



HEALTH PROMOTING LIFESTYLE AMONG NURSES IN INDONESIA

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ABSTRACT

Background: Nurses are expected to be role models for the surrounding environment, both patients and families, particularly in clean and healthy living behaviours that can reduce the occurrence of obesity. The purpose of this study is to determine the prevalence of obesity and a healthy lifestyle among nurses at the Surabaya Islamic Hospital.

Method: a cross-sectional study method with 406 nurses at Surabaya Islamic Hospital recruited by convenience sampling using questionnaires distributed via an online survey. The Health Promoting Lifestyle Profile II (HLP-II) questionnaire was used to collect data from December 2022 to February 2023.

Results: According to the findings, 191 nurses (47.04%) were obese. A healthy lifestyle has a total score of 129.77 ± 17.89. Spiritual development received the highest score with 25.39±3.76, interpersonal relationship 23.90 ± 3.60, nutritional 20.98± 3.57, health responsibility 20.34 ±3.93, stress management 19.57 ±3.42, and physical activity 18.04 ±4.27. According to the findings of the Pearson analysis, there was a weak relationship between body mass index and physical activity ($r=0.106$, $p\text{-value} = 0.033$), as well as body mass index and interpersonal relationships ($r=0.120$, $p\text{-value} 0.015$).

Conclusion: Nurses obesity is a public health issue because nurses are not only self-sufficient individuals, but also role models for those around them. As a result, hospital and government policies to increase awareness of how dangers of obesity are required.

Keywords: Health Promoting Lifestyle, Indonesia, Nurses, Obesity.

SAÚDE PROMOVEDO ESTILO DE VIDA ENTRE ENFERMEIROS NA INDONÉSIA

RESUMO

Antecedentes: Espera-se que os enfermeiros sejam modelos para o ambiente circundante, tanto para os pacientes como para as famílias, particularmente em comportamentos de vida limpos e saudáveis que podem reduzir a ocorrência de obesidade. O objetivo deste estudo é determinar a prevalência de obesidade e um estilo de vida saudável entre os enfermeiros do Hospital Islâmico Surabaya.

Método: um método de estudo transversal com 406 enfermeiros do Hospital Islâmico de Surabaya recrutados por amostragem de conveniência usando questionários distribuídos através de uma pesquisa on-line. O questionário

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Health Promoting Lifestyle Profile II (HLP-II) foi usado para coletar dados de dezembro de 2022 a fevereiro de 2023.

Resultados: De acordo com os achados, 191 enfermeiros (47,04%) foram obesos. Um estilo de vida saudável tem uma pontuação total de $129,77 \pm 17,89$. O desenvolvimento espiritual recebeu a maior pontuação com $25,39 \pm 3,76$, relação interpessoal $23,90 \pm 3,60$, $20,98 \pm 3,57$ nutricional, responsabilidade em saúde $20,34 \pm 3,93$, gestão de estresse $19,57 \pm 3,42$ e atividade física $18,04 \pm 4,27$. De acordo com os achados da análise de Pearson, houve relação fraca entre índice de massa corporal e atividade física ($r=0,106$, p -valor = $0,033$), assim como índice de massa corporal e relações interpessoais ($r=0,120$, p -valor $0,015$).

Conclusão: A obesidade dos enfermeiros é um problema de saúde pública porque os enfermeiros não são apenas indivíduos autossuficientes, mas também modelos para aqueles ao seu redor. Como resultado, são necessárias políticas hospitalares e governamentais para aumentar a conscientização sobre como os perigos da obesidade são necessários.

Palavras-chave: Saúde Promovendo Estilo de Vida, Indonésia, Enfermeiros, Obesidade.

PROMOCIÓN DE LA SALUD Y EL ESTILO DE VIDA ENTRE LAS ENFERMERAS DE INDONESIA

RESUMEN

Antecedentes: Se espera que las enfermeras sean modelos a seguir para el entorno circundante, tanto para los pacientes como para las familias, especialmente en lo que respecta a los comportamientos de vida limpios y saludables que pueden reducir la incidencia de la obesidad. El propósito de este estudio es determinar la prevalencia de la obesidad y un estilo de vida saludable entre las enfermeras del Hospital Islámico de Surabaya.

