

**FACTORS ASSOCIATED WITH SELF-CARE BEHAVIOR
OF ANDROPAUSAL MEN : A CASE STUDY OF
NON-COMMISSION POLICEMEN IN BANGKOK METROPOLIS**



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Entitled

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FACTORS ASSOCIATED WITH SELF-CARE BEHAVIOR OF ANDROPAUSAL MEN: A CASE STUDY OF NON-COMMISSION POLICEMEN IN BANGKOK METROPOLIS

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ABSTRACT

The objective of this cross-sectional research was to explore self-care behavior and factors associated with self-care behavior of andropausal men. Subjects were 360 non-commission policemen in Bangkok Metropolis aged 40 - 59 years . The data were collected by using questionnaires, during November 10 to December 26, 2003. Data were analysed using frequency, percentage, mean, standard deviation, Pearson Product Moment Correlation Coefficient, and Stepwise Multiple Regression, with significant level at $p\text{-value} < 0.05$.

Results revealed that 47 % had a low level of self-care behavior; 56% had lack of high calcium food consumption; 46% had non-regular exercise; and 77% had not having prostate gland examination regularly. Approximately 11% of the subjects had andropausal symptoms, using PADAM score. Significant correlation was found between age, education, self-care attitude, partial androgen deficiency, social support and self-care behavior. Social support, age, and partial androgen deficiency could predict self-care behavior of andropausal men by 36%.

In conclusion, almost half of the subjects reported a low level of self-care behavior. Three significant factors related to low level of self-care behavior were social support, age, and partial androgen deficiency.

Based on this study, it is recommended that proper self-care behavior of adropausal men should be promoted through social support activity, such as proving the necessary information and guidance through various media and close persons; andropausal men should be encouraged to have self-care behavior from the early stage of andropause; special guidance should be provided for those with serious complications of partial androgen deficiency. The recommended self- care behavior includes increased exercise, calcium consumption, and regular prostate gland examination .

KEY WORDS: SELF-CARE / ANDROPAUSE / POLICEMEN
PATIAL ANDROGEN DEFICIENCY

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ปัจจัยที่มีความสัมพันธ์กับพฤติกรรมการดูแลสุขภาพของชายวัยทอง:กรณีศึกษาในข้าราชการตำรวจชั้นประทวนเขตกรุงเทพมหานคร (FACTORS ASSOCIATED WITH SELF-CARE BEHAVIOR OF ANDROPAUSAL MEN : A CASE STUDY OF NON-COMMISSION POLICEMEN IN BANGKOK METROPOLIS)

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บทคัดย่อ

การศึกษาเชิงสำรวจ เพื่อศึกษาพฤติกรรมการดูแลสุขภาพและปัจจัยที่มีความสัมพันธ์กับพฤติกรรมการดูแลสุขภาพของชายวัยทอง กลุ่มตัวอย่างคือ ข้าราชการตำรวจชั้นประทวน ในเขตกรุงเทพมหานคร เพศชาย ที่มีช่วงอายุ 40-59 ปี จำนวน 360 คน เก็บข้อมูลโดยวิธีการตอบแบบสอบถาม ระยะเวลาเก็บข้อมูลตั้งแต่วันที่ 10 พฤศจิกายน ถึง 26 ธันวาคม 2546 วิเคราะห์ข้อมูลโดยใช้ ค่าร้อยละ ค่าเฉลี่ย และส่วนเบี่ยงเบนมาตรฐาน การทดสอบสัมประสิทธิ์สหสัมพันธ์แบบเพียร์สัน และสถิติการวิเคราะห์ถดถอยพหุแบบขั้นตอน

ผลการศึกษาพบว่าชายวัยทองส่วนใหญ่มีการดูแลสุขภาพตนเองอยู่ในระดับต่ำ ร้อยละ 47 โดยร้อยละ 56 ของกลุ่มตัวอย่างขาดการรับประทานอาหารเช้าที่มีแคลเซียม, ร้อยละ 46 ขาดการออกกำลังกายอย่างสม่ำเสมอ, ร้อยละ 77 ไม่ไปรับการตรวจมะเร็งต่อมลูกหมากอย่างสม่ำเสมอ และร้อยละ 11 มีภาวะโฮโมนเพศชายบกพร่อง ซึ่งวินิจฉัยโดยใช้แบบสอบถาม PADAM score ปัจจัยที่มีความสัมพันธ์กับพฤติกรรมการดูแลสุขภาพของชายวัยทองอย่างมีนัยสำคัญทางสถิติ ($p\text{-value}<0.05$) ได้แก่ อายุ ระดับการศึกษา เจตคติต่อการดูแลตนเอง อาการภาวะฮอร์โมนเพศชายบกพร่อง และแรงสนับสนุนทางสังคม เมื่อวิเคราะห์ปัจจัยที่สามารถทำนายพฤติกรรมการดูแลสุขภาพของชายวัยทองพบว่า แรงสนับสนุนทางสังคม อายุ และอาการภาวะฮอร์โมนเพศชายบกพร่อง สามารถร่วมทำนายพฤติกรรมการดูแลสุขภาพของชายวัยทองได้ ร้อยละ 36

ข้อเสนอแนะจากการวิจัย ควรส่งเสริมให้ชายวัยทองได้รับแรงสนับสนุนทางสังคมที่ดีจากบุคคลใกล้ชิดและหน่วยงานที่เกี่ยวข้อง โดยเฉพาะเรื่องข้อมูลข่าวสาร เกี่ยวกับการดูแลตนเองในวัยทอง และควรเริ่มดำเนินการดูแลตนเองตั้งแต่เริ่มเข้าสู่วัยทอง ส่วนชายวัยทองที่มีอาการภาวะฮอร์โมนเพศชายบกพร่องมากเป็นกลุ่มที่ต้องให้คำปรึกษาแนะนำเป็นพิเศษ ในการดูแลตนเองควรส่งเสริมให้ชายวัยทองมีการออกกำลังกายและการบริโภคอาหารที่มีแคลเซียมเพิ่มมากขึ้น และควรไปรับการตรวจมะเร็งต่อมลูกหมากอย่างสม่ำเสมอ

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CHAPTER I

INTRODUCTION

Background and Significant

The structure of Thai population at present has changed from the past because of the success in family planning. In addition, development in medical system and public health service results in an increase in the average age of Thai population. The Office of National Economic and Social Development Board estimates that in the year 2000–2005 the average age of Thai males is 68.15 years and the number will be increased to 70.07 years in 2015–2020. These numbers indicate that most Thai males live the last one-third of their life after 40 years of age, which is also known as andropausal age(1).

Andropause is defined as a man aged about 40 with the deficient function of testis in producing spermatozoa and testosterone, which is the most important androgen hormone. This condition called “Partial Androgen Deficiency in Aging Male”(PADAM) (2).The age of 40–59 years, or middle-age period, is a significant turning point of adult age and it is also a preparation stage for entering elderly period. Men with appropriate development in accordance to their age should have succeeded in family and work life at this age, as it is known as the prime of life(3). At present, there are approximately 6.9 million men at this age(4), which is quite a large number. However, men at this age may have health problems from various causes. One of the common causes is the decrease in testosterone, which may have impacts on the functioning of various body systems. Effect on neuronal and psychological systems such as moody, depression, loss of concentration, having no creativity, forgetfulness, loss of self- confidence, insomnia , hot flushes and sweat. Reproductive organs and urinary system change including genitalia atrophy bigger size of prostatic or benign prostatic hypertrophy that symptoms such as loss of urine, frequency, and dysuria. In addition, sexuality is affected, for example, loss of libido and intermittent failure to

achieve an erection, leading to performance anxiety and eventually complete impotence, physiological effects such as tiredness, and loss of appetite, muscular atrophy, dry skin, to collect fat at abdomen that look like apple type. Long term physiological change such as cardiovascular, dyslipidemia, hypertension, osteopenia and osteoporosis (2)

The top ten important and frequently found problems in andropausal clinic at Ramathibordi hospital (5) are dyslipidemia 82%, Andropausal Symptoms 78%, erectile dysfunction 66%, benign prostatic hyperplasia 65%, obesity 46%, hypertension 39%, hyperemia 36%, osteopenia 32%, diabetic 22%, and osteoporosis 9%

Erectile dysfunction is a common condition in andropausal men and it leads to various problems in daily life. It is found that approximately 52 percent of men aged 40–70 years have erectile dysfunction at any level (6). As a result, these men become stressed, which may affect their family relationship. They may suffer from depression, loss of self-respect and poor self-esteem. Osteoporosis is another problem that is commonly found in men older than 50 years of age, and osteoporotic fracture is found in every one out of eight men in this group (13%). Among those with osteoporotic fractures (7), half of them need long-term hospitalization. Moreover, the mortality rate of men with hip fractures is twofold higher than the mortality rate of women with the same problems (8).

The aforementioned health problems in andropausal men, therefore, have strong impacts on men's personal and family life, as well as their work efficiency and economy. Thus, it is important to promote health condition and delay health problems at an early stage, in order to maintain healthy condition for the andropausal period, and eventually, entering older ages with quality.

Promotion of self-care is a common approach that is used in fundamental public health service to maintain people's healthy condition. Self-care behavior concerning health involves the activities that one should conduct to maintain good health in both healthy and ill conditions. Self-care is the process in which people can conduct health activities by themselves with objectives to promote and maintain healthy condition, prevent disease, and self-manage illness including physical and mental rehabilitation (9).

Referring to the policy of the Department of Health, Ministry of Public Health (10), the health vision for andropausal men is stated as follows: “Men aged 40–59 years to be in healthy condition in physical, mental, social, and spiritual aspects.” In order to achieve the vision, the Department of Health states that the goal for promoting health is to provide men aged 40–59 years with knowledge and to increase their awareness about health promotion, as well as giving them support for standard health care for at least 20 percent. The standard health care for andropausal men comprises the following: 1.) appropriate self-care in aspects of nutrition, physical exercise, rest, avoidance of addictive substance, mental exercise, and participation in health activities either with the family or the society; 2.) health surveillance from public health officers, including having medical check-up at least once a year, undergoing prostate glands examination at least once a year, having assessment of weight, height, waist-hips ratio, blood pressure, pulse rate and respiratory rate at least once a year; undergoing exercise test at least once a year; and having mental health assessment at least once a year.

According to Orem (11), self-care comprises universal self-care requisites, developmental self-care requisites, and health deviation self-care requisites. Andropausal men need to conduct self-care in all aspects. Universal self-care requisites includes requisites includes dietary, exercise, rest, excretion, and prevention of health problems, which is in accordance with the standard health care for andropausal men proposed by the Department of Health, the Ministry of Public Health. Developmental self-care requisites means self-care according to personal development for self-acceptance and self-esteem. Self-care while having health problems includes the caring of one’s self when having illness from changes in androgen hormone or from any diseases thus men should have capacity for good self-care. Basic factors affecting the capacity for self-care comprise age, gender, developmental stage, tradition, culture, housing, family system, lifestyle, health condition, resources, and significant life experience. For the development of health behavior, essential basic factors are knowledge, attitude, and practice (12).

Bangkok Metropolis is the province with the largest size of population in Thailand. Among the total number of 5,703,292 people in present Bangkok, 642,408 people (13), or 11.3 percent of the whole population, are andropausal men. Growth

and developments of Bangkok induce various consequent problems such as pollution, traffic problems, crimes, mental health problems, etc. These problems have strong impact on the citizens of Bangkok. This research was conducted in a group of non-commission policemen in Bangkok Metropolis because police work naturally concerns with people's troubles and stressful situation (14). Police is a hard work with no definite work time, as it needs to provide 24-hour service, like nursing. Police work requires irregular bedtime and irregular mealtime, thus the police need to change their daily lifestyle and social activities, leading to negative effects on body, mind, family, social life, and work performance (15). Moreover, police work is harder than the work of other civil servants with the work day of averagely six days per week. Nonetheless, it is found that 38.5 percent of the police work seven days. The number of working hour is averagely 8.95 hours per day (16); and this number includes traffic police, who have to work among the pollutions i.e. air pollution, loud noise, and high temperature. Their work environment, therefore, invariably has effects on their health. Moreover, non-commission policemen, who are the majority of police population, have low income and low education levels. A study conducted by Petchthong J. (17) found that most non-commission policemen were educated lower than a bachelor's degree level (90.4%) and had average family income of 12,084 baht with 47.1 percent of them had income lower than 10,000 baht. The health assessment of policemen, who were mostly aged 40–59 years, in the Department of Urban Police, Bangkok in the year 2001(18) showed that 26.6 percent of them had hyperlipidemia, 12 percent had hypertension, 3.6 percent had diabetes mellitus, and 5 percent had heart disease. Petchthong J. also reported that 63.1 percent of non-commission policemen were aged 40–49 years, 43.4 percent had smoking habits, 61.3 percent drank alcohol, 8 percent did not have annual medical check-up, and 21.6 percent had body mass index higher than standard value Phorung C.(19) found that traffic police in Bangkok had health behavior in aspect of exercise at low level, as 51.1 percent had improper health behavior; moreover, 36.6 percent of the sample in this study never had any hobby.

Guidelines for the promotion of general self-care, developmental self-care, and self-care while having health problems will help andropausal men, whose physical condition is deteriorated with an increase in health problems, to live a happy life. Hence, in order to promote self-care among andropausal men and in response to the

government policy of health promotion for andropausal men, the researcher of this study was interested in studying the factors associated with self-care behavior of andropausal man in non-commission policemen in Bangkok Metropolis. The information obtained from this study can be used as guidelines in providing knowledge and advice for health promotion to policemen in andropausal age and, eventaulally, health care among andropausal men in general.

General Objectives

To study factors related to self-care behavior of andropausal men (non-commission policemen) in Bangkok Metropolis.

Specific Objectives

1. To study self-care behavior of andropausal men (non-commission policemen) in Bangkok Metropolis.
2. To study the relationships between personal factors (age, education, marital status, family income) and self-care behavior of andropausal men (non-commission policemen) in Bangkok Metropolis.
3. To study the relationships between self-care knowledge factors and self-care behavior of andropausal men (non-commission policemen) in Bangkok Metropolis.
- 4.To study the relationships between self-care attitude factors and self-care behavior of andropausal men (non-commission policemen) in Bangkok Metropolis.
5. To study the relationships between Partial Androgen Deficiency in Aging Male (PADAM) and self-care behavior of andropausal men (non-commission policemen) in Bangkok Metropolis.
6. To study the relationships between social support and self-care behavior of andropausal men (non-commission policemen) in Bangkok Metropolis.
7. To investigate the influence of the factors affecting self-care behavior of andropausal men (non-commission policemen) in Bangkok Metropolis.

Research Hypotheses

1. Personal factors (age, education, marital status, family income) have positive relationships with self-care behavior of andropausal men(non-commission policemen) in Bangkok Metropolis.
2. Self-care knowledge factors have positive relationships with self-care behavior of andropausal men (non-commission policemen) in Bangkok Metropolis.
3. Self- care attitude factors have positive relationships with self-care behavior of andropausal men (non-commission policemen) in Bangkok Metropolis.
4. Partial Androgen Deficiency in Aging Male (PADAM) have negative relationships with self-care behavior of andropausal men (non-commission policemen) in Bangkok Metropolis.
5. Social support have positive relationships with self-care behavior of andropausal men (non-commission policemen) in Bangkok Metropolis.
6. Personal factors, Self-care knowledge, Self- care attitude, Partial Androgen Deficiency in Aging Male and Social support are predictors self-care behavior of andropausal men (non-commission policemen) in Bangkok Metropolis.

Scope of study

This study was conducted with andropausal men age 40 to 59 years old, non-commission policemen working under metropolitan police division 1-9 and living in Bangkok Metropolis not less than 6 months.

From the literature review, self-care behavior of andropausal men depends on many factors. This study aimed to study selected factors related self-care behavior of andropausal men based on the concept of Orem (11) which included age, marital status, educational level, monthly income, Partial Androgen Deficiency in Aging Male and social support. For the development of health behavior, essential basic factors are knowledge, attitude, and practice (12). The conceptual framework of this study is presented in the following Figure 1.

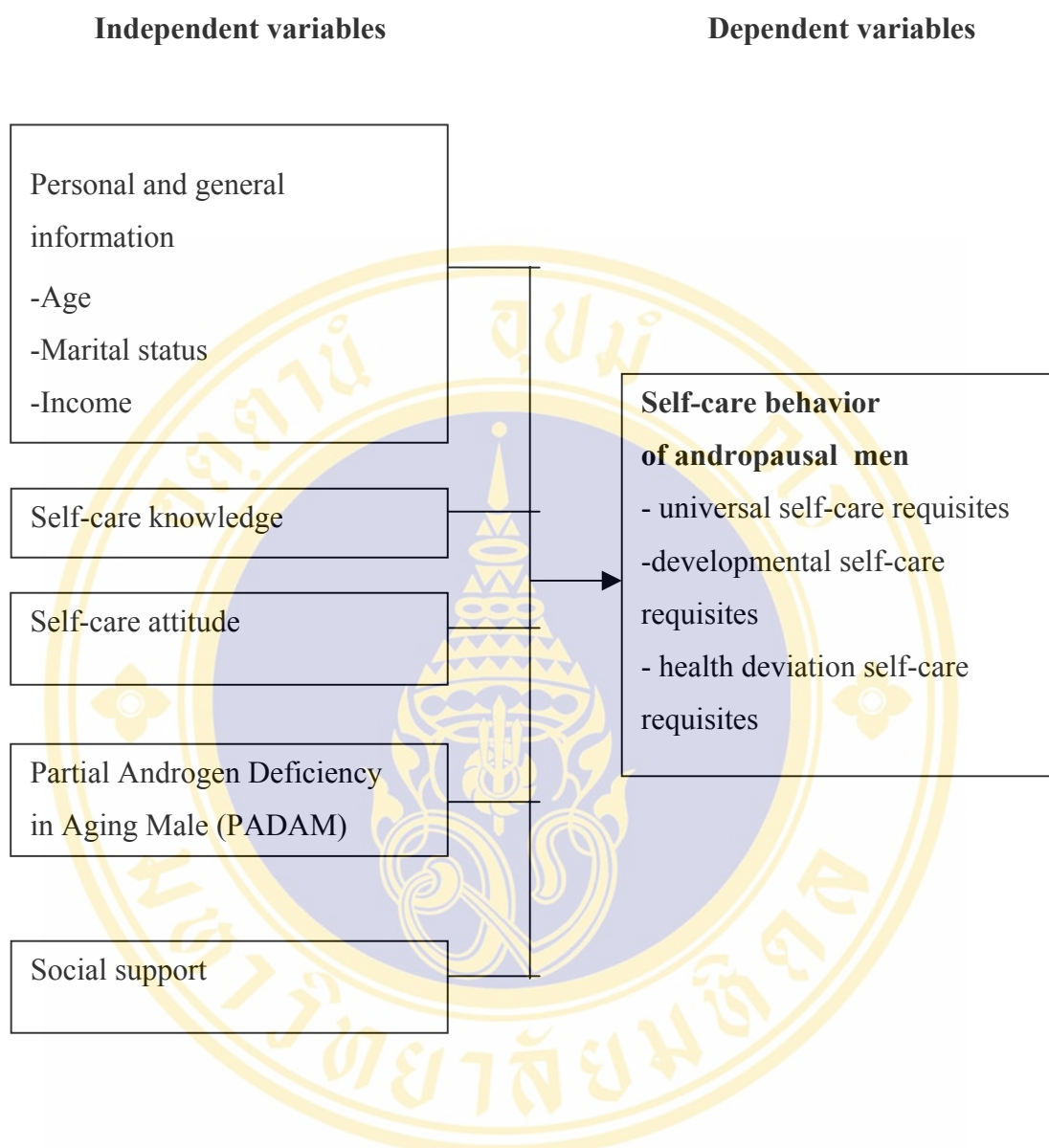


Figure 1: Conceptual Framework

Operational definition of variables

1. Self-care behavior is defined the practice of activities that individuals on their own behalf in maintaining life, health and well being. Self-care is the practice of activities that perform on their own behalf in maintain life, health and well being. This study self-care behavior of andropausal men based on the concept of Orem (11) which included the following:

- **universal self-care requisites** is defined the practice of activities of air, water, nutrition , physical exercise, rest, the maintenance of balance between solitude and social interaction, participation in health activities either with the family or the society. Prevention of hazards to life, avoidance of addictive substance. Health promotion by having medical check-up at least once a year, undergoing prostate glands examination at least once a year, having assessment of weight, height, waist-hips ratio, blood pressure, pulse rate and respiratory rate at least once a year; undergoing exercise test at least once a year; and having mental health assessment at least once a year.

-**developmental self-care requisites** is defined the practice of activities to andropausal men development for self-acceptance and self-esteem. Andropausal men should understand physical and mental changes in this state and confront and coping with the stress.

-**health deviation self-care requisites** is defined the practice of activities to self-care while having health problems includes realize and attend when having illness

Subjects were then divided into three groups according to level of Self-care behavior : high, moderate and low.

2.Andropausal men is defined as man aged about 40 with the deficient function of testis in producing spermatozoa and testosterone, which is the most important androgen hormone. This study means the age of 40–59 years (policy of the Department of Health, Ministry of Public Health)(10), non-commission policemen working under metropolitan police division 1-9 and living in Bangkok not less than 6 months.

