Health status and health promoting behaviors among community health nurses in Jakarta, Indonesia

Egi Abdul Wahid[1, 2] **Apa Puckpinyo**[3] **and Bang-on Thepthien**[3]

[1] M.P.H.M, ASEAN Institute for Health Development (AIHD), Mahidol University. Thailand
[2] M.P.H.M, Center for Indonesia's Strategic Development Initiatives (CISDI). Jakarta, Indonesia
[3] Ph.D., ASEAN Institute for Health Development, Mahidol University, Thailand

Corresponding author: Apa Puckpinyo **Email:** *apa.puc@mahidol.ac.th*
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Abstract

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This study assessed factors related to health status among community health nurses in Jakarta, Indonesia. It was a descriptive cross-sectional study with a sample size of 219 community health nurses who selected by multi-stage random sampling from 1263 community health nurses from 5 cities in Jakarta Province. SF-36 questionnaire was used to evaluate health status and health promoting lifestyle profile (HPLP II) for determine health promoting behaviors among community health nurses in Jakarta Province. The data were analyzed by descriptive statistics, Chi-square test, and multiple logistic regressions.

Most of the respondents were females (75.8%), and the mean age was 38.5 years (SD=10.5). The study showed that 41.1% reported they had poor health status. The overall health-promoting behavior was good (52.5%), the highest was spiritual growth (85.8%) while the lowest was physical activity (35.2%). Chi-square tests found that there was a significant relationship between health status and age, household income, body mass index (BMI), number of children, working duration, working position, overall health promoting behavior, physical activity, spiritual growth, interpersonal relations, and stress management behavior. Multiple logistic regression showed that BMI (Adj OR=2.17, 95% CI=1.14-4.10) and spiritual growth (Adj OR=4.13, 95% CI=1.47-11.59) were predictors of health status among community health nurses.

This study showed that almost half of community health nurses in Jakarta did not practice healthy life behaviors in their lives, and 4 by 10 nurses were reporting poor health status. Health-promoting behaviors and health status had been proven to have a positive relationship, especially on BMI score and spiritual status. Regulations and health promotion programs that are able to encourage healthy nurses are required.

Keywords: community health nurses, health status, health promoting behavior, Indonesia

ภาวะสุขภาพ และพฤติกรรมสร้างเสริมสุขภาพ ของพยาบาลชุมชนในจังหวัดจาการ์ตา ประเทศอินโดนีเซีย

เอกกี้ แอ็ปดุล วาฮิด[1, 2] อาภา ภัคภิญโญ[3] และบังอร เทพเทียน[3]

[1] M.P.H.M, ASEAN Institute for Health Development (AIHD), Mahidol University. Thailand
[2] M.P.H.M, Center for Indonesia's Strategic Development Initiatives (CISDI). Jakarta, Indonesia
[3] Ph.D., ASEAN Institute for Health Development, Mahidol University, Thailand

บทคัดย่อ

เอกกี้ แอ็ปดุล วาฮิด อาภา ภัคภิญโญ และบังอร เทพเทียน ภาวะสุขภาพ และพฤติกรรมสร้างเสริมสุขภาพของ พยาบาลชุมชนในจังหวัดจาการ์ตา ประเทศอินโดนีเซีย ว. สาธารณสุขและการพัฒนา 2561;16(2):15-28

การศึกษาครั้งนี้เป็นการประเมินปัจจัยที่เกี่ยวข้องกับภาวะสุขภาพของพยาบาลชุมชนในกรุงจาการ์ตาประเทศ อินโดนีเซีย เป็นการศึกษาแบบตัดขวางเชิงพรรณนาโดยมีกลุ่มตัวอย่างเป็นพยาบาลชุมชนจำนวน 219 คนที่ได้รับ การคัดเลือกโดยการสุ่มตัวอย่างแบบหลายขั้นตอน จากพยาบาลชุมชนจำนวน 1263 คนจาก 5 เมืองในจังหวัด จาการ์ตาร์ เครื่องมือที่ใช้ในการประเมินภาวะสุขภาพคือแบบสอบถาม SF-36 และใช้ HPLP II ในการประเมิน รูปแบบการดำเนินชีวิตเพื่อสุขภาพ วิเคราะห์ข้อมูลด้วยสถิติเชิงพรรณนาการทดสอบไคสแควร์และการถดถอย โลจิสติกพหุคูณ

