

KNOWLEDGE, ATTITUDE AND PRACTICE REGARDING INDIVIDUALS WHO ARE OBESE: A CROSS-SECTIONAL SURVEY AMONG PHYSICAL THERAPISTS

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خلاصہ

دنیا بھر میں موٹاپے کی تعداد میں اضافہ ہوا ہے۔ تمام تر آبادی موٹاپے سے وابستہ بیشتر امراض مثلاً، قلبی بیماری، ذیابیطس وغیرہ میں مبتلا ہونے لگ رہے ہیں۔ یہ آرٹیکل پاکستان میں موٹاپے کے علاج سے متعلق فیزیوتھراپی کے علوماطوار اور پریکٹس پر مشتمل ہے۔ اس مطالعہ کا مقصد موٹاپے کے شکار افراد سے متعلق فیزیوتھراپسٹ کے علم، رویہ اور طریقہ علاج کی نشاندہی کرنا ہے۔ فیزیوتھراپی IPMR, DUHS کے طلباء کی جانب سے ایک کراس سیکشنل KAP مطالعہ کیا گیا۔ سیمپل کے لیے Non-probability purposive sampling کا طریقہ کار استعمال کیا گیا۔ 124 شرکاء کے سیمپل سائز کے لیے آن لائن سوفٹ ویئر *OpenEpi* استعمال کیا گیا۔ ڈیٹا جمع کرنے کے لیے ایک ایڈاپٹڈ سوال نامہ استعمال کیا گیا۔ مطالعہ کا دورانیہ تین مہینے پر محیط ہو گا۔ ڈیٹا، IPMR، ڈیو یونیورسٹی آف ہیلتھ سائنس، DUHS اور جھانسی، ڈاکٹر ضیاء الدین ہسپتال، SMBB، JPMC، ٹراما سینٹر، رابعہ مون (ٹرسٹ)، MMI ہسپتال، دیوان یونیورسٹی، انڈس ہسپتال، نیشنل انسٹیٹیوٹ آف کارڈیالوجی، انڈس ہسپتال، سندھ انسٹیٹیوٹ آف یورولوجی اینڈ ٹرانسپلانٹیشن (SIUT) سے جمع کیا جائے گا۔ اس تحقیق میں 126 فیزیوتھراپسٹ نے حصہ لیا۔ زیادہ تر فیزیکی تھراپسٹ کے مطابق جسمانی غیر فعالیت (85%)، زیادہ چکنائی والی خوراک (81%) اور زیادہ کھانا (80.2%) موٹاپے کی بنیادی وجوہات ہیں اور غذا اور ورزش کا امتزاج ضروری علاج سمجھا جاتا ہے۔ فیزیوتھراپسٹ کی اکثریت زیادہ ورزش (81%) کرنے کی تجویز دیتے ہیں۔ اور کبھی بھی مریضوں کو باریٹرک سرجری (42.9%) کے لیے تجویز نہیں کرتے۔ علم کے حوالے سے، شرکاء موٹاپے اور زیادہ وزن کی طبی تعریف میں فرق نہیں کر سکتے۔ نتائج کے مطابق فیزیکی تھراپسٹس جسمانی سرگرمیاں اور وزن کے درمیان تعلق کو ان درمیان کرتے ہیں۔ وزن میں کمی میں اضافہ اور موٹے افراد میں چربی کی مقدار میں کمی کے لئے کیلوری کی مقدار پر پابندی جسمانی تربیت میں اضافہ کے ساتھ مل کر ایک موثر نقطہ نظر کی نمائندگی کرتا ہے۔ موٹاپے سے متعلق تعلیم پر وگرامز کی تشکیل فیزیوتھراپسٹس کے لئے اشد ضروری ہے۔