3. Age is defined as the age of the andropausal men in whole years. The subjects were divided into four groups: 40-44 years, 45-49 years, 50-54 years, and 55-59 years.

4. Marital status is defined as the current marital status of the andropausal men. It is classified into married, single, widowed, and divorced/ separated.

5. Educational level is defined as the highest year of education of the andropausal men. It was divided into three groups: Primary school, Vocational/Certificate, Bachelor degree/higher

6. Family income is defined as the income from salary and extra salary of the andropausal men and his wife for one month. Criterion by spread income of people in Bangkok (20). It was divided into three groups: low income, medium income, and high income.

7. Self-care knowledge is defined as the knowledge and understand of self-care behavior of the andropausal men. That is comprises the following: 1.universal self-care requisites 2.developmental self-care requisites 3. health deviation self-care requisites, measured the self-care knowledge of the andropausal men into high level, moderate level, and low level.

8. Self-care attitude is defined as the process of thinking and responding to the feeling, and belief towards self-care behavior of the andropausal men. That is comprises the following: 1.universal self-care requisites 2.developmental self-care requisites 3. health deviation self-care requisites measured the self-care attitude of the andropausal men into good level, moderate level, and poor level.

9. Partial Androgen Deficiency in Aging Male is defined as deficient of androgen hormone and had physical symptoms, vasomotor symptoms, psychological symptoms, and sexual symptoms. It was evaluate by PADAM score (21), symptoms occur in last one month. It was divided into two groups:

-Have partial Androgen Deficiency means total scores of physical symptoms + vasomotor symptoms ≥ 5 and total scores of psychological symptoms ≥ 4 and total scores of sexual symptoms ≥ 8

-Have no partial Androgen Deficiency means total scores of physical symptoms + vasomotor symptoms < 5 or total scores of psychological symptoms < 4 or total scores of sexual symptoms < 8

10. Social support is defined as emotional support, esteem support, network support, tangible support, and information support from close persons, such as his wife his son, friends, and health personnel. This research used the concept of social support by Cobb and Schaefer et al. Social support was measured the responsibility of the andropausal men into high level, moderate level, and low level.



CHAPTER II

LITERATURE REVIEW

This research aimed to study the self-care behavior of andropausal men . The researcher had reviewed the concepts, theories and relevant studies in order to use them as the conceptual basis of the study. The literature review is presented as follows:

1. Concepts of andropausal men health
2. Concepts of self-care
3. Concept of health care behavior, knowledge, attitude, practice
4. Concepts of social support
5. Related researchs

1. Concepts of andropausal men health

1.1 Definition of the Andropause

Andropause is defined as a man aged about 40 with the deficient function of testis in producing spermatozoa and testosterone, which is the most important androgen, “Partial Androgen Deficiency in Aging Male” PADAM is used to represent this stage since there still be an androgen production in some men aged over 100. Recently, andropenia is raised to represent this stage of low androgen production in men instead of PADAM, The term andropause is, However, currently used more so that it will be analogous to the term menopause for women. In fact, using the term andropause is not quite accurate since the testis does not stop androgen completely (2).

The function of testis was controlled by hypothalamus and pituitary gland-anterior lobe both in spermatozoa and testosterone production.

1.2 Hypothalamus Pituitary Reticular Axis

The interrelation between hypothalamus, pituitary gland-anterior lobe, and testis can be precisely and efficiently controlled as described in the following conclusions(2).

1.Hypothalamus produces gonadotropin releasing hormone GnRH to stimulate pituitary gland-anterior lobe in producing FSH and LH, which will then stimulate sertoli cells to produce inhibin (nonsteroid) and steroids. (Testosterone and estradiol respectively) Besides, it is revealed from many researches and clinical experiment that GnRH can stimulate growth of interstitial cells and produce spermatozoa in primary spermatocyte stage as well.

2.Intratesticular Modulation.This mechanism has occurred from activation of appropriate hormone receptors together with the deviation in level of inhibin and steroids.

3.Feed back mechanism includes both positive or stimulatory type and negative of inhibitory type.

3.1 Steroids

Steroids from testis (testosterone and estrogens) will inhibit the GnRH secretion by influencing the hypothalamus. This phenomenon was proven by experiments in animal, that is the GnRH level and gonadotropin level in blood would be higher if the testis is taken out.

3.2 Estrogens and Androgens

These hormones have effects on hypothalamus, and pituitary anterior Lobe feedback mechanism. It is widely known that estrogens can inhibit the gonadotropin secretion. On the contrary, neither dihydrotestosterone nor mesterolone, which are saturated derivative of testosterone, could stop the gonadotropin secreting. As a result, it can be pointed out that estrogens or estrogens with testosterone (not solely testosterone) can activate feedback mechanism to hypothalamus and pituitary anterior lobe.

3.3 Inhibin

It is produced by sertoli cells to inhibit FSH secreted from pituitary

anterior lobe under the stimulation of GnRH.

3.4 The change in level of activity of steroid-metabolizing enzymes within hypothalamus and pituitary anterior lobe can control gonadotropins secreting.

1.3 Androgens

95% of androgens are produced from testis cell as testosterone and the other 5% come from adrenal gland in the form of dehydroepiandrosterone. Three important androgens consist of Testosterone, dehydroepiandrosterone and androstenedione: the ration of these three hormones in spermatic vein is 47.9, 4.5 and 2.9 respectively. The level of testosterone produced only by testis is high in the body. While dehydroepiansterone produced by adrenal gland will be transformed to testosterone and androstenedone in the peripheral tissues. In general, testosterone and adrostenedione have more potency than dehydroepiandrosterone. The level of testosterone in blood for Thai men and women are approximately 2.59-8.18 and 0.36-0.45 mg/ml.(Cited from biological reproduction system laboratory, Faculty of Medicine, Chulalongkorn University) After being produced, testosterone will be distributed to body mostly via spermatic vein. Moreover, there is a daily diurnal variation of testosterone that is high in the morning and low in the late evening. Testosterone will generally bind with protein and only 2% are in the form of free testosterone. It is found that 30-40% or testosterone will bond loosely with albumin and 50-60% will bind with Sex Hormone Binding Globulin(SHBG). Thus the bonded testosterone and albumin can be in the free form, called bioavailable of bioactive testosterone, which can influence the target organs.

1.4 The Role of Testosterone Hormone

Testosterone plays very important role in the body: its roles are described as follows

1. Stimulating growth of seminal vesicle and prostate gland such as seminal vesicle, prostate gland
2. Enhancing secondary sex characteristics at penis, testes and scrotum and growing hair on the body
3. Stimulating production of sebum in sebaceous gland which cause acne and baldness

4. Distributing the accumulated fat mostly on the top half of body such as at the neck and shoulder but less at stomach and waist
5. Stimulating the bigger and stronger muscle build up
6. Enhancing bone production which results in higher bone density and stronger bone in men
7. Affecting brain and mind such as initiation, aggressive and libido
8. Producing spermatozoa and nurturing the sperms until it can move and reproductive
9. Supporting hemoglobin production
10. Controlling normal functions of hypothalamus and pituitary gland, anterior lobe
11. Bioactive of bioavailable testosterone in blood accounted for 30% of total testosterone in the body is the only portion that can influence the target organs all over the body.

1.5 Lack of Testosterone Conditions

1. Hypogonadism is the stage that testosterone level decreases severely more than 50% of those in normal male. It is, however, very rare for hypogonadism.
2. PADAM is the stage of partial deficiency of testosterone level, that is the level of testosterone decreases about 25% of those in normal men. PADAM is regularly found in andropausal male.

1.6 Effects of testosterone decrease on andropause

1. Osteoporosis disease
2. Increase risk of cardiovascular and cerebrovascular disease
3. Have effects on muscle, skin and blood circulation
4. Hot flushes and sweat
5. Effect on cognitive function and mood such as forgetfulness, insomnia, loss of self-confidence, feeling tense, moody tiredness and anxiety etc.
6. Effects on sexual role such as loss of libido, genital, itching, loss of erection and impotence. There are two factors affect sexual role; psychological problems such as stress, sadness, anxiety and loss of motivation; the second factor,

diseases such as diabetic mellitus, neuromuscular and spinal cord disease, and cardiovascular disease.

1.7 Suggestion and Treatment (2)

Treatment principles for andropause are divided into 4 parts consisting of ,

1. General Treatment
 - 1.1 Having food that contains all nutrition in 5 groups including carbohydrate, fat , protein, vegetable, and fruits.
 - 1.2 Having supplemental mineral such as 1,000-1,500 mg of calcium daily
 - 1.3 Having supplemental vitamin such as B1, B6, B12 , E , and C etc.
 - 1.4 Drinking plenty of water at least 1,500-2,000 ml per day
 - 1.5 Having appropriate exercise every day to increase more HDL-C and beta-endorphin
 - 1.6 Exposing to sunlight occasionally to activate vitamin D production in body
 - 1.7 Taking enough sleep at least 6-8 hours per day
 - 1.8 Having time for recreation and hobbies and quit smoking
2. Treatment for the deficiency of hormone in men
 - 2.1 Testosterone substitution shall be given under doctor supervision only
 - 2.2 DHEA substitution
3. Loss of libido treatment
4. Treatment of unusual conditions or other disease such as hypertension, cardiovascular disease, dyslipidemia, hyperemia, diabetic, osteoporosis, benign prostatic hypertrophy (BPH) and obesity

2. Concept of personal self-care

Self-care is extremely necessary for people nowadays. The matter of fact of either personal remedy from sickness or self taking care for better health depends largely on each individual; as a result, the serious promotion of self-care is essential for the success in improving personal health condition.

2.1 Definition of personal self-care

Pender (24) defined personal self-care as the individuals' activities initiated or carried for self benefit in maintaining or continuing usual-life function and having good health.

Norris (25) defined that self-care is the process that permits people and their families to take the initiation and responsibility and function effectively in developing their potential caring for health.

Orem (11) stated that self-care is the practice of activities that individuals on their own behalf in maintaining life, health and well being. Self-care is the practice of activities that perform on their own behalf in maintain life, health and well being.

Therefore, definition of self-care can be concluded as the individuals' activities determining and aiming to develop personal abilities in maintaining health condition for continuously good health.

2.2 The objectives of self care can be described as follows (11)

1. Maintaining the life process and enhancing continuity of life function.
2. Remaining human growth and continuity of human development.
3. Preventing and controlling health deviation along with healing or curing life according to particular stages of sickness.
4. Preventing and limiting the disabilities possibly occurred or compensating disabilities already occurred.
5. Enhancing life security

2.3 Elements of self care behavior

According to Orem (11,26), the core elements of self-care are the followings:

2.3.1 Universal self-care requisites

Universal self-care requisite is performed to enhance and maintain the personal good health and security which can be explained as follows:

1. The maintenance of a sufficient intake of food, water and air.
2. The provision of care associated with elimination and excrement processes.
3. The maintenance of balance between activity and rest.
4. The maintenance of balance between solitude and social interaction.
5. Prevention of hazards to life, functioning, and well being.
6. Promotion of well being.

2.3.2 Developmental self-care requisites

Developmental self-care requisite is initiated according to the developmental process of human life.

Developmental self-care requisite for human's developmental process can be classified into 2 types.

1. The development and maintenance necessary for the condition supporting life process and enhancing proper personal maturation in particular stages of life cycles starting from fetus, infant, childhood, adolescences, adult until the old age eventually.
2. The caring to prevent the causation affecting to human development can be done by reducing the stress or overcoming the difficulties resulting from lacking education, problem in social adjustment, ill mentality due to losing the love one, illness, and any changes due to the various situation, the symptom of last stage of disease and death.

2.3.3 Health deviation self care requisites

Health deviation self care requisites is performed when having illness, accident or disabilities causing the lower abilities in taking care lives or being unable to perform usual activities. Heath deviation self care requisite included the followings:

1. Seeking for the help from reliable person.
2. Acknowledge and paying attention to the effect of health condition affecting on self-development.
3. Effectively corresponding to the remedy plans that are diagnosis, health recovery and prevention on any possible implications might occur.
4. Acknowledge and paying attention to preventive action from being uncomfortable due to the side effect of medical treatment or disease.
5. The self adaptabilities to the changes from illness or medical treatment
6. Learning to survive with the well understanding in symptom characteristics including with understanding in result of medical diagnosis and treatment in the way that help completely enhance personal development according to the best abilities.

2.4 Factors influencing self-care

Self-care is one kind of learning behavior. According to Orem, typical factors influencing self-care abilities of individuals can be as follows;

1. Age
2. Gender
3. Developmental stage
4. Culture/ tradition
5. Living environment
6. Family system
7. Lifestyles
8. Health condition
9. Factors related to health service system
10. Supporting Source
11. Life experience

In this study, researcher aimed to find out the influencing factors possible related to self-care behavior of andropausal men, which are age, family status (marital status), lifestyles (educational level, family incomes), health condition (condition of deficiency of male hormonal system), Supporting source (social support).

2.5 Self care behavior of andropausal men(27)

When comparing the guidance from Ministry of Public Health regarding health promotion for andropausal men with the Orem's theory(11,26), researcher could conceptualize self-care behaviors of andropausal men as follows:

1. Universal self-care requisite

1.1 Receiving sufficient nutrition, water, and purified air.

1.1.1 Sufficient nutrition

For the andropausal people, it is usually that digestive and intestinal system can function lower due to reduction of gastric and intestinal juice resulting into the lower abilities of nutrient absorption. Incompletely digested in the stomach, when passing into intestine, food will be digested by intestinal bacteria causing gassy,

gastric indigestion, flatulence, and reducing intestinal movement resulting in constipation finally.

By having the sufficient proportion of five typical nutrient substances of carbohydrate, lipid, protein, vitamin, mineral, andropausal men could maintain their digestive and intestinal system to function effectively without having digestive problem as previously explained.

The necessarily nutrient substances included followings:

1. Protein

Meat is the major source of protein. Andropausal men should have protein from fish meat due to containing the lower cholesterol than other kinds of meat; moreover, fish meat especially Tuna meat is digestible easily and has high nutrition because it contains Eicosapentaenoic acid and Docosahexaenoic acid which are necessary for brain cell.

-Egg proteins

Protein from egg is the best quality protein since it contains essential amino acid in the suitable level for body; therefore, andropausal men should weekly take at least 2-3 well-cooked eggs especially white egg only. This is because egg yolk contains high cholesterol but white egg contains no cholesterol at all.

-Milk proteins

Milk is the beverage with high nutrition. Milk proteins contain high calcium and phosphorus which help prevent osteoporosis. However, since milk proteins contain both saturated and unsaturated lipid acid, for those people with high cholesterol in blood level should drink only skimmed milk.

-Cereal protein and seed proteins

Cereal protein and seed proteins (bean water, been curd, soybean) also are rich in proteins, vitamin B and iron. Moreover, they also contain the fiber help facilitate urinary and excretion system. Soybean is rich in essential amino acid and helps reduce lipid level in blood.

2. Carbohydrate

Carbohydrate (rice, starch, sugar, taro) is the source of energy. It also contains natural fiber, which help the excretion and evacuation system. Andropausal men should avoid eating sweet, dessert and food with a lot of sugar

causing the increase in triglyceride level in body and resulting in the coronary thrombosis.

3. Vitamin and mineral from vegetable and fruit

Vegetable both green and yellow leaf are rich in carotene which is the source of vitamin A. Fresh vegetable provides vitamin C, A which are the antioxidant of free radical causing cancer cell in body. Besides, fruit and vegetable contain a natural fiber, which help facilitate excretion system. Dark green leaf contains are rich in calcium as well.

4. Lipid from plant and animal

Lipid is the major sources of energy. Energy from lipid is two times higher than those from carbohydrate and proteins. Andropausal men with obesity should avoid fatty meal.

Moreover, andropausal men should avoid salty meal and try to limit sodium in daily food. Those salty food or foods with Monosodium glutamate could cause the high blood pressure and increase calcium release at kidney.

1.1.2 Purified air

Good ventilation is necessary for andropausal men. Andropausal men should avoid the crowded place and walking in the morning to receive the purified air. Controlling respiration of having three to five times of deep breath when waking up in the morning could enable lung functions effectively.

1.1.3 Water

Andropausal men should drink at least six to eight glasses of water a day. This will help prevent skin dryness, and facilitate circulatory system preventing infection in urinary tract.

1.2 Excretion and evacuation

Andropausal men should pay attention to the practices in maintaining usual urinary and excrement system for example practicing of punctual evacuation, eating meal rich in natural fiber, drinking a lot of water, and proper self-cleaning after having toilet.

1.3 Exercising and resting

1.3.1 Exercising

Exercising will help andropausal men maintain the good health and keep other biological system in balance, increase blood circulation that help excrete the wastes from body cells. Exercising help improve muscle strength, maintain body balance, enhance the bone density, enable movement of body joint in wider angle, control the sugar level and improve the cholesterol level in blood circulation. Moreover, exercising will help andropausal men feel more relax and have the good emotion, fresh, and increase self –esteem and self-valuation in themselves.

When having exercising, Andropausal men should practice according to below guidance.

1. Follow the medical instruction strictly. For example, andropausal men with complication of osteoporosis should do the exercise allowing the weight falling to the body mostly for example fast walking, Chinese excersis (Taike), jogging. When having aerobic exercise, andropausal men would ensure that the pulse rate should be 70-80% from the maximum pulse at least 30 minutes which help strengthen lung and heart muscle enabling them to function effectively; however, before having exercise, andropausal men should prepare their body by pre-exercising at least 5-15 minutes
2. Perform exercise properly to the age.
3. Perform exercise regularly at least 3-5 times a week
4. Before having exercise, andropausal men should have physical check to ensure that they did not have complication of coronary thrombosis or pain at body joint and back.

1.3.2 Resting

Andropausal men should have enough rest at least six to eight hours a day. andropausal men are usually facing the problem of being unable to sleep and feel restless. Therefore, andropausal men should perform meditation and avoid drinking beverage containing high caffeine such as tea, and coffee.

1.4 Spending free time and interaction with others

Andropausal men should spend time for reading, listening to music, and doing hobby, and meeting and talking with friends for not only entertainment propose but also for sharing information, idea, attitude which can be used in problem solving.

1.5 Life prevention

Andropausal men should interest in acknowledging the possible implication usually happen to people in their age for example osteoporosis, the coronary artery heart disease and refrain from such habit of consuming addicted substance such as smoking, and alcohol drinking which could cause the condition of coronary artery heart disease becoming worst.

It has been found that smoking could cause the disease and affect to health condition by causing cancer to other organs including increasing the risk of having coronary artery heart disease such as coronary thrombosis and having the condition of insulin resistance resulting in the improper changes of lipid level in blood circulation.

Therefore, andropausal men should avoid drinking beverage containing high caffeine such as tea, and coffee. According to study, those drinking coffee more than 4 glasses a day are at risk of osteoporosis. This is because caffeine has the effect of increasing urine excretion resulting in the higher release of calcium excreted with urine. Besides, andropausal men should be careful with their movement and body balance. They should aware of the risk of accident such as slipping and prevent themselves from such danger by keeping house neatly and cleanly.

1.6 Health improvement and development.

Andropausal men should have interest in health condition, find the health information from the health expertise of physician, and have physical check every year. Moreover, andropausal men should have prostate gland check at least one time a year. Andropausal men should receive the physical measurement of weight, height, waist, hip, and also blood pressure, pulse checking, respiration checking at least one time a year. Moreover, they need to have also physical test and assessment for mental health at least one time a year.

2. Developmental self-care requisite

Andropausal age is one of developmental state during middle age, which is the connection between adult and old age. There are several changes occurred in this state such as the figure changes with the cellulite in body cell, the hair color becoming white. Therefore, andropausal age should understand these physical changes and adjust themselves without desperate and anxious feeling to such changes.

Andropausal age should entertain themselves by doing favorite hobby that could benefit themselves and society, and use their previous experience to help others and community to find best way for solving problem.

Concerning the working proficiency of andropausal age, since strength and movement of muscle, and ability in remembering things have become lower, activities and assignment task should be adjusted appropriate to the health condition. Although considered as period of successful career, andropausal people is possible to face conflicts in workplace and problem related to job, therefore, andropausal people should adapt themselves to the situation in order to avoid the negative effect might happen.

Regarding family of andropausal men, the changes in the family live will be related to the development of life cycles for example the lost of love one, and separation of their children for having own family. Andropausal man should be well prepared for and accept development changes by learning how to confront and coping with the stress according to below guidance.

2.1 Guidance to confront with the stress effectively.

1. Find out whether or not they are having the stress.

Normally when having depression, and stress, people would reflect their stress that can be observable physically, mentally, and socially such as followings

- Physically; for example, getting headaches, exhausted, sleepless, unable to eat, and inconsistent breath.
- Mentality; for example, being confused, irritated, unable to thing, easily bored, and emotional
- Socially; for example, having quarrel to their close person, being quiet

Moreover they can also indicate the stress by using questionnaire and self analysis to find out the stress themselves as well.

2. Accepting the truth and being optimistic

Accepting the fact that problem and mistakes are inevitable for everyone. Therefore, they should learn from the mistake to improve and solve the situation.

