Health Responsibilities of an Aging Thai Male Workforce

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Objective: *To examine the health responsibilities of an aging Thai male workforce and its related factors.*
Material and Method: *A descriptive study was conducted with 417 male workers aged 45-60 who were working in 4 regions of Thailand. Data were collected between October 2004 and February 2005 using self-administered questionnaires. Health responsibility was measured at the frequency of the participants personal health practices relating to the health seeking, participation in health promoting activities, and having health check-ups. Statistical analyses used were percentage, mean, and multiple regression analysis.*
Results: *Results showed that subjects had health responsibility at moderate level (Mean = 17.2 $\pm$ 4.7). Lowest mean of health responsibility was found in participation in health promotion activities/club area (Mean = 1.9 $\pm$ 1.0). Social support, perceived health status, and monthly income ($p < 0.05$) altogether could explain 17.7% of variance in health responsibility.*
Conclusion: *Health responsibility of an aging workforce should be enhanced through support from family, friends, and co-workers.*

Keywords: *Aging workers, Health responsibility*

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The Thai population will undergo considerable aging in the 21st century. Official statistics show that the number of people aged 60 and over in Thailand has continued to grow. It rose from 5.9 million in 2000, or 9.5 percent of the population to 10.4 percent in 2006. It is estimated that the aging population group will reach 11.7 percent in 2010 and 16.8 percent in 2020 [1]. In these circumstances, the number of workers aged 45 and older will account for a larger proportion of the working age population[2].

This increasing trend of higher numbers of aging workers will have a significant impact on occupational health[3]. In the workplace, aging workers may be at risk of occupational illnesses due to being more susceptible to harmful environments. Personal health problems such as cardiovascular diseases, diabetes mellitus, and musculoskeletal problems are also very common among this group of workers[4]. In addition, aging workers may experience declining physical capabilities and energy level because of physical degeneration[3]. Moreover, older workers may also be more likely to get stress-related health problems[5].

Although older workers are considered to be an important asset to an organization because of their skills and experiences, some of them leave the workforce early due to chronic health conditions such as hypertension, diabetes mellitus, and arthritis. In order to promote a healthy workforce, besides improving working conditions and conducting workplace health promotion program, an increase in individual health responsibility should also be emphasized[3]. Research on health responsibility as an aspect of health-promoting lifestyle behaviors has focused mostly on general working population[6-8]. Minimal attention has been given to aging worker per se. Also, gender perspective in health promotion has been emphasized that they are more likely to be successful and cost-effective [9]. Compared to women, men display less interest in health matters and less preventive

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health activity[10]. Therefore, the purpose of this study was to examine the individual health responsibilities of an aging Thai male workforce and the factors relating to health responsibilities of this working population.

Material and Method

Even though there is no universal agreement on a cut off point, when classifying workers as "aging", this study applies the term "aging", to workers according to the World Health Organization definition as pertaining to workers 45 years of age and older[11]. The subjects in this study therefore, were 417 male workers aged between 45 and 60 years old. Of these 417 workers, 115 were agricultural workers, 195 were laborers, and 107 were government officers. Multi-stage sampling was used to select subjects from 6 provinces representing a mix of rural and urban areas from all 4 regions of Thailand. The studied provinces were Chiangmai, Phuket, Khonkaen, Suphanburi, Pathumthani, and Bangkok.

Self-administrated questionnaires were used in this descriptive study. The questionnaire was designed to assess the subjects' personal factors including age, occupation, education, monthly income, personal illnesses, perceived health status, perceived benefits and barriers, and social support.

Health responsibility, an aspect of a health-promoting lifestyle, was defined as personal health practices relating to the seeking of health information/ health services, participation in health promoting activitiesclubs, and having health check-ups. The health responsibility subscale of the Health Promoting Lifestyle Profile (HPLP)[12] was modified to use in this study. It was measured by a 7 items rating scale with responses ranging from *regularly*, *often*, *sometimes*, and *never*. A total health responsibility score provides a comprehensive measure of health responsibility. For perceived health status, subjects were asked to report their opinion on their current health status on a 10 cm-visual analog scale (*worse-great*).

Perceived benefits and barriers were defined as beliefs regarding the positive results or the real or perceived obstacle of having health responsibilities. They were measured by an 8 item rating scale with the response options ranging from *strongly agree* to *strongly disagree*. Social support was measured by a subject's perception on the level of support and advice from significant others regarding their health. The 3-item rating scale with the response options of *not at all* to *very much* was used. Questions on perceived benefits, perceived barriers, and social support were developed by the researcher.

Before the data were collected, three experts who work in the area of health promotion, occupational health, and gerontology assessed the content validity of the instrumrnt. The questionnaire was pre-tested with 30 aging workers of similar characteristics in Sakaeo Province for its reliability. Cronbrach alpha's coefficients of the perceived benefits, perceived barriers, social support, and health responsibilities were 0.83, 0.75, 0.79, and 0.86, respectively.

