Original Article

Influence of physicians' BMI on counseling practice for obesity in primary health care clinics in Aljouf region, Saudi Arabia. A cross-sectional study

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Abstract

Objectives: The aim of this study was to determine the perceived frequencies about counseling to obese patients, among physicians stratified by body mass index (BMI), working in primary health care clinics (PHCC) in Aljouf region of Saudi Arabia. **Methods:** All primary health care physicians in Aljouf region were invited to participate in the study. The study was conducted between January to March 2020. Demographical variables and questions related to counseling for weight loss. Physicians' BMI and questions related to counseling were analyzed to study the statistical significances. **Results:** Of 118 participants majority were under 40 years old (47.5%) while there were 74 (62.7%) males and 44 (37.3%) female physicians in the study. Fifty percent of the study participants were overweight while 16.1% were obese. Significantly high proportion of the participants were agreed that patients are not trust on weight loss advice by overweight/obese physicians ($P = 0.014$). Secondly, over 90% of respondents were agreed to counsel their patients to do exercise and do dietary adjustments for weight loss however it was not statistically significant. **Conclusion:** Participants showed a general agreement that physicians' own health has significant effect on weight loss counseling provided to the patients. Hence, it is important to improve physicians own health because patients also get inspired by physicians' health and appearance and that can help to make weight loss counseling more effective and fruitful.

Keywords: BMI, counseling, obesity, PHC

Introduction

Proportion of overweight adults had been increased from 27.8% to 33.6% from 1985 to 2011[1] and this had been witnessed in both developing and developed countries. This globally increasing trend also prevailed in Kingdom of Saudi Arabia (KSA), Forbes reported that Saudi Arabia was at 29th position among the list of fattest countries with percentage of 63.5% of its citizens being overweight (BMI >25).[2] One study from KSA reported 28.7% prevalence of obesity (body mass index [BMI] ≥30 kg/m^2).[3] Alenazi SA *et al.*[4] reported that 30.4% and 17.2% of high school students were obese and overweight respectively.

Dietary intervention and physical activity are a cornerstone of weight loss therapy.[5] Literature reported that both, dietary habit and increase in physical activity, together can help to reduce 3 to 17 kg weight loss per year.[6] Physicians' BMI corroborate with their counseling practice for obese patients. However, primary care physicians (PCP) face numerous challenges to counsel their patients which includes lack of knowledge (e.g., insufficient training),[7] structural barrier (e.g., time)[8] and other factor which was identified as barrier was PCP body weight. A survey reported that physicians with normal BMI had given more effective weight loss counseling and patients perceived their weight

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loss advice trustworthy compare to overweight/obese physicians.[9]

Studies conducted and reported the BMI of the participants from Saudi Arabia. However, BMI of the primary health care physicians in KSA and either they perceived their increased BMI would be a barrier to give weight loss counseling to their patients or not, this information is hardly available. Hence, this study was designed to determine the perceived frequencies about counseling to obese patients, among physicians' stratified by BMI, working in primary health care clinics (PHCC) in Sakaka, Saudi Arabia.

Methods

This cross-sectional study was conducted between January to March 2020. All primary health care centers (PHCC) in Aljouf region which includes; Sakaka, Alqurayat, Domat, Aljandal, Tabarjal and Swair, were included in the study. All male and female physicians registered in PHCC irrespective of their sub-specialties were invited to participate in the study. Ethical approval for the study was granted by research ethics committee, Ministry of Health Saudi Arabia.

A self-administered questionnaire was prepared and sent to the participants via Email. The questions were extracted from previously published study and hence validation of the questionnaire was not required. List of email addresses of PHC physicians working in Aljouf region was obtained from ministry of health. Data collection period was two months and reminder emails were keep sending after every two weeks to attain the maximum possible response.

Questionnaire consisted of demographic and questions related to weight loss counseling. Demographic questions included gender, age (categorized as 1. under 40, 2. 40-54, 3. 55 and above) and weight (kg) and height (cm). BMI was calculated for each participant by using weight and height later BMI was categorized as 1. Normal (BMI ≤25 kg/m^2), 2. Overweight (BMI between 25 and 30 kg/m^2), 3. Obese (BMI >30 kg/m^2). Furthermore, there were four questions related to weight loss counseling and each one could be answered 1. More likely, 2. Less likely, 3. As likely. Reliability analysis was performed to check the validity of the questionnaire, Cronbach's alpha value was 0.541 which was closer to the acceptable range.