กลุ่มตัวอย่างส่วนใหญ่เป็นหญิง (75.8%) อายุเฉลี่ย 38.5 ปี (SD=10.5) ผลการศึกษาพบว่าร้อยละ 41.1รายงานว่าตนมีสุขภาพไม่ดี ร้อยละ 52.5 มีพฤติกรรมสร้างเสริมสุขภาพโดยรวมอยู่ในเกณฑ์ดี โดยด้านที่มี คะแนนสูงสุดคือด้านจิตวิญญาณ (85.8 %) ส่วนด้านที่ต่ำที่สุดคือด้านกิจกรรมทางกาย (35.2%) การทดสอบไค สแควร์พบว่าภาวะสุขภาพมีความสัมพันธ์กับอายุ รายได้ของครอบครัว ดัชนีมวลกาย จำนวนบุตร ระยะเวลา ทำงาน ตำแหน่งงานและพฤติกรรมสร้างเสริมสุขภาพทั่วไป รวมทั้งพฤติกรรมการเคลื่อนไหวร่างกาย จิตวิญญาน สัมพันธภาพระหว่างบุคคลและการจัดการความเครียด ปัจจัยทำนายภาวะสุขภาพของพยาบาลชุมชนคือดัชนีมวล กาย (Adj OR=2.17, 95% CI=1.14-4.10) และพฤติกรรมสร้างเสริมสุขภาพด้านจิตวิญญาน (Adj OR=4.13, 95% CI=1.47-11.59)

การศึกษานี้แสดงให้เห็นว่าเกือบครึ่งหนึ่งของพยาบาลชุมชนในกรุงจาการ์ตาไม่ได้ปฏิบัติพฤติกรรมสุขภาพที่ดี โดยผลการศึกษาพบว่า 4 คนจาก 10 คนรายงานว่ามีภาวะสุขภาพไม่ดี พฤติกรรมการสร้างเสริมสุขภาพและภาวะ สุขภาพได้รับการพิสูจน์ว่ามีความสัมพันธ์ทางบวก โดยเฉพาะอย่างยิ่งดัชนีมวลกายและพฤติกรรมสร้างเสริมสุข ภาพด้านจิตวิญญาน ควรมีโปรแกรมสร้างเสริมสุขภาพรวมทั้งการออกข้อบังคับให้พยาบาลชุมชนมีพฤติกรรม สุขภาพที่ดี

คำสำคัญ: พยาบาลชุมชน ภาวะสุขภาพ พฤติกรรมสร้างเสริมสุขภาพ ประเทศอินโดนีเซีย

Introduction

Nurses play an important role in health promotion in communities and manage health promotion projects, and they are expected to be a healthy role model[1]. Many studies found a large proportion of nurses had unhealthy behaviors such as smoking, low physical activity, overweight or obesity, and eating unhealthy food[2-3]. Moreover, worldwide studies found a relationship between nurses' health behaviors and their readiness to promote healthy lifestyle of the clients[2]. For instance, nurses who smoke are less likely to encourage smokers to quit smoking. Furthermore, health status and health-promoting behaviors of nurses may impact on the trustworthiness of their health promotion communication[2].

Indonesia, the fourth most populous country in the world has 172,658 nurses in hospitals and 115,747 community health nurses in health centers or called 'Puskesmas' (Pusat Kesehatan Masyarakat)[4]. Jakarta is the capital and the most populous city in Indonesia, which has 340 health centers and 1263 community health nurses. Community health nurses are responsible for taking care of patients who come to health centers and people living in communities. Little known regarding health statuses and health promoting behaviors of community health nurses in Indonesia. Only one study showed that nurses working in a private hospital in Jogjakarta had low back pain (10%), fatigue(15%), and musculoskeletal disorder (25%)[5]

The aims of this study were to assess health status and health-promoting behaviors of community health nurses and to examine the relationship between an individual's characteristics and health-promoting behavior and health status among community health nurses in Jakarta, Indonesia.

