Annals of R.S.C.B., ISSN: 1583-6258, Vol. 25, Issue 5, 2021, Pages. 4667 - 4673

Received 25 April 2021; Accepted 08 May 2021.

Nurses' Knowledge toward Obesity in Al-Basra City

Ali Malik Tiryag[1]*, Hussein Hadi Atiyah[2]

[1]MSc, Adult Nursing Department, College of Nursing, University of Baghdad, Iraq[2]Prof., Adult Nursing Department, College of Nursing, University of Baghdad, Iraq

*Corresponding Author E-mail:alimalikteryag1991@gmail.com

ABSTRACT

Obesity is an epidemic disease and worldwide concern since it is an important risk factor for major causes of mortality, including heart disease, type 2 diabetes, and some cancers. The knowledge of nurses is important to the management and prevention of obesity.

The study aimsto assess the level of nurses' knowledge about obesity and to find the relationship between Nurses' knowledge about obesity and their demographic variables (age, gender, level of education, and years of experience).

A descriptive study was conducted on nurses' knowledge of obesity atAl-Faiha Teaching Hospital, Al-Sader Teaching Hospital, and Al-Mawani Teaching Hospital in Al-Basra City. The period of the study was started from the 10th of October 2020 to the 15th of April 2021. A purposive (non-probability) sample covers one hundred nurses who work in the surgical wards, a questionnaire was designed to investigate nurses' demographics and knowledge toward obesity.

The findings of the presentstudy showed that 67% of nurses had poor knowledge about obesity, 30% of nurses had moderate knowledge and only 3% of nurses had good knowledge.

The present study concluded the nurses have poor knowledge about obesity.

The researcher recommends special training courses that should be designated and presented to the nurses about obesity and obesity-related comorbidities.

Keywords

Nurses, Knowledge, Obesity.

Introduction

In both economically stable and emerging areas of the world, obesity has been one of the most critical public health issues. About 1.9 billion people were overweight globally in 2016, and of these, more than 650 million were obese, a figure that has tripled since the 1970s. If the rate continues to grow, it is projected that by 2025, about one-third of the world's adult population will be overweight and over 1 billion will be obese [(1)], and up to 57.8% of the adult population of the planet (3.3 billion people) will be either overweight or obese by 2030 [(2)].

Every second, an extra 2.5 individuals are introduced to the global population, and one of them would be obese or overweight. In the US, 39.8 percent of the adult population is estimated to be obese (Hales et al., 2017).

In the Eastern Mediterranean region, the prevalence of obesity and obesity ranges from 74% to 86% in women and 69% to 77% in men [(3)], in Iraq alone about 23.6 million are obese, accounting for 65.6% of the adult population[(4)].

Obesity is a worldwide concern since it is an important risk factor for major causes of mortality, including heart disease, type 2 diabetes, and some cancers [(5)].

Obesity-related comorbidity is defined as conditions either directly caused by overweight/obesity or known to contribute to the presence or severity of the condition [(6)].

Patients classified as overweight or pre-obese when BMI is 25 to 29.9 kg/m^2 and also when BMI exceeding 30 kg/m^2 in those with obesity. Obesity is graded as moderate or extreme when the BMI reaches 40 kg/m^2[(7)].

Obesity refers to body fat collection and irregular distribution caused by several causes such as inheritance, high-calorie, high-fat intake, and absence of count of physical activity[(8)].

Obesity has a genetic basis and is often attributed to lifestyle, with core and environmental variables. The increased prevalence of this complication in recent years is responsible for lifestyle-related variables such as diet, socio-cultural problems, and physical activity [(9)].

Obesity in the United States and globally is a growing problem. Obesity is associated with increased all-cause deaths and obesity is linked to over 300,000 deaths every year in the United States [(10)]. Obesitymanagement involves exercise, nutrition, drugs, and surgery [(11)].

In the case of extreme obesity, bariatric surgery is the gold standard technique where all approaches are unsuccessful [(12)].

Mobility, quality of life, and productivity are all impaired by obesity; and extreme obesity also can shorten life expectancy by an average of 5 to 20 years [(13)].

Received 25 April 2021; Accepted 08 May 2021.

Mortality increases from 44% for Class I obesity (BMI of 30 to 35 kg/m^2) to 88% for Class II obesity (BMI of 35 to 40 kg/m^2) and 150% for Class III obesity (BMI of > 40 kg/m^2) [14]. Obesity is now known to be the second most common cancer risk factor, after smoking [15].