ABSTRACT

The frequency of obesity has risen around the world. Individuals in the world are in danger of developing various comorbidities, for example, cardiovascular disease, diabetes etc. This article describes the knowledge, attitudes, and practice with regards to physiotherapists in Pakistan concerning the treatment of individuals who are obese. The objective of current study is to identify physiotherapists' knowledge, attitude and practice about weight gained and physical activity of obese individuals. This cross-sectional KAP study is conducted on the operating government and private field physical therapists by the students of physiotherapy IPM&R, DUHS Karachi. Non-probability purposive sampling approach is used for sampling. Sample size of 124 participants is calculated simply by online software Open Epi. To gather data, an adopted questionnaire was used while study duration was three months. Data was collected from IPM & R, Dow University of Health Sciences, DUH Ojha Campus, Dr Ziauddin Hospital, JPMC, SMBB Trauma Centre, Rabia Moon (Trust), MMI hospital, Dewan University, Indus Hospital, National Institute of Cardiovascular Diseases, Agha Khan University Hospital, Sindh Institute of Urology and Transplantation (SIUT). In this study 126 physiotherapists took part. According to most of physical therapists, physical inactivity (85%), high fat diet (81%) and overeating (80.2%) are the main reasons that cause obesity and the combination of diet and exercise are considered as essential treatment. Majority of physiotherapists recommend exercising more (81%) and would never recommend clients for bariatric surgery (42.9%) as a part of their practice. Regarding the knowledge, participants cannot differentiate between clinical definitions of obesity and overweight. The result concluded that physical therapist indicated that there is inverse relationship between physical activity and weight gain. Calorie intake restriction combined with increase physical training represents an effective approach to increase weight loss and reduce fat mass in obese

individuals. There is a need and strongly recommended education programs to enhance physical therapists' knowledge about obesity.

Key Words: Obesity, Physical Therapist, Knowledge, Practice, Attitude.

Introduction

Obesity is one of the frequently progressing and major nutritional issues all over the globe and recently its occurrence is increasing in establishing countries (Rehman *et al.*, 2014). Obesity is categorized according to BMI, people more than 30 kg/m² classified as obese (Butt *et al.*, 2019) Obesity is a compound disorder associated with physiological and environmental factors (Sack *et al.*, 2009). The undesirable health consequences associated along with obesity include cardiovascular disorder, stroke, type-II diabetic mellitus, hypertension, dyslipidaemia and osteoarthritis (Racette *et al.*, 2003). The frequency of obesity is a worldwide problem, affecting approximately three hundred million individuals (WHO., 2009). According to the WHO, typically the incidence of obesity has increased thrice worldwide since 1975 together with the number of heavy adults in 2016 hitting 1.9 billion (WHO., 2018). The frequency of being overweight have upraised radically around the globe, getting labelled a global outbreak in recent years along with Pakistan ranked ninth out of one eighty-eight countries (Stevens *et al.*, 2011 and Mahmood *et al.*, 2015). Exercising and physical activity happen to be key components of therapy practice and important factors within the management of persons with obesity (Kesäniemi *et al.*, 2010 and Eriksson *et al.*, 2006).

Canadian physiotherapy Association claims that physical therapist is often the first to get in touch with the individual having vague pain or restricted movement caused by obesity (CPA., 2007). Increasing physical exercise can reduce the particular complications associated with unhealthy weight and also promote weight reduction (Slentz *et al.*, 2007 and Haskell *et al.*, 2007 and Hill *et al.*, 2005).

Moreover, according to several studies physiotherapists have clear understanding that dealing with obesity is the part of their treatment but few of the studies also shows that many physiotherapists have neutral attitude towards obese patients (You *et al.*, 2012 and Rinne *et al.*, 2018). Studies in France on general physician showed that they do not consider obesity as a multi factorial disease and they do not treat their patients with that concern of a chronic disease (Bocquier *et al.*, 2005 and Thuan *et al.*, 2005). Some other studies on health care providers showed that they do not have enough knowledge about obesity, and they do not take obesity as a serious health concern (Poon & Tarrant., 2009 and Martins & Norsett-Carr., 2017 and Bucher *et al.*, 2018). Therefore, the aim of this study is to justify the behavior, practice and knowledge of physiotherapy approaches associated with overweight people since physiotherapists are the part of multidisciplinary team that promote wellness, health, fitness along with treating problems affecting the quality of life of people. They might play a great role for the elimination and prevention of weight problems. Physiotherapists might be able to customize their interventions which will help in finding the treatment outcomes for obese people by promoting individual's physical state and self-reliance.