Methods

Jakarta province has 1263 community health nurses working in 340 health centers divided in 5 districts. Multi-proportional random sampling conducted to get proportion number of community health nurses in each city. Sample size calculation was using prevalence estimation by William G. Cohran (1977). This study use prevalence of positive health status among community health nurses in Brazil was 85 %, Z score: 1.96 and margin of error 0.05%[6]. The result was 196 and add 24 respondents for prevent dropout, totally of 220 community health nurses who working in community health centers in Jakarta. The exclusion criteria were community health nurses have been working less than 1 year in health center.

A self-reported questionnaire was used for assessing general characteristics, health status, and health-promoting behaviors among community health nurses. The first part of the questionnaire consists of questions regarding age, gender, number of children, education level, monthly income , smoking behaviors measured by 4 questions (C3-C6) from modified Basic health Survey Ministry of health Indonesia[7], health problems in the past 30 days and Body mass index (BMI).

Specific individual characteristic such as BMI It is defined as a person's weight in kilograms divided by the square of the person's height in meter (kg/m^2). BMI categorize by WHO recommendation BMI for Asian as follows: "normal" for score $18.5–23$ kg/m^2 (normal), "Not Normal" if the score

less than 18·5 kg/m^2 (underweight) and 23–27·5 kg/m^2 (over weight) ; and 27·5 kg/m^2 (obese)[8]. Health problems identified by given table with 28 list of diseases and asked were they diagnosed by doctor and other health professional the disease in last 30 days. The health problems categorize by number of disease diagnosed in last 30 days, "None" if there is no disease diagnosed and "Yes" if they diagnosed at least one disease by doctors in last 30 days[9].

The second part is a 36-Item Short Form Survey Instrument (SF-36) version 1 developed by Ware and Sherbourne 1992. The instrument widely use for measure health status among general population and able to capture holistic dimension in health status on individual level. The SF-36 consists of 36 questions that assess 8 domains: physical functioning, role limitation due to physical health problems, role limitation due to emotional problems, vitality, mental health, social functioning, bodily pain, and general health perceptions. For measuring health status, it was two step. First, based on Rand Health approach each answer will scored 0-100. Second each questions of SF-36 were categorized to 8 domains. After that calculate all score calculated and got the mean score. Health status categorized by "good" health status if score higher than Mean Score, and categorized as "poor" health status if the score less than mean score[10].

The third part is the Health Promotion Lifestyle Profile-II (HPLP-II) questionnaire developed by Walker, Sechrist, and Pender in 1987[11]. The questionnaire consists of 52 items and 6 categories: health responsibility, physical activity, nutrition, spiritual growth, interpersonal relations, and stress management. The respondents were asked to indicate how often they adopted specific health-promoting behavior on a 4-point Likert scale. The total score of each domain was divided by number of questions in that domain for calculating average score. Scores were classified as "good" and "poor" health-promoting behavior with middle score of 2.5[12-13]. The questionnaire was tested for validity and reliability in 38 community health nurses in South Tangerang, Banten Province. The Cronbach's alpha coefficients for SF-36v1 was 0.887 and for HPLP-II was 0.937. The study was approved by the Committee for Research Ethics, Mahidol University (Certificate of Approval No.: 2015/130.1604).

Descriptive analysis was used to determine means and frequencies in all variables. Chi-square tests were employed to examine an association between each independent variable and health status. Multiple logistic regression was used for ascertaining which factors were most related to the health status of community health nurses.

Results

Of the 219 community nurses, age ranged from 21-59 years, with a mean age of 38.5 years (SD 10.4). Majority of respondents were female (75.8%), married (79.9), and has children at least 2 (60.2%). Almost half of the respondents (48.9%) were not in a normal BMI range. Around 11% of respondents are smokers and 62.1% reported they had at least 1 health problem in the past 30 days (Table 1).