Data was collected between October 2004-February 2005. Public health officers in this field of study also worked as research assistants in this study. After the subjects' names were located from the family folders at their respective local health centers, trained research assistants made appointments with subjects, who having agreed to participate in the study and then collected data from their respective homes. Subject participation was voluntary. Data were analyzed by frequency and percentage to describe subjects' characteristics. Multiple regression analysis was used to determine the factors predicting health responsibility with the significant level set at $p < 0.05$.

Results

The subject ages ranged from 45-60 years with the mean of 51.3 (SD = 4.5). Most of them were married (87.5%) and had completed primary school level education (68.1%). Monthly incomes ranged from 500 baht -58,100 baht with the median of 6,000 baht. About 77.3% reported no personal illnesses, and 88.3 indicated that they had fair health status (Table 1). Table 2 presents the health responsibility level of the aging Thai workforce. It was found that most subjects had a health responsibility at moderate level (17.2 ± 4.7). The highest mean score was found in seeking health information from the mass media (2.8 ± 0.8). The lowest mean score was found in participating in health promotion activities and clubs (1.9 ± 1.0). Bivariate analysis showed that perceived barrier, perceived health status, monthly income, and education were significantly related to health responsibility at $p < 0.05$ (Table 3). Stepwise multiple regression analysis showed that social support, perceived health status, and monthly income altogether could explain the 17.7 % of variance in health responsibility ($p < 0.05$) as presented in Table 4. After controlling for other variables, no significant relationships were found between age, education, occupation, perceived benefits, and perceived barriers.

Table 1. Characteristics of an aging Thai male workforce

Characteristics	n	%
Age	Min 45, Max 60, Mean 51.3 ± 4.5	
Occupation		
Agricultural workers	115	27.6
Laborers	195	46.8
Government officers	107	25.6
Marital status		
Single	8	1.9
Married	356	87.5
Separate/widow	43	10.6
Personal illnesses		
Yes	77	22.7
No	262	77.3
Education		
Primary	286	69.1
Secondary	83	20.0
College and higher	45	10.9
Monthly income (baths)		
<5,000	180	47.4
5,001-10,000	110	28.9
>10,000	90	23.7
	Min 500, Max 58,100, Mean 9,239.8 ± 8,892.9, Median 6,000	
Perceived health status		
Good	10	2.9
Fair	299	88.2
Poor	30	8.9

Table 2. Health responsibility of aging Thai male workforce

Health Responsibility	Range	Mean (SD)
Overall health responsibility	7-24	17.2 (4.7)
Seeking health information from the mass media	1-4	2.8 (0.8)
Having health checked-up	1-4	2.6 (0.9)
Self-inspecting the body	1-4	2.6 (0.8)
Seeking health guidance	1-4	2.5 (0.9)
Discussing health concerns with others	1-4	2.4 (0.9)
Attending health education program	1-4	2.2 (1.0)
Participating in health promotion activities/health club	1-4	1.9 (1.0)

Table 3. Correlations between independent variables and health responsibility

	n	r	p-value
Perceived benefits	410	0.083	0.092
Perceived barriers	406	-0.110	0.027
Health status	334	0.181	0.001
Social support	397	0.264	<0.001
Age	413	0.079	0.111
Education	410	-0.106	0.033
Income	378	-0.113	0.029

Table 4. Predictors of health responsibility using stepwise multiple regression analysis

Predictors	b	Beta	R^2	p-value
Social support	2.035	0.338	0.177	<0.001
Health status	0.526	0.178		
Monthly income	-1.294	-0.138		

Constant = 10.270, Overall F = 20.87

Discussion

In Thailand, the health promotion program for workers of 45 years of age or over has not been fully implemented, due to the fact that few studies have been conducted on the health of aging workers. Health promotion of aging workers is defined not only in terms of interventions that ensure well-being but also in the self-care of one's own health by making use of counseling and advice[13]. This study illustrates that an appropriate level of self care in regards to one's own health then, is a desirable responsibility of aging Thai workers. A moderate level of health responsibility of the aging workforce should be enhanced. Health responsibility including seeking health guidance, participation in health promoting activities, and having health check-ups, lead not only to the prevention of chronic diseases, but also to the containment of health care costs.

In addition, this study reported that social support was the strongest predictor of health responsibility of aging Thai workers. Consistent with the concept of social support which indicates that family and friends are considered to be an interpersonal influence leading to an increase in health promoting behaviors, combined with an increase in one's own responsibilities, desirable results could be achieved through encouragement and support from family, supervisors, and coworkers[14]. Health deterioration which is a major concern for many older adults

can be alleviated by participation in a wellness program in a workplace or in a work community[15]. Health education and support groups focused on reducing health risks such as obesity, tobacco and alcohol use, can enhance not only older workers' well-being but also their ability to continue their productive participation in the workforce.

