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Assessment of knowledge and attitude of primary health care physicians towards bariatric surgery

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Abstract

World Health Organization defines overweight as BMI that is equal to or more than 25 and defines obesity as BMI equal to or more than 30. Moreover, morbid obesity was defined as a dangerous health condition that arises from an abnormal body mass that is diagnosed by having a body mass index (BMI) more than 40 kg/m2, a BMI more than 35 kg/m2 with at least one serious obesity related condition or being more than 45 kg over ideal body weight (IBW).

The Aims and objectives are to assess knowledge and attitude of primary health care physicians (PHCPs) that may affect referrals to bariatric surgery and level of care.

This study is observational, cross-sectional, quantitative study with a questionnaire about bariatric surgery to asses knowledge and attitude of PHCPs about bariatric surgery. Family physicians and general practitioners are included to answer a valid questionnaire.

In conclusion, unfamiliarity with knowledge and low attitude scores seen among the practitioners about bariatric surgery emphasizes the need for possible educational programs to foster the proper management delivered in primary health care centers (PHCCs) for morbidly obese patients.

Introduction

World Health Organization defines overweight as BMI that is equal to or more than 25 and defines obesity as BMI equal or more than 30, While Morbid Obesity defined as a dangerous health condition that arises from an abnormal body mass that is diagnosed by either having a body mass index (BMI) more than 40 kg/m2, a BMI more than 35 kg/m2 with at least one serious obesity-related condition, or being more than 45 kg over ideal body weight (IBW) [1,2].

Worldwide obesity has nearly tripled since 1975 [1]. The latest data in 2016 showed more than 1.9 billion adults at age 18 years and older were overweight [1]. Based on Study conducted at 2016 In Saudi Arabia showed one out of three adults suffers from obesity and at least one out of ten adults have morbid obesity [3]. There are many serious health conditions caused by obesity and overweight, including cardiovascular diseases, such as stroke, hyper- tension, and other heart diseases, metabolic disorders as diabetes mellitus, musculoskeletal disorders, such as osteoarthritis, urinary stress incontinence, infertility, sleep-breathing abnormalities as obstructive sleep apnea, and mental problems like depression [1,4]. Losing weight with lifestyle-based conservative methods failed in patients with BMI greater than 40 kg/m2 or BMI ranging between 35 and 40 kg/m2 with co-morbidities thus, bariatric surgery becomes the most effective treatment for obesity [5]. It has been noticed that poor understanding of weight loss surgery, and lack of confidence in providing post-operative management resulted in pessimistic attitudes of primary care physicians (PCPs) towards treating obesity [6-8].

This study aims to assess knowledge and attitude of PHCPs about bariatric surgery.

Objectives

To assess primary health care physician's knowledge and attitude towards bariatric surgery of morbidly obese patients.

Aims

To help improve the level of care delivered to morbid obese patients encountered in primary health care centers (PHCCs)

To help improve the population health with proper counseling

To utilize proper referrals to bariatric surgery

Methodology

The study design is observational quantitative cross-sectional study that was conducted in Riyadh, Saudi Arabia. Data collection was through electronic and hard copy surveys. The questionnaire was derived from other published studies with the same topic and the rest was done from our side.

The questionnaire included three segments. The first segment included demographic data (age, gender, height, weight, duration of work in PHC, and specialty) as independent variables. The second segment included attitude of physicians toward bariatric surgery that was a dependent variable. It included number of morbid obese patients seen in clinics as a percentage, preference of referring candidates to bariatric surgery and percentage of patients referred. Also, there was a third segment to assess knowledge about bariatric surgery. There were questions on definition of morbid obesity with and without co-

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morbidities and average weight loss following Roux-en-Y gastric bypass as dependent variables to be filled by the physician. Moreover, there were twenty different statements with a scale from zero (not at all likely) to ten (extremely likely) to be selected. Statements cover knowledge about management of morbid obese patients, benefits of surgery, complications, beliefs and indications of the surgery. Moreover, it included statements about procedures like gastric banding; sleeve gastrectomy, Roux-en-Y and liposuction. Confidentiality was maintained as the name of the physicians was excluded.

Candidates that were recruited for this study included those who work as general practitioners, family physicians and residents in Riyadh as inclusion criteria. The exclusion criteria included other physicians working in different specialties such as dentistry. The target number of sample size aimed to get more than 150 participants.

Investigator assessed the knowledge segment by giving each questionnaire a mark and another investigator will verify this mark with a total out of hundred. The same was applied to the attitude segment. These dependent variables will be statistically analyzed against independent variables such as age, experience and specialty. Data collection sheet was developed compromising demographic data and knowledge. Data collection attached.

Data collection sheet was developed compromising demographic data, knowledge and attitude. Data collection sheet attached.

Results

The results of the study have demonstrated the characteristics of PHCPs based on the attitude and knowledge. Attitude was evaluated by giving each respondent a score out of 100 based on the verification done; and similarly, was done for knowledge. The average attitude score for the 163 respondents participated in this study was 68.49 ± 9.4 (SD) ranging between minimum score with 45 and a maximum score with 94; while the average knowledge score for the respondents was 51.53 ± 11.2 (SD) with a minimum score of 20 and a maximum score with 88. There was no significant difference in attitude although females had better attitude with average of 69.46 (± 10 SD), compared with male attitude with average of 67.32 (± 8.6 SD). Males had better knowledge with average of 52.51 (± 9.1) compared with female knowledge with average of 50.71 (± 12.7) although this is not significantly different. The average age of the respondents was 32.2 (± 7.5) (SD) with 89 female (54.6%) and 74 males (45.4%); Table 1 showed more detail.

