีแคลเซียมสูงมีอาหารประเภทใดบ้าง				
7. ท่านไม่สามารถเลี่ยงอาหารมันได้เนื่องจากไม่มีโอกาสเลือก				
8. ท่านไม่สามารถออกกำลังกายได้เพราะไม่มีสถานที่สำหรับการออกกำลังกาย				
9. ท่านไม่สามารถออกกำลังกายได้เพราะไม่ทราบวิธีการออกกำลังกายที่เหมาะสมกับท่าน				

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ข้อความ	เห็นด้วยอย่างยิ่ง	เห็นด้วย	ไม่เห็นด้วย	ไม่เห็นด้วยอย่างยิ่ง
10. การออกกำลังกายเพื่อส่งเสริมสุขภาพมีขั้นตอนยุ่งยากในการปฏิบัติ				
11. การบริหารร่างกายเป็นการกระทำที่ไม่เหมาะสมสำหรับท่าน				
12. ผู้ที่สูบบุหรี่จะมีโอกาสเลิกยากเพราะบุหรี่เป็นสิ่งเสพติด				
13. ผู้ที่สูบบุหรี่จะมีโอกาสเลิกยากเพราะไม่สามารถบังคับใจตนเองได้				
14. ท่านไม่ไปตรวจสุขภาพประจำปีเพราะใช้เวลานานมากและเสียค่าใช้จ่ายสูง				
15. การที่ท่านมีสุขภาพแข็งแรงจึงไม่จำเป็นต้องตรวจสุขภาพประจำปี				

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ส่วนที่ 5 การรับรู้ความสามารถของตนเองต่อการปฏิบัติพฤติกรรมส่งเสริมสุขภาพ

คำชี้แจง โปรดทำเครื่องหมาย √ ลงในช่องท้ายข้อความที่ตรงกับความคิดเห็นของท่านในปัจจุบันมากที่สุดเพียงช่องเดียว โดยแต่ละช่องมีความหมายดังนี้

เห็นด้วยอย่างยิ่ง หมายถึง มีความคิดริเริ่ม ความพยายาม ความมุ่งมั่นที่จะกระทำพฤติกรรมเป็นประจำทุกวันอย่างเคร่งครัด

เห็นด้วย หมายถึง มีความคิดริเริ่ม ความพยายาม ความมุ่งมั่นที่จะกระทำพฤติกรรมเป็นประจำทุกวัน

ไม่เห็นด้วย หมายถึง มีความคิดริเริ่ม ความพยายาม ความมุ่งมั่นที่จะกระทำพฤติกรรมนั้นเล็กน้อย

ไม่เห็นด้วยอย่างยิ่ง หมายถึง ไม่มีความคิดริเริ่ม ความพยายาม ความมุ่งมั่นที่จะกระทำพฤติกรรมนั้นเลย

ข้อความ	เห็นด้วยอย่างยิ่ง	เห็นด้วย	ไม่เห็นด้วย	ไม่เห็นด้วยอย่างยิ่ง
1. ท่านสามารถฉันอาหารให้ครบ 5 หมู่เป็นประจำทุกวันได้				
2. ท่านสามารถงดฉันอาหารประเภทเนื้อสัตว์ติดมันหรืออาหารที่มีไขมันได้				
3. ท่านสามารถฉันผักและผลไม้เป็นประจำทุกวันได้				
4. ท่านสามารถหลีกเลี่ยงการฉันอาหารประเภทปิ้งย่างที่ไหม้เกรียมได้				
5. ท่านสามารถดื่มนมอย่างน้อยวันละ 1 แก้วได้				
6. ท่านสามารถงดเครื่องดื่มประเภทชูกำลัง ได้				
7. ท่านสามารถงดดื่มน้ำอัดลมได้				
8. ท่านสามารถงดดื่มเครื่องดื่มประเภทชา กาแฟได้				
9. ท่านสามารถงดฉันอาหารที่มีรสจัดได้				