Table 1 Distribution of respondents by socio-demographic factors

Socio-demographic factors	Number	Percent
Age		
< 40	122	55.7
≥ 40	97	44.3
Gender		
Male	53	24.2
Female	166	75.8
Children		
< 2	152	69.4
≥ 2	67	30.6
Education Level		
Diploma	183	83.6
Bachelor	36	16.4
Monthly household income (Rp.)		
< 5.000.000	76	34.7
≥ 5.000.000	143	65.3
Smoking		
Yes	25	11.4
No	194	88.6
BMI		
Normal	112	51.1
Not Normal	107	48.9
Health Problems		
No	83	37.9
Yes	136	62.1
Most common health problems (can answer more than one)		
Gastrointestinal Problems	108	49.3
Respiratory Problems	44	20.1
High Cholesterol level	40	18.3
Musculoskeletal Problems	39	17.8
Hypertension	23	10.5
Gout	22	10.0
Others	16	7.3

Health Status assessed by standard questionnaire SF-36. It was designed as a generic indicators of health status in population survey and evaluation studies of health policy. With First Rand Health approach we divided health status into two categories. The study found 58.9% of the sample reported they had good health status and 41.1% reported poor health status (Table 2).

Table 2   Distribution of respondents by reporting on health status

Health status	n	Percent
Good	129	58.9
Poor	90	41.1

Table 3 shows that the overall health-promoting behaviors mean score for the respondents is 2.5 (SD=0.3). The highest mean score was for the spiritual growth subscale (mean=2.9, SD=0.4) and the lowest mean score was for the physical activity subscale (mean=2.3, SD=0.5). Health promoting behavior was divided into 2 categories using mean score=2.5[21]. Respondents who scored below the mean were categorized as 'poor,' and those had equal or above mean score were categorized as 'good.' The results show that 52.5% of the respondents had good overall health-promoting behaviors while 85.4% had good health-promoting behavior for the spiritual growth subscale and only 31.5% had good health-promoting behavior for the physical activity subscale.

Table 3   Descriptive Statistics for the HPLP-II Subscales

Subscale	Mean	SD	Good	Percent	Poor	Percent
Health Responsibility	2.4	0.4	91	41.6	128	58.4
Physical Activity	2.3	0.5	77	35.2	142	64.8
Nutrition	2.5	0.4	106	48.4	113	51.6
Spiritual Growth	2.9	0.4	188	85.8	31	14.2
Interpersonal Relation	2.8	0.3	180	82.2	39	17.8
Stress Management	2.5	0.4	104	47.5	115	52.5
Total HPLP II	**2.5**	**0.3**	**115**	**52.5**	**104**	**47.5**

The relationship between individual characteristics with health status is summarized in Table 4. The research found out that 6 out of 11 variables are associated with health status. The variables are age (OR=1.93, 95%CI=1.12-3.34), household income (OR=2.16, 95%CI=1.19-3.92), body mass index (OR=2.07, 95% CI=1.19-3.59) and number of children (OR: 2.17, CI 1.21-3.89), working experience (OR:2.07, 95%CI=1.18-3.63) and work position (OR=5.46, 95% CI=1.11-26.49) are significantly related to health status.

Table 4   Relationship between health status with study factors and health promoting behaviors

