

SELF-PREVENT BEHAVIORS IN OSTEOPOROSIS OF ELDERLY AT AMPHAWA DISTRICT, SAMUT SONGKHRAM PROVINCE

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ABSTRACT

The purposes of this study was aimed to study on self-care behaviors and relating factors of osteoporosis in elders at Amphawa district, Samut Songkhram province, which was conducted data collection during January to February 2018. Four hundred of elders were included in this study by selective sampling and data collection was done by questionnaire interviewing. The data analysis was used descriptive statistics including frequency, percent and average; and Chi-square test. The results were found that common illness in elder group was hypertension (N =147, 36.8%); history of osteoporosis screening on last one year in elders was very low (N = 64, 16%); and the number of osteoporosis was 50 (12.5%) and represented in male and female elders were 13 (3.25%) and 37 (9.25%), respectively. The significant relation of osteoporosis and health behaviors ($p<0.05$) were including alcoholic consumption, insufficient of physical activity and prolong home staying with sluggish movement.

Our finding was suggested that relating government who responsible, such as, provincial public health office, provincial social security office and provincial office for local administration should be educate appropriate self-care behaviors for health promoting and osteoporosis prevention in local elder group, which can be understanding of causes, prevention and treatment for osteoporosis due to bone calcium is reduce increment by age and able to adjust behaviors among them. The holistic (physiologic and metal) self-care was necessary for longevity of life.

Key words — Self-prevent behaviors, Osteoporosis, Elderly

INTRODUCTION

The TWELFTH NATIONAL ECONOMIC AND SOCIAL DEVELOPMENT PLAN (2017-2021), which focuses on promoting health risk reduction and all aspects of health by developing people with knowledge in health care to have a good health consciousness. And got self-screening behaviors through a variety of learning channels. (The Government Gazette, 2560: 78). In line with the National Health Development plan during the 11th National Economic and Social Development Plan 2012-2016. Strategy focuses on health promotion, disease prevention, and disease control and consumer health protection. Thai people are strong physically, mentally, socially and intellectually. They develop and promote the practice of health behavior for the people. Establish social measures to control critical health risk behaviors and promote exercise and good mental health. (Ministry of Public Health, 2016)

Osteoporosis is a condition in which the bone mass is low and the bone structure changes at the micro level, leading to bone loss. The bones were found to be less common in patients with osteoporosis including: spinal (vertebral bodies), distal radius and proximal femur, the bone is divided into two kinds. Primary osteoporosis is the increase in postmenopausal women with decreased levels of estrogen in the blood and secondary osteoporosis, which is caused by a number of factors. Some diseases occur on the body. The use of certain drugs such as corticosteroids, etc. (Natthawutsibmoo, 2009: 505) When the bone mass or density decreases including lower bone quality. The composition ratio unchanged the bone strength decreased and the risk of fracture increased (wasuwatkitisomprayoon, 2005: 2). The conditions of Osteoporosis occur in females than males. The incidence in the 50-year-old woman was as high as 40%, while the incidence in the same males was only 13%. However, high levels of estrogen in the reproductive age did not help. Prevent the occurrence of coronary heart disease is the prevention of osteoporosis as well because of the estrogen hormone levels. A decrease in menopause will result in decreased bone density that may cause osteoporosis and fractures, which can lead to pain or sometimes death. (Jomjaisajjareewat and TheraRitrod, 2543: 4) Osteoporosis is a major public health problem, both in terms of personnel and budgets used to care for patients with the disease. Osteoporosis is a silent disease, that is, osteoporosis patients with osteoporosis will see the doctor. The disease can be prevented and treated. It is a disease without any warning signs. Asymptomatic patients are therefore not diagnosed and treated in the early stages of the disease. Until fractures (CharoenchaiParkpianpirote, PrasertLiwphonwanich and pariyuthjianpattankom, 2558: 11)

