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Management of Obesity, Practice and Barriers among Primary Health Care Centers Physician in Jazan - Saudi Arabia

Nouf Nasser Ahmed ALzughbi

Ministry of health || Jazan || KSA

Anas Ellyas Ahmed **Sarah Mohammed Awadallah**

Jazan University of Medicine || Jazan || KSA

Abstract: Background: Obesity is considered as a risk factor for diabetes, hypertension, dyslipidemia, liver disease, and impaired renal function, which require immediate treatment. Personal weight control plans is one of the important methods for the evaluation of patient readiness to change behaviors and other barriers to weight loss.

Objectives: To explore management of obesity, practice and barriers among primary health care centers physician in Jazan, Saudi Arabia.

Subjects and methods: This is a cross-sectional study carried out from March 2017 to May 2018. Self-administered valid questionnaires were administered to 240 primary health care physicians (PCPs). Data was collected and coded, then analyzed and tabulated using the Statistical Package for Social Science (SPSS version 20, IBM, Chicago, USA).

Results: Males represented 52.9% of the 240 PHC participants. Majority of the PCPs (91%) believed that "Providers can help obese patients achieve a healthier weight." Nevertheless, only 41% agreed with the statement "I feel confident in assisting patients with weight management." This demonstrates that even though PCPs believed they were useful in helping patients lose weight, PCPs felt only moderately confident in their ability to manage obesity.

Conclusions: This study showed that the PCPs may not be appropriately educating their patients about the full spectrum of available and effective treatment options for obesity management. This may be due to low perceived effectiveness, safety concerns, and specific patient characteristics required.

Keywords: Obesity, Practice, Barriers, Primary care, physicians

Introduction

Overweight and obesity are defined by World Health Organization (WHO) as abnormal or increased fat accumulation which affects individual health.[1] Overweight and obesity are diagnosed in adults if body mass index (BMI) exceeds 25 or 30 kg/m2 respectively. [1]

Increased body fat occurs as a result of positive energy balance, meaning the amount of calories consumed is higher than the calories expended. However, the genetic makeup does influence our body weight. Most cases of obesity are due to excessive food energy intake and/or physical inactivity.[1]

Obesity is considered as a risk factor for diabetes, hypertension, dyslipidemia, liver disease, and impaired renal function, which require immediate treatment. Also, depression, mood disorders and other eating disorder are common in obese patients and it may influence weight management negatively. [2]

It is known that obesity trend is fast increasing across the world and this is considered as alarming and public health problem.[3] The increasing level of obesity is the biggest challenge for public health for the 21st century.[4]Personal weight control plans one of the important method for evaluation of patient readiness to change behaviors and other barriers to weight loss.[2]

Despite its efforts in controlling malnutrition, the WHO has identified also the problem of obesity as it needs urgent action to combat its increasing prevalence, which now affects developing and developed countries.[5]

Many study recommended prescribe of physical activity by physicians as 30 minutes of physical activity of moderate intensity per day, rising to 60 minutes per day as part of an overall weight-loss program that should be probable and suitable to the individual.[2]

There are previous studies in Saudi Arabia that confirmed the rising trend from the of obesity prevalence in all parts. The prevalence of obesity is about 20%, ranging from as low as 13.1% among men to 26.6% among women. However, some studies reported higher prevalence rates, above 35%, in the kingdom.[6-7]

Numerous studies noted that physicians encourage healthy lifestyle (increased physical activity), dietary education (decreased number of total calories) or referral to a dietician but rarely provide a practical program of how to implement these recommendations.[8]It is apparent that there is a need for guidelines for primary care physicians to raise the uniformity of the assessment and improve physicians' self-efficacy in managing adult and childhood obesity. [9-10]

This study was carried out to explore management of obesity, practice and barriers among primary health care centers Physician in Jazan, Saudi Arabia.