3. Consider the situation and find out the causes of effect

4. Coping with the stress effectively

2.2 Coping with stress.

1. Finding the favorite hobby for example reading the book, planting, painting, listening to music, watching movie
2. Taking care good health by having the meal with the proper proportion of typical five nutrition and avoiding the use of addicted substance.
3. Listening to music for relaxation with favorite song and slow melody and in the middle tone, this will help andropausal men feel comfortable and help reduce the blood pressure due to the reduction of stress.
4. Exercising for relaxation with the enjoyable sport. Try to select the sport that could enable muscle of every part of body moving continuously for example jogging, and weight lifting. Appropriate time is necessary and should be concerned, andropausal men should spend at least 30 minutes to one hour for exercising. Yoga, and Taike are also another kinds of exercise which andropausal men can enjoy. Yoga and Taike help develop concentration and emotional stability.
5. Having enough resting. People tend to sleepless when facing the stress because anxiety arouse their mind.
6. Eliminating the negative attitude and feeling for example anger, and jealousy. Anger will cause stress and revengeful feeling leading many people lost self-conscious. In dealing with the anger, one should be clam down, makes realization of being anger so that he will not turn anger to the abhorrence, counts to ten or takes several deep breath and avoid confrontment to person with whom being anger. In dealing with joyously, one should stop comparing himself with others.
7. Be optimistic and have positive thinking. When facing the failure in life, most people feel desperate, discouraged and even blame themselves. Being optimistic and learn from the failure and see it as the challenge will help improve the situation. The positive perception toward oneself and other could enable one to have the good thinking and right consideration, have the good emotion, and intelligence together conscious in solving the problem effectively.
8. Confronting and accepting for the changes.

Changes are inevitable for our lives. Changes in the positive direction will surely bring the happiness; in the other hand, changes in the negative direction will of course bring the sadness in which people cant accept such negative changes. So people

should confront the truth and accept the changes. By considering the fact and cause of changes, we will be able to find out the cause of problem and the best solution to the problem.

9. Talking to friend

When having the problem and stress, one should try to bring the issue to friends or reliable person for open discussion. Keeping the problem with himself could cause uncomfortable feeling and unhappiness. Talking the problem with close persons for example wives, parents, close friend could help relief and clam situation

10. Having the good mood

Having good mood or feeling fun and keep smiling would help reduce stress. Smiling, and laughing would help body release endorphin that help smooth emotion and make us feel fresh. Laughing help also expand artery, generate warm to body, and accelerate blood movement to carry oxygen to allover body which increase cell respiration to enhance body function effectively. Moreover, this will help improve immune system, which help prevent body from the disease, sickness and also create appetite. Laughing only 1 minutes is equal to body having rest for 45 minutes.

3. Health deviation self care requisites

Health deviation self-care requisites are the activities necessary for andropausal men to behave regardless of being healthy or having illness. Andropausal men are more likely to have sickness since health condition and physical proficiency have become weaker and lower. Specially andropausal men with the health problem, some are necessary to have hormonal supplement or under supervision of physician. As a result, andropausal men should pay attention to the cause of illness including with medical treatment applied to them. It is necessary for andropausal men to learn new information or find the additional knowledge related to health problem together with physical adjustment when having sickness or being unable to take care themselves.

Since any physical, mental and social problems of andropausal men could result from hormonal deficiency, self-care behavior is necessary for them to maintain good health, enhance good development and prevent implication of other disease.

In this research, theoretical framework by Orem (11) will be used for evaluating self-care behaviors of andropausal men in three aspects: Universal self-care requisites, Developmental self-care requisites, Health deviation self care requisites.

3. Concept of health care behavior, knowledge, attitude, practice.

3.1 Behavior

According to Suwan P. (28), behaviors may be defined as any activities that people behave either intentionally or unintentionally for example walking, thinking, acknowledging, interesting. It is the abilities expressing through gesture and action or the observable behavior towards particular situation that requires the knowledge, and attitude as basic element and process initiating behavior would take time and need several process of decision making.

Twaddle (29) gives the definition of the Behavior that the reactions or activities are human internal and external manifestation. Also it can be seen or can not be seen. The Behavior are different because of the societies and culture. Most often it influenced by the enterprise of the people, events and experience in the past.

Types of the behavior (30,31)

Behavior can be divided into 2 types:

1. Overt behavior is the external conduct that other people can be easily observed.
2. Covert behavior the internal conduct that occurs in people minds and can not be observed. No one else except the person who acts knows when the internal conduct does exist. For example, sense, perception, memory and decision etc.

Element of behavior

Element of behavior can be divided into three parts as follows(32):

1. knowledge

It is the cognitive abilities and skill in considering situation or thing. Knowledgeable behavior include the knowledge, understanding, usage, analysis, synthesis, and evaluation.

2. Attitude

The behavior related mental adjustment, characteristics, morality, value which included acknowledgment, response, valuation, and management

3. Skill

It is abilities in performing assignment effectively, abilities related to systematic function of body organ including with imitation, justices, continuity, spontaneous.

Forms of changing behavior

Human behavior can change over time. Moreover, human behavior can develop all the lifetime, but some behavior still remain. Kelman stated that forms of changing behavior could be classified into 3 types .(33)

1. The change that effects by force, for example, social used the law to force people to do things and not to do things.
2. Change of behavior in order to mimic their role models, such as mimic their parents, teachers, and or celebrities.
3. Change of behavior can be seen as a good thing or the change is an ideal virtue to practice.

Measurement of behaviors

In measuring behaviors, effective observation of both in process and outcome of measuring are necessary; therefore, the instruments used in observation are included with checklist, rating scale and questionnaire(34).

In conclusion, behaviors can be explained as the action or personal practices related to self-care in which individual perform based on the validity, according to acknowledgment process, with the objective of such behaviors. Behaviors can be both visually or intangible action which is unobservable but measurable by using specific instrument or indication. In this study, researcher uses questionnaire as the research instrument in measuring behaviors.

3.2 Knowledge

According to Good (35), knowledge can be defined as the fact and details in which human have received and experienced.

Suwan P. (36)stated that knowledge is the ability in remembering or recognizing event or situation including with received experience.

Bloom (37) divide Level of Knowledge

1. Knowledge as defined here includes those behavior and test situations with emphasize the remembering, either by recognition or recall, idea, material or phenomena.
2. Comprehension it refer to a type of understanding and ability to translation, interpretation and extrapolation.
3. Application it refer to the use of abstractions in particular and concrete situation.
4. Analysis it refers to the break down of a communication into its constituent elements or part such that the relative hierarchy of ideas is made clear and/or the relations between the ideas expressed are made explicit.
5. Synthesis it refers to the putting together of elements and part so as to form a whole. This involves the process of working with pieces, part, element,etc, and arranging and combining them in such a way as to constitute a pattern or structure no clearly there before.
6. Evaluation it refers to judgments about the value of material and methods for given purpose.

Measurement of knowledge

Suwan P. (36) explained that based on Bloom's theory, measurement of knowledge can be done by measuring the following behaviors.

1. Abilities related to recognition of event which displaying in term of recalling or remembering in the details, process, concepts, and theory.
2. Abilities in interpreting and understanding in details, information when displayed in table, graph, symbol, or etc.
3. Abilities in applying, analyzing, summarizing, and evaluating all details in various situations.

Knowledge measurement is a test that involves past experience memory. There are many types of tools used as measurements and they are quite different from each other. Most used tools are test method, which can be divided into 3 categories (38)

- 1.Oral Examination Method refers to interactive testing through conversation between examiner and examinee or so called "interview"
- 2.Written Method refers to a type of test that is separate into 2 categories

2.1 The Essay- is a type of test that needs participants to explain or to criticize something which concerned to be writing.

2.2 Limited Answer- having four type as correct-incorrect, fill in the blank, pairing up, and choose the correct answer.

3. Practical Test Method- is a type of test that needs no explanation, it rather needs a real-time action.

In summary, knowledge in self-care should be obtained from the research, experiences, learning, finding information or observing fact which has been stored and displayed in term of behaviors in taking the recognition to explain the situation which should be observable and measurable. Moreover, personal factors for example experiences, ability in recognition, analysis and synthesis could affect to learning behaviors.

3.3 Attitude

According to Good (35), attitude can be defined as the readiness of particular expression of accepting or denying such situation.

Johnson (39) stated that attitude is the feeling of agreeing and disagreeing in one subject, and various perception from different persons by using their frame of reference, knowledge, personal views for their consideration.

Kowasin C. (40) has defined the attitude as the feeling to the different things which resulting from their experiences stimulating that person to behave or response to the situation with their acceptance or deny.

Suwan P. (36) suggested that an attitude is an individual' s belief and feeling towards things, such as another individual, things, actions, situation and other things.

Lasuwong K. (41) speak of attitude

1.Attitude results from learning or experience; people are not born with it.

2.Attitude is the concept to express such behavior. People with god attitude tend to prefer confrontation and accept the behavior. In the other hands, with the negative attitude, those tend to avoid discussion and deny such behavior.

3. Attitude results from imitation and could be passed on to others.

4. Attitude is the changeable since it is created by learning, and experience of individuals. The changes in learning and experience of individuals could result in the changes in attitude as well.

Three components of attitude are as the following(42).

1. Cognitive component is the perception toward each stimulus based on the individual assumption. This attitude can be varied to individual perception.

2. Affective component is the part of emotion, feeling able to stimulate other attitude positively or negatively.

3. Behavior component will emphasize in the possibility of behaviors. When having appropriate stimulus will cause the unique responsive interaction.

Attitude evaluation concepts

There are 3 basic concepts in the attitude evaluation

1. Content: attitude evaluation requires stimulants for action to be expressed. The stimulant in general is the content that needs to be measured.

2. Direction: attitude evaluation in general determines the direction of the attitude to be straight and continual in the right or positive, or left and negative direction. In other word, the direction would start from mostly agreeable, reduce to indifference, and further to mostly disagreeable. The characteristics of agreement and disagreement are on the same continuous straight line.

3. Intensity: action or feeling expressed the stimulant has different qualities

Two way of measurement of attitude can be explained as the following:

1. Interviews

Interviews is that individuals gave their comments towards opinion, behavior of themselves or others. Interviews can be carried out by having interrogator addressing questions to the interviewee. Anyhow, interviews may not be effective in measuring attitude due to information can be distorted since interrogator could influence the interview when answering the question.

2. Questionnaire

Questionnaire should be used with moderate educated answerer at least literate level. Questionnaire is most favorite instrument used in measuring attitude.

In summary, attitude related to self-care is the process of thinking and responding to the feeling, and belief towards self-care behavior in term of satisfaction,

dissatisfaction, agreement, and disagreement. It is the mind readiness created from experience with the possibility to behave differently in which this research use the questionnaire in measuring attitude.

3.4 Practice

Definition

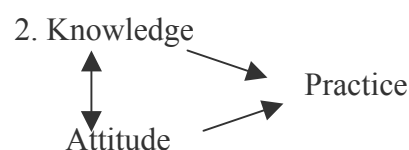
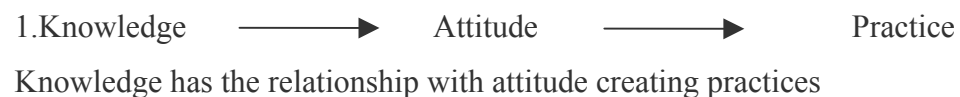
The oxford Encyclopedic English Dictionary (45) has defined practice as the behaviors or any acts repeatedly performed till it is becoming the habit or developed to be skill of that person.

Suwan P. (36) defined that practices is the abilities or any behaviors which is physically observable to particular situation. Practice can also refer to inert behavior unable to perform immediately but expected to proceed in the next occasion. This behavior required intelligence and attitude as its component so that it can be assessable when being performed. However, practices initiating behaviors needs certain times and several decision-making.

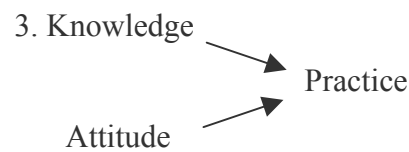
Practices related to self-care behaviors

Suwan P. (36) stated that although those persons have knowledge, it is unable to ensure that those will practice according to their knowledge. Attitude is the connection between the received knowledge and practices. With the positive attitudes including with other components, when being stimulated, individual tend to practice while those with negative attitude will act otherwise.

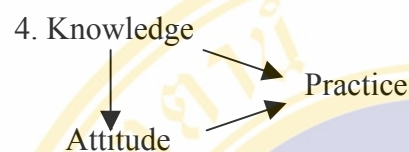
Manoonpiju N.(46) proposed four types of relationship between knowledge, attitude, practice as illustrated below:



Knowledge has the relationship with attitude and both creating practice



Knowledge and attitude create practice but there is no relationship between knowledge and attitude



Knowledge has direct and indirect relationship to practice. But for indirect relationship require attitude as stimulus factor leading to practice

Measurement of practices

In this research, questionnaire will be used as the research instrument in measuring in self-care practice.

4. Concept of social support

4.1 Definition

Social support can be defined as factor of social attitude towards behaviors and health condition of human for physics and mentality. The definition of social support can be as follows:

Cobb (22) claimed that social support is that individuals are convinced by the received information of having love, support , attention , caring, and valuation, respects from others which resulting in their appreciation and pride of being a part of social network.

Housed cited in brown (47) stated that social supports is the individuals' interaction between one another that include with caring, trust, support in term of money, material, labors, information, together with responsive information and knowledge information for self evaluation and assessment.

According to Takoonwong B. (48), social support is that individuals have received the support in term of information, material, or mentality from others.

In conclusion, social support can be defined as that individuals have received the support in term of emotional, social, material or information from their social network with which individuals have interaction.

4.2 Types of social support

Cobb (22) divide the social support into 3 types:

1. Emotional support, which was the information that made the individual believe that love, care , connection and trust had been received.
2. Esteem support, which was the information that made an individual, felt that others provided importance and acceptance.
3. Sociality support, which was the information that indicated the individual was apart of the society and belonged in the society that the individual lived in.

Schaefer et al.(cited in 23) divided social support into 3 areas, as follows:

1. Emotional support including intimacy and attachment, reassurance, and being able to confide in and rely on another, all of which contribute to the feeling that one is loved or cared about, or even that one.
2. Tangible support involving direct aid or services and even including loans, gift of money or good, and provision of services such as taking care of needy persons or doing a chore for them.
3. Information support including giving information and advice that could help a person solve a problem and provide feedback about how a person is doing.

In this study, the researcher gad used the concept of social support by Cobb(22) and Schaefer it al. (cited in 23) since it covered the responses to the basic physical, mental, emotional and social needs of the elderly, as follows:

Social support for andropausal men can be defined as that andropausal men have received the support from their close persons for example wives, children, relatives, friends, or medical service in term of the following:

1. Emotional support

Physical and mental changes in andropausal men are because of the decrease in testosterone. Andropausal men are likely to feel exhausted, easily irritated, and gloomy. Moreover, they tend to have less concentration, short memory, and lack of self-confidences that could cause the interaction problem with their social network.

As a result, emotional support from close persons or their family members is necessary for andropausal men. In other word, family members and close persons need to give them love, caring and understanding, and listen to their problem.

2. Esteem support

Andropausal men are usually losing self esteem due to physical changes when getting older. The lower abilities of body movement, working, and having short memory could make andropausal men lack of confidence in their personality and proficiency. By receiving the acceptance of their network, andropausal men would feel more confident, self-valuable, and proud of themselves.

3. Network support

The physical changes could make andropausal men feel that they have become old and have lower abilities in handling things resulting in their avoidance of involving with social members. Therefore, network support could encourage andropausal men to maintain social interaction, sharing attitude with other social member and give help to each other.

4. Information support

It is necessary for andropausal men to receive information, fact, and guidance or other options enabling them to cope the problem effectively which could reduce stress to them. Physical changes due to older age could make andropausal men feel anxious of how to behave; therefore, information support could help andropausal men understand the physical changes in this age so that they can prepare themselves and know how to practice properly in confidently taking good care of themselves.

5. Tangible support

Tangible support refers to the help in terms of material, money, any belonging necessary for lives or medical or caring service. Some andropausal men need hormonal treatment which is expensive. Therefore, andropausal men need the financial support from family members or their working organization; moreover, because of physical changes, there should be workforce assisting their responsible task as well.

This can be concluded that social support is important to andropausal men because they are in the state of age variation to life cycle. Social support could make

andropausal feel that they have received love, caring, and support in term of information, and money, material motivating them to have proper self-care behavior.

5. Related research

5.1 Age

Muhlenkamp 1986(49) studied the relationship between social support, self-esteem and positive health practices of adult, aged 18 – 67 years 98 persons. The research instrument was used is Personal resource questionnaire, Coopersmith self-esteem inventory Personal lifestyle activities questionnaire. The result showed that the age was significantly negative correlation with health lifestyle ($p\text{-value} < 0.001$).

Walker, et al.1988 (50) studied the relationship and pattern of health promotion of elderly, comparison between elderly and early adult, middle age. The sample size was 452 persons, divided into four groups: early adult (18-34 years)167 persons, middle age(35-54 years)188 persons, and elderly(55-88 years) 97 persons The result showed that the age was significantly correlation with health promotion ($r = 0.22$, $p\text{-value} < 0.001$)

Phorung C.1997 (19) studied the health perception and self-care are practice of traffic policeman in Bangkok. The sample size was traffic policeman 380 persons. The result showed that the age was significantly positive correlation with self-care. ($r = 0.21$, $p\text{-value} < 0.001$)

Petchthong J.1997 (17) studied the factors affecting health promotion behavior among policemen in Suphanburi province. This research was design as a cross sectional survey research. The sample size was commission policemen 450 persons, non-commission policemen 169 persons, The result showed that the age was significantly correlation with health promotion . ($r = 0.2248$, $p\text{-value} < 0.0001$)

Jaroensook B. 1998 (51) studied the relationship between selected factors and health promoting behavior of middle aged people Suphanburi Municipality. This research was design as a cross sectional survey research. The sample size had 381 persons, male 51.7 percent, female 48.3 percent policemen 169 persons, The results showed that age did not statistically significantly correlated with health promoting behavior .

Shaisemseng N.2000(52) studied the factors affecting health promoting behavior among Thai military officers in Lopburi province. The sample size was 580 persons, commission policemen 215 persons, non-commission policemen 365 persons, The result showed that the age was significantly correlation with health promotion .

Junhom K.2000(53) studied the health promoting behavior of non-commissioned officers in Bangkok Metropolis. The sample size was policemen 400 persons, commission policemen 215 persons, non-commission policemen 365 persons, The result showed that the age had affect and predictor non-smoke cigarette behavior .

Phanumartrussami V. and Kaewpan W.2002 (54) studied the health status and health promoting behaviors of andropausl men in Sakeaw province. The sample size was andropausl men age40-59 years old 322. The result showed that the different age was significantly correlation with different health promoting behaviors. (p-value <0.05).That was the andropausl men age40-59 years,46-50 years, and 51-55 years had health promoting behaviors different from the andropausl men age56-60 years

From the review of literature, it was found that the age of andropausl was related and not related to self-care behavior. It found the age indication reflecting physical, thinking, and feeling development, ability to understand and decide. self-care ability beginning the child and absolute development in adult. Later on the ability decrease in elderly. Therefore the age should related to self-care behavior.

5.2 Marital status

Walker, et al.1988 (50) studied the relationship and pattern of health promotion of elderly, comparison between elderly and early adult, middle age. The sample size was 452 persons, divided into four groups: early adult (18-34 years) 167 persons, middle age(35-54 years)188 persons, and elderly(55-88 years) 97 persons. The result showed that the marital status was significantly correlation with health promoting nutrition in three age groups. ($r=0.175$, p-value < 0.05)

Shi 1998(55) studied the population and social characteristic with health behavior. Objective to study relationship between population and social characteristic and economy status with health behavior, such as exercise, smoke cigarette, and eat food. The study used data from collecting of Behavioral Risk Factors surveillance System (BRFSS,1994) in South Carolina. Collecting data from adult 2000 persons by

telephone interview. it was found that the marital status was not statistically significantly correlated with health behavior.

Phorung C.1997 (19) studied the health perception and self-care are practice of traffic policeman in Bangkok. The sample size was traffic policeman 380 persons. The result showed that the marital status was significantly positive correlation with self-care. ($r = 0.14$, $p\text{-value} < 0.01$)

Petchthong J.1997 (17) studied the factors affecting health promotion behavior among policemen in Suphanburi province. The sample size was 619 persons, it was found that the marital status was not statistically significantly correlated with health promotion . ($X^2 = 2.3$, $p\text{-value} = 0.3$)

Jaroensook B.1998 (51) studied the relationship between selected factors and health promoting behavior of middle aged people Suphanburi Municipality. This research was design as a cross sectional survey research. The sample size had 381 persons, male 51.7 percent, female 48.3 percent policemen 169 persons, it was found that the marital status was not statistically significantly correlated with health promotion .

Shaisemseng N.2000 (52) studied the factors affecting health promoting behavior among Thai military officers in Lopburi province. The sample size was 580 persons, it was found that the marital status was not statistically significantly correlated with health promotion . ($r = 0.095$, $p\text{-value} = 0.022$)

Junhom K.2000 (53) studied the health promoting behavior of non-commissioned officers in Bangkok Metropolis. It was found that the marital status was not predict the health promoting behavior .