The primary mechanism of osteoporosis is the imbalance between bone and bone cells. By having strong bones, the balance between these two cells must always be balanced. Loss of balance may be due to aging, the cells deteriorate, as well as cells that make bone. Thus, the bone is reduced, but the cells responsible for bone destruction continues to operate normally or due to lack of testosterone, a hormone that helps the cells that build bone. Osteoporosis is more common in women, especially in menopause, or because of the nutrients it contains to build bone mass and stimulate bone growth. The important food of bone formation is protein, calcium and vitamin D. The elderly often lack these nutrients or lack of exercise to stimulate the function of the bone cells and reduce the function of the bone destruction. Thus resulting in increased bone destruction. Births from a family history of osteoporosis can cause high levels of osteoporosis, or may be related to hormonal abnormalities such as overactive thyroid gland or benign tumors etc. (Sukanya Kanonpanwanich, 2559: 55)

Elderly mean persons over the age of sixty and above and must receive medical services. The public health is provided by the convenience and speed of the special case. It should also include research, data, research and development on protected work. Promote status Role and Activities of the Elderly (The Elderly Act, 2013, 2015) Yuri et al. (Yuriek and others, 1980: 31). According to the National Institute of Elderly in the United States, there are two groups, aged 60-74, and elderly aged 75 years and over. The Department of Non-Formal Education (1998: 37-38) presents changes in the age of the elderly in the circulatory system, blood vessels, and other tissues. The heart pumps blood is not healthy as it was. The amount pumped down Blood clotting and blood pressure rise. Resulting in reduced blood supply to the organ and has found that physical inactivity. General exercise stimulates the bone remodeling cycle, resulting in increased bone mass. However, if exercise is too high in childhood and adolescence, the peak bone mass is low. In premature menopausal women, it stimulates bone turnover and reduces intestinal calcium absorption or smoking and alcohol consumption, resulting in greater bone resorption and osteoporosis. (Somchay Pattanankoon, 2549: 94) There are studies that found that breast cancer survivors had moderate knowledge of osteoporosis, 49.2% had osteoporosis behavior, 32.3% had moderate risk for osteoporosis (Supap Areea and Montalimthongkul, 2551: 209-224) In males, fractures occur more severely and the mortality rate is higher than that of females. After a 2-year-old male hip fractures have a death rate of 22 percent female, 11 percent are being treated for a long time and continuing on with broken bones. This wasteful spending dramatically, it is a financial burden for both themselves and their families. So knowing how to prevent osteoporosis more. Preventing fractures as well as to avoid the risk factors of osteoporosis is what gives life to be happy. (Patcharin Chanapah, 2554: 283-294) Exercise to increase muscle strength. Increase the density of the bones of the body. Reduce the risk of falls, fractures. The exercise with the diet is essential in individuals with osteoporosis. (Supaporn Silalertdetkul, 2554: 27-38) The results of the study showed that the experimental group receiving the health education program had an average score on knowledge about osteoporosis. Health education believes on self-efficacy in the prevention of osteoporosis and osteoporosis prevention behaviors among higher education programs. (Niwat Wonglee, Kannikar Reungdet and boonsit Chaichana, 2558: 88-100) A cross-sectional study was carried out in Samut Songkhram, Thailand, and 105 elders were joined. Materials and Methods: Bone mineral density (BMD) was measured by calcaneal quantitative ultrasound. BTMs (osteocalcin [OC], Procollagen type 1 N-terminal pro-peptide, Beta-crossLaps [CTX], and alkaline phosphatase [ALP]); bone-related biochemical markers (25-hydroxyvitamin D [25-(OH)D], calcium, phosphorus, and magnesium); lipid profile (cholesterol, triglyceride, high density lipoprotein-cholesterol, and low density lipoprotein); and high sensitive C-reactive protein (hs-CRP) were analyzed using automatic analyzers. Blood pressure measurement was done after resting. Statistical Analysis Used: Descriptive data were represented as a mean \pm standard deviation. One-way ANOVA was compared parameters within three elders groups. Pearson's correlation was tested for the relations of BMD with other parameters. Odds ratio was calculated for risk of prehypertension. Results: BMD was significantly correlated to calcium, phosphorus, and triglyceride in high, low, and very low levels, respectively. Inversely correlations of BMD with CTX and hs-CRP were significant in medium level. Risk of prehypertension was increased 1.12-fold with a decrement of T-score < -1.0 . Increment of CTX, hs-CRP, and LDL-C was increased 1.93, 1.94, and 1.31-fold of prehypertension risks, respectively. Conclusions: Prehypertension was associated with osteoporosis, which indicated by inversely correlation of hs-CRP and CTX to BMD; and correlation of serum calcium, phosphorus, and triglyceride to BMD. (Yuttana Sudjaroen and Pimporn Thongmuang, 2018: 277-283)