In the United States, the annual medical cost of obesity is estimated at $147 billion [16]. According to the American Heart Association, overall medical expenses could hit up to $957 billion by 2030. The medical costs of obesity could rise from $147 billion to $210 billion annually [17].

Nurses play an important part in treating and reducing obesity[18].

Material and Methods

To achieve the aims of this study**:** A descriptive-analytic study was conducted on nurses' knowledge toward obesity at surgical wards at Al-Faiha Teaching Hospital, Al-Sader Teaching Hospital, and Al-Mawani Teaching Hospital in Al-Basra City. The period of the study was started from the 10th of October 2020 to the 15of April 2021.

Instruments were constructed by the researcher for the study. A non-probability purposive sample of one hundred nurses. The study instrument is composed of two parts: the first part dealing with the demographic variables of the nurses, the second part dealing with knowledge about obesity, which involved (6) items (Know, Uncertain, and Don't Know).

Each question is involved (3) items in the form (Know, Uncertain, and Don't Know).and given (3 for Know answer, 2 for Uncertain, and 1 for Don't Know). About (10-15) minutes are given to complete the test.

The validity of the study instrument was determined through a list of (13) experts and the reliability of the instrument was determined through the alpha Cronbach method. The analysis of the data used was descriptive statistics and statistical inferential, to find the differences between thedemographic variables of the nurses and their knowledge.

Data Analysis

Data were analyzed through the use of SPSS application version 26.0. Descriptive data analysis including Mean of the score (M.S), with their Standard Deviation (S.D), and frequency (f). Inferential data analysis includes the T-test for independent samples, analysis of variance (one-way ANOVA), Pearson correlation.

Results

Table 1: Distribution of the Variables Related Demographic Characteristics N=100 nursing staff

descriptive statistics of Demographic Variables			
Demographic Variables	**Variables Classes**	**F**	**Percent**
Gender	**Male**	**48**	**48 %**
	Female	**52**	**52 %**
	Total	**100**	**100 %**
Age	**20-24**	**17**	**17 %**
	25-29	**30**	**30 %**
	30-34	**12**	**12 %**
	35-39	**11**	**11 %**
	40-44	**10**	**10 %**
	45 & more	**20**	**20 %**
	Total	**100**	**100 %**

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Received 25 April 2021; Accepted 08 May 2021.

Marrital status	**Single**	**21**	**21 %**
	Married	**79**	**79 %**
	Total	**100**	**100 %**
Education level	**Secondary School**	**48**	**48 %**
	Institute	**39**	**39 %**
	College	**13**	**13 %**
	Total	**100**	**100 %**
Years of experience	**1-5**	**34**	**34 %**
	6-10	**28**	**28 %**
	11-15	**11**	**11 %**
	16-20	**8**	**8 %**
	20 & more	**19**	**19 %**
	Total	**100**	**100 %**

F = frequency

This table shows the demographic variables of the nurses in this study more than half of them were female (52%) and their ages were(25-29) years (30%). Regarding educational levels, the highest percentage is seen with the secondary school of nursing (30%). The majority of them married (79%). 34% of them had 1-5 years of experience.

Table 2:Knowledge related to Obesity

Assessment of Obesity Domain Questions						
Items	**Answer**	**N = 100**		**MS**	**Sd**	**Ass.**
		F	**%**			
Q1	**Don't know**	**60**	**60 %**	**1.69**	**0.895**	**Medium**
	Uncertain	**11**	**11 %**			
	Know	**29**	**29 %**			
Q2	**Don't know**	**74**	**74 %**	**1.44**	**0.783**	**Weak**
	Uncertain	**8**	**8 %**			
	Know	**18**	**18 %**			
Q3	**Don't know**	**73**	**73 %**	**1.42**	**0.741**	**Weak**
	Uncertain	**12**	**12 %**			

Received 25 April 2021; Accepted 08 May 2021.

	Know	**15**	**15 %**			
Q4	**Don't know**	**55**	**55 %**	**1.71**	**0.856**	**Medium**
	Uncertain	**19**	**19 %**			
	Know	**26**	**26 %**			
Q5	**Don't know**	**80**	**80 %**	**1.29**	**0.624**	**Weak**
	Uncertain	**11**	**11**			
	Know	**9**	**9 %**			
Q6	**Don't know**	**76**	**76 %**	**1.39**	**0.737**	**Weak**
	Uncertain	**9**	**9 %**			
	Know	**15**	**15 %**			

F = frequency, % = percent, Ass. = Assessment, MS= Mean Score, Sd=Standard Deviation

This table shows the most of the nurses (67%) have weak knowledge about obesity (Mean Score= 1-1.66), 30% of them was Medium (Mean Score= 1.67-2.33), and a small percentage of them (3%) was good (Mean Score= 2.34-3) as shown in the figure (1).

