HEALTH PREPARATION FOR RETIREMENT AMONG COMMUNITY HOSPITALS REGISTERED NURSES IN KHON KAEN PROVINCE, THAILAND

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ABSTRACT: The elderly health promotion is an important issue as the elderly population ratio is increasing continuously, community registered nurse (RNs) as a health professional play an important role in health promotion, and they may experienced occupational related health problems in their elderly period after retirement. This study aimed to explore the prevalence of health preparation for retirement among the community hospital registered nurses (RNs) including identifying the factors related to health preparation thereof. A cross sectional descriptive study was conducted in September, 2010. Total of 327 samples were included in the study using a systematic sampling from hospital nurse name lists. A self-administered questionnaire were developed from literature review and validated by 3 experts. Descriptive statistics, i.e. frequency, mean, median and inferential statistics, i.e. bivariate, multiple logistic regression data were used in the analysis. The response rate to questionnaire was 100%. The prevalence of health preparation for retirement was 45.3% (95%CI 39.80, 50.83). Most samples indicated good spiritual health while social health was at the lowest. The factors related to health preparation for retirement hereby were identified as 1) age, 2) self-rated health, 3) good attitude of value of health preparation to retirement and 4) that attitude of readiness. Less than half of samples demonstrated health preparation for retirement in all 4 dimensions. However, more than half of them required health preparation for retirement promotion and also required encouragement to improve related factors to increase the prevalence.

Keywords: health preparation, retirement, community hospital registered nurse

INTRODUCTION

The situation of global aging population trend continues to increase. In 2000, 600 million people were at or above 60 years old, by 2025 this will be 1.2 billion and close to 2 billion by 2050. This aging population will double from 11% (in 2006) to 22% (by 2050) [1]. In addition, the number of elderly in developing country has been rapidly increasing. Meanwhile the potential support ratio has been continually declining. That means the number of working-age people per older person is expected to drop. By 2050 it is projected to be 4.1 globally (2.2 in more developed regions and 4.6 in the less developed regions) from 11.6 in 1950 and 9.1 in 2000 [2]. There will be fewer minders to look after the seniors. Moreover, advancement in medical treatment and technology, eradication of many infectious diseases and improved nutrition, hygiene and sanitation will increase life expectancy. However, the normal biological process of aging leads to functional decline and increased susceptibility to disease. Common chronic diseases lead to morbidity, hospitalization and disability among most of elderly in the world [3]. It is necessary for the country to set up appropriate strategies to promote health preparation for retirement in middle age population.

Thai population structure also followed similarly with global trend, It was estimated that elderly population will increase from 8% in 2543 BE to 16% in 2563 BE, which is doubled in only 20 years while it is predicted to take 70-100 years in a developed country [4]. Thus, health promotion for elderly becomes priority and important especially in the occupational groups that have high risk health problems at older age. Health preparation before retirement and successful aging health transition among the middle age group is required to promote active aging and improve quality of their life.

Health preparation before retirement refers to the activities designated to prevent disease or sickness and maintain physical, mental, social and spiritual well being. The health preparation concept was supported by a number of theories i.e. Continuity theory viewed it as the opportunity for retirees to maintain and continue their social relationship and lifestyle patterns into their retirement and Role theory viewed it as the activity necessary to maintain life satisfaction and positive self-concept focusing on the individual's need to maintain a productive life for it to be a happy one [5]. Transition theory viewed the retirement as a transitional process associated with life. The stage of change model described health preparation as an individual's readiness to act on a new healthier

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behavior, and established a set of strategies for action and maintenance [6].

According to previous studies, successful preparation for retirement features health and wealth [5, 7]. Several studies were focusing on aging preparation in the areas of financial, physical and psychological while only few studies focus on holistic health. Thus the extensive and meaningful study in health preparation should be of high priority and important subject to accelerate upcoming aging society.