Subjects and methods:

Analytic cross sectional design was adoptedin Jazan Region, during 2017. Jazan City is considered the provincial capital of Jazan region. Jazan region is located in south-western part of Saudi Arabia. It is bounded by Asir region in the north, the State of Yemen in the south, Asir region in the east and the State of Yemen, and the Red Sea in the west. The study included a representative random sample of the primary care physicians working in Jazan Region. There are 179 primary health care centers with 479 physicians working under the authority of Ministry of health.

A sample size of 224 was calculated from the study population with an estimated probability of 41% for PCPs 'ability of to treat obesity (from a previous study(11),95% confidence coefficient, 5% confidence interval, and 5% non-response rate. The list of PHC physicians (n= 479) in Jazan Region was taken from Health Affairs Office Directorate .The study sample was randomly selected by using the simple random sampling method from the list and was invited to participate in the study.

Self-administered reliable and valid questionnaire was used to collect the data with permission to use the questionnaire from the corresponding author through an E-mail. The questionnaire included 26itemsthat were classified into three sections; the first part was about socio-demographic data, type of services and activities provided to obese patients, availability of infrastructures to care for obesity, professional competency to manage obese patients, barriers facing management obesity at PHCC, attending training course in obesity and role of PHCC physician in management of obesity. The Second part included statements about attitude of PCPs toward obesity. The 5-point Likert's scale was used to assess the attitude. The response to the attitude statements will be one of the followings: strongly agreed, agree, neutral, disagree and strongly disagree, respectively. The third part consisted of statements about practice of primary healthcare center (PHCC) physician regarding obesity.

Approval was taken from the Research Committee at King Fahd Central Hospital in Jazan Region. Permission letter was taken from Ministry of health to conduct the study as well as field work was approved by Directorate of primary Health care centers, Jazan Region. Informed consent from each physician to participate in the study was obtained.

Data was reviewed carefully to verify that there are no data mistakes and the errors were corrected immediacy (cleaned and managed). The Statistical Package for Social Sciences (SPSS) software program version 20.0 was used for data analysis. Descriptive statistics were computed to explore the data. Chi square test was used to test the significance of differences between the participants regarding the categorical variables like gender. Group t-test was conducted to assess the significance of differences between males and females regarding the continuous variables. Statistical significance was set at α=0.05.

Results

The study included 240 PHC physicians. Males represented 52.9% of them. Out of the 137 males, 76 (55.5%) were working in urban areas compared to 55 (53%) of females. Almost two-thirds (67.1%) of the participants had Medicine Baccalaureus and Baccalaureus Surgical (MBBS) whereas 17.9% have Diploma in family medicine. The mean± standard deviation of age among males and females were 38.8±9.8 and 35.0±7.4 years, respectively.

Table-1 illustrated that there were no significant differences between males and females regarding average of patients seen/day, and years of experience in PHC. However females consulted significantly higher numbers of obese patients seen/day (3.85±2.0 versus 3.03±1.84, p=0.001)

Most of physicians had positive attitudes towards management of obesity in PHC because over90 % of physicians either agreed or strongly agreed on the positive statements of Likert scale, for example PHC doctors can play important role in management of obesity. Also they disagreed or strongly disagreed on negative statements of the questionnaire such as "I would only offer advice regarding weight control when a patient requests it". There were no significant differences regarding the participants' response to different Likert's attitude statements towards obesity management in PHC, between different categories of qualification with the exception of one statement that is "management of obesity is similar to that of other chronic diseases like diabetes and hypertension" as most of junior physicians compared to low percentage of senior physicians agreed with that, p=0.011. Table 2

Screening programs, data registers and management plans for obesity were not available in 60%, 64.2% and 58%, respectively as shown in table 3. Also table 3 illustrated that there were no significant differences regarding the availability of screening programs, data registers and management plans for obesity in the PHC center according to physician's' qualification. The most prevalent health services provided for obese patients were dietary counseling followed by physical activity counseling. However, there were no significant differences in the provided health services between different qualification categories of the physicians as shown in Figure1.

