

Correlation Between Nurses' Body Mass Index (BMI) and Their Attitude Towards Obese Patients

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ABSTRACT

Introduction: Obesity is categorised as a non-communicable disease and has become a global problem and it is a significant risk factor in developing medical conditions such as cardiovascular disease, hypertension, diabetes and others. Healthcare providers, especially nurses, play an important role in assisting and providing support to patients with weight problems. As the prevalence of overweight and obesity has risen, the report regarding negative attitudes among nurses, against obese people also has increased. As such, this study aims to examine the relationship between nurses' body mass index and their attitude toward obese patients.

Methods: A descriptive cross-sectional survey was conducted, and random sampling method was applied in selecting the study setting. One hundred and seven nurses were recruited from a variety of primary health clinics throughout Kuantan, Pahang. After obtaining informed consent, the questionnaires were distributed to the participants.

Results: Out of 107 participants, 84.1% showed a positive attitude towards obese patients. There is no significant association between the body mass index of nurses and their attitude towards obese patients as the significant value (p-value) is greater than 0.05.

Conclusion: In conclusion, the current study shows that nurses should maintain a positive attitude as it has been shown to boost the efficiency of nursing intervention and minimize biased attitudes.

Keywords: Obesity, Nurses, Negative attitude, Body mass index

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INTRODUCTION

The prevalence of worldwide obesity has nearly tripled since 1975, and in 2016 over 650 million people were obese (1). Overall, it was estimated 13% of the world adult population were obese in 2016 (1). Malaysia was the country with the highest rate of obesity among Asian countries (2). The prevalence of obesity was 64% among males and 65% among the female population (2). Obesity was categorised as a non-communicable disease (NCD) and has become a global problem (3). In addition, obesity continues to be a public issue, and it is a significant risk factor in developing medical conditions such as cardiovascular disease, hypertension, diabetes and others. Thus, healthcare providers, especially nurses, play an important role in assisting and providing support to patients with weight problems. As the prevalence of overweight and obesity has risen, the report regarding negative attitudes among healthcare providers, especially nurses, against obese people also has increased (4).

Individuals who were obese experienced stigmatised and multiple discrimination due to their weight (5). In addition, they faced stigmatisation, especially in a hospital setting (5). The negative attitudes among nurses are shown to be related to the body mass index (BMI) of nurses. For instance, the study conducted by Zhu, Norman, & While, found a significant relationship between health professionals' weight status and attitude towards weight management ($p < 0.001$), where the most negative attitude towards obese patients is observed in nurses who have lower weight categories which are BMI < 25 compared to those nurses who are obese (6). In addition, the study by Torre et al. revealed that nurses with higher BMI showed a more positive attitude towards obese patients (5). Healthcare professionals, such as nurses, who have a high BMI and have struggled to control their weight, are more likely to empathise with obese people (6). Then, another study by Keyworth et al. conducted among twenty nursing students using semi-structured interviews reported that most nurses show negative attitudes like blaming the patients for being obese due to lack of self-control and did not engage in a healthy lifestyle (7).

There are many impacts when patients are stigmatised, such as resulting in the risk of depression, low self-esteem, physical stress, and other psychiatric disorders (5). Furthermore, this study also showed that the patient who is the victim of stigmatisation would avoid, delay and cancel their appointment in receiving service or care from the health care provider. Thus, it will directly impact delivery of care to the patient.

The healthcare providers, especially nurses, should improve their attitudes by reducing stigma and discrimination towards obese people as it affects patient's quality of care, such as patient will avoid, delay or cancel the appointments and refuse the treatment. Hence, the objective of this study is to examine the relationship between nurses' body mass index and their attitude toward obese patients.

METHODS

A quantitative cross-sectional survey using questionnaires was conducted at eleven primary health clinics around Kuantan, Pahang. The random sampling method was applied in selecting the study setting. The primary health clinic was selected to be the study setting as this is the first point of contact for all patients and is thus viewed as the ideal place to address overweight and obesity. This study obtained ethical approval from Medical Research and Ethics Committee (MREC) and Pejabat Kesihatan Daerah Kuantan. The participants were given an informed consent form as verification that they agreed to participate in this study.

The self-administered questionnaires consist of two parts: Part A consists of socio-demographic data of study population such as age, BMI, education level, location of Primary Health Clinic and year of working. Part B contained 15 questions Likert Scales; 5 response choices ranged from strongly agree (1 point) to disagree (5 points) strongly. The minimum and maximum scores for this part were 15 to 75 points. Those participants who scored less than 38 were considered negative attitudes, and those who scored more than 38 were categorised as having positive attitudes (8). The questions were modified and adapted from Zhu et al.; Kable et al. (6, 9). A pilot study has been carried out to ensure reliability and

validity. The questionnaires have been prepared in both languages, which were English and Malay. The Cronbach Alpha has been used for each part of the questionnaires to test for reliability, and it has a good value (Cronbach $\alpha=0.738$).

Statistics

All data were analysed using IBM Statistical Package Social Science (SPSS) version 22.0. Descriptive characteristics of the participants were presented as frequency, percentage, mean and standard deviation. In addition, the Chi-Square test has been used to test for the association between the body mass index (BMI) of nurses and their attitude towards obese patients.

Ethical Matters

This study obtained ethical approval from Medical Research and Ethics Committee (MREC) before conducting the survey.