Phanumartrussami V. and Kaewpan W.2002 (54) studied the health status and health promoting behaviors of andropausl men in Sakeaw province. The sample size was andropausl men age40-59 years olds 322persons. The result found that that the andropausl men with different marital status would also have the different health promoting behaviors . The result was not significantly correlation. $\alpha = 0.05$ ($p\text{-value} < 0.05$)

From the review of literature, it was found that the marital status of andropausl was related and not related to self-care behavior. It found the marital status indication reflecting social support, In general the married to receive social support more than

single, widowed, and divorced/ separated. Therefore the marital status should related to self-care behavior.

5.3 Education level

Muhlenkamp 1986(49) studied the relationship between social support, self-esteem and positive health practices of adult, aged 18 – 67 years 98 persons. The research instrument was used is Personal resource questionnaire, Coopersmith self-esteem inventory Personal lifestyle activities questionnaire. The result showed that the education level was significantly positive correlation with health lifestyle (p-value < 0.05)

Walker, et al.1988 (50) studied the relationship and pattern of health promotion of elderly, comparison between elderly and early adult, middle age. The sample size was 452 persons, divided into four groups: early adult (18-34 years)167 persons, middle age(35-54 years)188 persons, and elderly(55-88 years) 97 persons The result showed that the education level was significantly correlation with health promotion ($r = 0.16$, p-value < 0.001)

Speake, et al. 1989 (56) studied the factors affecting health promoting behavior of elderly in Florida. The sample size was 297 persons. The result founded that the education level was significantly correlation with health perception. (p-value < 0.05)

Tohnai and Hata 1994 (57) studied the factors affecting health behavior of people aged 40 years, used Health Belief Model. The sample size was people live in town, hill tribe village, and fisherman village 1,120 persons. The result found that the education level was not different of health behavior.

Phorung C. 1997(19) studied the health perception and self-care are practice of traffic policeman in Bangkok..The sample size was traffic policeman 380 persons. The result showed that the education level was significantly negative correlation with self-care. ($r = -0.12$, p-value < 0.05)

Jaroensook B.1998 (51) studied the relationship between selected factors and health promoting behavior of middle aged people Suphanburi Municipality. This research was design as a cross sectional survey research. The sample size had 381

persons, male 51.7 percent, female 48.3 percent policemen 169 persons, it was found that the education level was significantly correlated with health promotion .

Khapradee J. 1998 (58) studied the health promoting behavior of the benign prostatic hypertrophy in elderly .The sample size had 120 persons. it was found that the education level was significantly positive correlated with health promotion . ($r=0.352$, $p\text{-value} < 0.001$)

Shaisemseng N.2000(52) studied the factors affecting health promoting behavior among Thai military officers in Lopburi province. The sample size was 580 persons, it was found that the education level was not statistically significantly correlated with health promotion.

Phanumartrussami V. and Kaewpan W.2002 (54) studied the health status and health promoting behaviors of andropausal men in Sakeaw province. The result found that the andropausal men with different education levels would also have the different health promoting behaviors. The result was significantly correlation. $\alpha =0.05$ ($p\text{-value} < 0.05$)

From the review of literature, it was found that the education levels was related and not related to self-care behavior. It found the education levels was important to develop knowledge, skill, and attitude of self-care. Therefore in this study the education levels should related to self-care behavior.

5.4 Family income

Walker, et al.1988 (50) studied the relationship and pattern of health promotion of elderly, comparison between elderly and early adult, middle age. The sample size was 452 persons, divided into four groups: early adult (18-34 years)167 persons, middle age(35-54 years)188 persons, and elderly(55-88 years) 97 persons. The result showed that the family income was significantly correlation with health promotion . ($r=0.17$, $p\text{-value} < 0.001$)

Phorung C. 1997(19) studied the health perception and self-care are practice of traffic policeman in Bangkok. The sample size was traffic policeman 380 persons. The result showed that the family income was significantly positive correlation with self-care. ($r=0.26$, $p\text{-value} < 0.01$)

Petchthong J. 1997(17) studied the factors affecting health promotion behavior among policemen in Suphanburi province. The sample size was commission policemen 619 persons. The result showed that the family income was significantly correlation with health promotion . ($r = 0.2006$, $p\text{-value} < 0.001$)

Jaroensook B.1998 (51) studied the relationship between selected factors and health promoting behavior of middle aged people Suphanburi Municipality. This research was design as a cross sectional survey research. The sample size had 381 persons, male 51.7 percent, female 48.3 percent policemen 169 persons, The results showed that the family income was statistically significantly correlated with health promoting behavior . ($r = 0.2361$)

Shaisemseng N.2000(52) studied the factors affecting health promoting behavior among Thai military officers in Lopburi province. The sample size was 580 persons, it was found that the family income was statistically significantly correlated with health promotion. ($r = 0.088$, $p\text{-value} = 0.034$)

Junhom K.(2000)(53) studied the health promoting behavior of non-commissioned officers in Bangkok Metropolis. The result showed that the family income was not predict the health promoting behavior .

Phanumartrussami V. and Kaewpan W.2002 (54) studied the health status and health promoting behaviors of andropausl men in Sakeaw province. The result found that the andropausl men with different family income would also have the different health promoting behaviors. The result was significantly correlation. $\alpha = 0.05$ ($p\text{-value} < 0.05$)

Khapradee J. 1998(58) studied the health promoting behavior of the benign prostatic hypertrophy in elderly .The sample size had 120 persons. it was found that the family income was significantly positive correlated with health promotion . ($r = 0.174$, $p\text{-value} < 0.05$)

From the review of literature, it was found that the family income was related and not related to self-care behavior. It found the family income indication reflecting economy and social status and that is important factor with self-care ability. Therefore the family income should related to self-care behavior.

5.5 Self-care knowledge

Nasslund 1997 (59) studied the relationship between health behavior, knowledge, and believe in Swedish. The sample size was worker 1359 persons. The result showed that the knowledge was not correlated with health behavior.

Hunkittikul S.1996 (60) studied the factors affecting health promoting behaviors of elderly in Lampang province. The sample size was the elderly 400 persons. The result showed that the health promoting knowledge was correlated with health promotion and can predict the health promoting behavior .

Theeraphongnaphalai P.1998 (61) studied the factors affecting health promoting behaviors among school teachers, department of general education, Bangkok. The sample size had 396 persons. it was found that the health promoting knowledge was significantly correlated with health promotion . (p-value < 0.05)

Junhom K. (2000)(53) studied the health promoting behavior of non-commissioned officers in Bangkok Metropolis. The sample size was non-commissioned officers 400 persons. The result showed that the health promoting knowledge was not predict the health promoting behavior .

Chinjoho K. 2001(62) studied the Self-care of workers in small establishment, Muang distric, Nakhon Ratchasima province. The sample size was workers in small establishment 358 persons. The result showed that the Self-care knowledge was significantly correlated with Self-care. ($r = 0.236$, p-value < 0.05)

Mali N. 2001(63) studied the factors affecting health promoting behaviors of elderly ,Muang distric,Nontaburi province. The sample size was elderly 400 persons. it was found that the health promoting knowledge was significantly correlated with health promotion . ($r = 0.127$, p-value < 0.01)

From the review of literature, it was found that the Self-care knowledge was related and not related to self-care behavior. It found the knowledge indication reflecting the person receive truth and detail from experience, study, and information. Therefore self-care knowledge should related to self-care behavior.

5.6 self-care attitude

Tohnai and Hata 1994 (57) studied the factors affecting health behavior of people aged 40 years, used Health Belief Model. The sample size was people live in town, hill tribe village, and fisherman village 1,120 persons. The result found that the education level was not different of health behavior. The result showed that the health believe was predict 33 percent of the health behavior.

Nasslund 1997 (59) studied the relationship between health behavior, knowledge, and believe in Swedish. The sample size was worker 1359 persons. The result found that the believed was correlated with health behavior.

Petchthong J. 1997(17) studied the factors affecting health promotion behavior among policemen in Suphanburi province. The sample size was commission policemen 619 persons. The result showed that the self-care attitude was significantly moderate correlation with health promotion behavior of commission policemen and low correlation with health promotion behavior of non-commission policemen. ($r = 0.33$, $p\text{-value} < 0.001$)

Theeraphongnaphalai P. 1998 (61) studied the factors affecting health promoting behaviors among school teachers, department of general education, Bangkok. The sample size was 396 persons. It was found that the health promoting attitude was significantly correlated with health promotion. ($p\text{-value} < 0.05$)

Junhom K. 2000(53) studied the health promoting behavior of non-commissioned officers in Bangkok Metropolis. The sample size was non-commissioned officers 400 persons. The result showed that the smoke cigarette attitude and medical check-up attitude had affect and was predict the smoke cigarette behavior and medical check-up behavior.

Namtip Mali (2001)(63) studied the factors affecting health promoting behaviors of elderly, Muang district, Nontaburi province. The sample size was elderly 400 persons. It was found that the health promoting attitude was significantly positive correlated with health promotion. ($p\text{-value} < 0.01$)

From the review of literature, it was found that the self-care attitude was related and not related to self-care behavior. It found the attitude indication reflecting thinking of the persons like or dislike that thing. Therefore self-care attitude should related to self-care behavior.

5.7 Partial Androgen Deficiency in Aging Male

Sidney and Shephard 1976 (cited in 64) studied the exercise test of elderly in 14 weeks, and they were answer The Comell Medical Index Health Questionnaire. The result showed that the patient reported to have serious sickness in the past were unlikely to participate with the exercising program than those reported with low sickness.

Kaphardee J. (1998)(58) studied the health promoting behavior of the benign prostatic hypertrophy in elderly .The sample size was 120 persons, it was found that the seriousness of symptom of dysuria had significant relationship with health promotion behaviors of elderly with complication of benign prostatic hypertrophy.

Taweechai V. (2000) (65) studied the self-care behaviors and the seriousness of osteoarthritis in elderly. The sample size was 150 persons, It was found that the self-care behaviors of elderly suffering form osteoarthritis had significantly negative relationship with the seriousness of osteoarthritis in high level. ($r = -0.787$)

Partial Androgen Deficiency in Aging Male was indicator reflecting health condition and personal abilities of self-care management. Complication of serious Partial Androgen Deficiency in Aging Male could affect health condition and lower abilities in managing self-care activities. Therefore Partial Androgen Deficiency should related to self-care behavior.

5.8 social support

Tohnai and Hata 1994 (57) studied the factors affecting health behavior of people aged 40 years, used Health Belief Model The sample size was people live in town, hill tribe village, and fisherman village 1,120 persons. The result found that the education level was not different of health behavior. The result showed that the social support and information was predict 33 percent of the health behavior.

Muhlenkamp 1986(49) studied the relationship between social support, self-esteem and positive health practices of adult, aged 18 – 67 years 98 persons. The research instrument was used is Personal resource questionnaire, Coopersmith self-esteem inventory Personal lifestyle activities questionnaire. The result showed that the social support was significantly correlation with health lifestyle. ($r = 0.26$, $p\text{-value} < 0.01$)

Hunkittikhun S.1996 (60) studied the factors affecting health promoting behaviors of elderly in Lampang province. The sample size was the elderly 400 persons. The result showed that supporting suggestion from close persons had significant relationship with health promoting behaviors. (p-value <0.001)

Petchthong J.1997 (17) studied the factors affecting health promotion behavior among policemen in Suphanburi province. The sample size was commission policemen 619 persons. The result showed that the instruction from persons was correlation with health promotion behavior of non-commission policemen. ($X^2=12.71$, p-value< 0.05)

Theeraphongnaphalai P.1998 (61) studied the factors affecting health promoting behaviors among school teachers, department of general education, Bangkok. The sample size had 396 persons. It was found that the information support was significantly correlated with health promotion . (p-value < 0.05)

Shaisemseng N.2000(52) studied the factors affecting health promoting behavior among Thai military officers in Lopburi province. The sample size was 580 persons, it was found that the information support was statistically significantly correlated with health promotion. ($r=0.375$, p-value = 0.0014)

Junhom K.2000(53) studied the health promoting behavior of non-commissioned officers in Bangkok Metropolis. The sample size was non-commissioned officers 400 persons. The result showed that the social support was not predict the health promoting behavior .

Mali N. 2001 (63) studied the factors affecting health promoting behaviors of elderly , Muang distric, Nontaburi province. The sample size was elderly 400 persons. it was found that the information support was significantly positive correlated with health promotion . ($r=0.136$,p-value < 0.01)

Social support is important factor of self-care behaviors, and help persons maintain health promoting behavior, including persuade to change behaviors and from the review of literature, it was found that the social support was related to self-care behavior. Therefore social support should related to self-care behavior.

CHAPTER III

MATERIAL AND METHODS

Research design

This research is designed as a cross sectional survey research to study factors associated with self-care behavior of andropausal men: A case study of non-commission policemen in Bangkok Metropolis.

1. Population

The population for this study was andropausal men aged 40 to 59 years old, non-commission policemen working under metropolitan police division 1-9 and living in Bangkok Metropolis not less than 6 months. The number of population was 5,421 . (66)

2. Samples

2.1 The sample size for this study was calculated by using Daniel WW technique(67),as follows:

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

n = sample size

N = known population size

Z = standard statistical value, under normal distribution curve, sat at $\alpha=0.05$

$\alpha/2 =1.96$

P = anticipated proportion. In study Petchthong J.(17) Factors affecting health promotion among policemen in Suphanburi province in 1997.It was found non-commission policemen had incorrect many part of health behavior and part of exercise behavior was found large sample size. It was found that proportion of the exercise behavior 48.2 percent. $P=0.48$

d = acceptable error of sample selection (0.05)

$$n = \frac{(1.96)^2 (5421)(0.48)(0.52)}{(1.96)^2 (0.48)(0.52) + (5421-1)(0.05)^2} = 358 \text{ persons}$$

Therefore, the samples were recruited at the minimum of 358 persons. In this study, the total sample was 400, which was additional 10% of the sample size calculated.

2.2 sampling technique

For sample selection, the researcher selected sample by using multistage random sampling techniques. There were 5,421 non-commission policemen age 40 to 59 years olds, working in 88 police stations from 9 metropolitan police division . as follows

Step 1 selecting police stations from 9 metropolitan police division

In metropolitan police division1, there were 9 police stations ,and 593 policemen, Division 2, 11 stations, and 841 policemen, Division 3, 11 stations, and 456 policemen, Division 4, 8 stations, and 562 policemen, Division 5, 9 stations, and 821 policemen, Division 6, 8 stations, and 578 policemen, Division 7, 11 stations, and 504 policemen, Division 8, 11 stations, and 494 policemen, Division 9, 10 stations, and 572 policemen,

By using the simple random sampling method, from each metropolitan police division, the nine police stations selected were Samsen, Thungsonghong, Meanburi, Huamark, Lumpinee, Patumwan, Talingchan, Bangmod, and Thakam.

Step 2 sample size for each metropolitan police division by proportion allocation(68)as follows

$$n_1 = \frac{N_{1 \times} n}{N}$$

$$n_2 = \frac{N_{2 \times} n}{N}$$

$$n_3 = \frac{N_{3 \times} n}{N}$$

⋮

$$n_9 = \frac{N_{9 \times} n}{N}$$

N = Total of the non-commission policemen age 40 to 59 years old in 9 metropolitan police division = 5,421 persons

n = Total of sample size from calculation = 400 persons

N_{1-9} = Number of the non-commission policemen age 40 to 59 years old in each metropolitan police division

n_{1-9} = Number of sample size in each metropolitan police division

Step 3

The non-commission policemen age 40 to 59 years old were simple random sampling from the sample police stations. The required sample size was 400 persons. The sampling procedure was summarized as shown in Figure 2.

Table 1 The number of non-commission policemen and the number of sample in each police stations

metropolitan police division	The number of non-commission policemen	The number of police stations	The number of sampling police stations	The name of police stations	The number of non-commission policemen	The number of sample
division 1	593	9	1	Samsen	74	44
division 2	841	11	1	Thungsonghong	70	62
division 3	456	11	1	Meanburi	77	34
division 4	562	8	1	Huamark	87	42
division 5	821	9	1	Lumpinee	98	60
division 6	578	8	1	Patumwan	82	42
division 7	504	11	1	Talingchan	72	37
division 8	494	11	1	Bangmod	51	37
division 9	572	9	1	Thakam	44	42
total	5,421	88	9		655	400

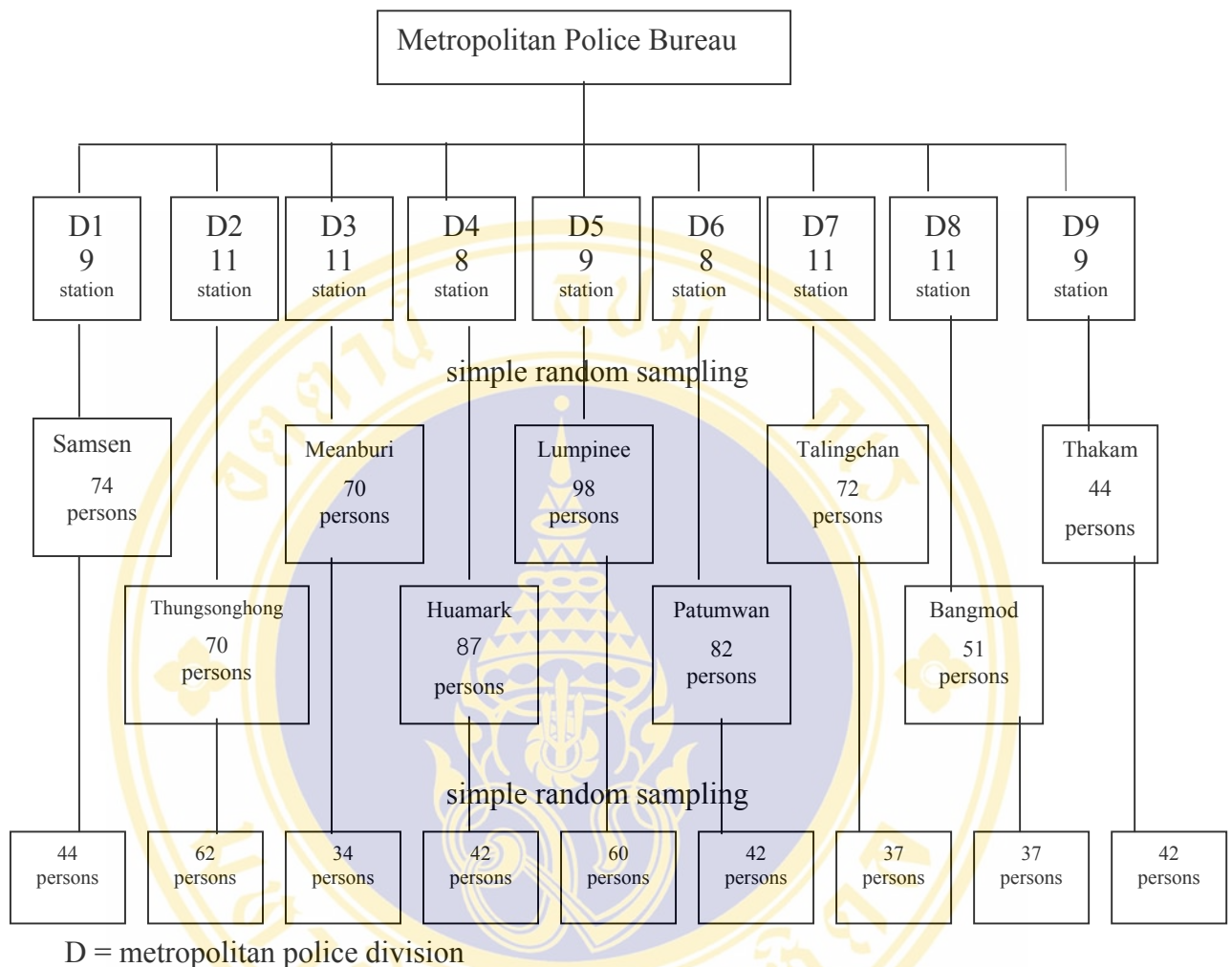


Figure 2 sampling procedure

Research instrument

The instrument used in this research were a 6 part questionnaire as the following

Part 1 personal and general question

This part included questions about age, marital status, education level, family income.

Part 2 self-care knowledge

This part of the instrument was constructed based on health promotion practice and prevent disease method of andropausal men(27). The content was based on Orem concept 20 items 3 groups as follows.

-universal self-care requisites 15 items Number 1-15

The questionnaire statement contained positive meaning are 4 items number 6,10,13-14 and negative meaning statement are 11 items number 1-5,7-9,11-12,15

-developmental self-care requisites 3 items Number 16-18

The questionnaire statement contained negative meaning are 3 items

-health deviation self-care requisites 2 items Number 19-20

The questionnaire statement contained negative meaning are 2 items

The answer choices for the question are yes, no and don't know. The correct answer gets 1 point, the wrong or don't know gets 0 point.

The total possible score for the scale ranges from 0-20 points. The classification was applied from the criteria by Kitpredabrorisood B. (69). The subjects were classified into three levels based on the following participation scores.

High level : the scores of 80-100%(16-20 points) and 0.81-1.00 points

Moderate level : the scores of 60-79%(12-15 points) and 0.60-0.80 points

Low level : the scores of 0-59%(0-11 points) and 0-0.59 points

Part 3 self-care attitude

This part of the instrument was constructed based on health promotion practice and prevent disease method of andropausal men(27). The content was based on Orem concept 20 items 3 groups as follows.