| Variables | | Health Status | | Crude OR (95% CI) | P-value |
| | | Good | Poor* | | |
		n (%)	n (%)		
Age	< 40	81 (66.4)	41 (33.6)	1	
	≥ 40	49 (50.5)	48 (49.5)	1.93 (1.12-3.34)	**0.019**
Gender	Male	32 (60.4)	21 (39.6)	1	
	Female	98 (59.0)	68 (41.0)	1. 06 (0.52-1.99)	1.000
Education levels	BSC	24 (66.7)	12 (33.3)	1	
	Diploma	106 (57.9)	77 (42.1)	1.45 (0.68-3.08)	0.329
Household income	< 5,000,000	54 (71.1)	22 (28.9)	1	
	≥ 5,000,000	76 (53.1)	67 (46.9)	2.16 (1.19-3.92)	**0.014**
Smoking status	No	15 (60.0)	10 (40.0)	1	
	Yes	115 (59.3)	79 (40.7)	1.03 (0.44-2.41)	1.000
BMI	Normal	76 (67.9)	36 (32.1)	1	
	Not Normal	54 (50.5)	53 (49.5)	2.07 (1.19-3.59)	**0.009**
Number of children	< 2	99 (65.1)	53 (34.9)	1	
	≥ 2	31 (46.3)	36 (53.7)	2.17 (1.21-3.89)	**0.011**
Health problems	No	54 (63.5)	29 (36.5)	1	
	At least 1	76 (55.9)	60 (44.1)	1.47 (0.84-2.58)	0.203
Working duration (years)	< 16	92 (65.7)	48 (34.3)	1	
	≥ 16	38 (48.1)	41 (51.9)	2.07 (1.18-3.63)	**0.015**
Work position	Practitioner	128 (61.0)	82 (39.0)	1	
	Administrator	2 (22.2)	7 (77.8)	5.46 (1.11-26.49)	**0.033**
Working hour	≤ 8 hour	109 (59.6)	74 (40.4)	1	
	> 8 Hour	21 (58.3)	15 (41.7)	1.05 (0.51-2.17)	1.000
Health Promoting Behaviors					
HPLP Overall	Good	78 (67.8)	37 (32.2)	1	
	Poor	52 (50.0)	52 (50.0)	2.11 (1.22-3.65)	**0.009**
Health Responsibility	Good	51 (60.7)	33 (39.3)	1	
	Poor	79 (58.5)	56 (41.5)	1.09 (0.63-1.91)	0.779
Physical Activity	Good	49 (71.0)	20 (29.0)	1	
	Poor	81 (54.0)	69 (46.0)	2.09 (1.13-3.85)	**0.018**
Nutrition	Good	68 (64.2)	38 (35.8)	1	
	Poor	62 (54.9)	51 (45.1)	1.47 (0.855-2.53)	0.171
Spiritual Growth	Good	122 (65.2)	65 (34.8)	1	
	Poor	8 (25.0)	24 (74.0)	5.63 (2.39-12.24)	**<.001**
Interpersonal relation	Good	144 (63.3)	66 (36.7)	1	
	Poor	16 (41.0)	23 (59.0)	2.48 (1.22-5.03)	0.012
Stress Management	Good	70 (67.3)	34 (32.7)	1	
	Poor	60 (52.2)	55 (57.8)	1.89 (1.09-3.27)	0.028

*Good health status is the referent group

Analysis of the relationship between health status with health promotion behavior using Chi-square is shown in Table 4. Health promoting behaviors among nurses were measured using HPLP II which consists of 52 questions and 6 domains. From the analysis it was found that, from six domains, only the health responsibility and nutrition domains were not related to health status; the other 4 domains physical activity (OR=2.09, 95%CI=1.13-3.85), spiritual growth (OR=5.63, 95%CI=2.39-12.24), interpersonal relations (OR=2.48, 95%CI=1.22-5.03) and, stress management (OR=1.88, 95%CI=1.09-3.27) were significantly related with health status.

Multiple logistic regression was performed using the enter method. All independent variables with P-values less than 0.05 in the bi-variate test and reviewed by the model in theory were included in the full model. The result is that BMI (Adj OR=2.17; 95% CI= 1.14-4.10) and Spiritual Growth (Adj OR= 4.13, 95% CI= 1.47-11.59) were found as predictors of health status among community nurses (Table 5).