Método: un método de estudio transversal con 406 enfermeras del Hospital Islámico de Surabaya reclutadas por muestreo por conveniencia utilizando cuestionarios distribuidos a través de una encuesta en línea. Se utilizó el cuestionario Health Promoting Lifestyle Profile II (HLP-II) para recopilar datos desde diciembre de 2022 hasta febrero de 2023.

Resultados: Según los hallazgos, 191 enfermeras (47,04%) eran obesas. Un estilo de vida saludable tiene una puntuación total de $129,77 \pm 17,89$. El desarrollo espiritual recibió la puntuación más alta con $25,39 \pm 3,76$, relación interpersonal $23,90 \pm 3,60$, nutrición $20,98 \pm 3,57$, responsabilidad en la salud $20,34 \pm 3,93$, manejo del estrés $19,57 \pm 3,42$, y actividad física $18,04 \pm 4,27$. Según los hallazgos del análisis de Pearson, hubo una relación débil entre el índice de masa corporal y la actividad física ($r=0,106$, valor $p = 0,033$), así como el índice de masa corporal y las relaciones interpersonales ($r=0,120$, valor $p 0,015$).

Conclusión: La obesidad de las enfermeras es un problema de salud pública porque las enfermeras no solo son individuos autossuficientes, sino también modelos a seguir para quienes las rodean. Como resultado, se han establecido políticas hospitalarias y gubernamentales para aumentar la conciencia sobre los peligros de la obesidad.

Palabras clave: Promoción de la salud, Estilo de vida, Indonesia, Enfermeras, Obesidad.

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1 INTRODUCTION

Nurses play a critical role in healthcare delivery, providing essential care and support to patients. Nurses spend a lot of time encouraging patients and their families to lead healthy lifestyles. However, studies of nurses' lifestyle choices have typically revealed a pattern of disregard for dietary recommendations, smoking, alcohol consumption, sedentary behavior, and



physical activity (1). However, nurses may encounter a range of behavioral problems that can impact their ability to provide high-quality care and maintain their own health and wellbeing. Some of the common behavioral problems that nurses may face include stress, burnout, poor communication, lack of teamwork, and low job satisfaction (2). These problems can impact their job performance, as well as their physical and mental health

Nurses' behavior lifestyle can vary depending on a number of factors, including personal habits, work environment, and access to resources. Studies have shown that nurses are more likely to engage in physical inactivity (3). This may be due in part to the physically demanding nature of their work. However, nurses may still struggle to find time for regular physical activity, particularly if they work long or irregular hours, this situation can impact to the high risk of obesity. Obesity is a growing problem among nurses and can have a significant impact on their health and wellbeing (4) . Nurses who are obese may experience a range of physical and mental health problems, including an increased risk of chronic diseases such as diabetes, heart disease, and certain types of cancer (4)

The research conducted by Kayaroganam on nurses working in hospitals in South India indicates that they have a high prevalence of non-communicable diseases(5) the same situation with in England, a study has indicated that roughly 25% of nurses suffer from obesity(6) This may be due in part to limited access to healthy food options in the workplace or the need for quick and convenient meals during busy work shifts. Nurses' behavior lifestyle can have a significant impact on their own health and wellbeing, as well as the quality of care they provide to their patients. Hence, it is crucial for nurses to prioritize their health by adopting appropriate health practices and lifestyle habits. This can enable them to set a role model for the community by promoting self-care and personal health (7).

The objective of this study was to expand upon existing knowledge by collecting initial data on nurses' Body Mass Index (BMI) and the prevalence of obesity in their current lifestyles and habits at a tertiary hospital. Moreover, the study assessed the extent to which nurses engaged in health-promoting behaviors and examined the correlation between a healthy lifestyle and BMI.