Social package for social sciences (SPSS v. 23) was used for data entry and analysis. In descriptive analysis, frequency distribution and bar graphs were used to present the data. For inferential statistics, cross tabulations with Chi-square test was used to compare two categorical variables. A value of $P < 0.05$ was considered as statistically significant.

Results

Total number of PHC physicians participated and filled the questionnaire was 118. Among those majority were under 40 years (47.5%) and participation of male (n = 74, 62.7%) physicians were higher compare to females (n = 44, 37.3%). Of 118 participants 59 (50%) were overweight while 19 (16.1%) were obese [Table 1]. Figure 1 presented the distribution of responses for the questions regarding counseling to the obese patients. The figure showed that over 67% of physicians responded that it is less likely to take weight loss advice given by overweight/obese physician. In addition, over 90% responded that it is more likely counsel a patient to do exercise and dietary adjustments.

It was found that significantly low proportion of the physicians who were 40–54 years old had normal BMI (P = 0.001) and most of the respondents in that age group were overweight (53.8%). Furthermore, cross-tabulation between BMI and gender revealed that proportion of male physicians were higher compared to females who were obese; however, differences in proportions were not found statistically significant [Table 2].

Responses of the physicians regarding counseling of their patients, to control obesity, in relation with their BMI were summarized in Table 3. Significantly high proportion of physicians were agreed that it is less likely that a patient will take weight loss advice by an overweight/obese physician (P = 0.014). Most of the physician said weight loss advise could be more effective if given by a healthy weight physician. Furthermore, over 90% of the physicians, irrespective to their BMIs, were agreed to advised their patients to do exercise and change the diet in order to control obesity however proportions were not found statistically significant.

Table 1: Demographics of study participants

	Frequency	Percent
Age (years)		
Under 40	56	47.5
40-54	52	44.1
55 and over	10	8.5
Gender		
Male	74	62.7
Female	44	37.3
BMI		
Normal	40	33.9
Overweight	59	50
Obese	19	16.1

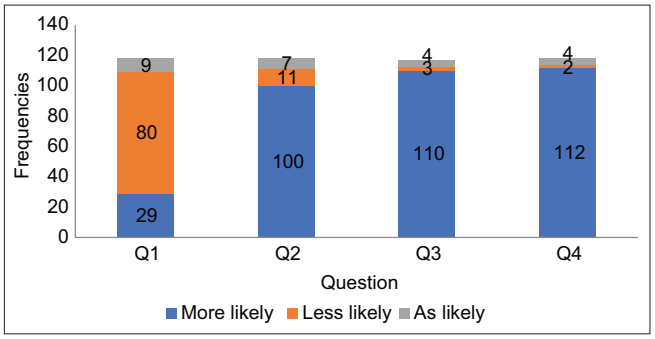

Figure 1: Distribution of responses regarding patients' counseling

Discussion

This study was not only about how a primary health care physician (PHC) counsels his/her patient regarding obesity but this work also provided a chance to measure the prevalence of obesity among PHC physicians. Exactly half of the participants were overweight and obesity was found in over 16%. It was also observed that significantly high proportion of young physicians (aged less than 40) were overweight which gave indication that there would be increased level of obesity prevalence among the PHC physicians. Prevalence of overweight and obese among residents in Aseer region of Saudi Arabia was reported 36% and 23.2% respectively.[10] Prevalence of obesity/overweight among the physicians was reported in a study conducted in the USA, study reported prevalence of obesity among 15% and 38% were overweight.[11] Furthermore, other studies also provided the high prevalence of obesity among physicians.[12,13]

Study findings revealed that there was general consensus among the study participants that it was less likely that an overweight/obese patients are trust to weight loss advice from overweight/obese physicians, which showed that a physician should be a role model to their patients and they get motivated by their physicians health and appearance.[9,14] Bleich *et al.* reported that high proportion of normal BMI physicians (72%) were strongly agreed that a physician should be a role model by maintaining health weight while 56% of overweight/obese physicians were agreed with the statement.[9]