Nurse is an important health professional who provides health promotion to functioning people in the community [8]. Nurses major roles are health promotion, providing empathy, support and information to patients as well as medical care [9]. Their work at unusual time have a negative impact to their health such as cardiovascular diseases, gastrointestinal complaints, sleep deprivation, mental health problems [10-14], fatigue [15], breast cancer [16], colon carcinomas [17] and also loss of quality time spent with family and social activities [14]. Despite such health risk, the nurses' health has been almost neglected. Nurses perform few health activities such as exercise [18] while engaging in stressful job and time shift work. This will affect their quality of life and health especially when they get older and physiologically weaker [19]. Previous studies in Canada found only 24% of nurses had prepared for retirement. However, the number of retiring Thai registered nurses will increase from 9,752 RNs in 2017 to 19,490 in 2022 [20]. Therefore, health preparation for retirement becomes a priority and important issue for assessment and acknowledges nurses. In addition, this study focused on registered nurses (RNs) in community hospital in Khon Kaen province which located in the middle of northeastern Thailand. RNs in this area possessed the highest work-load than other areas of this country (1,160.04 persons per 1 RNs; Mahidol University Population Projections for Thailand, 2005-2025: March 2006), even though, only few related studies were conducted. The objective of this study is to explore the prevalence of health preparation for retirement among community RNs in Khon Kaen province and identify the factors related to health preparation.

The implication of this study is to enhance the health preparation among the community of RNs, and develop health promotion role model regarding health preparation for retirement for the people in other occupational areas.

MATERIAL AND METHODS

The cross-sectional descriptive study was conducted in community hospitals in September 2010. Community Hospital refers to the hospital of 30-120 bed capacity under command of Ministry of Public Health located in a sub-district or district in Khon Kaen province. In this study, 20 community hospitals were involved.

The study population was 839 female nurses, aged 30-59 years old, working in community hospitals over a year and exclusion criteria was a) pregnancy leave or b) educational leave.

A systematic sampling technique was adopted to identify the samples; using hospital's nurse name list to sampling frame [21]. Sample size was calculated by computer software yielding 327 samples with a confidence value of 95% CI, acceptable difference = 0.046, P = 0.467 (A pilot study with similar criteria among registered nurses at Kalasin province), expected loss of subjects = 10% then random by "k" (Sampling interval) = 2.56.

Health preparation for retirement refers to the activities performs to prevent diseases or sickness and maintain health. The activities include all physical, mental, social and spiritual activities. It was measured by a subjective self-administrated questionnaire that consists of 4 parts i.e.: basic information, attitude for health preparation to retirement and self adjusted report of health preparation in all 4 dimensions of physical-mental-social-spiritual. The questionnaire used a major research instrument was developed by means of literature review then brought into focus group discussion within community registered nurse based on focus group discussion guideline in June, 2010. Then, the content was validated by 3 experts. The validated instrument was used with 10 RNs for content and linguistic adjustment fitting for practical purpose. The pilot study of the adjusted instrument was conducted with 30 registered nurses at Yangtalad Hospital at Kalasin Province yielding the reliability; Cronbach's alpha test =0.81.

The data collection process, comprised of 4 steps as follows: 1) Arranged an introduction meeting with the community hospital representative to introduce the objective and methodology of research as well as to clarify the questionnaire, 2) Gave the questionnaire to the coordinators from each hospital then distribute to the subjects by the sampling name-list, 3) the questionnaires were returned within 15 days, and 4) followed up in case of non-returned questionnaires.

In absence case, select a contact next to the subject on the name-list. Double data entry technique was used before transferred the data to statistical computer software then calculated descriptive statistics e.g. frequency, percentage, mean (SD), median (IQR), mode, odds ratio and inferential statistics e.g. Pearson chi square, multiple logistic regression and 95%CI. Prior to starting the data collection, this study was approved by the Ethics committee for human research of Khon Kaen University.