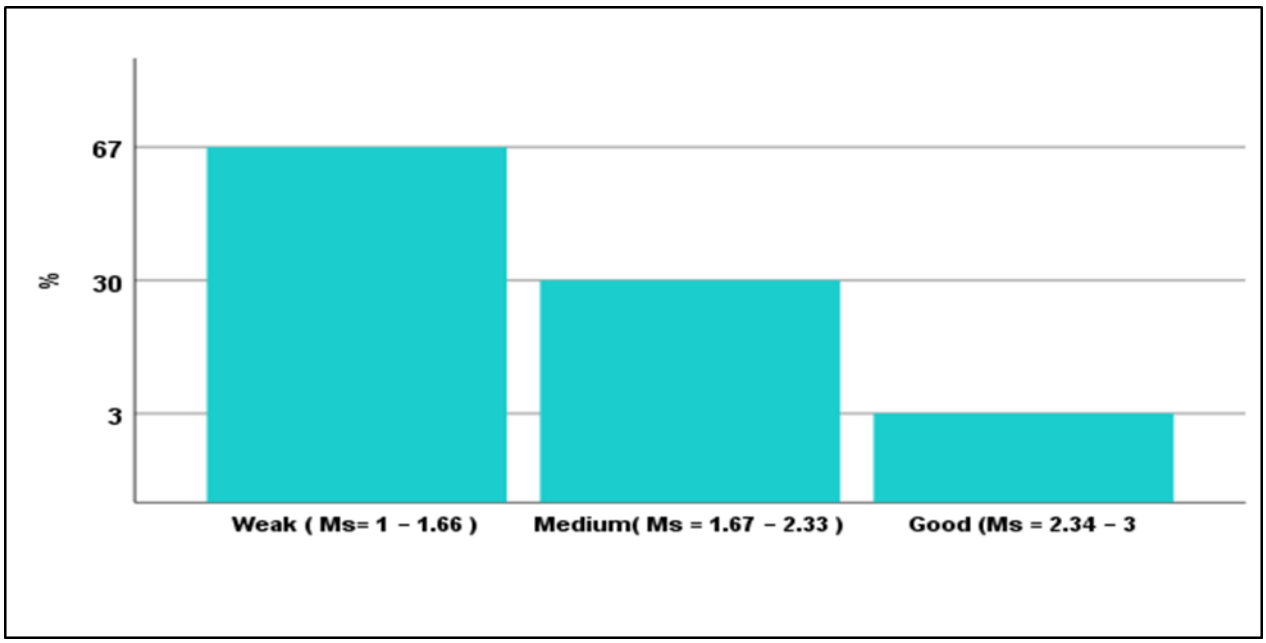

Figure (1) Assessment of Obesity

Table 3: Relationships of Demographic Variables with Obesity

Relationships of Demographic Variables with obesity domain										
Demographic Variables	**Variables Classes**	**N**	**MS**	**Sd**	**Ass.**	**df**	**Significant**			
							Cal.	**Tab.**	**P-value**	**Sig.**
Gender	**Male**	**48**	**1.36**	**0.370**	**W**	**98**	**T-test =1.85**	**T-test =1.98**	**0.067**	**NS**
	Female	**52**	**1.51**	**0.439**	**W**					

Received 25 April 2021; Accepted 08 May 2021.

Age	**20-24**	**17**	**1.49**	**0.291**	**W**	**94,5**	**Anova = 0.37**	**Anova = 2.31**	**0.866**	**NS**
	25-29	**30**	**1.48**	**0.511**	**W**					
	30-34	**12**	**1.31**	**0.296**	**W**					
	35-39	**11**	**1.42**	**0.479**	**W**					
	40-44	**10**	**1.38**	**0.437**	**W**					
	45 & more	**20**	**1.47**	**0.371**	**W**					
Marrital status	**Single**	**21**	**1.61**	**0.445**	**W**	**98**	**T-test =2.08**	**T-test =1.98**	**0.093**	**NS**
	Married	**79**	**1.40**	**0.395**	**W**					
Education level	**Secondary school**	**48**	**1.25**	**0.259**	**W**	**97,2**	**Anova = 61.93**	**Anova = 3.09**	**0.000**	**S**
	Institute	**39**	**1.40**	**0.300**	**W**					
	College	**13**	**2.19**	**0.260**	**M**					
Years of experience	**1-5**	**34**	**1.52**	**0.438**	**W**	**95,4**	**Anova = 0.814**	**Anova = 2.47**	**0.519**	**NS**
	6-10	**28**	**1.35**	**0.359**	**W**					
	11-15	**11**	**1.48**	**0.481**	**W**					
	16-20	**8**	**1.33**	**0.333**	**W**					
	20 & more	**19**	**1.47**	**0.420**	**W**					