-universal self-care requisites 15 items Number 1-15

The questionnaire statement contained positive meaning are 10 items number 1-9,15 and negative meaning statement are 5 items number 10-14

-developmental self-care requisites 3 items Number 16-18

The questionnaire statement contained positive meaning are 2 items number 17-18 and negative meaning statement are 1 items number 16

-health deviation self-care requisites 2 items Number 19-20

The questionnaire statement contained positive meaning are 1 items number 20 and negative meaning statement are 1 items number 19

Each items was scores on a five points Likert-scale. The score was given according to meaning of each statement as follow:

score	positive statement	negative statement
5	mostly true	slightly true
4	much true	little true
3	moderate true	moderate true
2	little true	much true
1	slightly true	mostly true

The total possible score of the scale range from 20-100 points. The classification was applied from the criteria of education evaluation in schools by Racharoj S.(70).The subjects were classified into three levels based on the following participation scores.

Good level	: the scores of 80-100%(84-100 points) and 4.21-5.00 points
Moderate level	: the scores of 60-79%(68-83 points) and 3.40-4.20 points
Poor level	: the scores of 0-59%(20-67 points) and 1.00-3.39 points

Part 4 Partial Androgen Deficiency in Aging Male (PADAM)

This part of instrument used the PADAM SCORE (21) questionnaire. The subjects were divided into four groups of symptom as follows physical symptoms 4 items , vasomotor symptoms3 items, psychological symptoms 5items, and sexual symptoms 5 items, total 17 items. It was evaluate of symptoms occur in last one month. Each items was scores on a four points Likert-scale. The score was given as follow:

3 points	=	very often (4-7 days/week)
2 points	=	often (2-3 days/week)
1 points	=	sometimes (1 days/week)
0 points	=	never

It was classified into two groups.

-Partial Androgen Deficiency means total scores of physical symptoms + vasomotor symptoms ≥ 5 and total scores of psychological symptoms ≥ 4 and total scores of sexual symptoms ≥ 8

-non partial Androgen Deficiency means total scores of physical symptoms + vasomotor symptoms < 5 or total scores of psychological symptoms < 4 or total scores of sexual symptoms < 8

Part 5 social support

This part was adapted from questionnaire on social support of the female climacteric period by Kirdsuwan P. based on Cobb and Schaefer's concept. It had Cronbach's alpha coefficient of 0.86.

This part had 20 items and evaluate the receiving social support as follows

1. Emotional support 4 items Number 1-4

The questionnaire statement contained positive meaning are 2 items number 2,4 and negative meaning statement are 2 items number 1,3

2. Esteem support 4 items Number 5-8

The questionnaire statement contained positive meaning are 3 items number 5,7-8 and negative meaning statement are 1 items number 6

3. Network support 4 items Number 9-12

The questionnaire statement contained positive meaning are 4 items

4. Tangible 4 items Number 13-16

The questionnaire statement contained positive meaning are 4 items

5. Information support 4 items Number 17-20

The questionnaire statement contained positive meaning are 3 items number 17,19-20 and negative meaning statement are 1 items number 18

Each items was scores on a five points Likert-scale. The score was given according to meaning of each statement as follow:

score	positive statement	negative statement
5	mostly true	slightly true
4	much true	little true
3	moderate true	moderate true
2	little true	much true
1	slightly true	mostly true

The total possible score for the scale range from 20-100 points. The classification was applied from the criteria of education evaluation in schools by Racharaj S.(70).The subjects were classified into three levels groups based on the following participation scores.

High level : the scores of 80-100%(84-100 points) and 4.21-5.00 points
 Moderate level : the scores of 60-79%(68-83 points) and 3.40-4.20 points
 Low level : the scores of 0-59%(20-67 points) and 1.00-3.39 points

Part 6 self-care behavior of andropausal men

This part of the instrument was constructed based on health promotion practice and prevent disease method of andropausal men(27). The content was based on Orem concept 40 items 3 groups as follows.

-universal self-care requisites 33 items Number 1-33

The questionnaire statement contained positive meaning are 27 items number 1-12,14-16,18-24,28-33 and negative meaning statement are 3 items number 13,15-17,25-27

-developmental self-care requisites 4 items Number 34-37

The questionnaire statement contained positive meaning are 4 items

-health deviation self-care requisites 3 items Number 38-40

The questionnaire statement contained positive meaning are 4 items

Each items was scores on a five points Likert-scale. The score was given according to meaning of each statement as follow:

score	positive statement	negative statement
4	frequently	never
3	regularly	sometimes
2	sometimes	regularly
1	never	frequently

The total possible score of the scale range from 20-100 points. The classification was applied from the criteria of education evaluation in schools by Racharaj S.(70).The subjects were classified into three groups based on the following participation scores.

The subject were classified 3 levels as follows

High level : the scores of 80-100%(136-160 points) and 3.41-4.00 points

Moderate level : the scores of 60-79%(112-135 points) and 2.80-3.40 points

Low level : the scores of 0-59%(40-111 points) and 1.00-2.79 points

Validity and reliability

1.Content validity:

The assessment tools particularly the questionnaire were initially submitted to the thesis advisor and four experts to assess its content validity and language. The study tools were revised and corrected according to the recommendation of the experts and advisor. Thereafter, the study tools were tested for its reliability.

2. Reliability

The revised questionnaires were pre-test with 35 non-commission policemen in Bangbon police station. The results were analyzed for reliability by using Cronbach ' s Coefficient Alpha. The reliability values of questionnaires were as follows:

self-care knowledge=0.75

self-care attitude=0.85

PADAM SCORE=0.83

social support =0.90

self-care behavior of andropausal men =0.88

Data collection procedures

1. The research proposal was submitted to faculty of Graduate Study of Mahidol University for the accredited statements from the Committee of human right for the experiment in human.

2. The letter of permission from Graduate Study of Mahidol University was submitted to the Chief of Metropolitan Police Bureau for approval of conducting questionnaire administration.

3. Contact the responsible officers from assigned police station totaling 9 stations to provide the name list of non-commission policemen aged between 40-59 years old for the sampling selection. Researcher gathered the non-commission policemen information for making appointment.

4. Before starting the research interview, the researcher would inform all the participants about research proposal, the benefit of research to the society and also procedure in completing and answering the research questions. All completed questionnaires would be gathered within the same day that data collection had been conducted. However, for those sampling non-commission policemen unable to attend the interview, they would be appointed for their questionnaire submission within the following day. Regarding the sampling non-commission working in the night shift, researchers asked the assigned officers to help deliver and gather all the questionnaires. Then, researchers checked for the completeness of information and immediately contact the participants in case of the missing data.

5. According to gathered questionnaires from those nine assigned police station, there were 360 questionnaires. with complete information and answers, which equal to 90 percent of the total sample in this research.

Data analysis

The statistic used were follows

1. Discriptive statistic

The discriptive of the data obtained from the andropausal men were presented as the total number, percentage, mean, standard deviation.

2. Analytical statistic

2.1 Pearson Product Moment Correlation Coefficient was used in analysis of the relationship between age, marital status, education level, family income, self-care knowledge, self-care attitude, Partial Androgen Deficiency in Aging Male (PADAM score), social support and self-care behavior of andropausal men.

2.2 The Stepwise Multiple Regression was used in analysis of the predictability of age, marital status, education level, family income, self-care knowledge, self-care attitude, Partial Androgen Deficiency in Aging Male (PADAM score), social support and self-care behavior of andropausal men.

In order to use the stepwise multiple regression analysis, the independent variables and dependent variable need to be interval or ratio scale. The variables measured as nominal scale in this study were therefore transformed into the dummy variables as follows:

<u>Variable</u>	<u>Dummy variable</u>
- Marital status	
married	0
single, widowed, divorced/separated	1
- Education level	
diploma, bachelor's degree	0
high school	1

CHAPTER IV

RESULTS

This research studied the self-care behavior of andropausal men and factors associated with self-care behavior of andropausal men: A case study of non-commission policemen in Bangkok Metropolis. The data collected from 360 non-commission policemen by using questionnaires, 10 November to 26 December 2003. The results are presented in tables with interpretation and discussions in the following order:

Part 1: The demographic characteristic of sample group, as follows:

- 1.1 Personal characteristics of andropausal men consisted of age, marital status, education level, family income.
- 1.2 Self-care knowledge
- 1.3 Self-care attitude
- 1.4 Partial Androgen Deficiency in Aging Male (PADAM)
- 1.5 Social support

Part 2: self-care behavior of andropausal men (non-commission policemen)

Part 3: Analysis of relationship between personal factors, self-care knowledge, self-care attitude, partial androgen deficiency, social support and self-care behavior of andropausal men based on Pearson's Product Moment Correlation Coefficient.

Part 4: Analysis of factors predicting self-care behavior of andropausal men, by Stepwise Multiple Regression.

Part 1: The demographic characteristic of samples

1.1 Personal characteristics of andropausal men

Table 2 displayed the age of andropausal men which were very close from one another ranging from 40-44 years old, 50-54 years old, and 55-59 years old or in percentage of 26.2 %, 24.4 %, 24.7% and 24.7% respectively. The mean age of respondents was 49.3 years old, the youngest was 40 years old and the oldest age was 59 years old. About education, the result showed that 70.6% of samples finished secondary schooling, followed by 16.9 % of the samples with the vocational or certificate degree and 12.5 % finished bachelor degree or higher.

Table 2 Number, and percentage of samples categorized by personal characteristics of andropausal men

Personal Characteristics	Total (n=360)	
	Number	Percent
Age (years)		
40-44 years old	94	26.2
45-49 years old	88	24.4
50-54 years old	89	24.7
55-59 years old	89	24.7
$\bar{x}$ = 49.33, SD = 5.85 , Min =40, Max=59		
Education		
Primary school	254	70.6
Vocational/Certificate	61	16.9
Bachelor degree/higher	45	12.5

Table 3 described personal characteristics in term of marital status, number of children, the number of family members to take care, family income, income sufficiency, health condition and residential status.

Regarding marital status, the majority of the sampling andropausal men (78.2%) were married and still living together with their wives, while 6.7 % were

separated, followed by 5.8% being divorced. About the number of children, generally, the majority of the respondents (34.7%) had 2 children, followed by 33.7% having 3 children or more. As for the number of family members to take care, 44.2% of the respondents had three or four persons to take care, followed by 31.1% of respondents having one or two family members to take care. About the family income, most of the respondents (61.6%) received income less than 20,000 baht per month, followed by 29.2% receiving income 20,000-29,999 baht per month. Concerning income sufficiency, 52.5% of the respondents revealed that received income were enough for household expense but not for saving while 26.9% confessed that their income were not enough for household expense together with debt. Related to health condition, most of the respondents (78.1%) were healthy without personal illness, while 21.9% had the complication of personal disease such as hypertension (60.7%), muscular strain (13.9%), allergy (13.9%) and others (11.5%) as illustrated in Table 4. Regarding residential status, most of respondents (69.4%) living in governmental service house, followed by 23.1% having their own house, only 4.7% renting house.

Table 3 Number, and percentage of samples categorized by personal characteristics of andropausal men

Personal Characteristics	Total (N=360)	
	Number	Percent
Marital status		
Single	15	4.3
Married and Living together	282	78.2
Married but Separated	24	6.7
Widow	18	5.0
Divorced	21	5.8
Number of children		
No children	44	12.2
1 child	70	19.4
2 children	125	34.7
3 children or more	121	33.7
$\bar{x} = 2.30, SD = 1.23, \text{Min} = 0, \text{Max} = 6$		
Number of family members to take care		
None	28	7.8
1-2 persons	112	31.1
3-4 persons	159	44.2
5 persons or more	61	26.9
$\bar{x} = 3.03, SD = 1.67, \text{Min} = 0, \text{Max} = 8$		
family income		
Low income (less than 20,000 baht/month)	222	61.6
Medium income (20,000-29,999 baht/month)	105	29.2
High income (30,000 baht/month or higher)	33	9.2
$\bar{x} = 1,8033.79, SD = 6,607.68, \text{Min} = 5,740, \text{Max} = 45,000$		

Table 3 Number, and percentage of samples categorized by personal characteristics of andropausal men (continued)

Personal Characteristics	Total (N=360)	
	Number	Percent
Income sufficiency		
Sufficient with saving money	74	20.6
Sufficient without saving money	189	52.5
Not sufficient together with debt	97	26.9
Health condition		
With personal illness	281	78.1
Without personal illness	79	21.9
Residential status		
Having own house	83	23.1
Renting House	17	4.7
Living in governmental service house	250	69.4
Others	10	2.3

Table 4 Number, and percentage of personal disease found in andropausal men

Personal Disease	Total (N=79)	
	Number	Percent
Hypertension	48	60.7
Muscular strain	11	13.9
Allergy	11	13.9
Others	9	11.5

In term of job position, Table 5 showed that 71.4 % were commissioned officers, followed by 21.7 % were sergeant in which 45.3% working in the office, followed by 27.8 % and 20.8 % controlling or handling the traffic and working out field respectively.

Table 5 Number, and percentage of samples categorized by personal characteristics of andropausal men

Personal Characteristics	Total (N=360)	
	Number	Percent
Rank		
Non-commissioned officer	25	6.9
Sergeant	78	21.7
Commissioned officer	257	71.4
Job Description		
Working in the office	163	45.3
Managing traffic	100	27.8
On field	75	20.8
Others	22	6.1

1.2 Self-care Knowledge

Table 6 explained that the result of study that most andropausal men (43.1%) had self-care knowledge in the low level, followed by 40.0% having self-care knowledge in the moderate level.

Table 6 Number, and percentage of sample categorized by the level of self-care knowledge of andropausal men

The level of self-care knowledge	Total (N=360)	
	Number	Percent
High level of self-care knowledge	61	16.9
Moderate level of self-care knowledge	144	40.0
Low level of self-care knowledge	155	43.1
$\bar{x} = 11.90, SD = 3.60, Min = 1, Max = 19$		

When considering the self-knowledge individual criteria, it was found that samples had the high level of self-care knowledge that anger and stress could weaken health condition leading to having sickness easier than usual. Regarding the self-care knowledge in maintaining the good health, sampling andropausal men mostly had well understanding in self-care knowledge in term of good health, andropausal men should avoid the crowded or poor ventilated place and if having insomnia, they should not buy hypnotic pill without prescription. The percentage of samples giving the correct answer were 86.1 %, 84.2 % and 81.9% as showed in Table 7 respectively.

Moreover, the result of study described that andropausal men had the low understanding in self-care knowledge about seafood (shell, squid) was necessary for them since it provided high energy, andropausal men should avoid taking high calcium food since it caused renal calculus, taking meal with high carbohydrate and lipid could help improve excretion system and prevent constipation accordingly, drinking distilled water in stead of filtered water was appropriate for health, problem of benign prostatic hypertrophy could result in flatulent and hepatitis, hypertension could cause diabetic, and practices of reducing the stress help improve the sleeping problem but not help for general health problem. Table 7 showed the percentage of those giving the correct answers of 42.2%, 42.2%, 58.1%, 39.7%, 23.6%, 14.2%, and 37.5% respectively.

Table 7 Number, and percentage of sample categorized by the level of self-care knowledge of andropausal men

Self-care knowledge	Correct answers	Incorrect answers	$\bar{x}$	SD	Level of knowledge
1. Seafood such as shell and squid are high energy food necessary for andropausal men.	42.2	57.8	0.42	0.49	Low
2 Hypertension is derived from genetics not related to intake daily meal.	63.3	36.7	0.63	0.48	Moderate
3. Andropausal men should avoid high calcium food which could cause renal calculus.	42.2	57.8	0.42	0.49	Low
4. Taking meal with high carbohydrate and lipid could help improve excretion system and prevent constipation accordingly.	58.1	41.9	0.58	0.49	Low
5. Drinking distilled water in stead of filtered water was appropriate for health.	39.7	60.3	0.40	0.49	Low
6. For good health, andropausal men should avoid the crowed or poor ventilated place for example movie theater, shopping mall.	84.2	15.8	0.84	0.37	High
7. Undergoing exercise for 20-30 minutes monthly at least.	65.3	34.7	0.65	0.48	High
8. Solving insomnia problem by purchasing hypnotic pill without prescription is not appropriate.	81.9	18.1	0.82	0.39	High

Table 7. Number, and percentage of sample categorized by the level of self-care knowledge of andropausal men (continued)

Self-care knowledge	Correct answers	Incorrect answers	$\bar{x}$	SD	Level of knowledge
9. Only smoking 1-2 cigarettes per day does not increase the risk of heart disease or lung cancer.	62.5	37.5	0.63	0.48	Moderate
10. Regularly drinking alcoholic beverage can result in dementia before age.	75.6	24.4	0.76	0.43	Moderate
11. Problem of benign prostatic hypertrophy could result in flatulent and hepatitis.	23.6	76.4	0.24	0.43	Low
12. Hypertension could cause diabetic.	14.2	85.8	0.14	0.35	Low
13. Weight control could reduce the risk of diabetic and heart disease.	74.7	25.3	0.75	0.44	Moderate
14. Anger and stress could weaken health condition leading to having sickness easier than usual.	86.1	13.9	0.86	0.35	High
15. Andropausal men have the same ability of physical recovery after serious accident as adolescent people.	63.1	36.9	0.63	0.48	Moderate
16. Practices of reducing the stress helped improve the sleeping problem however could not help for general health problem.	37.5	62.5	0.38	0.48	Low

Table 7 Number, and percentage of sample categorized by the level of self-care knowledge of andropausal men (continued)

Self-care knowledge	Correct answers	Incorrect answers	$\bar{x}$	SD	Level of knowledge
17. Always being cautious for other's deception could result in the good health.	65.3	34.7	0.65	0.48	Moderate
18. Hobbies are not necessary for andropausal men due to wasting time and money.	78.3	21.7	0.78	0.41	Moderate
19. Seeing the doctor when the serious symptom is better than when the early stage of disease so that physician could give precise diagnosis.	67.5	32.5	0.68	0.47	Moderate
20. Knowledge about the disease is physicians' responsibilities not patient's.	65.6	34.4	0.66	0.48	Moderate

1.3 Self-care attitude

According to the result of study, most of samples (51.4%) had the good level of self-care attitude, followed by 35.5% having the moderate attitude as illustrated in Table 8

Table 8 Number, and percentage of sample categorized by the level of self-care attitude of andropausal men

The level of self-care attitude	Total (N=360)	
	Number	Percent
Good level (84-100 scores)	185	51.4
Moderate level (68-83 scores)	127	35.3
Poor level (20-67 scores)	48	13.3
$\bar{x}$ = 82.29, SD = 11.03, Min =54, Max=100		

When considering the self-care attitude according to individual criteria, it was found that the samples had good level of self-care attitude in term of taking high fat meal increasing the risk of heart disease and coronary thrombosis, taking vegetable and fresh fruit everyday could prevent constipation, drinking at least 6-8 glasses of water is appropriate for health, receiving purified air could enhance good health, constant exercise help remain healthy, insufficient resting affects the good health condition, good excrement result in the good health, performing according to the physician's instruction is appropriate for good health. Table 9 displayed the mean scores of 4.29, 4.36, 4.30, 4.45, 4.51, 4.36, 4.27 and 4.21 respectively. It was also found that samples had the moderate scores for the rest criteria.

Table 9 Number, and percentage of mean and standard deviation of the scores of self-care attitude

Self-care attitude	Highest	High	Moderate	Low	Lowest	$\bar{x}$	SD	Level
1 Taking high fat meal increasing the risk of heart disease and coronary thrombosis (+)	48.5	41.4	10.0	1.7	1.1	4.29	0.08	High
2. Taking salty and sweetly meal are at risk of disease (+)	31.4	50.8	13.9	2.81	1.1	4.09	0.81	Moderate
3. People in this age should avoid high calcium foods (+)	29.4	36.7	23.1	9.2	1.7	3.83	1.01	Moderate
4. Taking vegetable and fresh fruit everyday could prevent constipation. (+)	52.2	34.2	11.4	1.90	0.30	4.36	0.78	High
5. Drinking at least 6-8 glasses of water is appropriate for health. (+)	47.8	38.1	11.1	2.8	0.30	4.30	0.80	High
6. Receiving purified air could enhance good health(+)	57.2	33.1	7.5	2.2	0.0	4.45	0.73	High
7. Constant exercise help remain healthy. (+)	61.9	30.8	4.2	2.8	0.30	4.51	0.73	High

Table 9 Number, and percentage of mean and standard deviation of the scores of self-care attitude (continued)

Self-care attitude	Highest	High	Moderate	Low	Lowest	$\bar{x}$	SD	Level
8. Insufficient resting affect the good health condition. (+)	50.6	37.5	10.0	1.1	0.8	4.36	0.77	High
9. Good excretion system help remain healthy	41.90	46.1	9.2	2.2	0.5	4.27	0.76	High
10. Smoking only 1-2 cigarettes per day does not increase the risk of heart disease and lung cancer (-)	6.1	7.2	17.8	17.5	51.4	4.01	1.24	Moderate
11. Drinking alcohol but not addicted does not affect the health (-)	2.2	16.4	29.4	23.6	28.3	3.59	1.13	Moderate
12. Prostate grand examination provide no advantage for health (-)	5.0	14.2	16.7	23.6	40.6	3.81	1.25	Moderate
13. Blood pressure examination provide no advantage for health (-)	5.6	10.6	11.9	20.0	51.9	4.02	1.25	Moderate
14. Checking for appropriate weight, height, waist-hip ratio provide no advantage for health (-)	3.60	7.8	20.6	25.0	43.1	3.96	1.13	Moderate
15. Andropausal men should be careful with the accident such as slippery more than adolescent people (+)	35.0	38.1	16.4	6.4	4.2	3.93	1.07	Moderate
16. When facing problem, andropausal men should keep the problem with themselves (-)	3.1	7.8	24.4	23.9	40.8	3.92	1.11	Moderate

Table 9 Number, and percentage of mean and standard deviation of the scores of self-care attitude (continued)

Self-care attitude	Highest	High	Moderate	Low	Lowest	$\bar{x}$	SD	Level
17. Favorite hobby is one of the relaxation and a way of stress reduction (+)	40.8	42.5	13.6	0.80	2.2	4.19	0.86	Moderate
18. When having stress, andropausal men should find the cause and corrective action for the problem. (+)	38.3	42.8	15.0	2.8	1.1	4.14	0.85	Moderate
19. It is not necessary to see the doctor if no symptoms observed. (-)	3.1	10.8	13.6	25.8	46.7	4.02	1.15	Moderate
20. Performing according to the physician's instruction is appropriate for good health. (+)	44.4	38.1	13.1	2.8	1.7	4.21	0.89	High

1.4 Partial Androgen Deficiency

The researches questions related to the Partial Androgen Deficiency would be measured by employing PADAM score (21) to categorized symptom into 4 types of physical symptoms, neuronal and vasomotor symptoms, mental symptoms, and sexual symptoms.