The study on self-protection behavior in osteoporosis of elderly at Ampawa District farmers, Samut Songkram, was consistent with Rosenstock (1974), who described the health beliefs that individuals exhibit one's health behavior. Avoiding the disease must be believed to be at risk for disease. And the disease will have severe violence to life. Practice to avoid the disease will be beneficial to them because they want to be healthy by buying drugs to eat or take care of themselves to relieve the illness that occurs. The idea, as this is consistent with social learning theory (Social

Learning Theory) of Albert Bandura (1977) Local Health Service Project at Suanluang District, Samut Songkhram Province In the past year, as a result of the medical services provided to Samut Songkhram farmers, there were severe pain and pain of a number of farmers to ask for medication to relieve the pain. Thus, from the foregoing, it is evident that osteoporosis was causing health problems to the general public. It also has a long-term impact and may be related to many diseases, and a study on the behavior of pesticide use by farmers in Samut Songkhram province. There are side effects including allergic reactions in the respiratory and skin and some side effects on the brain and muscles. (Pimpon Thongmuang and Yuthana Sudjaroen, 2558) There is no study on self-protection behavior in osteoporosis among elderly farmers in Amphawa Interesting point is Amphawa, Samut Songkhram province, located in the area used for agriculture in factory. The use of chemical pesticides, including agriculture by using force, including a lack of knowledge about the supplements to prevent disease. Therefore, the incidence of osteoporosis among the elderly in amphawa district, which is treated in the wrong prevention of disease, such behavior may cause problems Therefore, the research team found that it is necessary to study the self-protection behavior in osteoporosis of the elderly in Amphoe Amphawa, Samut Songkhram province in order to know the self-protection behavior in osteoporosis of the elderly in Amphawa. the correct extent and results of this research data used as basis Find a way to reduce the incidence of osteoporosis and strengthen self-care behaviors in Amphawa district to reduce public health burden on the country.

2. Research Objective

To study resistance behaviors and factors of Osteoporosis in elders in Ampawa District Samut Songkhram Province.

RESEARCH METHODOLOGY

The research of “ Resistance behaviors and factors of Osteoporosis in elders in Ampawa District Samut Songkhram Province” is survey research that researchers have noted all of the method’s details down below

Procedure of the research

This research intends to study on elders in Ampawa District Samut Songkhram Province. The researchers had organized the meeting to clarify the objectives of the project, procedures of the research to the officers and gathered the primary information to create the documents, books and involved researches. The local meeting had been arranged to let researchers learn more about the local, observe the resistance behaviors and factors of Osteoporosis in elders in Ampawa District Samut Songkhram Province by letting researchers directly interviewed the elders and analyzed the information by using descriptive statistics such as frequency, percentage, average rate, Chi-square rate and research’s conclusion.

Research’s delimitation

- a. Human resources delimitation: The target group of people for this research is 400 people of the elders in Ampawa District Samut Songkhram Province during the period of October 2017 – November 2017.
- b. The researchers have specified the sample group of target human resources as 400 elders in Ampawa District in Samut Songkhram Province during the period of October 2017- November 2017.
- c. Information framework: This research intends to study the resistance behaviors and factors of Osteoporosis in elders in Ampawa District Samut Songkhram Province.