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ข้อความ	เห็นด้วยอย่างยิ่ง	เห็นด้วย	ไม่เห็นด้วย	ไม่เห็นด้วยอย่างยิ่ง
10. ท่านสามารถงดฉันอาหารประเภทสุกๆดิบๆ ได้				
11. ท่านสามารถออกกำลังกายโดยใช้เวลาครั้งละไม่ต่ำกว่า 20-30 นาที 3วันต่อสัปดาห์ได้				
12. ท่านสามารถร่วมกิจกรรมพัฒนาวัด เช่น กวาดลานวัด ศาลาวัด ทำความสะอาดโบสถ์ กุฏิ ได้นาน 20-30นาทีต่อครั้งได้				
13. ท่านสามารถจัดสรรเวลาเพื่อออกกำลังกายได้				
14. ท่านสามารถออกกำลังกายภายในกุฏิได้				
15. ท่านสามารถหลีกเลี่ยงสถานที่ที่มีคนสูบบุหรี่อยู่ได้				
16. ท่านสามารถงดสูบบุหรี่ได้				
17. ท่านสามารถไปพบแพทย์เพื่อตรวจ สุขภาพปีละ 1 ครั้งได้				

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ส่วนที่ 6 พฤติกรรมส่งเสริมสุขภาพ

คำชี้แจง โปรดใส่เครื่องหมาย √ ลงในช่องข้อความที่ตรงกับการ**ปฏิบัติจริง**ของท่าน**ในรอบ 3 เดือนที่ผ่านมา** โดยแต่ละช่องมีความหมายดังนี้

ปฏิบัติเป็นประจำ หมายถึง ท่านได้ทำสิ่งนั้นเป็นประจำทุกวันใน 1 สัปดาห์

ปฏิบัติเป็นส่วนมาก หมายถึง ท่านได้ทำสิ่งนั้นประมาณ 4-6 ครั้งใน 1 สัปดาห

ปฏิบัติเป็นส่วนน้อย หมายถึง ท่านได้ทำสิ่งนั้นประมาณ 1-3 ครั้งใน 1 สัปดาห์

ไม่ปฏิบัติเลย หมายถึง ท่านไม่เคยปฏิบัติสิ่งนั้นเลย

พฤติกรรม	ความถี่ในการปฏิบัติ			
	เป็นประจำ	เป็นส่วนมาก	เป็นส่วนน้อย	ไม่ปฏิบัติเลย
1. ท่านฉันอาหารครบทั้ง 5 หมู่				
2. ท่านฉันอาหารมื้อเช้า				
3. ท่านฉันอาหารประเภท ผัก ผลไม้				
4. ท่านดื่มเครื่องดื่มประเภทชา กาแฟ				
5. ท่านดื่มนมวันละ 1 แก้ว				
6. ท่านฉันเนื้อสัตว์ติดมัน อาหารประเภทไขมันสูง				
7. ท่านฉันอาหารที่ปิ้ง ย่างจนไหม้เกรียม				
8. ท่านฉันขนมหวาน / ขนมใส่กะทิ				
9. ท่านฉันอาหารรสเค็มจัด				
10. ท่านดื่มน้ำอัดลม				
11. ท่านดื่มเครื่องดื่มประเภทชูกำลัง				
12. ท่านฉันอาหารประเภทสุกๆ ดิบๆ				
13. ท่านออกกำลังกายโดยใช้เวลาครั้งละไม่ต่ำกว่า 20-30 นาที มากกว่า 3 ครั้ง ต่อสัปดาห์				
14. ท่านเดินจงกรมโดยใช้เวลาไม่ต่ำกว่าครั้งละ 20 นาที				
15. ท่านนั่งสมาธิหรือทำจิตให้สงบ				

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พฤติกรรม	ความถี่ในการปฏิบัติ			
	เป็นประจำ	เป็นส่วนมาก	เป็นส่วนน้อย	ไม่ปฏิบัติเลย
16. ท่านเคยออกกำลังกายภายในกุฏิ				
17. ท่านร่วมกิจกรรมพัฒนาวัด เช่น กวาดลานวัด ทำความสะอาดโบสถ์ ศาลาวัด โดยใช้เวลาไม่ต่ำกว่าครั้งละ 20 นาที				
18. ท่านเคยทำความสะอาดกุฏิ ปลูกต้นไม้ หรือ รดน้ำต้นไม้ โดยใช้เวลาไม่ต่ำกว่าครั้งละ 20 นาที				
19. ท่านออกกำลังกายโดยคำนึงถึงวัย และสภาวะของร่างกาย				
20. ในรอบ 3 ปีที่ผ่านมาจนถึงปัจจุบันท่านตรวจสุขภาพประจำปีอย่างน้อยปีละ 1 ครั้ง				