While current study results suggested that all physicians, either categorized as normal BMI or overweight/obese, were stated to counsel their patients to regular exercise and make some dietary adjustments to control obesity. Contrarily, studies reported that those physicians who do regular exercise and maintain healthy diet are more likely to discuss to reduce BMI through diet and exercise.[15,16] However, overweight/obese physicians feel more comfortable to prescribe weight loss medicine to obese patients. Another study conducted to study the non-physician health professionals BMI on obesity care and reported there was no difference in obesity care practice due to professional BMI.[11]

Regardless the weight of the health professionals, it is important to increase self-efficacy to improve the targeted efforts to control obesity stigma which has risen overtime.[17,18] In addition, increase in self-efficacy and weight management practices are positively associated.[19] Including various health professions may help to understand their perception regarding physicians BMI impact on weight loss counseling.

There were some limitations of the study. First, there were limited questions regarding weight loss counseling. Secondly, information about obesity training was not taken as a variable. In addition, this study was conducted in one region of Saudi Arabia and hence findings can also be for that specific region.

In conclusion, this study suggests that variation in physicians' BMI did not impact their obesity care practice and counseling.

Table 2: Relationship between physicians' BMI and their demographics

	BMI *n* (%)			*P*
	Normal	Overweight	Obese	
Age (years)				
Under 40	22 (39.3)	30 (53.6)	4 (7.1)	0.001*
40-54	12 (23.1)	28 (53.8)	12 (23.1)	
55 and over	6 (60)	1 (10)	3 (30)	
Gender				
Male	24 (32.4)	34 (45.9)	16 (21.6)	0.104
Female	16 (36.4)	25 (56.8)	3 (6.8)	

*Statistically significant at 0.05 level of significance

Table 3: Relation between physicians' BMI with the questions related to patients' counseling

Questions	BMI *n* (%)			*P*
	Normal	Overweight	Obese	
Do you think overweight/obese patients are trust to weight loss advice from overweight/obese physicians?				
More likely	9 (22.5)	10 (16.9)	10 (52.6)	0.014*
Less likely	30 (75.0)	43 (72.9)	7 (36.8)	
As likely	1 (2.5)	6 (10.2)	2 (10.5)	
Do you think overweight/obese patients trust to weight loss advice from healthy weight physicians?				
More likely	35 (87.5)	50 (84.7)	15 (78.9)	0.765
Less likely	4 (10)	5 (8.5)	2 (10.5)	
As likely	1 (2.5)	4 (10.5)	2 (10.5)	
Do you counsel your obese patients to do exercise?				
More likely	37 (92.5)	55 (94.8)	18 (94.7)	0.71
Less likely	1 (2.5)	2 (3.4)	0 (0)	
As likely	2 (5.0)	1 (1.7)	1 (5.3)	
Do you counsel your obese patients to do dietary change?				
More likely	38 (95.0)	56 (94.9)	18 (94.7)	0.431
Less likely	0 (0)	2 (3.4)	0 (0)	
As likely	2 (5.0)	1 (1.7)	1 (5.3)	

*Statistically significant at 0.05 level of significance

However, participants showed a general agreement that physicians' own health has significant effect on weight loss counseling provided to the patients. As it was observed that physicians' own health is important in this regard but our results reported overweight and obese physicians were in high proportion. Hence, it is important to improve physicians own health to control increase in obesity among PHC physicians in future. More research is needed to understand the impact of physician BMI on obesity care.

Conclusion

High proportion of the physicians participated in the study were overweight/obese and they agreed that patients of those doctors neither take weight loss counseling seriously nor they follow the instructions given to them. Hence, the key findings of the study are physicians' own health has key importance for successful weight loss counseling. However, as found from the analysis that high proportion of the physicians were either overweight or obese. Hence, it is also important to increase awareness among the physicians to be healthy and fit so that their patients inspired from them and their counseling will become for effective and fruitful.

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Conflicts of interest

There are no conflicts of interest.

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