The majority of the physicians perceived that they were incompetent in obesity management, with no difference according to their qualification as shown in Figure 2.

The most frequently reported appropriate screening tool of obesity was BMI according to 91.3% of the physicians, followed by waist circumference (4.6%) and finally Waist-hip ratio (4.1%). Lack of skills in obesity management was reported by 52.8%, 34.9%, 73.9% and 46.2 % of physicians who were certified with MBBS, Diploma, Master degree, and Board respectively. However, the differences was not statistically significant as illustrated in table 4

Table 5 illustrated that lack of time and lack of training were highly prevalent among different qualifications of physicians as perceived barriers in obesity management; however, it was not significant. About one-third (36%) of the physicians had no experience in obesity management, 21% of them reported that they detected difficulty to arrange for a referral and 18% found difficulties in dietary management with no difference between them according to their qualification. Figure 3

About one-fifth of the physicians (20.4%) have attended training courses in obesity management and only 15 physicians (6.3%) described their experience in obesity management as excellent whereas most of them described it as good (162; 67.5%) with no statistically significant difference according to qualification.

Regarding causes of relapse of body weight during obesity management, poor compliance of obese patients to medical advice (62%), and ineffective behavior therapy (23%) were the most frequent caused mentioned by physicians with no statistically significant difference according to their qualification.

Most physicians would prescribe Orlistat (53%), or metformin (40%), in obesity management if they decided to medicate the disease. The differences in the frequency distributions of their behavior tendency for drugs' prescription in obesity management in different qualification categories were insignificant as shown in Table 6.

Discussion

In the current study, female physicians consulted significantly higher numbers of obese patients seen/day and were significantly younger than male physicians. The higher number of obese patients seen by female physicians may be explained by the fact that obesity is more prevalent among women (33.5%) than men (24.1%) in Saudi Arabia.[12]

Most of physicians had positive attitudes towards management of obesity in PHC since almost 90 % of physicians either agreed or strongly agreed on the positive statements of attitude toward obesity management, for example PHC doctors can play important role in management of obesity.

This study found that 91% of PCPs believed that providers can help obese patients achieve a healthier weight. Nevertheless, only 41% agreed with the statement of "I feel confident in assisting patients with weight management." This demonstrated that even though PCPs believed that they were useful in helping patients lose weight, they felt only moderately confident in their ability to manage obesity, a result which is consistent with another study that was conducted by Yahia et al, 2017[11].

The most prevalent health services provided for obese patients were dietary counseling followed by physical activity counseling. About 36% of the study group had no experience in obesity management, 21% of them had reported that they detected difficulty to arrange for a referral and 18% found difficulties in dietary management. Obesity management is multifactorial. Our results suggest that obesity management for many patients does not extend past behavioral counseling and recommendations for diet and exercise. PCPs may not be appropriately educating their patients about the full spectrum of available and effective treatment options for obesity management. This may be due to low perceived effectiveness, safety concerns, and specific patient characteristics required. When considering the Chronic Care Model.[13]Patients cannot be fully

informed and engaged members in the decision-making process if they do not have fully informed and engaged PCPs.

Most physicians would prescribe Orlistator metformin in obesity management if they decided to medicate the disease. The present study demonstrates the both PCPs and patients need accurate information about treatment options to collaboratively weigh the risks with the benefits.

Unfortunately, many barriers exist to obesity management. PCPs reported one of the major barriers being lack of time during encounter to discuss weight loss. Another important barrier was lack of ancillary resources such as registered dieticians or weight loss programs. The results of the present study are consistent with that of Yahia et al, 2017[11], where insufficient time; health education materials; guideline and referral system were the main barriers for effective obesity management in PHC. In the literature, PCPs expressed frustration with managing obesity. The PCPs may have a desire to help patients lose weight but insufficient time to do so. The patients presented with multiple complaints during the 12-minutes, on average, patient visits, and patients usually had other co-morbidities such as diabetes and hypertension. Time constraints did not allow for the PCPs to discuss weight loss. The patients may have urgent health complaints and uncontrolled chronic diseases that required more immediate attention. [14]

Only one fifth of physicians attended training courses in obesity management in the present study and only 6.3% described their experience in obesity management as excellent. Also, 83% thought that management of obese patient is considered difficult like management patients with diabetes or hypertension. In one study conducted in Australia, most of GPs felt confidence to manage patients with obesity. [15] These defects in attitude could be due to inadequate training in addition to lack of clinical guidelines.