Research Materials

In this research, the researcher uses the tools created by studying the papers, concepts, theories and related research. The structure of the questionnaire was 5 parts. part1 . The basic social and economic characteristics are set answers to choose from (close-ended question).Part 2 . Health Information3 . The information about the behaviors of self-protection in osteoporosis. The answer is given to (close-ended question).Part 4 . Factors contributing to knowledge. Part 5 . Factors that enhance knowledge. Show the following information:

RESULTS

4.1 General information: which were the sample group for 400 people had the analysis result as follows, 31.8 % were male and 68.3 were female, 58.5 % were married, 72.5 % were primary school graduated, 31.3 % were farmer

4.2 Health information : Most diseases 36.8% were Hypertension , 15.8 % were hyperlipidaemia, 12.8 % were Diabetes mellitus, 5.0 % were heart disease, 5.0 % were Bone diseases and 4.5 % were Allergy. Risk behavior 7.8 % were smoke and 5.5 % were drink.

4.3 Health information on osteoporosis and Self-prevention behavior in osteoporosis: (Table 1)

Table 1 Amount (percentage) on Health information on osteoporosis and Self-prevention behavior in osteoporosis

Health information on osteoporosis	Amount (%)	
In the past 1 year, measured bone mass	64	(16.0)
Have ever been osteoporosis and calcium supplement	61	(15.3)
Have broken bones	71	(17.8)
Have a family history of osteoporosis	32	(8.0)
Current osteoporosis	50	(12.5)
Think of arthritis warning signs that are soft and bent, not a warning sign of osteoporosis	159	(39.8)
It is thought that osteoporosis will not have any warning symptoms until it has broken bones.	141	(35.3)
In the past 1 year, measured bone mass	64	(16.0)
Have ever been osteoporosis and calcium supplement	61	(15.0)
Have broken bones	71	(17.8)
Self-prevention behavior in osteoporosis	Amount (%)	
Lack of high calcium intake	146	(36.5)
Lack of eating increases calcium intake	168	(42.0)
Overdose of alcohol	18	(4.5)
Smoke	32	(8.0)
Taking steroids	32	(8.0)
lack of exercise is 3-4 times a week, each 30-45 minutes	145	(36.3)
Drink soft drinks often a week	54	(13.5)
Drink tea or coffee often a week	205	(51.3)
Eating salt Often times per week	80	(20.0)
Lack of bone mass build up but youthful	139	(34.8)

4.4 Information about enabling and reinforcing of knowledge: (Table 2)

Table 2 Amount (percentage) on Information about enabling and reinforcing of knowledge

Enabling of knowledge	Amount (%)	
Provincial Public Health do Health Education Program about Osteoporosis in Communities	170	(42.5)
Have knowledge about osteoporosis	123	(30.8)
Public health officials do forums on osteoporosis in community	144	(36.0)
Provincial Public Health has a wide range of calcium products in the community	97	(24.3)
Reinforcing of knowledge	Amount (%)	
Provincial Public Health advocate for education on osteoporosis in the community	181	45.3
Provincial Public Health advocate for bone Mass Measurement	159	39.8
Public health officials promote knowledge about osteoporosis in the community	160	40.1
Provincial Public Health advocate for exercise in the community	306	76.5
People in the community exercise regularly	303	75.8
People in the community are encouraged to eat high calcium foods	224	56.0
Eat high calcium foods regularly	211	52.8
Having a relative with osteoporosis aware prevents osteoporosis	93	23.3
Having a experienced care for osteoporosis patients aware prevents osteoporosis	85	21.3
Know the prevention of osteoporosis because it is known that when people are older, the risk of this disease is everyone	247	61.8

4.5 Relationship between osteoporosis in the present and self-prevention behavior in osteoporosis Relationship between osteoporosis in the present and self-prevention behavior in osteoporosis found that Significant correlations with current osteoporosis and behavior in various areas were found to be related to excessive alcohol intake, lack of exercise, 3-4 times/week, 30-45 minutes, in the eating of salty foods, often weekly. In the area of physical activity at home. (Table 3)

Table 3 Relationship between osteoporosis in the present and self-prevention behavior in osteoporosis

Osteoporosis	Self-prevention behavior		Total (%)	X ²	Sig
	No	Yes			
	Overdose of alcohol				
No	337(96.3)	13(3.7)	350(100.0)	4.02	.045