21. ปัจจุบันท่านสูบบุหรี่ หรือไม่

☐ ไม่สูบ

☐เคยสูบ เริ่มเมื่ออายุ……. ปี สูบมานาน……ปี หยุดสูบมานาน…..ปี สูบเฉลี่ยวันละ …….มวน

☐สูบ เริ่มสูบตั้งแต่อายุ…..ปี สูบเฉลี่ยวันละ …….มวน

ข้อที่ 22 - 24 สำหรับท่านที่สูบบุหรี่ หรือเคยสูบบุหรี่เป็นผู้ตอบ

22. เหตุผลที่ท่านสูบบุหรี่

☐คลายเครียด ☐แก้เหงาในเวลาว่าง

☐ตามเพื่อน ☐อยากลอง

☐เพิ่มความมั่นใจ ☐ญาติโยมนำมาถวาย

☐อื่นๆ ระบุ ……

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23. ลักษณะเหตุการณ์ที่ท่านจะใช้บุหรี่

☐เมื่อเครียด ☐หลังตื่นนอน

☐ก่อนออกบิณฑบาต ☐ก่อนฉันอาหาร

☐หลังฉันอาหาร ☐ก่อนนอน

☐มีเวลาว่าง ☐เมื่อออกไปปฏิบัติกิจนิมนต์นอกวัด

☐อื่นๆ ระบุ .....

24. ท่านได้บุหรี่ที่สูบจาก

☐ญาติโยม ☐เพื่อน

☐ซื้อเอง ☐อื่นๆ ระบุ .....

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ตารางที่18. ความสัมพันธ์ระหว่างระดับการศึกษาทางสายสามัญ ระดับการศึกษาทางธรรม สถานภาพภายในวัด และวัตถุประสงค์ของการบวชกับพฤติกรรมส่งเสริมสุขภาพ

ตัวแปร	พฤติกรรมส่งเสริมสุขภาพ						รวม	X^2	P-value
	ดี		พอใช้		ควรปรับปรุง				
	จำนวน	ร้อยละ	จำนวน	ร้อยละ	จำนวน	ร้อยละ			
ระดับการศึกษาทางสายสามัญ								10.046	0.123
ประถมศึกษา	15	13.6	81	73.6	14	12.7	110(100)		
มัธยมศึกษา	20	10.05	166	83.4	13	6.5	199(100)		
อนุปริญญา	3	10.7	19	67.9	6	21.4	28(100)		
ปริญญาตรีขึ้นไป	8	10.0	66	82.5	6	7.5	80(100)		
รวม	46	11.0	332	79.6	39	9.4	417(100)		
ระดับการศึกษาแผนกธรรมสูงสุด								7.461	0.280
ไม่ได้รับการศึกษา									
นักธรรมชั้นตรี	5	11.9	31	73.8	6	14.3	42(100)		
นักธรรมชั้นโท	15	16.7	65	72.2	10	11.1	90(100)		
นักธรรมชั้นเอก	5	13.5	29	78.4	3	8.1	37(100)		
รวม	21	8.5	207	83.5	20	8.1	248(100		
	46	11.0	332	79.6	39	9.4	417(100)		
ระดับการศึกษาแผนกบาลีสูงสุด								6.509	0.369
ไม่ได้รับการศึกษา	29	13.5	168	78.1	18	8.4	215(100)		
เปรียญธรรม 1-2 หรือ 3 ประโยค	8	8.8	75	82.4	8	8.8	91(100)		
เปรียญธรรม 4 , 5 หรือ 6 ประโยค	5	6.8	57	78.1	11	15.1	73(100)		
เปรียญธรรม 7, 8 หรือ 9 ประโยค	4	10.5	32	84.2	2	5.2	38(100)		
รวม	46	11.0	332	79.6	39	9.4	417(100)		
สถานภาพภายในวัด								2.184	0.336
พระสังฆาธิการ	5	16.7	24	80.0	1	3.3	30(100)		
พระลูกวัด	41	10.6	308	79.6	38	9.8	387(100)		
รวม	46	11.0	332	79.6	39	9.4	417(100)		