Table 1 The prevalence of health preparation for retirement

Health dimension	Frequency (n)	Percentage (%)	95%CI
Health Prepared	148	45.3	
Non health prepared	179	54.7	39.80, 50.83
Physical health			
Prepared	216	66.1	
Non prepared	111	33.9	60.60, 71.12
Mental health			
Prepared	240	73.4	
Non prepared	87	26.6	68.19, 78.03
Social health			
Prepared	193	59.0	
Non prepared	134	41.0	53.46, 64.36
Spiritual health			
Prepared	263	80.4	
Non prepared	64	19.6	75.62, 84.50

RESULTS

Sample RN Characteristics

The response rate of questionnaire was 100%. 327 RN respondents comprised of those who were practitioner nurse and management nurse, 75.5% were solely practitioner nurse, 14.4% were solely management nurse, 7.6% were nurse working as both practitioner and management nurse, 1.8% were training nurse 0.6% performed all three tasks of practitioner, management and training nurse. Most of the samples hold a bachelor's degree (86.2%), and 13.8% hold master degree. For the experience of health preparation for retirement, 96.6% did not have a pre-retirement training also 95.4% did not have a job associated with pre-retirement preparation. 62.1% plan to retire at 60 years old, 37.3% at less than 60 years old, and 0.6% at over 60 years old.

Demographic characteristics

The registered nurse samples demographic characteristics were as follows: median age was 42 (IQR=7) years old ranged from 30 – 56, among these, 76.1% were in the age range from 30-45 years and 23.9% was at the age over 45 years old. For marital status, 72.8% were married, 17.7% were single, 5.2% were divorced, 3.4% were windowed and 0.9% separated. Almost all the married group had children. 5.3% had no children, 23.1 % had 1 child, 63.6% had 2 children and 8% had 3 or more children. In terms of earning adequate income, 42.9% of them earned adequate income, 31.3% earned adequate income with some savings, 20.9% earned inadequate income and in debt and 4.9% earned inadequate income but no debt.

Regarding the self-rated health status 55.4% demonstrated good health status, 35.2% demonstrated moderate health status, 5.5% demonstrated very good health status, 3.4% demonstrated bad health status and 0.6% demonstrated very bad health status. Regarding BMI (Body Mass Index) one-third of the sample (76.0%) had a normal level of BMI, 7.5% was high and 6.5% was low. Regarding underlying diseases, 86.2% did not have underlying disease while 13.8% of them have chronic diseases such as asthma, hypertension and chronic pain. Regarding attitude to health preparation, most samples demonstrated good attitude to health preparation for retirement as 83.6% rated it as importance, 92.6% rated it as necessity, 87.0% rated it as valuable and 80.6% was ready to perform health preparation for retirement.

Health preparation for retirement among Community Hospital RNs

The prevalence of health preparation for retirement was 45.3% (95%CI 39.80, 50.83).Within the health preparation group, 80.4% demonstrated spiritual health preparation, 73.4% demonstrated mental health preparation, 66.1% demonstrated physical health preparation and 59.0% demonstrated social health preparation (Table 1).

Factors related to Health preparation among com hosp RNs

The bi-variated analysis of the factors related to health preparation among RNs shows the significant statistics (p-value < 0.05) with age (p-value =0.023), self rated health (p-value =0.006), attitude of value of health preparation (p-value =0.015) and attitude of readiness to retirement (p-value <0.001).

Table 2 shows related variables to health prepared for retirement. Senior RNs had prepared their health better compared to younger RNs (OR 1.8, CI 1.05-3.11). Most samples who rated good for self-rated health also demonstrated health preparation in higher percentage (OR 0.006, CI 1.16-3.04), Similarly high percentage of health preparation was demonstrated by the samples who rated good at the attitude of value and attitude of readiness to retirement.