Family physicians were categorized according to the level as family medicine (FM) residents, specialists and consultant. Results showed that there is no significant difference between these categories compared with the general practitioners; on their attitude and knowledge regarding bariatric surgery. However, results showed minimal average of 47.95 (8.6) for the family medicine (FM) specialists and maximal average for the attitude with 70.15 (9.4) for the FM specialists.

Obviously, there was no significant difference in attitude of the respondents in terms of the level. Results showed that "family medicine specialists" have got the best score of attitudes with an average of 70.15 (± 9.4 SD) out of 100, compared to the worst score of "family medicine consultants" with an average of 65.45 (± 6.9 SD) out of 100. The opposite applies with "family medicine specialists" as they have scored the lowest score in knowledge with 47.95 (± 8.6 SD) compared to the best knowledge score of "family medicine consultants" with an average of 65.45 (± 6.9 SD) out of 100, however, results for attitude and knowledge were not significantly different ($p>0.05$).

Literature review

A cross-sectional study showed there are still misconceptions among the public towards bariatric surgeries. Tremendous efforts should be taken to improve the patient–doctor discussion, which may lead to better discussions and outcomes [5].

A cross-sectional descriptive study showed the main barrier to referral was unawareness where to refer patients. Regarding the physician's attitude towards referring patients to bariatric sugary, some did not believe that the benefit of bariatric surgery was worth its risks (15.6%), 51.7% felt competent in discussing surgery as an option for obese patients. Generally, physicians had a positive attitude regarding bariatric surgeries; in contrast, they need improvement in the area of referral and post-surgery follow-up [9].

A cross-sectional study showed that PCPs might 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 [10].

A cross-sectional study showed there was a need for educational programs to improve physician knowledge and competency in treating patients with obesity [6].

A pilot study of primary care physicians showed that PCPs have low referral rates for weight loss surgery, lack confidence and support managing weight loss surgery (WLS) patients and are not well informed regarding the risks and benefits of bariatric surgery. In addition, it appears that junior PCPs may have a particularly negative perception regarding WLS [11].

Discussion

The result of the study showed low score of both attitude and knowledge among all PHCPs towards bariatric surgery. However,

Table1. Characteristics of respondents showing the average evaluation for the attitude and knowledge, age, BMI and years of experience according their specialty

	All Data (n=163)	Female (n=89)	Male (n=74)	General Practit. (n=18; 11%)	FM Residents (n=114; 69.9%)	FM Specialist (n=20; 12.3%)	FM Consultant (n=11; 6.7%)
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Age in year	32.23 (7.5)	31.72 (6.3)	32.85 (8.8)	39.44 (11.9)	28.99 (3.5)	39.5 (7.5)	40.82 (5.8)
BMI	26.83 (4.9)	24.87 (3.7)	29.19 (5.1)	27.55 (4.1)	26.45 (5.3)	27.13 (2.8)	29.05 (4.1)
Experience	5.81 (6.2)	5.37 (5.2)	6.34 (7.3)	11.56 (10.9)	3.07 (2.2)	12.2 (6.1)	13.18 (3.5)
Attitude	68.49 (9.4)	69.46 (10)	67.32 (8.6)	68.5 (6.8)	68.49 (10)	70.15 (9.4)	65.45 (6.9)
Knowledge	51.53 (11.2)	50.71 (12.7)	52.51 (9.1)	55 (12.1)	50.8 (10.5)	47.95 (8.6)	59.91 (16.3)

females got higher attitude score than males that can be possibly explained by their preference to the cosmetic side of bariatric surgery. As previously published study evidence shows that many primary care physicians (PCPs) have negative attitudes towards treating obesity [11].

According to family medicine practitioners who were categorized according to their level as residents, specialists, consultants and GPs the best attitude score was seen in family medicine specialists. On the other hand the lowest score was seen in family medicine consultants. This study result is in contrast to previous study that showed junior PCPs might have a particularly negative view regarding bariatric surgery unlike seniors [11].

A study revealed there are still misconceptions among the public towards bariatric surgeries and patient–doctor discussion should improve [5]. The discussion can't be wealthy if the majority lacks knowledge to provide about bariatric surgery as it shows in our results. There is a need for educational programs to improve physician knowledge and competency in treating patients with obesity [6].

Conclusion

In conclusion, unfamiliarity with bariatric surgery knowledge and low attitude scores seen among practitioners despite their gender and level differences emphasizes the need for possible educational programs to be implemented. It is important for PHCPs to be aware about the topic to have proper discussions with candidates of bariatric surgery and to foster the proper management delivered in primary health care centers for morbidly obese patients encountered.

Statistical consideration

Data collection sheet was developed compromising demographic data, knowledge. Data collection sheet attached.

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Sponsor

None

Conflict of interest

Authors declare that there is no existing conflict of interest in terms of commercial or financial relationship in any way.

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