Yes	45(90.0)	5(10.0)	50(100.0)		
Total	382(95.5)	18(4.5)	400(100.0)		
	Lack of exercise regularly				
No	232(66.3)	118(33.7)	350(100.0)		
Yes	23(46.0)	27(54.0)	50(100.0)	7.79	.005
Total	255(63.8)	145(36.3)	400(100.0)		
	Eat salty foods weekly				
No	286(81.7)	64(18.3)	350(100.0)		
Yes	34(68.0)	16(32.0)	50(100.0)	5.143	.023
Total	320(80.0)	80(20.0)	400(100.0)		
	Less body movement at home				
No	196(56.0)	154(44.0)	350(100.0)		
Yes	20(40.0)	30(60.0)	50(100.0)	4.509	.034
Total	216(54.0)	184(46.0)	400(100.0)		

SUMMARY AND DISCUSSION

5. Summary and discussion

This study shows that the elderly in Amphawa, Samut Songkhram, focus on the prevention of osteoporosis and self-care on osteoporosis by preventing and promoting health before illness to reduce the incidence of osteoporosis and bone mass measurement. Overall, it was found that older farmers in Amphawa, Samut Songkhram, were 90 years old. A total of 400 people were diagnosed with hypertension, 147 of whom were 36.8%. Smoking and Alcohol. The current sample In terms of smoking, the majority of the non-smokers were 340 (85.0%), 354 (88.5%), and 354 The survey sample consisted of 400 people. Found that most think the warning signs of arthritis include joint swelling, soften and bend is not a warning sign of condition osteoporosis found 159 percent of 39.8, followed by the thought that osteoporosis. There are no warning symptoms until fractures were 141 people, representing 35.3 percent.

The findings in health-related osteoporosis showed. The fracture history of a sample of 400 people found that subjects with a history of fracture of 71 people, representing 17.8 percent by osteoporosis, this is a disaster a silencer which does not show symptoms until it's born fractures in people with However, the elderly in Amphawa. Samples of this study revealed that there were 32 patients with osteoporosis in the family, of which 8.0% were similar to those found in the study SupabAuaaree and MintaLimthongkul, 2551. The data from the sample showed that seven members of the family were osteoporosis, or 7.2 percent, which was the same rate of appearance.

The information found in the history of fractures found that seniors were 71 people, representing 17.8 percent similar to the findings in the research of SupabAuaaree and MintaLimthongkul the discovery of a history of bone fracture amounts. 11 people accounted for 11.6 percent. The findings in the history of measuring bone mass in the first year that seniors are 64 they accounted for 16.0 percent differ from the findings of SupabAuaaree and MintaLimthongkul found to have a history for bone mass measurement of a sample of just 5.2 (SupabAuaaree and MintaLimthongkul, 2551: 209-224).

Data on self-protection behavior in osteoporosis of 400 elderly people showed that most of them had dietary deficiency that increased calcium content, 168 people, 42.0%, and lack of exercise regularly 3-4 times, 30-45 minutes, 145 people or 36.3%. In this section, the researchers organized a meeting to educate about high calcium foods because the elderly mistakenly thought that soy milk was the same high calcium source as cow's milk.

Significant correlations with current osteoporosis and behavior in various areas were found to be related to excessive alcohol intake, lack of exercise, 3-4 times/week, 30-45 minutes, in the eating of salty foods, often weekly. In the area of physical activity at home, this section provides the findings and knowledge about how to properly handle the elderly.

6. Suggestion

Relevant agencies such as Samut Songkhram Provincial Public Health Office, Samut Songkhram Provincial Social Security Office and the Provincial Administration Office's trainings should be provided to older farmers in Samut Songkhram province. About enhancing self-care behaviors in osteoporosis is aimed at educating these individuals to adapt and enhance self-care behaviors in osteoporosis. To understand the causes of osteoporosis, preventing osteoporosis and treatment of osteoporosis. Due to the level of calcium in the body the level decreases with increasing age. Therefore, the elderly should be aware of the cause of the

disease. Proper prevention and treatment to improve the quality of life. The holistic health care to the longevity and strength of body and soul together.

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