Table 2 Result of factors related to health preparation

Variable	N (327)	% health preparation	P-value	Crude OR	95%CI
Age					
46 – 59	78	56.4	0.023*[a]	1.80	1.05, 3.11
30 – 45	249	41.8			
Education					
Over bachelor degree	45	46.7	0.838	1.07	0.54, 2.10
Bachelor degree	282	45.0			
Age					
46 – 59	78	56.4	0.023*	1.80	1.05, 3.11
30 – 45	249	41.8			
Education					
Over bachelor degree	45	46.7	0.838	1.07	0.54, 2.10
Bachelor degree	282	45.0			
Income					
Enough	242	45.5	0.972	1.01	0.59, 1.71
Not enough	84	45.2			
Body mass index					
Below	21	52.4	0.510	1.35	0.51, 3.58
Normal	247	44.9	0.594	1	
Over	57	43.9	0.882	0.96	0.51, 1.78
Marital status					
Couple	238	46.2	0.569	1.15	0.69, 1.94
Single	89	42.7			
Number of children					
0 – 2	243	46.5	0.434	1.39	0.57, 3.45
more than 2	21	38.5			
Children status					
Studying	229	45.9	0.740	1.08	0.65, 1.79
Working and another	98	43.9			
Chronic diseases					
Have	45	55.6	0.135	1.62	0.82, 3.19
Not have	282	43.6			
Self rated health					
Good	128	51.3	0.006*[a]	1.87	1.16, 3.04
Bad	199	35.9			
Training experience					
Had training	11	63.6	0.212	2.17	0.56, 9.02
Had no training	316	44.6			
The attitude of the importance					
Bad	7	57.1	0.255	2.50	0.40,16.55
Fair	46	34.8		1	
Good	217	46.5	0.139	1.63	0.81, 3.29
The attitude of necessity					
Bad	4	57.1	0.255	2.50	0.40,16.55
Fair	20	34.8		1	
Good	300	46.5	0.139	1.63	0.81, 3.29
The attitude of value					
Bad	11	27.3	0.92	1.08	0.17, 6.31
Fair	31	25.8		1	
Good	282	47.9	0.037*[a]	2.64	1.08, 6.66
The attitude of readiness					
Bad	21	28.6	0.53	1.47	0.38, 5.67
Fair	42	21.4		1	
Good	261	50.2	<0.001***[b]	3.69	1.62, 8.68

*[a]Significant at the level $p < 0.05$,
***[b]Highly significant at the level $p < 0.01$

In addition, samples with higher level education demonstrated higher percentage of health preparation (OR 1.07, CI 0.54-2.10), in case of income, those with adequate income demonstrated higher percentage of health preparation (OR 1.01, CI 0.59-1.71), married samples demonstrated health preparation in higher percentage than singles (OR 1.15, CI 0.69-1.94), those who have a chronic diseases demonstrated health preparation in higher percentage (OR 1.62, CI 0.82-3.19), and, in terms of health preparation experience, those who had training and worked in health preparation for

Table 3 Multivariate analysis of factors related with Health preparation among Community Hospitals RNs

Factors	AOR	95%CI	P-value
Age	1.06	1.01, 1.10	0.013
Attitude of value	2.01	1.06, 3.80	0.030
Attitude of readiness	1.84	1.13, 2.98	0.014
Self rated health	1.90	1.17, 3.07	0.009

Significant at the level $p < 0.05$

retirement field demonstrated health preparation in higher percentage than those who did not. This is shown in Table 2.

The results of multivariate analysis are summarized in Table 3. Statistic variables on univariate analysis were included in the multivariate model. Upon the control of the other related factors i.e. age, attitude of value, attitude of readiness and SRH were found to be the factors related to health preparation for retirement.

DISCUSSION

Prevalence of health preparation for retirement among Community RNs

This study found the prevalence of health preparation for retirement among the community RNs was 45.3%. This was higher than the previous study among Canadian nurses in which the prevalence of health preparation was 24%. The past work explored health preparation in 3 elements, i.e. physical health, financial health, and psychosocial health [22]. The past study also reported that more than half of Thai nurses had not prepared for retirement [23]. However, only few of those studies actually implemented the prevalence of four dimensions of health preparation to retirement of registered nurse.

According to the previous studies in Thailand, most researchers focused on the preparation for retirement on physical, mental and social preparation and found a high level of mental and social preparation for retirement [24, 25]. The finding in the previous studies showed physical preparation had the highest concern from retirees [25-28]**,** on the contrary to this study, the spiritual health preparation were demonstrated by highest portion of samples, and social health was at the lowest.