Material & Methods

A cross sectional study was conducted through an adopted questionnaire with permission from a survey designed by S. Sack and other authors. Data was gathered from physical therapist of Karachi currently working in government or private jobs from IPM&R, Dow University of Health Sciences, Dow University Hospital (DUH) OJHA campus, Dr. Ziauddin Hospital, JPMC, Rabia Moon Memorial Institute of Neurosciences, SMBB Trauma Center, Memon Memorial Institute Hospital, Dewan University, Indus Hospital, National Institute of Cardiovascular Diseases, Agha Khan University Hospital, Sindh Institute of Urology and Transplantation (SIUT). Physiotherapist having minimum 1 year of experience and BSPT or higher degree were included. Those who were non practicing were excluded from the study. The sample size of 126 with 20% dropout ratio was ascertained utilizing Open Epi version 3 with hypothesized frequency of 92.8% (physical inactivity). Confidence limits of 5%, design effect of 1% and confidence interval of 95%. The questionnaire consists of 3 sections. The first section consisted of demographic information (name, age, gender, qualification, organization). The second section consisted of inclusive and exclusive questions. The third section consisted of various domains regarding attitudes of physiotherapist towards obesity and how to treat it. These types of domains include attitude in the direction of the cause of being overweight, efficiency associated with interventions, and fat reduction. The questionnaire also consists of questions concerning knowledge and practice techniques that were in the field of physiotherapy. The survey comprised of fifteen questions in Likert type scale, correct and incorrect design. The questionnaire piloted from 5 subjects and few changes were made. The non-probability purposive sampling technique was used, and 126 responses were gathered. From approval of synopsis to data collection this study took around 3 months. IBM software SPSS version 21 was used to enter and analyses data. Percentages and frequencies were calculated for qualitative variables. Mean and standard deviation were taken out for all the quantitative variables.

Results and Discussion

Almost 126 physiotherapists participated in this study. Mean age of the study participant was 29.79 years and mean experience was 5.97 years. Among 126 participant 43.7% and 56.3% were male and female respectively.

A question was asked to rank the significance of causes of obesity. Physical inactivity (85%), high fat diet (81%) and overeating (80.5) were mostly marked by the participants as very or extremely important causes of obesity. However according to some participant psychological problem (52.4) and poor nutritional knowledge (37.3) were rated somewhat to moderately important as a cause of obesity (Table 1). For the effectiveness of treatment for obese individuals, large number of participants rated exercise training (81.7%), diet and exercise (79.3%) and diet therapy by a certified dietitian in blended with workout exercise (74.6%) as most effective treatment.

Table 1. Attitudes about causes of obesity and effectiveness of obesity treatment

Attitudes Regarding Cause of Obesity							
Cause of Obesity	No. of Respondents	1 Not at All		2 & 3 Somewhat to Moderately		4 & 5 Very to Extremely	
		n	%	n	%	n	%
Lack of willpower	126	12	9.5	26	26.6	88	69.8
Metabolic defect.	126	8	6.3	30	23.8	88	69.9
Genetic factor	126	4	3.2	42	33.3	80	63.5
Physical inactivity	126	2	1.6	17	13.5	107	85
Overeating	126	2	1.6	23	18.2	101	80.2
Repeated dieting	126	8	6.3	63	50	55	43.7
Psychological problem	126	6	4.8	66	52.4	54	42.9
High fat diet	126	1	0.8	23	18.2	102	81
Restaurant eating	126	5	4.0	31	24.6	90	71.4
Poor nutritional knowledge	126	3	2.4	47	37.3	76	60.3
Endocrine disorder	126	15	11.9	34	26.9	77	61.1
Attitudes Regarding Effectiveness of Obesity Treatment							
Treatments	No. of Respondents	1 Not at All		2 & 3 Somewhat to Moderately		4 & 5 Very to Extremely	
		n	%	n	%	n	%
Exercise training	126	1	0.8	22	17.5	103	81.7
Weight loss surgery	126	26	20.6	69	54.7	31	24.6
Diet alone	126	23	18.3	90	71.4	13	10.3
Medication for weight loss	126	28	22.2	81	64.3	17	13.4
Commercial weight loss programs	126	29	23.0	79	62.7	18	14.3
Diet and exercise	126	8	6.3	18	14.2	100	79.3
Nutritional counselling by a registered dietitian with exercise training	126	2	1.6	30	23.8	94	74.6

As described in Table 2, participants were asked about the agreed or disagreed about statements associated with obesity. Most respondent agreed with statements; While nearly half of the respondents disagreed with the statements; "I have negative reactions towards obese individuals based on their weight and/or appearance" (63.5%), "I am usually unsuccessful in helping obese individuals lose weight" (57.9%).