2 METHOD

This research was a cross sectional study. We used Health Promoting Lifestyle Profile-II scale. HPLP-II is 52 items consist of six subscales, including physical activity (PA), nutrition (N), spiritual growth (SG), interpersonal relation (IR), stress management (SM) and health



responsibility (HR). the HPLP-II developed by Walker and Hill Polerecky (8) A Likert scale was utilized to evaluate various behaviors. The scale's categories included never (1), sometimes (2), frequently (3), and regularly (4). The HPLP II score is calculated by determining the mean score of all 52 HPLP items, and it ranges from 52 to 208. The total score is further categorized into four groups: poor (52-90), moderate (91-129), good (130-168), and excellent (169-208). Greater scores in each subscale indicate more frequent health-promoting behaviors. The original version of the HPLP II had a Cronbach's alpha of 0.94 for the overall scale and ranged from 0.79 to 0.87 for the six subscales.

The study employed a convenient sampling method with online survey, and the participants were 406 nurses who works in Islamic Surabaya Hospital selected based on specific inclusion criteria. These criteria included being professionally active nurses who held a valid license to practice, had a minimum of six months of work experience, and provided informed consent to participate in the research. It's conducted from December 2022 – February 2023. The collected socio-demographic data were subjected to a descriptive analysis.. To determine the relationship between socio demographic and BMI using Chi square. HPLP-II and BMI, Pearson's correlation analysis was conducted. The study has approval from Surabaya Islamic Hospital Ethical Board No.125/KEPK-RSISJS/XI/2022

3 RESULT

Table 1

Characteristic socio-demography of respondents

Variable		(n= 406)	
		n	%
Age		Mean (\pm SD) 30.22 (\pm 8.04)	
Gender	Male	94	23.2
	Female	312	76.8
Marital Status	Single	63	15.5
	Married	343	84.5
Educational level	Master	8	2.0
	Bachelor	185	45.6
	Diploma	213	52.5
Working Hours	Shift	318	78.3
	Office Hour	88	21.7
Working Experience	1 – 5 years	106	26.1
	6 - 10 years	136	33.5
	11 – 15 years	73	18.0
	16 – 20 years	49	12.1
	>20 years	42	10.3



Chronic diseases	Unknown	406	100.0
	Known with a chronic disease	00	00
Smoking	No	372	91.6
	Yes	34	8.4
Alcohol use	No	406	100.0
	Yes	0	00

Source: Prepared by Authors (2024)

Table 1 shows the mean age 30.22 (± 8.04). There were more females for participants 76.8%. Other demography are: marital status (84.5%), most work on shift basis (78.3%), a greater proportion have a work experience of six to 10 years (33.5%), most are not aware of the presence of a chronic disease (100%), only a few smoke (8.4%) none was reported in consuming alcohol.

Table 2

correlation between socio-demographic and body mass index (BMI) among nurses

Variable	BMI Category				Total	X ²	DF	p-value
	Underweight	Normal	Overweight	Obese				
Age								
21-30	12	50	27	50	139			
31-40	4	42	46	93	185	27.191 ^a	9	0.001
40-50	1	16	15	39	71			
51-100	0	1	1	9	11			
Total	17	109	89	191	406			
Gender								
Male	3	19	24	48	94			
Female	14	90	65	143	312	3.443 ^a	3	0.328
Total	17	109	89	191	406			
Marital Status								
Single	4	25	8	26	63	8.831 ^a	3	0.032
Married	13	84	81	165	343			
Total	17	109	89	191	406			
Edu level								
Master	8	64	44	97	213			
Diploma	9	45	43	88	185	5.811 ^a	6	0.445
Bachelor	0	0	2	6	8			
Total	17	109	89	191	406			

Source: Prepared by Authors (2024)

Table 2 shows the prevalence of obesity among nurses was 191 of 406 nurses (47%). The data indicates that there were significant associations between age and BMI ($p = 0.001$) as well as marital status and BMI (0.032) at a significance level of 0.05. However, no significant associations were observed between gender and BMI ($p = 0.328$) and between level of education and BMI ($p = 0.445$) at the 0.05 level of significance.