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ตารางที่18. (ต่อ)

ตัวแปร	พฤติกรรมส่งเสริมสุขภาพ						รวม	X^2	P-value
	ดี		พอใช้		ควรปรับปรุง				
	จำนวน	ร้อยละ	จำนวน	ร้อยละ	จำนวน	ร้อยละ			
วัตถุประสงค์ที่ท่านบวชเป็นพระสงฆ์								3.396	0.183
-วัตถุประสงค์ทางโลก	34	10.2	265	79.3	35	10.5	334(100)		
-วัตถุประสงค์ทางธรรม	12	14.5	67	80.7	4	4.8	83(100)		
รวม	46	11.0	332	79.6	39	3.4	417(100)		

ตารางที่ 19. จำนวน ร้อยละของพระสงฆ์กลุ่มที่สูบบุหรี่ จำแนกตามอายุที่เริ่มสูบบุหรี่ (n = 156)

อายุ (ปี)	จำนวน	ร้อยละ
5 ─ 9	1	0.7
10 ─ 14	14	7.2
15 ─ 19	104	68.0
20 ─ 24	21	13.7
25 ─ 29	8	5.2
30 ปีขึ้นไป	8	5.2
$\bar{x}$ = 18.44		

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ตารางที่ 20. จำนวน ร้อยละของพระสงฆ์กลุ่มที่สูบบุหรี่ จำแนกตามสาเหตุของการสูบบุหรี่ (n = 156)

สาเหตุการสูบ	จำนวน	ร้อยละ
แก้เหงา	49	31.4
คลายเครียด	45	28.8
ตามเพื่อน	33	21.2
อยากลอง	15	9.6
ญาติโยมถวาย	6	3.8
เหตุผลอื่นๆ	6	3.8
เพิ่มความมั่นใจ	2	1.4

ตารางที่ 21. จำนวน ร้อยละของพระสงฆ์กลุ่มที่สูบบุหรี่ จำแนกตามแหล่งที่มาของสูบบุหรี่ (n = 156)

แหล่งที่มา	จำนวน	ร้อยละ
ซื้อเอง	149	95.9
เพื่อน	4	2.6
ญาติโยมถวาย	3	1.5

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ตารางที่ 22. จำนวน ร้อยละของพระสงฆ์กลุ่มที่สูบบุหรี่ จำแนกตามลักษณะหรือเหตุการณ์ของการสูบบุหรี่ (n = 156)

ลักษณะหรือเหตุการณ์ของสูบ	จำนวน	ร้อยละ
เวลาว่าง	61	39.3
เกือบทุกกิจกรรม	41	26.3
หลังฉันอาหาร	27	17.3
เมื่อเครียด	18	11.5
เหตุการณ์อื่นๆ	6	3.8
ก่อนออกบิณฑบาต	1	0.6
ก่อนฉันอาหาร	1	0.6
หลังฉันอาหาร	1	0.6

ตารางที่ 23. ความสัมพันธ์ระหว่างจำนวนพรรษาที่เคยบวชเป็นสามเณรมาก่อนกับพฤติกรรมด้านการสูบบุหรี่

ตัวแปร	พฤติกรรมด้านการสูบบุหรี่						รวม	X^2	P-value
	ไม่สูบ		เคยสูบ		สูบ				
	จำนวน	ร้อยละ	จำนวน	ร้อยละ	จำนวน	ร้อยละ			
จำนวนพรรษาที่เคยบวชเป็นสามเณร								47.729	<0.001*
-ไม่เคยบวช	84	33.5	40	15.9	128	50.6	252(100)		
-เคยบวช	100	60.2	37	22.3	29	17.5	166(100)		
รวม	184	44.1	77	18.5	156	37.4	417(100)		

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BIOGRAPHY

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