MS = mean score, W=Weak, M=Medium, Ass= Assessment, Sd= standard deviation, S=significant, if (P-value) < 0.05 is significant (S), if (P-value) > 0.05 is nonsignificant (NS),
P-value using T-test for independent samples when it is two groups, P-value using one-way ANOVA (Analysis of Variance) when it is three or more group
df: degree of freedom, T-test (n – 2), ANOVA (n – groups), Cal.= calculated, Tab.= tabular

The results of this table reveal there is a significant relationship between education level of the nurses and their knowledge about obesity at a P-value ≤ 0.05.

Also, the findings of this table indicate there is no significant relationship between nurses'(age, gender, marrital status,and years of experience) and their knowledge about obesity at a P-value ≤ 0.05.

Discussions

Part one: Discussion of Demographic variables of nurses

The characteristics of the nurses involved in this study ages of nurses were (25-29) years old (30%).These results agreed with (Fan et al., 2020) which most of the nurses' age was between (18-27) years old (39.8%).

Regarding gender, the present study reveals that most of the nurses are female (52%).This study agreed with (Wynnet al., 2016) which shows that the most of nurses were female (86%).

Regarding the marital status, the present study indicates the most of the nurses were married (79%).The results of this study agreed (Peplonska et al., 2015) which stated that (75%) nurses were married.

Regarding educational levels, in this study, the majority of the nurses were graduated from secondary school of nursing (30%).The results of the present study agreed with (Chin et al., 2016) which stated that (34.4%) of the nurses were either secondary school or diploma.

Also, the results of the study disagreed with (Miller et al., 2008) which stated that (72%) of the nurses graduated from college of nursing.

The present study showed the most of the nurses who work in the surgical wards were between (1-5) years of experience with a percentage (34%). These findings are agreed with (Phillips et al., 2014) which shows 60% of participants had <5 years of experience.

Part two: Discussion of Nurses Knowledge about obesity

The finding of this study showed that most of thenurses (67%) have poor knowledge about obesity.

The researcher believes that nurses' knowledge deficit regarding obesity might be due to many causes; nurses not studied obesity, the nurses not have any training courses about obesity, the nurses do not develop and update their knowledge continuously.

Received 25 April 2021; Accepted 08 May 2021.

The findings of this study agreed with (Bucher Della Torre et al., 2018) which revealed a lack of knowledge about how to detect obesity in adults and children, and also trust and training courses about how to care for obese patients. Approximately 33% of the study sample couldn't measure body mass index and deficit knowledge and skills about management of obesity.

(Fan et al., 2020) in their study, they concluded that the Chinese Nurses have poor knowledge of obesity-related metabolic disorders.

Part three: Discussion of Relationship between Nurses' Knowledge and their Socio-Demographic Data

According to the findings of this study related to the relationship between nurses' knowledgeand demographical variables. This study showsthere is a significant relationship between nurses' knowledge and level of education. The finding of this study is agreed with (Chin et al., 2016) that indicates no significant relationship between age and gender of the nurses and their knowledge.

The results of this study also disagreed with (Gormely and Melby, 2020) that showsa significant difference between demographic variables (gender, years of experience, or year groups)and nurses' knowledge.

Conclusions

1.Most of the study sample in this study had poor knowledge about obesity and obesity-related comorbidities.

2. There is no significant relationship between demographic variables (age, gender,marrital status, and years of experience) and nurses' knowledge.

3. The demographic variables of the nurses in this study more than half of them were female (52%) and their ages were within (25-29) years (30%). Regarding educational levels, the highest percentage is seen with the secondary school of nursing (30%). The majority of them married (79%). 34% of them had 1-5 years of experience.

Recommendations

The researcher recommends the following based on the results of this study:

1- Providing education programs for nurses to increase their knowledge about obesityobesity-related comorbidities.

2-Training courses should be provided to nurses to improve their knowledge about obesity and obesity-related comorbidities.

3- The researcher recommended more studies about obesity because of the few studies about obesity in Iraq.

4-Creating a continued education unit in the surgical ward to help nurses improve their knowledge about obesity because the curriculumat secondary nursing school, nursing institute, and college of nursing doesn't include obesity and its risk.

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