Table 5 Multiple logistic regression for predictors of health status*

Variables		Adj OR	95% C.I.		P- value
			Lower	Upper	
Age	< 40	1			
	≥ 40	0.79	0.31	2.01	0.618
Household Income	< Rp.5,000,000	1			
	≥ Rp.5,000,000	1.51	0.73	3.14	0.267
BMI	Normal	1			
	Not Normal	2.17	1.14	4.10	**0.018**
Number of Children	< 2	1			
	≥ 2	1.78	0.86	3.71	0.123
Working duration (years)	< 16	1			
	≥ 16	1.40	0.58	3.40	0.455
Working Position	Practitioner	1			
	Administrative	5.67	0.94	34.13	0.058
HPLP	Good	1			
	Poor	1.14	0.49	2.60	0.763
Physical Activity	Good	1			
	Poor	2.10	0.99	4.45	0.54
Spiritual Growth	Good	1			
	Poor	4.13	1.47	11.59	**0.007**
Interpersonal relation	Good	1			
	Poor	1.43	0.57	3.61	0.446
Stress Management	Good	1			
	Poor	0.96	0.441	2.11	0.928

*Good health status is the referent group

Discussion

Health status refers to physical, mental, and social health, not just the absence of the diseases. Health status of a person can determine how well they function in society[14]. Community health nurses have a wide range of responsibilities that make them exposed to high workload and stress. The patient-nurse ratio of community health nurses in Jakarta is 1: 193.3 per 100,000 population and is still far from the government's target of 1:117 per 100,000[15]. The study found that 41.1% of the overall health status of community health nurses in Jakarta indicates poor health status compared with Thailand's 33%[16]. Community nurses in Jakarta have a very wide catchment area, and the proportion of patients-nurses is unbalanced.

This study found there is a significant association between age and health status. Age is highly correlated with health status due to the decline in organ function[17]. The age of nurses affects health status due to long exposure to stress, and biological changes in the body that affect the decrease in body functions. More than half of community health nurses were over 40 years old (47.9%), and this should be a concern of the Jakarta health office to give more attention to the health of nurses, because it will have a direct impact the performance of nurses.

Income is one health determinant that influences health status. Research in Australia[18] and South Africa[19] found that higher income of a nurse related to better health status. This research found that community health nurses with high incomes tend to have poorer health status. High income for nurses is related to their high position and promotion. High positions give more responsibility and put nurses in more stressful conditions. Income affected health status, but only occur at extremely low-income[20].

The Body mass index (BMI) is an indicator of adiposity BMI and may lead to health problems ranging from cause-specific and all-causes mortality[21]. Almost half of community health nurses in Jakarta have abnormal BMI. Respondents with abnormal BMI were 1.8 times more likely to have poorer health status. Health problems caused by overweight and obesity are numerous: hypertension, heart disease, type II diabetes, degenerative joint disease, pulmonary disease, and several cancers[22].

Community health nurses have families and need to take care of their children[23]. Respondents who have more than 2 children have poorer health status. When they have 3 or more children, nurses have to devote significantly more energy and time to the family. That means nurses tend to experience physical fatigue[23]. Nurses who have more than two children should be able to role-share with other family members to maintain their health status.

Working in a stressful environment, high workload, and exposure to disease agents will adversely affect their health status. Working as a community health nurse limits their time for sports[24]. There should be more concern for community health nurses to plan their exercise time, and do healthy lifestyle activities during work.

Nurses who worked as a nurse manager were more likely have poorer health status than nurses who work as a practitioner. These results are different from research conducted in Taiwan that found nurses who work in administrative positions have better health status than nurses in other divisions. However, in the

same study, nurses who as a manager have health problems (such us high fatty liver) had less physical activity[12]. The nurse manager is a structural positions and occupied by a senior nurse who is usually older. This study found an association between health-promoting behaviors with health status. Respondents who have poor health-promoting behavior were twice more likely to have poorer health status. Health promoting behavior indicates people lifestyle that can support they roles in communities. This finding also found research in Korea[25-26], America[27], and China[28] where people who included health-promoting behavior in their lifestyles have better health status in terms of physical and mental health.

This study found 61% of community health nurses in Indonesia have low level of physical activity. Research in the US found that low physical activity among nurses was due to lack of time, inability to choose a method, competing demands, environmental factors, and lack of support[29]. Nurses with a good physical activity will have a good body condition, low levels of cholesterol, a better cardiovascular system, and more concentration in their work.