These results reveal a need for more education of PCPs in various areas of obesity management because the majority of the present study group perceived that they were not highly competent in obesity management. PCPs could benefit from increased strategies, such as motivational interviewing, to help patients overcome their lack of motivation. [16,17]

In the present study, screening programs, data registers and management plans for obesity were not available in 60%, 64.2% and 58%, respectively. There were no significant differences regarding the availability of screening programs, data registers and management plans for obesity in the PHC center by physician's' qualification. According to the published literatures, training of PCPs is effective in improving overweight and obesity management in PHC. For example based on a single educational session with follow-up measurement at three months, Farran, et al. (2013)[18] implemented a quality improvement project to help PCPs from three primary care clinics improve their management of obesity. PCPs' documentation of diagnosis of overweight

and obesity improved from 24% to 55% and documentation of a management plan improved from 5% to 20%.

In conclusion, the PCPs may not be appropriately educating their patients about the full spectrum of available and effective treatment options for obesity management. Therefore, continued education focused on helping PCPs overcome identified knowledge gaps in the area of obesity management should include motivational interviewing, nutrition, bariatric surgery, and pharmacotherapy for weight loss. In addition, more ancillary resources, such as having a registered dietician within the primary care office available to see patients, would be an empowering resource.

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Table (1) Comparison between males and females regarding burden of work (n=240)

	Males (n, 137)	Females (n, 103)	t-value	P
Average of Patients seen/day Mean (SD)	45 (26. 7)	45 (23.702)	-0.001	0.999
Average of Obese patients seen/day Mean (SD)	3.03 (1.843)	3.85 (2.021)	-3.293	0.001
Years of experience in PHC Mean (SD)	6.72 (6.488)	5.48 (5.615)	1.560	0.120

Table (2) Frequency distribution of participants' responses to Likert's attitude statement that compared the management of chronic diseases such as diabetes and hypertension to that of obesity (n=240)

	Neutral N (%)	Agree N (%)	Strongly Agree N (%)	Total
MBBS	51 (31.7)	99 (61.5)	11 (6.8)	161 (100.0)
Diploma	9 (20.9)	29 (67.4)	5 (11.6)	43 (100.0)
Master degree	5 (21.7)	16 (69.6)	2 (8.7)	23 (100.0)
Board	0 (0.0)	8 (61.5)	5 (38.5)	13 (100.0)
Total	65 (27.1)	152 (63.3)	23 (9.6)	240 (100.0)

Chi square=15.5,p=0.011

Table (3) Availability of screening programs, data registers and management plans for obesity in the PHC center by physician's' qualification

	MBBS		Diploma		Master		Board		P*
	Yes N (%)	No N (%)	Yes N (%)	No N (%)	Yes N (%)	No N (%)	Yes N (%)	No N (%)	
Screening programs	62 (38.5)	99 (61.5)	19 (44.2)	24 (55.8)	12 (52.2)	11 (47.8)	4 (30.8)	9 (69.2)	0.512♥
Data registers	59 (36.6)	102 (63.4)	15 (34.9)	28 (65.1)	7 (30.4)	16 (69.6)	5 (38.5)	8 (61.5)	0.937♥
Management plans	62 (38.5)	99 (61.5)	22 (51.2)	21 (48.8)	11 (47.8)	12 (52.2)	7 (53.8)	6 (46.2)	0.350♥

*Chi-square test

Table (4) Perceived personal defects in management of obese patients (n=240)