The negative relationship between income and health responsibility might be due to the fact that the higher income group spent more time working and paid less attention to taking care of their own health. Work-life balance and a positive attitude toward health, life, and work should therefore be emphasized for the higher income group. The significant relationship between health status and health responsibility means that the better health status aging workers have, the higher their level of health responsibility. Consistent with previous study[16,17], this reflects the need for health personnel to pay special attention to those with poor health as this group is more likely to take less care of their health.

Insignificant relationship between age, education, occupation, perceived health risks and health responsibility of aging workers might be due to the fact that regardless of age, education, occupation, and perceived health risks, all subjects were actively engaged in work where health was of less a concern than productivity. In addition, the health responsibilities explored in this study were related to general health rather than work-related health only. This might contribute to the insignificant association between occupation and health responsibility. It should also be noted that perceived benefits and barriers had no significant relationship with the health responsibility of aging workers. This contrasts with the findings of Becker et al[18] which indicated that a person needed to firstly perceive and believe that an activity could prevent some diseases before deciding whether or not to do that activity, and, if once a person perceived that a specific activity wasted time and money, that person would always decide not to do that activity. It is possible that in this study, health responsibility was measured by the workers, as a set of behaviors rather than as a single specific activity. The perceived benefits and barriers of a desirable activity do not prompt the aging worker to engage in such a specific activity as has been shown in other studies[19,20].

Findings suggest that health responsibility especially partipation in health promoting activities by an aging workforce should be enhanced through support from family, friends, and co-workers. Work-life balance and a positive attitude toward health, life, and work should therefore be emphasized for the higher income group. An important limitation of this study is that it focused only on individual factors. Organizational factors such as working conditions, working hours and community factors that might be related to the health responsibility of aging workers should also be explored in future studies. Another limitation is that it did not include female workers, industrial workers, or health care workers. Future research is therefore needed to examine the health responsibilities of these aging workers. Interventions which increase worker health responsibility should also be designed based on the findings in this study and tested for their effectiveness.

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ความรับผิดชอบต่อสุขภาพของแรงงานสูงอายุชายในประเทศไทย

สุรินธร กลัมพากร, วันเพ็ญ แก้วปาน, พิพัฒน์ ลักษมีจรัลกุล

วัตถุประสงค์*: เพื่อศึกษาความรับผิดชอบต่อสุขภาพของแรงงานสูงอายุในประเทศไทยและปัจจัยที่เกี่ยวข้อง*

วัสดุและวิธีการ*: เป็นการศึกษาเชิงพรรณา เก็บรวบรวมข้อมูลจากแรงงานวัยทำงานเพศชายที่มีอายุอยู่ระหว่าง 45-60 ปี ประกอบอาชีพเกษตรกร รับจ้าง และข้าราชการใน 4 ภูมิภาคของประเทศไทยจำนวน 417 คนโดยการใช้แบบสอบถามแบบให้ตอบด้วยตนเอง เก็บรวบรวมข้อมูลระหว่างเดือนตุลาคม พ.ศ. 2547-กุมภาพันธ์ พ.ศ. 2548 ประเมินความรับผิดชอบต่อสุขภาพโดยการสอบถามถึงความถี่บ่อยในการค้นหาข้อมูลด้านสุขภาพ/บริการด้านสุขภาพ การเข้าร่วมในกิจกรรม/ชมรมสร้างเสริมสุขภาพและการตรวจสุขภาพ วิเคราะห์ข้อมูลโดยใช้สถิติเชิงพรรณนา ความถี่ ร้อยละ และใช้การวิเคราะห์ถดถอยพหุคูณในการหาปัจจัยที่สามารถอธิบายความรับผิดชอบ ต่อสุขภาพของแรงงานสูงอายุ*

ผลการศึกษา*: พบว่า แรงงานสูงอายุมีคะแนนเฉลี่ยของความรับผิดชอบโดยรวมอยู่ในระดับปานกลาง (คะแนนเฉลี่ย 17.2 $\pm$ 4.7) และมีความรับผิดชอบต่อสุขภาพต่ำสุดในด้านการเข้าร่วมในกิจกรรม/ชมรมสร้างเสริมสุขภาพ (คะแนนเฉลี่ย 1.9 $\pm$ 1.0) ปัจจัยที่มีความสำคัญกับความรับผิดชอบต่อสุขภาพอย่างมีนัยสำคัญทางสถิติ ได้แก่ การสนับสนุนทางสังคม การรับรู้ภาวะสุขภาพและรายได้ต่อเดือน โดยปัจจัยเหล่านี้สามารถร่วมกันทำนายความรับผิดชอบต่อสุขภาพได้ ร้อยละ 17.7*

สรุป*: ผู้ใกล้ชิด เช่น สมาชิกในครอบครัว เพื่อน และเพื่อนร่วมงานควรส่งเสริมแรงงานสูงอายุให้มีความรับผิดชอบต่อสุขภาพโดยเฉพาะในการเข้าร่วมในกิจกรรม/ชมรมสร้างเสริมสุขภาพ*