**Table 3***Correlation between HPLP-II with BMI among nurses*

Variables	(n= 406) (M±SD)	Pearson's r	p-value
Spiritual Growth	25.39 ± 3.76	0.039	0.436
Physical Activity	18.04 ± 4.27	0.106*	0.033
Health Responsibility	20.34 ± 3.93	0.053	0.285
Stress Management	19.57 ± 3.42	0.081	0.103
Nutritional	20.98 ± 3.57	0.032	0.522
Interpersonal Relationship	23.90 ± 3.60	0.120*	0.015
Total HPLP	129.77 ± 17.89	0.081	0.103

*. Correlation is significant at the 0.05 level (2-tailed)

Source: Prepared by Authors (2024)

Result of the analysis of the two variables reveals an overall positive weak correlation that is not statistically significant between the HPLP II and BMI ($r = 0.081$; $p\text{-value} = 0.103$). meanwhile, weak positive correlation that is significant were observed for physical activity subscale ($r = 0.106$; $p\text{-value} 0.033$) and interpersonal relationship ($r = 0.120$; $p\text{-value} 0.015$). and there is no correlation between spiritual growth, health responsibility, stress management, and nutritional ($p\text{-value} > 0.05$)

4 DISCUSSION

The research revealed a considerable prevalence of obesity among nurses, reaching 47%, the findings of this research are in line with the study conducted in Malaysia, which also demonstrates that nurses have a high prevalence of obesity (9). And most of the obese nurses are female, these results align with previous studies conducted in Korea have consistently found a high prevalence of obesity among female nurses (10) The prevalence of overweight and obesity was found to be higher among nurses compared to other healthcare professional (11). Some of the factors that contribute to obesity among nurses include long work hours, limited access to healthy food options, and high levels of stress. Nurses may also have irregular eating patterns due to the demands of their job, which can further contribute to weight gain.

When examining the relationship between BMI and four socio-demographic variables, the chi-square analysis indicated a significant association between BMI and age as well as marital status. A research conducted in China revealed that age has significant correlation with



BMI (12) (13) This could be attributed to factors such as decreased physical activity, changes in metabolism, hormonal changes, or lifestyle factors that contribute to weight gain over time. A study by Sato in Japan revealed that there was no association between BMI and married men, while BMI showed a strong association with married women.(14) the study by Cobb explained that BMI of married man and married woman exhibits significant associations over time, partially influenced by shared behaviors, such as dietary habits. Prior research has indicated that individuals' behaviors tend to align with those of their spouses, and furthermore, they may influence their spouses' behaviors as well (15)

In this study also showed a significant association between physical activity, interpersonal relationships, and body mass index (BMI) among nurses. Physical activity is a behavior that is less frequently engaged in by nurses due to the nature of their work, which often involves prolonged periods of sitting, standing in one place or being in a sedentary state for more than three hours per day or per shift. (16). Nurses, like many other healthcare professionals, are prone to sedentary behavior especially nurses who has night shift (17) Nurses allocated a greater portion of their day shifts to standing and walking activities, while dedicating less time to sitting compared to their night shifts. Prolonged periods of inactivity can negatively impact their health especially to prevalence of obesity.

The study shows that Interpersonal relationship has relationship with BMI, the previous study revealed that social norms operating within interpersonal relationships have the potential to impact individuals' eating habits and levels of physical activity (18). An expanding body of academic literature consistently indicates that interpersonal relationships play a significant role in the development of obesity and the associated risks at various life stages (19). Adults' dietary habits are influenced by social determinants such as peer influence, cultural conventions, and the desire for affiliation with a particular social group (20) This condition aligns with the subscale of Interpersonal Relationships within the Health Promoting Lifestyle Profile-II (HPLP-II), specifically with regards to the item related to maintaining intimacy with close friends. Consequently, if close friends or work partners have unhealthy eating habits, it can influence our own dietary practices as well. Aside from the various physiological, genetic, and environmental factors that contribute to the development of obesity, social connections and networks also have a notable impact on obesity and related behaviors.(21)



5 CONCLUSION

The prevalence of high BMI and the tendency towards obesity among nurses should be a concern for decision-makers, highlighting the importance of implementing targeted policies for nurses that emphasize the need for physical activity and the regulation of dietary choices, especially among those working night shifts

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