	Lack of knowledge N (%)	Lack of skills N (%)	Negative attitude N (%)	Total N (%)
MBBS	30 (18.6)	85 (52.8)	46 (28.6)	161 (100.0)
Diploma	10 (23.3)	15 (34.9)	18 (41.9)	43 (100.0)
Master degree	2 (8.7)	17 (73.9)	4 (17.4)	23 (100.0)
Board	3 (23.1)	6 (46.2)	4 (30.8)	13 (100.0)
Total	45 (18.8)	123 (51.2)	72 (30.0)	240 (100.0)

Chi square= 9.747, p= 0.124

Table (5) Perception of barriers of obesity management in PHC according to physicians `qualification

	Ineffective referral system	Lack of time	Lack of guidelines	Lack of drugs	Lack of teaching aids	Lack of training	Total
MBBS	7 (4.3)	73 (45.3)	17 (10.6)	13 (8.1)	12 (7.5)	39 (24.2)	161(100.0)
Diploma	5 (11.6)	20 (46.5)	5 (11.6)	1 (2.3)	3 (7.0)	9 (20.9)	43 (100.0)
Master	1 (4.3)	10 (43.5)	2 (8.7)	0 (0.0)	1 ((4.3)	9 (39.1)	23 (100.0)
Board	1 (7.7)	6 (46.2)	1 (7.7)	0 (0.0)	2 (15.4)	3 (23.1)	13 (100.0)
Total	14 (5.8)	109 (45.4)	25 (10.4)	14 (5.8)	18 (7.5%)	60 (25.0)	240 (100.0)

Chi square= 9.9,p= 0.791

Table (6) The behavior tendency for drugs' prescription in obesity management among different qualifications of physicians (n=240)

	If you decide to start drug for obese patient, the best choice would be:				Total
	Metformin N (%)	Orlistat N (%)	Phentermine N (%)	Sibutramine N (%)	N (%)
Undergraduate qualification+	63	81	5	12	161
	(39.1)	(50.3)	(3.1)	(7.5)	(100.0)
Postgraduate qualification**	32	45	2	0	79
	(40.5)	(57.0)	(2.5)	(0.0)	(100.0)
Total	95	126	7	12	240
	(39.6)	(52.5)	(2.9)	(5.0)	(100.0)