When considering the scores, it was found that only 11.7% of samples had the problem of partial androgen deficiency while 88.3% did not have the problem of partial androgen deficiency.

Table 10 Number, and percentage of sample categorized by partial androgen deficiency of andropausal men

Partial androgen deficiency	Total (N=360)	
	Number	Percent
Have partial androgen deficiency	42	11.7
Have no partial androgen deficiency	318	88.3
$\bar{x} = 15.64, SD = 9.08, Min = 0, Max = 46$		

When considering the scores for particular symptoms, Table 10 explained that most of andropausal men (74.7%) had physical and vasomotor symptoms followed by 62.2% having mental symptoms while only 12.2% had sexual problem.

Table 11 Number, and percentage of sample categorized by the symptoms of partial androgen deficiency of andropausal men

Symptoms of Partial androgen deficiency	Total (N=360)	
	Number	Percent
Physical and vasomotor symptom	269	74.7
Mental symptoms	224	62.2
Sexual symptoms	44	12.2

When considering the average scores for particular symptoms characteristics divided into 3 groups as following:

In term of physical and vasomotor symptom, most of andropausal men revealed that wakeful problem during the night resulting in sleeplessness, and bone and muscular strain were found frequently and regularly, selected by 36.7% and 35.8% respectively. Regarding the mental problem, majority of andropausal men confessed that moody, forgetfulness, and loss of concentrations were found frequently and regularly, selected by 3.25%, 26.7% and 25.6 % respectively. Concerning with sexual symptoms, most of andropausal men reported that failure of erection in the morning and lack of sexual excitement were frequently and regularly found, selected by 19.2% and 18.6% (Table 12)

Table 12 Number, and percentage of sample categorized by symptom characteristics of partial androgen deficiency of andropausal men

Symptom Characteristics	Frequently	Regularly	Sometimes	Never	$\bar{X}$	SD
Physical and vasomotor symptoms						
1. Exhausted	2.8	21.1	48.6	27.5	0.99	0.77
2. Wakeful problem during the night leading to sleeplessness	7.5	29.2	49.2	14.2	1.30	0.80
3. Loss of appetite	1.1	16.9	43.3	38.6	0.81	0.75
4. bone and muscular strain	7.2	28.6	46.4	17.8	1.25	0.83
5. Hot flushes	4.4	11.1	43.6	40.8	0.79	0.81
6. Sweating	7.2	21.7	42.8	28.3	1.08	0.89
7. Tremor	3.3	21.4	39.4	35.8	0.92	0.84
Mental symptom						
8. Forgetfulness	5.3	21.4	52.2	21.1	1.11	0.79
9. Loss of concentration	5.3	20.3	55.8	18.6	1.12	0.77
10. Panic	2.5	11.7	36.1	0.67	0.78	0.78
11. Moody	5.8	26.7	55.6	11.9	1.26	0.74
12. Inert	2.8	11.7	39.7	45.8	0.71	0.78
Sexual symptoms						
13. Loss of sexual desires	5.0	9.2	41.7	44.2	0.75	0.82
14. Loss of sexual excitement	4.4	14.2	39.2	42.2	0.81	0.84
15. Failure of erection in the morning	3.9	15.3	40.6	40.3	0.83	0.83
16. Lacking of sexual capacity	2.8	6.7	37.8	52.8	0.59	0.74
17. Erectile dysfunction when having sexual	3.3	7.5	39.7	49.4	0.76	0.76

1.5 Social support

Table 13 showed the result of study explaining that the majority of andropausal men (57.2%) received the social support in the low level, followed by 35.3% receiving the social support the moderate level and only 7.5% received social support in the high level.

Table 13 Number, and percentage of sample categorized by the level of social support provided to andropausal men

Level of social support	Total (N=360)	
	Number	Percent
High level (84-100 scores)	27	7.5
Moderate level (68-83 scores)	127	35.3
Low level (20-67 scores)	206	57.2
$\bar{x} = 66.79, SD = 10.53, Min = 32, Max = 100$		

When considering the social support in particular criteria, Table 13 described that most of andropausal men received social support in the moderate level that are network and esteem support with the mean score of 3.44 and 3.43 respectively. In the other hand, andropausal men were found to receive the low level of social support in term of emotional, informational and tangible support with mean score of 3.34, 3.22 and 3.25 respectively.

When considering the mean score of particular criteria, the outcome can be explained as follows:

1. Emotional support

Andropausal men has received the low level of emotional support in term of close persons provide love and caring and having close persons listening to their problem , and close persons provide emotional security with the mean score 3.27 and 3.15 as illustrated in Table 14

2. Esteem support

Andropausal men has received the low level of esteem support in term of receiving respect and commendation from close persons with mean score 3.21 as displayed in Table 14

3. Network support

Regarding network support, it was found that andropausal men has received the low level of network support in term of having personal connection with social network and participating in the community activities with the means core 3.36 and 3.24 as explained in Table 14

4. Tangible support

About tangible support, andropausal men has received the low level of tangible support in term of financial support, material support and career support when having sickness with mean score 3.14, 3.11 and 3.21 respectively as shown in Table 14

5. Informational support

Andropausal men has received the low level of information support in term of available guidance or suggestion related to proper consuming behavior, the medical guidance when having health problem, or having informational provider for self-care knowledge to promote self-care behaviors with mean score 3.21, 3.24 and 3.211 respectively as shown in Table 14

Table 14 Percentage, mean, and standard deviation of social support scores.

Social support	Percentage of acknowledgment to social support					$\bar{x}$	SD	Level
	Highest	High	Moderate	Low	Lowest			
Emotional support						3.34		Low
1. Having people listening to their problem	22.5	22.5	41.1	10.0	3.9	3.50	1.07	Moderate
2. Close person provide love and caring	10.0	23.9	52.2	10.8	3.1	3.27	0.89	Low
3. Close persons provide encouragement	18.1	25.6	43.3	9.7	3.3	3.45	1.00	Moderate
4. Close persons provide emotional security.	9.2	24.2	46.4	13.3	6.9	3.15	1.00	Low

Table 14 Percentage, mean, and standard deviation of social support scores (continued)

Social support	Percentage of acknowledgment to social support					$\bar{x}$	SD	Level
	Highest	High	Moderate	Low	Lowest			
Esteem support						3.43		Moderate
5. Receiving respects and commendation from the social network.	5.6	25.6	56.1	10.0	2.8	3.21	0.08	Low
6. Close persons accept and listen to the comments and opinion.	16.4	27.8	41.7	11.9	2.2	3.44	0.97	Moderate
7. Feel valuable to the close persons.	10.8	36.1	45.0	6.4	1.7	3.48	0.83	Moderate
8. Being the counselor for the close persons.	19.7	35.6	32.5	9.4	2.8	3.60	1.00	Low
Network support						3.44		Moderate
9. Having connection with other in social network.	11.7	33.1	39.4	11.7	4.2	3.36	0.98	Low
10. Joining and giving comments and attitude to the community.	11.4	36.9	38.3	10.6	2.8	3.44	3.92	Moderate
11. Participating in community activity	10.0	26.4	45.0	15.0	3.5	3.24	0.92	Low
12. Being invited to the activities in the community.	21.7	39.2	33.9	3.3	1.9	3.75	0.90	Moderate

Table 14 Percentage, mean, and standard deviation of social support scores (continued)

Social support	Percentage of acknowledgment to social support					$\bar{x}$	SD	Level
	Highest	High	Moderate	Low	Lowest			
Tangible support						3.22		Low
13. Financial support	7.80	25.0	44.7	18.6	3.9	3.14	0.94	Low
14. Material support	6.4	25.0	47.2	16.1	5.3	3.11	0.93	Low
15. Medical support when having illness.	14.2	30.3	41.9	11.4	2.2	3.43	0.94	Moderate
16. Career support when having sickness.	6.9	30.6	43.6	14.2	4.7	3.21	0.93	Low
Informational support						3.25		Low
17. Social Networks provide the guidance for proper consuming behavior.	6.9	30.6	44.2	13.3	5.0	3.21	0.94	Low
18. Social networks provide guidance for the proper exercise.	21.9	23.9	35.8	13.3	5.0	3.44	1.12	Moderate
19 Social networks provide medical guidance when having health problem.	8.1	30.6	42.5	15.3	3.6	3.24	0.93	Low
20. Having informational provider for self-care knowledge to promote self-care behaviors.	9.7	21.9	44.2	17.8	6.4	3.11	1.02	Low

Part 2: Self-care behavior of andropausal men in non-commission policemen in Bangkok metropolis.

The set of questions measuring self-care behaviors were self-developed questionnaire based on reviewed literature of the guidance for health promotion and disease prevention for andropausal men comprising of three self-care behaviors which are universal self-care requisites, developmental self-care requisites, health deviation self-care requisites

By categorizing andropausal men according to self-care scores, it can be concluded that most andropausal men (47.8%) had self-care behavior in the low level, followed by 43.9 % having self-care behaviors in the moderate level and only 8.3% had the self-care behaviors in the high level (Table 15)

Table 15 Number, and percentage of sample categorized by the level of self care behaviors

Level of self-care behavior	Total (N=360)	
	Number	Percent
High level (136-160 scores)	30	8.3
Moderate level (112-135 scores)	158	43.9
Low level (40-111 scores)	172	47.8
$\bar{x} = 113.50$, $SD = 14.50$, $Min = 76$, $Max = 156$		

When considering the self-care behaviors in particular criteria, the outcome can be explained as follows:

Most andropausal men had the correct self-care behaviors in the moderate level and had the correct self-care behaviors in the low level in term of life prevention and health promotion with the mean scores 2.49 and 2.30 respectively (Table 16)

When considering the self-care behaviors in particular aspects, the outcome can be explained as follows:

Universal self-care requisites

1. In term of receiving purified air, water and food, it was found that most andropausal men had the proper self –care behaviors in moderate level and had the

proper self-care behaviors in the low level which were avoiding the high lipid and carbohydrate food such as spicy coconut soup, squid, egg yolk, drinking milk and yogurt, taking food with high calcium and avoiding salty food. The mean score were 2.61, 2.48, 2.49, 2.56 (Table 16)

2. In term of excretion, it was found that most andropausal men had self-care behaviors in the moderate level as explained in Table 16

3. In term of exercise and resting, it was found that most andropausal men had the proper self-care behaviors in the high level about not taking hypnotic pill without prescription with the scores 3.48. In the other hands, andropausal men had the proper self-care behaviors in the low level about allocating daily time for resting and relaxation to reduce stress and appropriate exercise according to physical condition for example jogging, walking around 20-30 minutes three times a week. The mean score for allocating time and appropriate exercise were 2.77 and 2.47. (Table 16)

4. Regarding the use of private time and having interaction with others, it was found that andropausal men had the proper self-care behaviors in the moderate level and had the proper self-care behaviors in the low level about having time and opportunity sharing with friends and close persons and about sharing the self-care knowledge with the friends in their age. The mean scores were 2.77 and 2.47 (Table 16)

5. Concerning with Life protection, it was found that andropausal men had the proper self-care behaviors in the moderate level and had the proper self-care behaviors in the low level in term of drinking alcohol or beverage containing high caffeine such as tad, coffee. The mean scores were 2.73, and 2.40 (Table 16)

6. Related to heal promotion, it was found that andropausal men had the proper self-care behaviors in the low level in all aspects which are searching information and knowledge related to health promotion from related documentary or experts, or having prostate gland checked for unfamiliar symptom at least once a year, having physical and blood pressure check at least once a year. The mean scores were 2.64, 1.75, 2.40, and 2.44 respectively (Table 16)

Developmental self-care requisites

Most andropausal men had the correct self-care behaviors in the moderate level and had the proper self-care behaviors in the low level about allocating time for favorite hobbies such as planting, reading, listening to music and having appropriate way in dealing with the stress. The mean score were 2.79 and 2.79 respectively (Table 16)

Health deviation self-care requisites

Most andropausal men had the proper self-care behaviors in the moderate level in all aspects (Table 16)

Table 16. Number, and percentage of sample categorized by self-care behaviors of andropausal men

Activities	Frequently	Regularly	Sometimes	Never	$\bar{X}$	SD	Level
Universal self-care requisites							
<u>1. Receiving purified air, water and food</u>					2.88		Moderate
1. Living in the house and room with good ventilation. (+)	48.3	32.5	18.1	1.1	3.28	0.79	Moderate
2. Avoid staying in the crowded or poor ventilated or pollutant place for example the traffic area with exhausts and dust (+)	36.4	36.9	24.2	2.5	3.07	0.84	Moderate
3. Drinking pure water ate least 6-8 glasses a days (+)	50.6	36.4	11.9	1.1	3.36	0.73	Moderate
4. Taking the high nutrition meal of protein (meat), Carbohydrate (rice), Oil (lipid), Vegetable and fruit (vitamin and mineral) (+)	25.0	43.6	25.8	5.6	2.88	0.85	Moderate
5. Avoiding high cholesterol and carbohydrate food such as spicy coconut soup, squid, Egg Yolk. (+)	16.4	32.5	46.7	4.4	2.61	0.81	Low
6. Drinking milk and yogurt(+)	14.7	30.3	43.6	11.4	2.48	0.88	Low
7. Taking high-calcium food(+)	8.9	34.2	53.6	3.3	2.49	0.70	Low
8. Avoiding salty food(+)	17.5	27.8	47.8	6.9	2.56	0.80	Low
9. Having breakfast everyday(+)	44.2	23.3	26.4	6.1	3.06	0.97	Moderate
10. Receiving 3 basic daily meal +	45.0	24.2	27.5	3.3	3.11	0.92	Moderate
11. Control consuming habit for appropriate proportional dietary (+)	27.8	36.4	27.5	8.3	2.84	0.93	Moderate

Table 16 Number, and percentage of sample categorized by self-care behaviors of andropausal men (continued)

Activities	Frequently	Regularly	Sometimes	Never	$\bar{X}$	SD	Level
Universal self-care requisites							
<u>2. Excretion system</u>					3.17		Moderate
12. Having punctual defecation everyday (+)	55.0	31.7	11.4	1.9	3.40	0.77	Moderate
13. Taking cathartic pill for defecation (-)	5.0	31.7	11.4	1.9	3.4	0.77	Moderate
14. Taking fruit and vegetable for good defecation (+)	28.9	45.3	21.1	4.7	2.98	0.83	Moderate
15. Avoiding urination for a long time (-)	3.6	18.9	53.3	24.2	2.98	0.76	Moderate
16. Sleeping at least 6-8 hours a day (+)	38.3	35.3	25.0	1.40	3.11	0.82	Moderate
17. Always using hypnotic pill (-)	3.3	9.4	22.8	64.4	3.48	0.80	High
18. Allocating time in each day for relaxation to reduce the stress. (+)	17.5	40.8	37.2	4.4	2.71	0.80	Low
19. Exercising appropriately to health condition such as jogging, walking for 20-30 minutes at least three times a week (+)	20.0	32.8	38.3	8.9	2.64	0.90	Low
<u>4. Spending the private time and having interaction with social network</u>					2.80		Moderate
20. Having time for relaxation and doing favorite hobbies for example reading the book, listening to music, watching TV. (+)	23.3	39.7	33.9	3.1	2.83	0.82	Moderate
21. Always talking and discussing issue/topic in general with family members (+)	24.4	41.4	31.9	2.2	2.88	0.80	Moderate
22. Always having good relationship with the family members, friends, and familiar persons (+)	32.5	44.2	22.8	0.60	3.09	0.75	Moderate
23. Always having time and opportunities sharing with friends, and close persons. (+)	16.7	45.0	37.2	1.1	2.77	0.73	Low

Table 16 Number, and percentage of sample categorized by self-care behaviors of andropausal men (continued)

Activities	Frequently	Regularly	Sometimes	Never	$\bar{X}$	SD	Level
24. Always having the opportunity sharing the knowledge for health with friends in the same age (+)	10.3	37.5	41.1	11.1	2.47	0.82	Low
5. Life protection					2.79		Low
25. Drinking alcohol beverage-beer, or liquors (-)	9.4	28.6	41.9	20.0	2.73	0.89	Low
26. Smoking (-)	14.4	18.9	23.3	43.3	2.96	1.10	Moderate
27. Drinking tea, or coffee (-)	21.9	26.1	41.7	10.3	2.40	0.94	Low
28. Always caution wit the accidence possible happening in the house or workplace for example when going upstairs, and walking on slippery floor.(+)	40.8	33.9	19.2	6.1	3.09	0.92	Moderate
29. Watching over the weight and limit the dietary with high cholesterol and Always exercising (+)	24.7	37.8	30.0	7.5	2.80	0.90	Moderate
6. Health promotion					2.30		Low
30. Studying and searching for knowledge related self-care and health promotion from documentary or experts (+)	20.0	31.7	40.3	8.1	2.64	0.89	Low
31. Undergoing prostate glands examination at least once a year (+)	6.9	15.0	23.9	54.2	1.75	0.95	Low
32. Undergoing blood pressure examination at least once a year (+)	16.9	20.3	48.3	14.4	2.40	0.93	Low
33. Having physical examination at least once a year (+)	21.9	16.1	45.6	16.4	2.44	1.01	Low

Table 16 Number, and percentage of sample categorized by self-care behaviors of andropausal men (continued)

Activities	Frequently	Regularly	Sometimes	Never	$\bar{X}$	SD	Level
Developmental self-care requisites					2.82		Moderate
34. Respect and proud in themselves and always giving advice and suggestion to their younger relatives and close persons (+)	22.5	37.5	37.8	2.2	2.80	0.81	Moderate
35. Managing time for favorite hobbies such as planting, reading, listening to music. (+)	24.2	35.8	35.0	5.0	2.79	0.87	Low
36. Accept for the physical changes and different roles. (+)	21.9	26.1	41.7	10.3	2.40	0.94	Moderate
37. Having appropriate way in dealing with the stress (+)	18.9	45.6	30.8	4.7	2.79	0.80	Low
Health deviation self-care requisites					2.87		Moderate
38. Always paying attention and seeing doctors when finding out unfamiliar symptom (+)	25.3	37.8	33.6	3.3	2.85	0.84	Moderate
39. Always questioning about the health conditional symptom, curing progression when having medical treatment (+)	23.6	38.6	33.6	4.2	2.82	0.84	Moderate
40. When receiving medical treatment, always performing according to medical instruction advised by physician and nurse	26.9	42.8	28.1	2.2	2.94	0.80	Moderate

Part 3: Analysis of relationship between personal factors, self-care knowledge, self-care attitude, partial androgen deficiency, social support and self-care behavior of andropausal men based on Pearson's Product Moment Correlation Coefficient.

Result of analysis

1. The association between personal factors and self-care behaviors of andropausal men.

1.1 Age

Result of correlation analysis described that age had positive relationship with self-care behaviors of andropausal men at $r = 0.144$ with statistic significance of $p\text{-value} < 0.001$ (Table 17). This can explain that age and self-care behaviors have the relationship in the same direction that is the older age andropausal men are, the higher self-care behaviors they have.

1.2 Marital status

According to the result of correlation analysis, it was found that marital status was not significantly related to self-care behaviors of andropausal men. This can explain that although regardless of marital status of being single, married and living together, separated, widow or divorced, this does not affect on the self-care behaviors. ($r = 0.048$, $p\text{-value} = 0.361$) Table 16

1.3 Education

Referring to the result of correlation analysis, education of andropausal men had positive relationship with self-care behaviors at $r = 0.115$ with statistic significance of $p\text{-value} < 0.05$ (Table 17). This can explain that education and self-care behaviors have the relationship in the same direction that is with the higher education, andropausal men tend to have higher level of self-care behaviors.