Spiritual growth focuses on the development of inner resources and is achieved through transcending, connecting, and developing. This dimension indicates the condition of peace, well-balanced life and a meaningful life[11]. This study found that nurses who have low spiritual growth were 5 times more likely to have poorer health status. Spirituality has been accepted as part of the health component and is related to well-being. Many studies have shown that a person who has a high level of spirituality is able to appreciate themselves, have a better perception of their health and has a near-ideal BMI score[30].

This research found that respondents who had poor interpersonal relations have 2.5 times worse health status. Similar results were found from studies in South Africa which found that someone who has good social relationships with the group have better health status[19]. Interpersonal relations are a dimension that reflects their interpersonal communication which is close and meaningful. Research in the US found that close interaction in groups will affect their lifestyle[31].

Stress management is an important part of maintaining mental health. Fully 82.2% of respondents had a good stress management. Respondents who had poor stress management were 1.9 times more likely to have lower health status than respondents who had good stress management. Results of a study in the US found that persons who had good stress management, were able to control their response to stress and can minimize adverse effects on their own health[32-33].

This study found no association between domain nutritional with health status of the community health nurses in Jakarta. Domain nutrition shows how respondents use their knowledge about healthy food and then they practiced in daily life[11]. The Research in the United States that shows relationship between behavior in choosing healthy foods with better health status[31]. The finding was different due to health consequences of unhealthy diet behaviors had not yet affected the health conditions of community health nurses in Jakarta considering the majority respondents aged below 40 years. Despite there is no the relationship, nutritional status have play critical role in determining health status of community health nurses, in this study nurses with poorer nutrition status have 1.5 times more likely have poorer health

status. When viewed in percentage, more than half of the respondents (51.6%) had a poor nutritional status domain. It indicates nurses had not been able to transfer their knowledge in daily life.

Health domain responsibility was not significantly associated with health status. This domain plays a role in how nurse cares for their own health, and take action to maintain their health. Another study found 58.6% of nurses had poor health responsibility, which indicates that nurses are not concerned about their health. They are too busy with work, so they pay less attention to their health. Nurses also feel they have knowledge about disease conditions so they know when to worry; think can handle it themselves. Research in China[34] and Germany[35] found a relationship between health status and health responsibility, but this study was conducted on a general population, and that might produce differences with other studies.

Conclusions

This study shows that almost half of community health nurses in Jakarta do not practice healthy life behaviors in their lives, this will affect their role as role models in society that should be a good example of a healthy life behavior. It is noted that the majority of nurses have low levels of physical activity, choosing unhealthy foods for consumption, and have low ability to manage stress. These three factors become risk factors in the emergence of non-communicable diseases in an individual.

Health status of community health nurses influenced by many dimensions. This study addresses the majority of community health nurses with good health status, but there are more than 40% of community health nurses reporting poor health status.

This figure should be of concern to nurses and governments in view of the important role nurses play in providing services in the community.

Health-promoting behaviors and health status have been proven to have a positive relationship, especially on BMI score and spiritual status. The respondents who had poor health-promoting behavior were twice as likely to have poorer health status. So that regulations and programs that are able to encourage healthy nurses especially in keeping BMI in normal condition and improve spirituality so that formed a good mental health will directly affect their long-term health status

Recommendations

Recommendation for Health Centers

The association between health status and working position were found. Community health nurses who work in administrative positions were in poorer health than those in other positions. There should be a rotation of nurses in different positions. That would help prevent sedentary activity in one division. With regular rotation, nurses will have the new working environment and reduced stress.

Recommendation for Health Officers

This study found that BMI is one of a predictor of health status among community health nurses. The government should make plans to reduce obesity among community nurses. The study found that more than half community health nurses in Jakarta had abnormal BMI (51.1 %). Programs should be developed together with programs for community health nurses. The government can provide facilities and resources to support that program.

Recommendations for Future Research

Future studies can be conducted to probe the relationship of health status with quality of services provided by community health nurses. Further research can also look for information about reasons why nurses are not practicing healthy lifestyles in their daily lives. To explore their health-promoting behaviors, future research should include a qualitative study to explore how community health nurses transfer their knowledge into their lifestyle.

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