Chi square= 7.3; p= 0.054 +MBBS **Diploma, Master or Board

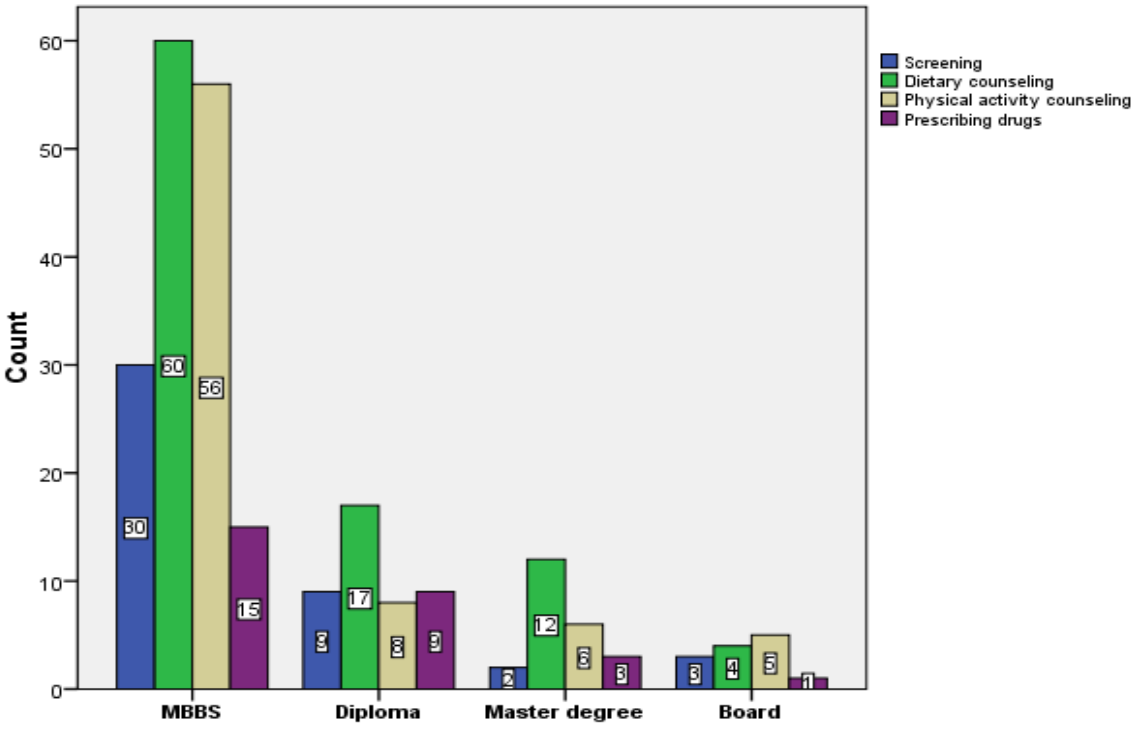

Figure (1) The provided health services for obese patients in the health center

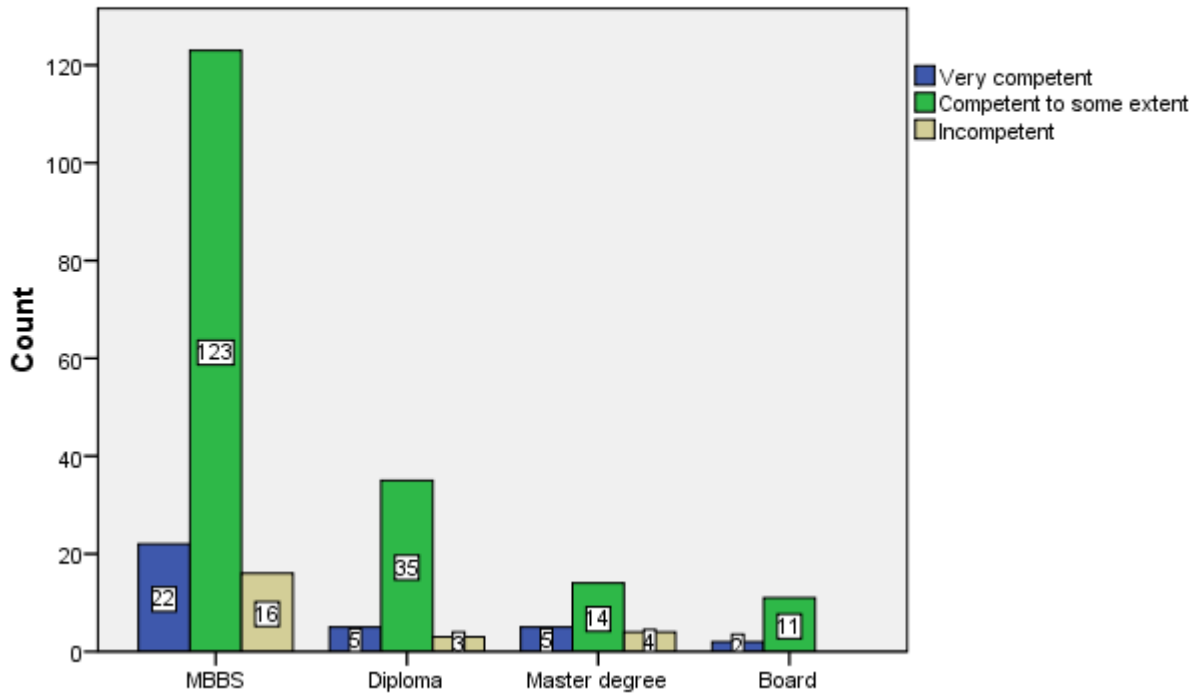

Figure (2) Competency in obesity management among physicians according to their qualifications