1.4 Family incomes

The result of correlation analysis, explained that family incomes was not significantly related to self-care behaviors of andropausal men. This can explain that regardless of higher or lesser amount received, family incomes does not have the effect on the self-care behaviors. ($r = 0.049$, $p\text{-value} = 0.357$) Table 17

2. Self-care knowledge

According to the result of correlation analysis, self-care knowledge has no significant association with self-care behaviors of andropausal men. This can explain that although andropausal men have much or little self-care knowledge, this could not affect on the self-care behaviors. ($r=0.053$, $p\text{-value}=0.32$) Table 17

3. Self-care attitude

Result of correlation analysis described that self-care attitude had positive relationship with self-care behaviors of andropausal men at $r= 0.241$ with statistic significance of $p\text{-value} < 0.001$ (Table 17). This can explain that self-care attitude and self-care behaviors have the relationship in the same direction in which those with the positive self-care attitude tend to have the higher level of self-care behaviors.

4. Partial Androgen deficiency

According to result of correlation analysis, partial androgen deficiency had negative relationship with self-care behaviors of andropausal men at $r= - 0.234$ with statistic significance of $p\text{-value} < 0.001$ (Table 17). This can explain that partial androgen deficiency and self-care behaviors have the relationship in the revert direction in which those with the serious complication of partial androgen deficiency tend to have low level of self-care behavior.

5. Social suport

The result of correlation analysis described that social support had positive relationship with self-care behaviors of andropausal men at $r= 0.588$ with statistic significance of $p\text{-value} < 0.001$ (Table 17). This can explain that social support and self-care behaviors have the relationship in the same direction in which andropausal men with the high social support tend to have high level of self-care behavior.

Table 17 Correlation value between personal factors, self-care knowledge, self-care attitude, Partial Androgen deficiency and social support with self-care behaviors of andropausal men based on Pearson's Product Moment Correlation Coefficient.

Factors having relationship with self-care behaviors	Correlation (R)	p-value
Age	0.144**	<0.001
Marital status	0.048	0.361
Education	0.115*	<0.05
Family income	0.049	0.357
Self-care knowledge	0.053	0.32
Self-care attitude	0.241**	<0.001
Partial androgen deficiency	-0.234**	<0.001
Social support	0.588**	<0.001

* significant level of 0.05 ** significant level of 0.01

Part 4: Analysis of factors predicting self-care behavior of andropausal men

According to the study of factors predicting self-care behaviors andropausal men in term of age, marital status, education, income, self-care knowledge, self-care attitude, partial androgen deficiency, and social support based on statistical method of Stepwise Multiple Regression, five factors having positive relationship with self-care behaviors such as age, education, self-care attitude, partial androgen deficiency, and social support will be analyzed

Stepwise Multiple Regression is the method of selecting variables into the equation criteria by criteria. From step 1, the first variable to be selected is the one with the most positive relationship (considered by r-value.) between independent variable and depend variable and test statistic significance based on F and t value. In the step 2, variable with Significance $t \max \leq 0.05$ or those with the maximum value form those excluded variables considered from partial correlation will be selected into

the equation and test for the statistic significance as the same as step 1. Repeating the whole step until $\text{Sig } t_{\max} > 0.05$ for the appropriate equation (72)

In this study, the first three factors predicting self –care behaviors of andropausal men to be selected into the equation are social support followed by age and partial androgen deficiency.

The result of study conclude that factors related to self-care behaviors of andropausal men when considering with Beta value are social support of Beta = 0.588 with statistical significance (p-value <0.001), followed by age and Partial Androgen deficiency of Beta = 0.112 and –0.116 respectively with statistical significance (p-value <0.001) Table 18. These 3 factors will be used for predicting self-care behaviors of andropausal men with the result in percentage of 36.6%

Table 18 Stepwise Multiple Regression between predicting factors and self-care behaviors of andropausal men.

Step	Predicting factors	R ²	B	Std. Error	Beta	t	p – value
1	Social support	0.344	0.810	0.059	0.588	13.756	< 0.001
2.	Age	0.355	0.279	0.105	0.112	2.848	0.008
3.	Partial androgen deficiency	0.366	-0.185	0.069	-0.116	-2.683	0.008
B ₀ = 50.588 R = 0.609 , Sig. F = 0.000							

Table 19 Conclusion of tested hypothesis

Assumed Hypothesis	Confidential level (p-value)	Accept H1
1. Personal factors of age, marital status, education, income has the significant relationship with self-care behaviors of andropausal men		
1.1 Age	<0.001	Accept
1.2 Marital status	0.361	Reject
1.3 Education	<0.05	Accept
1.4 Income	0.357	Accept
2. Self-care knowledge has the significant relationship with self-care behaviors of andropausal men	0.32	Reject
3. Self-care attitude has the significant relationship with self-care behaviors of andropausal men	<0.001	Accept
4. Partial Androgen deficiency has the significant relationship with self-care behaviors of andropausal men	<0.001	Accept
5. Social support has the significant relationship with self-care behaviors of andropausal men	<0.001	Accept
6. Factors of age, marital status, education, income, self-care knowledge, self-care attitude, partial androgen deficiency and social support could predict self-care behaviors of andropausal men		
1.1 Age,	0.008	Included in prediction
1.2 Marital status	-	Excluded in prediction
1.3 Education	-	Excluded in prediction
1.4 Income	-	Excluded in prediction
1.5 Self-care knowledge	-	Excluded in prediction
1.6 Self-care attitude	-	Excluded in prediction
1.7 Partial androgen deficiency	0.008	Included in prediction
1.8 Social support	<0.001	Included in prediction

CHAPTER V

DISCUSSION

This discussion of survey result was divided into 2 sections as follows:

1. Discussion of research methodology
2. Discussion of research result

Section 1. The discussion of research methodology

1. Research design

The research design was a cross-sectional survey in nature and aimed at studying the factors related to self-care behaviors of andropausal men in non-commission policemen in Bangkok Metropolis. The research was designed to find out from cross-section of self-care behaviors of andropausal men by analyzing the actual information according to data collection process applied in this study. As a result, this research is valid and appropriate due to its ability in providing the answers supporting to research objectives of identify the prevalence of between influencing factors and self-care behaviors of andropausal men in non-commission policemen in Bangkok Metropolis. In addition, the result of this research is contemporary and applicable as guidelines for promotion of self care behaviors.

2. The subjects

The subjects in this study were 360 andropausal men aged between 40-59 years old in non-commission policemen in Bangkok Metropolis. The samples size of 360 andropausal men were based on multistage random sampling technique. As for and the sample selection, simple random selection would be applied in sorting the target police station and target population of andropausal men so that individual samples had an equal chance of selection. As a result, the selected sample might be representatives of the total population.

3. Research instrument

This research employed self-administrative questionnaires as research instruments for data collection. The questionnaires included with six different parts of general demographic characteristics of samples, self-care knowledge, self-care attitude, partial androgen deficiency, social support, and self-care behavior of andropausal men. All 6 parts of questioners were checked for their content validity by the thesis committees and 4 experts in the field and were tested for their reliability with 35 andropausal men in non-commission policemen in Bangkok Metropolis who were carrying the similar demographic and environmental characteristics to the target subjects mostly in which the validity and reliability of the questionnaire could achieve 0.70 confidential level. Therefore, the questionnaires would be regarded as qualified for being research instrument due to its ability in providing consistent measurement and valid content according to the objective of study. However, since the questions related to partial androgen deficiency of PADAM score were related to sexual problem, those 360 subjects could possible feel uncomfortable when answering the questions resulting unreliable information or answers.

4. Data Collection

The researchers had carried out data collection by the use of self-administer questionnaires. Since the researcher administered the questionnaires to the subjects directly, any unclear information, the subjects could ask for the further explanation immediately. The difficulties in conducting the data collection of this research could be because of the different working time for individual subjects, therefore, it is inevitable for researcher to visit the selected police station quite several times, which might disturb the working times of subjects in this study.

Because the research questionnaire included with six parts totally 120 questions to cover all aspects of research objectives, the subjects possibly feel reluctant in answering the questions due to long and too much questions.

5. Data Analysis

For data analysis, the researchers employed descriptive statistic of percentages, mean, and standard deviation, to describe general characteristics of subjects. Pearson's

Product Moment Correlation Coefficient had been applied to ascertain the relationship between independent and dependent variables and Stepwise Multiple Regression has been used to analyze if the variables such as age, education, self-care attitude, partial androgen deficiency are predictors for self-care behaviors of andropausal men. In this research, most variables were interval scale, just only the variables of education and **marital status** were nominal scale, therefore, the researcher would adjust the data by creating the dummy variables for the case of nominal scales. Therefore, the statistics used were appropriate for identifying relationship between variables because of their abilities to answer the purpose of study and to test research hypothesis.

Section 2. The discussion of research results

The research results were presented respectively according to the research objectives follows:

Objective 1: To describe the self-care behaviors of andropausal men in non-commission policemen in Bangkok Metropolis

According to the research finding, from totaling 360 subjects, 47.8 % had the low level of self-care behaviors, while 43.9 % had moderate self-care behaviors. When considering self-care behaviors in particular aspects, most andropausal men had the correct self-care behaviors in the low level in term of life protection and health promotion.

In term of the incorrect self-care behaviors, most andropausal men were lacking of the well understanding in consuming calcium in daily meal. Most of them understood that osteoporosis possibly happen to menopausal women only. Therefore, promotion of self-care knowledge related to appropriately consuming calcium in daily meal should be conducted. In term of exercising, only 20 % of andropausal men were working out regularly since most of them felt tired from hard work already and felt unnecessary to work out or exercise while others gave the reason of having no time for irregular exercising. Therefore, the promotion for the regular exercise of andropausal men should be conducted. This was agree with the study by Petchthong J. (17) finding that up to 48.2% of non-commission policemen had the low level of proper exercise.

Regarding time arrangement for relaxation to reduce stress in each day, the majority of subjects ignored the importance of relaxation but pay attention only in work resulting in the insufficient resting. As for sharing the self-care experience and knowledge with the people in their age, most andropausal men really shared the knowledge and experience with their friends since they believed that friends might not be able to provide the correct answers. Especially for questions related to sexual behaviors, andropausal men felt uncomfortable and embarrassed to share the sexual condition with friends. As a result, guidance manual of health promotion should be arranged and distributed to encourage andropausal men for proper sexuality. About drinking the beverage containing alcohol and caffeine, most andropausal men mentioned the reason for drinking liquor or alcohol in order to develop friendship and to associate with social networks; therefore, promotion of self-awareness to the disadvantage of drinking beverage containing alcohol and caffeine should be conducted. Related self-care behaviors of health condition, the self-care promotion should be conducted to encourage andropausal men to undergo prostate glands examination and have medical check-up at least once a year.

Objectives 2: To investigate the factors related to self-care behavior of andropausal men (non-commission policemen) in Bangkok Metropolis based on the Person's Product Moment Correlation Coefficient

Data analysis of this research employed the statistical techniques of Person's Product Moment Correlation Coefficient to ascertain the relationship between personal factors such as age, marital status, education, family income, self-care knowledge and attitude, partial androgen deficiency and social with self-care behaviors. Moreover, this research applied statistical techniques of Stepwise Multiple Regression to find out the influencing factors such as age, education, self-care attitude and partial androgen deficiency as predictor for self-care behaviors. The discussion of research result according to research hypothesis was as follows.

Hypothesis 1: Personal factors (age, education, marital status, family income) have positive relationships with self-care behavior of andropausal men (non-commission policemen) in Bangkok Metropolis.

1.1 Age

According to results from data analysis, Table 17 demonstrated that age had significantly positive relationship with self-care behaviors of andropausal men (non-commission policemen) in Bangkok Metropolis ($r = 0.114$, $p\text{-value} < 0.001$). As a result, **hypothesis1 was accepted.**

This could be explained that age is one of indication reflecting personal maturity, and abilities in managing environmental, mental, and cognitive condition to understand, perceive and make judgment for the life situation and self-care competence. This is in accordance with the study by Muhlenkamp (49) and Walker, et al. (50) describing that age had significant relationship with healthy lifestyle. This is also supported the study by Phorong C. (19) identifying that age had positively relationship with self-care behaviors. In addition, the study by Petchthong J. (17), Shainsemseng N.(52), Phanumartrussami V. and Kaewpan W. (54) showed that age had relationship with health promoting behaviors which was similar to study by Junhom K.(53) describing that age was the influencing factors predicting the non-smoking behaviors. However, this study was contrary from the study by Jareonsuk B. (51) which found that age had no relationship with health-promotion behaviors.

1.2 Marital status

Table 17 showed that there was no significantly statistical relationship between marital status with self-care behaviors of andropausal men (non-commission policemen) in Bangkok Metropolis ($r = 0.048$, $p\text{-value} = 0.361$). This indicated that the difference in marital status of andropausal men would not affect self-care behaviors. As a result, **hypothesis1 was rejected.**

This can be attributed that marital status is potential indication reflecting social support to each individuals in general aspects. Those with couple marital status were more likely to have higher perception towards social support than those with marital status of being single, widow, and separated. This is because the spouses were the

benefit source encouraging each individuals to have better self-care behaviors. However, according to the study, the majority of subjects (78.2%) were living together; as a result, the marital characteristics of the subjects were similar to one another. Moreover, although being singles, widow, separated, and divorced, those subjects were living with friends and relatives who help to take care and support them whenever needed.

This was related to the study by Shi (55) which found that marital status has no significant relationship with self-care behaviors and also the study from Pecththong J. (17), and Jareonsuk B. (51) which found that marital status has no significant relationship with self-care behaviors along with the study by Junhom K. (53) describing that marital status was not influencing factors predicating self-care behaviors. However, this was not corresponding with the study by Walker, et al. (50) investigating that marital status had significant relationship with self-care promotion related to proper nutritional dietary and Phorung C. (19) finding that marital status had relationship with the healthy lifestyle together with the study by Phanumartrussami V. and Kaewpan W. (54) finding out that andropausal men with different marital status would have different self-care behavior from one another.

1.3 Education

Table 17 presented analyzed data describing that education has significantly positive relationship with self-care behaviors of andropausal men (non-commission policemen) in Bangkok Metropolis ($r=0.115$, $p\text{-value} = 0.001$) Therefore, **hypothesis was accepted.**

Andropausal men with the higher education were more like to have proper self-care behaviors than those with lower education. Education was important for developing knowledge, skill and attitude towards self-care behaviors. As a result, people with the higher education would have the higher abilities in searching, questioning and understanding how to take-care themselves better than those with the lower education. Moreover, those with higher education were more capable of using the knowledge source for the best benefit to them, and they tend to receive the higher social support than those with the lower education. Besides, education was necessary in developing positive attitude resulting in the proper self-care behaviors. In addition,

since those with higher education tend to have higher income compared to those with lower education, this indicated the limitation for those with low education in affording convenience for the better self-care behaviors. This was agreed to the study by Muhlenkamp (49) and Walker, et al.(50) describing that education was related to healthy lifestyles and the study by Speak, et al. (56) which showed that education can modulate the perception towards health controls of senior peoples together with the study by Phorung C. (19) , Jareonsuk B.(51), Khapradee J. (58) which identified that education had the significant relationship with self-care behaviors. Also the study by Phanumartrussami V. and Kaewpan W. (54) mentioned that andropausal men with different educational level would have different health promoting behaviors.

In contrast, the study by Tohnai and Hata (57) described differently that different education level were not resulting in the different health behaviors and the study by Shaisemseng (52) found that education had no significantly relationship with self-care behaviors.

1.4 Family income

According to the result for study, Table 17 presented that family income was not significantly related to self-care behaviors of andropausal men (non-commission policemen) in Bangkok Metropolis($r = 0.049$, $p\text{-value} = 0.357$). Regardless of high or less family income, self-care behaviors of andropausal men would not be different. Therefore, **hypothesis 1 was rejected.**

This could be explained that family income is the factors indicating the social economy and the key components necessary for abilities of andropausal men in taking care themselves. In other words, those with the higher income and social classes usually had the more opportunities in associating with the different classes of networks enable them to develop and enhance their knowledge and experience. Moreover those with higher income had abilities in affording the life conveniences in term of proper dietary and material to maintain and enhance proper self-care behaviors. However, according to the result of study, it was found that although the majority of subjects had less salary amount, the received incomes were sufficient for household expense. This could be because most of subjects were living in governmental service houses and received the medical benefit from government providing the convenience for

andropausal men to receive the same information and material necessary for proper self-care as those with high income. Moreover, self-care behaviors were the activities in which andropausal men could conduct by themselves without spending the money for the service. This was relevant to the study by Junhom k.(53) finding out that family income were not the influencing factors predicting self-care behaviors ; however, this study was contrary with the findings by Walker, et. al (50), Phorung C. (19) which found that family income had significant relationship with self-care behaviors. Also, the study by Pranmartrussami V. and Kaewpan W.(54) show that different family income could result in different health promoting behaviors .

Hypothesis 2: Self-care knowledge factors have positive relationships with self-care behavior of andropausal men (non-commission policemen) in Bangkok Metropolis.

According to the result for study, Table 16 presented that self-care knowledge was significantly related to self-care behavior of andropausal men (non-commission policemen) in Bangkok Metropolis ($r = 0.053$, $p\text{-value} = 0.32$). This explain that regardless of having high or low self-care knowledge, andropausal men would have the same self-care behaviors. Therefore, **hypothesis 2 was rejected**.

This could be attributed that knowledge was the prominent factors affecting self-care behaviors; however, knowledge supplement alone could not result in the effective self-care behavior although knowledge had the significant relationship with behaviors and was necessary for behaviors development. The result of this study revealed that the majority of subjects (43.1%1) had the low scores of self-care knowledge. This can be because these subjects might receive the self-care information from the public relational campaign of health promotion of Ministry of Public Health thru the various media such as television, radio, and journal. It is possible that andropausal men had applied the received knowledge in the inappropriate way together with the responsible officers with the proper self-care knowledge still showed improper self-care knowledge such as smoking and drinking alcohol and caffeine beverage. This was concurred with the study by Nasslund. (59) explaining that self-care knowledge had significant relationship with health behaviors and the study by

Junhom K. (53) on finding out that knowledge of health promotion were not able to predict self-care behaviors. However, with the study by Hunkittikul S.(60) describing that health promotion knowledge had the significant relationship with and able to predict health promotion behaviors together with Theeraphongnaphalai P. (61) , Chinjoho K. (62) and Mali N. (63) finding that health promotional knowledge had significant relationship with health promotion behaviors.

Hypothesis 3: Self- care attitude factors have positive relationships with self-care behavior of andropausal men (non-commission policemen) in Bangkok Metropolis.

Table 17 presented the finding of the study that self-care attitude had significantly positive relationship with self-care behavior of andropausal men (non-commission policemen) in Bangkok Metropolis ($r=0.241$, $p\text{-value} = 0.001$). This explained that self-care attitude had the direct relationship with self-care behaviors. That is andropausal men with positive self-care attitude were more likely to have proper self-care behaviors at the high level. Therefore, **hypothesis was accepted**.

The explanation was that attitude was the personal belief, and feeling towards various things for example material, persons, action, situation, and others including with mental expression to certain subjects. Attitude is one of the factors creating the action, and the condition of readiness in responding and showing the responsive direction to such stimulus. Therefore, those with the positive attitude towards self-care behaviors were more likely to have proper self-care behaviors. This was corresponding with the study by Tohnai and Hata (57) finding that health belief could predict self-care behaviors at 33% confidential level. Also, the study by Petchthong J., Theeraphongnaphalai P. (61) and Mali N. (67) described that attitude toward health promotion had the significant relationship with health promotion behaviors. Furthermore, Junhom K. (53) study showed that attitude towards the non-smoking behaviors and towards annual physical check were the influencing factors predicting the non-smoking behaviors and behavior of having annual physical check.

Hypothesis 4: Partial Androgen Deficiency in Aging Male (PADAM) have negative relationships with self-care behavior of andropausal men (non-commission policemen) in Bangkok Metropolis.

According to the result for study, Table 17 demonstrated that Partial Androgen Deficiency in Aging Male had significantly negative association with self-care behavior of andropausal men (non-commission policemen) in Bangkok Metropolis. ($r = -0.234$, $p\text{-value} < 0.001$). Partial Androgen Deficiency in Aging Male had revert relationship with self-care behaviors indicating that andropausal men with the serious complication of Partial Androgen Deficiency in Aging Male tend to have the low level of self-care behaviors. Therefore, **hypothesis was accepted.**

Further explanation was that Partial Androgen Deficiency in Aging Male was indicator reflecting health condition and personal abilities of self-care management. Complication of serious Partial Androgen Deficiency in Aging Male could affect health condition and lower abilities in managing self-care activities. This can be described that when androgen level in body began to decrease, this will lead to the physical unbalancing functions of physical system and result in the condition of partial androgen deficiency in which the seriousness of implication was varied from person to person. Serious condition of partial androgen deficiency could affect the health condition and caused andropausal men feeling sick leading to lower abilities in self-care management.

This supports the study of Sidney and Shephards 1976 (64) describing that the patient reported to have serious sickness in the past were unlikely to participate with the exercising program than those reported with low sickness. This was compliant with the study by Khapradee J. (58) finding that the seriousness of symptom of dysuria had significant relationship with health promotion behaviors of andropausal men with complication of benign prostatic hypertrophy. This support the study of Taweechai V. (65) finding that self-care behaviors of andropausal men suffering form osteoarthritis had significantly negative relationship with the seriousness of osteoarthritis in high level.