Referring to the spiritual health, which is very subjective and of a deeply personal [29]. It deals simultaneously with experience, emotion and motivation thus not surprising that it has the highest preparation. The spiritual health of the samples in this study was focusing on the religion including membership of a religious congregation and adherence to belief which both generated numerous potential benefits, particularly for mental and physical health. Also, the religious organizations can provide social support and function as social network. Spiritual healthy persons, for example in Thailand, sought for the purpose and meaning of life to maintain hope without discouragement, fulfillment of life, and good relationships with others without selfishness [30, 31] which facilitates quality of life improvement in every dimension. Especially, spiritual health in the Thai context is Buddhism in which humans can achieve perfection based on real purpose of life e.g. a person who has made good progress along that path would have a high degree of happiness, contentment and freedom from fear. In Thailand, all significant Buddhist holy days are declared to be national holidays, allowing people to devote themselves to religious practices which are also integral to all life events e.g. birthdays, marriages, funerals and so forth, thus the spirit of Thai people is profoundly embedded in religion.

Factors related to Health preparation among Community hospitals RNs

According to previous analysis the factors related to health preparation for retirement among registered nurses were age, self-rated health (SRH), and attitude towards value of health preparation for retirement and attitude of readiness to retire which can be discussed in details as follows;

Age:

According to the result of the study, samples' age affected the outcome of health preparation for retirement. The finding showed AOR=1.05 of 46 – 59 years old who demonstrated more health preparation than the younger age group. In order to explain this phenomena, the concept of various phases people face in taking up and playing the retirement role [32] was adopted**.** The pre-retirement period includes a remote phase and a near phase. In the remote phase, retirement is vaguely seen as something that will happen someday, the younger nurse group stressed the need of working for financial and health care benefit[33, 34]. Then followed by the near phase, in which individuals orient themselves toward separation from their jobs and social situations, and worry about retirement revolve around income and health [35]. Likewise the older group of nurses need socialization and also have health concerns when thinking about retirement [36].

SRH (Self Rated Health):

The perceived health status showed a significant correlation to health preparation for retirement. Over half of who perceived themselves as having

good self rated health, had prepared their health for retirement, while one third who rated themselves as having bad health status were prepared. On the other hand, it was found that who have chronic diseases have high preparation and showed better preparation than those who don't have diseases [23].

Attitude of health preparation for retirement:

The attitude of health preparation for retirement included 4 main themes consisting of the importance, the necessity, the value and the readiness of health preparation for retirement. The results showed the significance of the positive value and positive readiness attitude related to complete the four dimensions of prepared health for the retiree. Accordingly the attitude towards behavior is the basis of retirement planning: understanding the problem, setting goals, making a decision to start preparing and undertaking the behaviors needed to fulfill their goals [36]. The health belief model that focuses on health behaviors, practices, utilization and perception of a personal health behavior generate health values, interest and concern about health, especially in beliefs about the individual's perception and action. Thus a person who has a strong positive outcome from behavior will have a positive attitude toward behavior. Another study showed that a positive attitude directly leads to preparation for retirement [37].

In addition, attitude tends to increase the prevalence of health preparation for retirement. As a result, when people are aware that a problem exists and are seriously thinking about a behavioral change, this is regarded as the contemplation stage of the Trans-theoretical model, it constructs of stages of change that people engage and the action stage is when they are behaving in order to overcome their problems [38].

CONCLUSION

The prevalence of health preparation for retirement was 45.3%. When control influence factors, there were 4 factors related to health preparation i.e. age, SRH, attitude of value of health preparation for retirement and attitude of readiness to retire. More than half of the sample needs to promote health preparation, especially in the younger RNs.

One hundred percent response rate in this study was able to describe the health preparation for retirement in community registered nurse in Thailand. However, the cross-sectional study caused the time-limitation to generalize the outcome. The results could not be extrapolated to another population in different context.

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