RESULTS

Socio-demographic Characteristics

There were 107 participants in this study. The majority of the participants in this study were between the age of 37 and 44 years old, accounting for 51.4 percent ($n=55$), while the least number of participants was between the age of 53 and 60 years old, accounting for 2.8 percent ($n=3$). The majority of them, 68.2% ($n=77$), had worked for more than 14 years, while the smallest percentage, 4.7 percent ($n=5$), had worked for two to seven years. This study also revealed that the majority of participants were obese, which was 60.7% ($n=65$), while 38.3% ($n=41$) of the participants had a normal weight, and only 0.9% ($n=1$) was underweight. Moreover, 48.6% declared that they did not join any courses related to obesity, followed by 41.1% who joined the courses, and lastly, 10.3% did not remember whether they had joined or not. The majority of them did not follow any training on obesity with the percentage of 57.9%, while 42.1% joined the training. Overall results are presented in Table I.

The attitude of nurses towards obese patients

Fifteen questions measured the attitude of nurses towards obese patients, and five response choices ranged from strongly agree (1 point) to strongly disagree (5 points). Table II shows the results for descriptive analysis of the

attitude of nurses towards obese patients. Most of the participants showed a positive attitude towards obese patients with a percentage of 84.1%. However, 15.9% of participants showed a negative attitude towards obese patients.

Table I: Socio-demographic characteristic of the nurses, $n=107$

Variable	Frequency (n)	Percentage (%)
Age (years old)		
28-36	26	24.3
37-44	55	51.4
45-52	23	21.5
53-60	3	2.8
Working Experience (years)		
2-7	5	4.7
> 7-10	9	8.4
> 10-14	20	18.7
> 14	73	68.2
BMI		
Underweight	1	0.9
Normal	41	38.3
Obesity	65	60.7
Attended Obesity Courses		
Yes	44	41.1
No	52	48.6
Not remember	11	10.3
Attended Obesity Training		
Yes	45	42.1
No	62	57.9

Table II: Attitude of nurses towards obese patients, $n=107$

Attitude:	Frequency (n)	Percentage (%)	Mean (SD)
< 38 (negative)	17	15.9	0.841
≥ 38 (positive)	90	84.1	(0.367)
Total	107	100	

Association between BMI of nurses and their attitude towards obese patients

Table III presented the association between the BMI of nurses and their attitude towards obese patients. A Chi-Square test was used due to the non-normal distribution. The Chi-Square test showed that there was no significant association between nurses' BMI and their attitude towards obese patients, $\chi^2=0.135$, $df=2$ and p value = 0.378. So, it indicated that the

BMI of nurses did not affect their attitude towards obese patients.

Table III: Association between BMI of nurses and their attitude towards obese patients, n=107

BMI of nurses	Attitude		χ^2	d f	P-value
	Negative (n=20)	Positive (n=87)			
Under-weight	0	1	0.135	2	0.378
Normal	5	36			
Obesity	12	53			

DISCUSSION

The nurses in this study had a positive attitude towards the obese patients, with a percentage of 84.1% regardless of their weight status. This current finding consistent with study by Budd et al. where the nurses who were obese tended to show a positive attitude towards obese patients (10). Another study by Lee & Calamaro produced a positive result where the nurses who have weight problems showed less negative attitudes than those who did not have body weight problems (11). According to Hunter, Rawlings-Anderson, Lindsay, Bowden, and Aitken, the nurses who followed a structured educational obesity management, their attitudes were more positive towards obese patients (12).

Moreover, the study findings by Salziyan, Norwati, and Ismail also supported current study where it revealed that the correlation between BMI of nurses and their attitude was found to be not significant with p-value of 0.47 and Pearson correlation coefficient 0.04 (13). It was consistent with the current study that there was no significant association between the BMI of nurses and their attitude towards obese patients ($r = 0.04$, p value = 0.77, $n = 69$) (14). However, in the study by Zhu, Norman, and While, the finding was contradictory where it reported negative attitude towards obese patients was observed in nurses who have lower weight categories which BMI < 25 compared to those nurses who are obese (6). The p-value for this association is ($p < 0.001$). This should be avoided by showing negative attitudes to patients as it can affect the patient emotion and quality of care. Reflecting to these study findings, nurses who experience obesity or have a body weight problem and attended

structured educational obesity management will understand better because they have already faced it before. They will show an empathetic attitude and make patients calm and concerned about their condition. In addition, they also identified that weight management is an important part of their role and believed that primary health clinic is an ideal place to work with this problem.

CONCLUSION

The overall findings found that the majority of the nurses were showing a positive attitude towards obese patients with a percentage of 84.1%, and for the association part, it revealed that there was no association between BMI of nurses and their attitude towards obesity patients with $\chi^2 = 0.929$, $df = 2$ and p value = 0.628. It is crucial to avoid the negative attitude among health care providers, especially nurses, to help them provide the best care and plan the strategies for obesity management without having a negative attitude towards obese patients. It is proven that showing a negative attitude towards obese patients could be one of the barriers for the obese patient to seek treatment or intervention for weight management (6). Additionally, the nurses should support the obese patient in managing the obesity problem and avoiding negative attitudes such as stigmatization, discrimination, being judgmental, and others as it can harm them.

Besides, according to the result obtained, it is recommended that the next researcher increase the number of participants or sample size to provide significant results and association could be found with the higher number of participants. Moreover, the study should be conducted at more clinics in Pahang state to get more participants and significant study findings.

CONFLICT OF INTEREST

There is no conflict of interest in this study.

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