Hypothesis 5: Social support have positive relationships with self-care behavior of andropausal men (non-commission policemen) in Bangkok Metropolis.

Referring to the finding shown in Table 17, social support had significant positive relationship with self-care behavior of andropausal men (non-commission policemen) in Bangkok Metropolis ($r = 0.588$, $p\text{-value} < 0.001$). Therefore, **hypothesis 5 was accepted**. In other words, andropausal men with high social support were more likely to have the proper self-care behaviors than those with the lower social support. It can be elaborated that social support was the factor of social attitude related to behaviors and health condition of human physically and mentally. It was the necessary factors influencing personal self-care behaviors enable each person to maintain health promotion behaviors along with to motivate that person to change for a more appropriate self-care behaviors. Since andropause was the stage with physical and mental changes, if andropausal men had received sufficient social support in term of emotional, esteem, tangible and information support from close personas such as wives, children, relatives, and friends along with medical officers, this would encourage them to have self-value and self-respects to their abilities and their advantage to their family and society. With the care, understanding, acceptance and mental security from their relatives and close persons could make them feel that they were still beloved person. Moreover, with the information support related to health condition such as the physical changes during andropause, the proper self-care behaviors to prevent the disease implication along with tangible support, andropausal men feel encouraged to have proper self-care behaviors and also feel motivated to change for a more appropriate self-care behaviors. This finding was correlated with the study by Tohnai and Hata (57) which found that information support for the health knowledge through various media could predict self-care behaviors at 33 % confidential level and also corresponding with the study from Muhlenkamp (49) finding that social support had significant relationship with health promotion lifestyles together with the study by Hunkittikul S. (60) and Petchthong J.(17) finding that supporting suggestion from close persons had significant relationship with self-care promotion behaviors. This also supported the study by Theeraphongnaphalai P. (61),

Shaisemseng N. (52) and Mali N. (63) finding that information support had significant relationship with health-promotion behavior

Hypothesis 6: Personal factors, Self-care knowledge, Self- care attitude, Partial Androgen Deficiency in Aging Male and Social support are predictors self-care behavior of andropausal men (non-commission policemen) in Bangkok Metropolis.

According to the research result, Table 18 illustrated three influencing factors predicting self-care behaviors of andropausal men that are age, partial androgen deficiency and social support in which these three factors had been used for predicting self-care behaviors, it accounted for 36.6 %of variance. Moreover, the result showed that social support were the first variable selected into the equation (Beta =0.588), the followed variables were age and partial androgen deficiency (Beta = 0.112 and -0.116 respectively).

CHAPTER VI

CONCLUSIONS AND RECOMMENDATIONS

This cross – sectional survey aims at studying self-care behaviors of andropausal men in non-commission policemen in Bangkok Metropolis and to investigate the influencing factors and factors related to self-care behaviors. The subjects in this study were 360 andropausal men aged between 40-59 years old in non-commission policemen in Bangkok Metropolis in which those 360 subjects were selected by the use of multistage random sampling technique. Data were collected by interview questionnaires on November 10th to December 26th 2003. The research instruments were self-administrative questionnaires concerning with demographic characteristics, self-care knowledge, self-care attitude, partial androgen deficiency, social support and self-care behaviors of andropausal men. The statistical technique used in this study was descriptive statistic of percentages, mean, and standard deviation, Pearson's Product Moment Correlation Coefficient, and Stepwise Multiple Regression. Finally, the conclusion had presented according to research objectives and hypothesis as follows:

1. Self-care behaviors of andropausal men in non-commission policemen in Bangkok Metropolis

According to the research finding, from a total of 360 subjects, 47.8 % had the low level of self-care behaviors. While 43.9 % had the moderate self-care behaviors in which most of them had the correct self-care behaviors in term of life protection and health promotion at the lowest level.

2. Personal characteristics-age, marital status, education and income.

According to the result of study, the age range of andropausal men were close to one another between 40-44, 45-49, 50-54 and 55-59 years old. Most of them had couple marital status in which 78.2 % were married and still lived together. 70.6 % of subjects completed their secondary schools, and 44.2 % of the subjects had at least 3-4 persons to take care. The majority of subjects received family income less than 20,000

bahts per month in which about 50 % revealed that their income were sufficient for household expense but not for saving. Regarding general health condition, 78.1% confirmed that they were in a healthy stage and 69.4 % of them lived in governmental service house. Related to the career position, it was found that 71.4 % were commission officers and 45.3 % were responsible for administrative tasks.

3. Self-care knowledge

The result of this study revealed that the majority of subjects (43.1%) had the low scores of self-care knowledge, followed by 40.0% had self-care knowledge in moderate level.

4. Self-care attitude

The result of this study revealed that the majority of subjects (51.4.%) had the positive self-care attitude in the high level, followed by 35.3 % had self-care attitude in moderate level.

5. Partial androgen deficiency

According to the result of study, only 11.7% of andropausal men had the complication of partial androgen deficiency, while 88.3 had not. When considering the health condition in each aspect, it was found that up to 74.7 % had the physical problem of neuronal and vasomotor system mostly followed by 62.2 % having mental problem and only 12.2% had sexual problem.

6. Social support

According to the result of study, 57.2% had received social support in the low level, followed by 35.3% receiving the social support in the moderate level and only 7.5% received social support in the high level.

7. The results of data analysis for factors related to self-care behaviors of andropausal men in non-commission policemen in Bangkok Metropolis

According to the result of data analysis to ascertain the relationship between personal factors such as age, marital status, education, family income, self-care knowledge and attitude, partial androgen deficiency and social with self-care behaviors, it can be concluded that age, education, self-care attitude, partial androgen deficiency and social support were the factor related to self-care behaviors of andropausal men.

The factors without the relationship with self-care behaviors of andropausal men were marital status, family income, and self-care knowledge .

8. The results of data analysis for influencing factors predicting self-care behaviors of andropausal men in non-commission policemen in Bangkok Metropolis.

According to the research result, three influencing factors predicting self-care behaviors of andropausal men were age, partial androgen deficiency and social support. These three factors had been used for predicting self-care behaviors at 36.6 % confidential leveling which social support was the factors with the most significant relationship with self-care behaviors and were the first variable selected into the equation (Beta =0.588), the followed variables were age and partial androgen deficiency (Beta = 0.112 and -0.116 respectively).

Recommendation for further application

According to the result of this study, factors related to self-care behaviors of andropausal men were age, self-care attitude, partial androgen deficiency and social support. However, influencing factors predicting self-care behaviors were social support, age, and partial androgen deficiency.

Based on the result of study, the recommendation and suggestion of researchers can be summarized as follows:

1. The proper social support especially information support related to health care could encourage andropausal men to have proper self-care behaviors. According to the result of study, the close persons provided insufficient information support to andropausal men and were not able to help them when those andropausal men had the health problem. Regarding network support, it was found that andropausal men rarely participate in activities of community. As a result, the activities encouraging andropausal men to have proper self-care behaviors should be conducted.

- 1.1 Public health sectors or private sectors concerned in the public health should establish the effective public relation providing the necessary information related to health condition and self-care management to andropausal men by using the various media such as television, radio, newspaper, magazine so that andropausal men and others could received the more information related to andropausal men especially the

information related to cardiovascular, high cholesterol in blood coronary in which it can be prevented by reducing the intake of fat or lipid from dietary. This includes the knowledge related to the factors increasing osteoporosis such as drinking beverage containing caffeine, lacking of exercising, lacking of calcium and also the information related to the significance of annual physical examination and undergoing prostate gland examination together with sexual problem.

1.2 Public health section or private section concerned in the public health should establish and arrange the guidance and health manual for andropausal men in publication.

1.3 Public health sectors or private sectors concerned in the public health should establish the service unit to provide on-line guidance regarding health condition and health problem to andropausal men.

1.4 Public health sectors or hospital should establish clinic for andropausal men or arrange the andropausal men club in order to provide the opportunities in sharing the idea, knowledge related to health problem and even helping each other for recreation activities which could benefit their health condition and benefit to society as well.

1.5 Close persons such as friends, wives, and children including public health offices should coordinate and pay attention to health condition of andropausal men by providing the information and necessary guidance to them for proper self-care behaviors.

2. From the research finding, it was found that age has significantly positive relationship with self-care behaviors. The andropausal men with the older age tend to have the higher self-care behaviors than those younger. Therefore, andropausal men should be encouraged to have self-care behaviors since the early stage of andropause.

3. According to the result of study, andropausal men with the serious complication of partial androgen deficiency tend to have the lower self-care behaviors than those with lower complication of partial androgen deficiency. This result could be used as a guidance in clinic for categorizing andropausal men according to seriousness of complication of partial androgen deficiency in which the special guidance should be provided for those with serious complication of partial androgen deficiency for the better self-care behaviors.

4. Self-care attitude were the factors related to self-care behaviors. Therefore Public health section or other responsible parties should establish the activities for promoting and motivating the self-care attitude to andropausal men. The recommended activities can be the campaign of having high calcium food consumption, campaign of having prostate gland examination and medical check annually and campaign of having regular exercise.

Recommendation for further study

1. For the further study, blood test for androgen level should be conducted. This will help diagnose those subjects with the complication of partial androgen deficiency more accurately. Regarding the questions related to sexual condition, the separate envelop should be prepared so that when the respondents complete all questioners, they would feel confident that there answers related to sexual condition will be treated confidentially.

2. Since the questionnaire included with 6 parts totally 120 questions, it is possible that all respondents feel fed up with long questions causing inaccuracy of the results. Therefore, for further study, it is recommended that researches questions should be more selective to limit the numbers of variables and sort out irrelevant variables from the study.

3. Comparative research related to health education for proper educational pattern such as well-planned education, guiding education and mutual education should be conducted to encourage andropausal men to have a proper self-care behaviors.

4. Study self-care behaviors of andropausal men in other occupation.

5. Study related of other factors such as body mass index, health status perception, and factors of health service system.

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Documentary Proof of Ethical Clearance

The Committee on Human Rights Related to

Human Experimentation

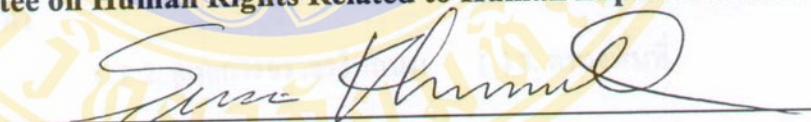
Mahidol University, Bangkok

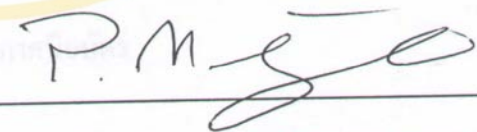
.....
Title of Project: **Factors Associated with Self-Care Behavior of Andropausal Men: A Case Study of Non-Commission Police Officers in Bangkok**

Principal Investigator: **Miss. Suporn Laoswat**

Name of Institution: **Faculty of Public Health**

Approved by the Committee on Human Rights Related to Human Experimentation

Signature of Chairman: 
(Professor Dr. Srisin Khusmith)

Signature of Head of Institute: 
(Professor Dr. Pornchai Matangkasombut)

Date of Approval: 6 NOV 2003

แบบสอบถามการวิจัย

เรื่องปัจจัยที่มีความสัมพันธ์กับพฤติกรรมการดูแลสุขภาพของชายวัยทอง:กรณีศึกษาในข้าราชการ
ตำรวจชั้นประทวนเขตกรุงเทพมหานคร

ส่วนที่ 1 แบบสอบถามข้อมูลทั่วไปของชายวัยทอง

คำชี้แจง โปรดทำเครื่องหมาย ✓ ลงหน้าข้อความ หรือเติมข้อความตามความเป็นจริงของท่าน
ในช่องว่างต่อไปนี้

1. อายุ.....ปี (นับจำนวนเต็มปีจนถึงปัจจุบัน)
2. สถานภาพสมรส
() 1. โสด () 2. แต่งงานแล้วอยู่ด้วยกัน () 3. แต่งงานแล้วแยกกันอยู่
() 4. หม้าย () 5. หย่า
3. จำนวนบุตรที่มีชีวิต.....คน
4. จำนวนสมาชิกในครอบครัวที่ท่านรับภาระดูแล.....คน
5. ยศของท่าน
() 1. นายสิบ () 2. จ่า () 3. นายดาบ
6. ลักษณะงานหลักที่ท่านทำ
() 1. อยู่ในสำนักงาน () 2. ดูแลการจราจรในถนน () 3. ตรวจพื้นที่
() 4. อื่นๆ ระบุ.....
7. ระดับการศึกษา
() 1. มัธยมศึกษา () 2. อนุปริญญา/ประกาศนียบัตร
() 3. ปริญญาตรีขึ้นไป
8. รายได้ของครอบครัวเฉลี่ยต่อเดือน (รายได้จากเงินเดือนประจำและรายได้พิเศษของท่าน
และภรรยารวมกัน) บาท
9. รายได้ของครอบครัวเพียงพอใช้จ่ายหรือไม่
() 1. เพียงพอใช้จ่าย มีเหลือเก็บ () 2. เพียงพอใช้จ่าย ไม่มีเหลือเก็บ
() 3. ไม่เพียงพอใช้จ่าย และมีหนี้สิน

ฯลฯ

ส่วนที่2 แบบสอบถามความรู้เกี่ยวกับการดูแลสุขภาพตนเอง

คำชี้แจง โปรดอ่านข้อความด้านซ้ายมือ แล้วพิจารณาใส่เครื่องหมาย ✓ ลงในช่องท้ายข้อความที่ท่านเห็นว่าถูกต้องที่สุด ในแต่ละข้อ เพียงคำตอบเดียว

ข้อความ	ใช่	ไม่ใช่	ไม่ทราบ
1. อาหารทะเล ประเภทหอย ปลาหมึก เป็นอาหารที่ให้พลังงานสูง จำเป็นต่อชายวัยทอง			
2.อาการของโรคความดันโลหิตสูงเป็นเรื่องของกรรมพันธุ์ ไม่เกี่ยวกับการรับประทานอาหาร			
3. ชายวัยทองควรหลีกเลี่ยงอาหารที่มีแคลเซียม เพราะจะทำให้เกิดนิ่วในไตได้			
4. การรับประทานอาหารจำพวกคาร์โบไฮเดรตและไขมันช่วยให้การขับถ่ายดีขึ้นและป้องกันปัญหาท้องผูกได้			
ฯลฯ			

ส่วนที่3 แบบสอบถามเจตคติต่อการดูแลสุขภาพตนเอง

คำชี้แจง โปรดอ่านข้อความด้านซ้ายมือ แล้วทำเครื่องหมาย ✓ ลงในช่องท้ายข้อความที่ตรงกับความคิดเห็นของท่านมากที่สุด เพียงคำตอบเดียว

ข้อความ	เห็นด้วยมากที่สุด	เห็นด้วยมาก	เห็นด้วยปานกลาง	เห็นด้วยน้อย	เห็นด้วยน้อยที่สุด
1. ท่านคิดว่าการรับประทานอาหารที่มีไขมันสูงทำให้เกิดโรคหัวใจและหลอดเลือดอุดตันได้					
2.ท่านคิดว่าการรับประทานอาหารที่มีรสเค็มจัดหรือ หวานจัดเสี่ยงต่อการเกิดโรคได้					
3.ท่านคิดว่าในช่วงวัยนี้ท่านควรรับประทานอาหารที่ให้แคลเซียมสูง เช่นปลากรอบ กุ้งแห้ง นม เพื่อให้กระดูกแข็งแรง					
4. ท่านคิดว่าการรับประทานผักและผลไม้ทุกวันจะทำให้ท้องไม่ผูก					
ฯลฯ					

ส่วนที่4 แบบสอบถามอาการภาวะฮอร์โมนเพศชายบกพร่อง

คำชี้แจง โปรดอ่านข้อความด้านซ้ายมือ แล้วทำเครื่องหมาย ✓ ลงในช่องท้ายข้อความ ที่ตรงกับอาการที่เกิดขึ้นมากที่สุด เพียงคำตอบเดียว โดยมีข้อความให้เลือกตอบดังนี้

เป็นประจำ หมายถึง ท่านมีอาการเกิดขึ้นสม่ำเสมอเกือบทุกวัน (โดยเฉลี่ย 4-7 วันต่อ สัปดาห์)

บ่อยครั้ง หมายถึง ท่านมีอาการเกิดขึ้นบ่อยแต่ไม่ทุกวัน(โดยเฉลี่ย 2-3 วันต่อ สัปดาห์)

นานๆครั้ง หมายถึง ท่านมีอาการเกิดขึ้น นาน ๆ ครั้ง (โดยเฉลี่ยน้อยกว่า หรือเท่ากับ1 ครั้งต่อ สัปดาห์ หรืออย่างน้อยเดือนละครั้ง)

ไม่เคย หมายถึง ท่านไม่มีอาการดังกล่าวเกิดขึ้นเลย

อาการที่เกิดขึ้น	เป็นประจำ 4-7 วัน/ สัปดาห์	บ่อยครั้ง 2- 3วัน/ สัปดาห์	นานๆครั้ง 1 วัน/ สัปดาห์	ไม่เคย
อาการทางร่างกาย				
1. ไม่มีเรี่ยวแรง				
2 นอนไม่ค่อยหลับ หรือตื่นกลางดึกแล้วหลับยาก				
3. เบื่ออาหาร				
4. ปวดเมื่อยตามกระดูกและข้อ				
ฯลฯ				

ส่วนที่ 5 แบบสอบถามการได้รับแรงสนับสนุนทางสังคม

คำชี้แจง โปรดอ่านข้อความด้านซ้ายมือ แล้วทำเครื่องหมาย ✓ ลงในช่องท้ายข้อความ ที่ตรงกับความรู้สึกของท่านมากที่สุด เพียงคำตอบเดียว

ความรู้สึกของท่านในเรื่องต่อไปนี้	จริงมาก ที่สุด	จริงมาก	จริง ปานกลาง	จริง น้อย	จริงน้อย ที่สุด
1.เมื่อท่านมีเรื่องไม่สบายใจ ไม่มีผู้ใดสนใจรับฟัง ปัญหาและความรู้สึกของท่าน					
2. เมื่อท่านมีปัญหา ท่านมีผู้แสดงความรัก ความห่วงใย ดูแลให้กำลังใจแก่ท่านเสมอ					
3. เมื่อท่านทำสิ่งต่างๆได้สำเร็จ ไม่มีผู้ใดให้กำลังใจ หรือยกย่องชมเชยท่าน					
4. ท่านมีบุคคลที่ทำให้ท่านรู้สึกมั่นคงปลอดภัย					
ฯลฯ					

ส่วนที่ 6 แบบสอบถามพฤติกรรมการดูแลตนเองของชายวัยทอง

คำชี้แจง โปรดอ่านข้อความด้านซ้ายมือ แล้วทำเครื่องหมาย ✓ ลงในช่องท้ายข้อความ ที่ตรงกับความเป็นจริงมากที่สุด เพียงคำตอบเดียว โดยมีข้อความให้เลือกตอบดังนี้

ปฏิบัติประจำ หมายถึง ท่านปฏิบัติกิจกรรมในเรื่องนั้น ๆ เป็นประจำสม่ำเสมอทุกวัน (โดยเฉลี่ย 5-7 วัน ต่อ สัปดาห์ หรือทุกครั้งที่มีเหตุการณ์เกิดขึ้น)

ปฏิบัติบ่อยครั้ง หมายถึง ท่านปฏิบัติกิจกรรมในเรื่องนั้น ๆ บ่อยครั้งหรือเกือบทุกวัน (โดยเฉลี่ย 3-4 วัน ต่อ สัปดาห์)

ปฏิบัติบางครั้ง หมายถึง ท่านปฏิบัติกิจกรรมในเรื่องนั้น ๆ เป็นบางครั้งหรือบางวันเท่านั้น (โดยเฉลี่ย 1-2 วัน ต่อ สัปดาห์)

ไม่เคยปฏิบัติ หมายถึง ท่านไม่เคยปฏิบัติกิจกรรมในเรื่องนั้น ๆ

กิจกรรม	ประจำ 5-7 วัน/ สัปดาห์	บ่อยครั้ง 3-4 วัน/ สัปดาห์	บางครั้ง 1-2 วัน/ สัปดาห์	ไม่เคย
การดูแลตนเองที่จำเป็นโดยทั่วไป				
1. ด้านการได้รับอากาศ,น้ำ ,อาหาร				
1. ท่านอยู่ในบ้านและห้องนอน ที่มีอากาศถ่ายเทได้สะดวก				
2. ท่านหลีกเลี่ยงไม่อยู่ในสถานที่แออัด หรือมีอากาศเสีย เช่น บริเวณที่มีควันของท่อไอเสีย หรือฝุ่นละออง				
3. ท่านดื่มน้ำสะอาดอย่างน้อยวันละ 6-8 แก้ว				
4.ท่านรับประทานอาหารได้ครบทุกประเภทในแต่ละวัน ได้แก่ เนื้อสัตว์ (หรือ เต้าหู้ ถั่วเหลือง) ข้าว น้ำมัน ผัก และผลไม้				
ฯลฯ				

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