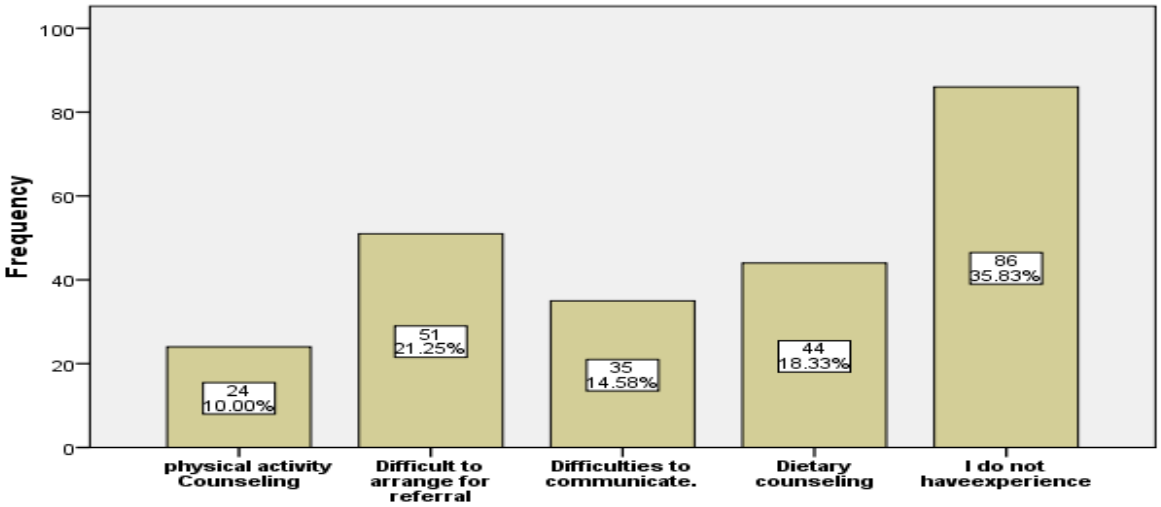

Figure 3: Difficulties faced by primary healthcare physicians during management of obesity

إدارة مرض السمنة: الممارسات والحواجز بين أطباء مراكز الرعاية الصحية الأولية في جازان - المملكة العربية السعودية

الملخص: هدف البحث إلى استكشاف إدارة السمنة والممارسة والحواجز بين أطباء مراكز الرعاية الصحية الأولية في جازان، المملكة العربية السعودية.

المواضيع والطرق: تستعرض هذه الدراسة والتي نفذت ما بين الفترة من مارس 2017 إلى مايو 2018م. وتشمل استبيانات صحيحة تدار ذاتيا بين أطباء الرعاية الصحية الأولية (PCPs).

النتائج: شملت الدراسة عدد 240 من أطباء الرعاية الصحية الأولية. ويمثل الذكور نسبة 52.9% من المشاركين. اعتقدت أغلبية الـ(91% من أطباء الرعاية الصحية الأولية) أن "مقدمي الرعاية يمكن أن يساعدوا المرضى البدينين في الحصول على وزن صحي." ومع ذلك، كانت الموافقة بنسبة 41% فقط على عبارة "أشعر بالثقة في مساعدة المرضى على إدارة الوزن". مما يدل على أنه بالرغم من اعتقادات أطباء الرعاية الصحية الأولية أنها كانت مفيدة في مساعدة المرضى على فقدان الوزن، ورأى الأطباء ثقة معتدلة فقط في قدرتها على إدارة السمنة.

الاستنتاجات: أظهرت هذه الدراسة أن أطباء الرعاية الصحية الأولية قد لا يكونون على دراية ملائمة بمرضاهم حول مجموعة كاملة من خيارات العلاج المتاحة والفعالة لإدارة السمنة.

الكلمات المفتاحية: السمنة، ممارسات، حواجز، الرعاية الأولية، أطباء.