Table 2. Attitudes regarding statements about obesity

Items	No. of Respondent	Approaches about Obesity					
		1&2 Disagree		3 Neutral		4 & 5 Agree	
		n	%	n	%	n	%
Obesity related with medical disorders	126	12	9.6	29	23.0	85	67.5
Most obese individuals can be at recommended weight kind if encouraged	126	7	5.6	18	14.3	101	80.1
I have negative reactions towards obese individuals based on their weight and/or appearance	126	80	63.5	28	22.2	18	14.3
I am obliged to teach overweight persons	126	20	15.9	38	30.2	68	54
It is difficult to loose for obese individuals	126	58	46.1	24	19.0	44	34.9
Obese patients are aware of the health risks of obesity	126	41	32.6	45	35.7	40	31.7
I usually accommodate obese people	126	43	34.1	46	36.5	37	29.4
I often feel uncomfortable when assessing an obese individual	126	58	46.1	42	33.3	26	20.7
I am usually ineffective in serving obese persons to drop bodyweight	126	73	57.9	38	30.2	15	11.9
Most of the participants are not going to show significant weight lose	126	55	43.7	35	27.8	36	28.6
Empathy is tough show for obese individual	126	61	48.4	44	34.9	21	16.7
Overall 10% decrease in weight is enough to control complications	126	41	32.5	42	33.3	43	34.1
Physiotherapist must be character to represent standard bodyweight	126	18	14.3	22	17.5	86	68.3
I am confident enough to provide regime for obese persons	126	18	14.2	39	31.0	69	54.7

Results regarding the recommendation of treating obese clients are shown in Table 3. Most of the participant recommended exercise (81%), recommended client to a registered dietitian for nutritional counseling (63.5%) and eating less (53.8%). However, most of the participants never referred patients to a physician who is specialized in obesity surgery (42.9%), never recommended clients for popular diet book (23.8%) and never provided sample menus (41.3%).

For the eight questions about knowledge as shown in figure 1, the participants most frequently chose the true response (96.8%) for the statement, "obesity causes muscular skeletal changes in human body". Second most frequently true response (84.1%) was marked about the recommendation of CDC guideline and also about the question. The largest proportion of false answers were about the definition of obesity, "BMI greater than 25kg/m²" (37.3%) and about the statement, "BMI more accurately reflect risk of cardiovascular disease than waist circumference" (34.1%) and also about the question, "Two out of three adult are overweight or obese" (30.2%).

This study was aimed to determine knowledge, attitude and practice of physical therapist regarding individuals who are obese. The respondents believed that physical inactivity, high fat diet and overeating are the most important factors which causes obesity. This finding was supported by the study conducted on physiotherapists in 2009, which shows physical inactivity (92.8%) and overeating (78.5%) as the main reason of being obese. In comparison, the study on primary care family physician, majority participants marked insufficient physical activity (97.2%) in causes on obesity (Block *et al.*, 2003). When evaluating for the effectiveness of obesity treatment, 81.7% believed that exercise training and 79.3% choose combination of diet and exercise. But only a small proportion of physiotherapist believed dieting alone (10.3%) was enough to treat obesity. In comparison, 92.3% respondents think combination of diet, exercise and cognitive behavior therapy as most favorable treatment of obesity, proposed in a study conducted in Norway (Onyemaechi *et al.*, 2016). By these results it is understood that most physiotherapist agreed that lack of physical activity in daily life is most important cause and it can be prevented by doing exercise along with dieting.

Table 3. Recommendations for treating clients who are obese

Recommendations for Obese people							
Treatments	No. of Respondent	1 Never		2 & 3 Rarely or Occasion ally		4 & 5 Frequently or Always	
		n	%	n	%	N	%
Recommend exercising more	126	4	3.2	20	15.9	102	81
Recommend commercial program such as Weight Watchers	126	25	19.8	69	54.7	32	25.4
Recommend client to a Registered Dietitian for nutritional counseling	126	3	2.4	43	34.1	80	63.5
Recommend eating less	126	6	4.8	53	42.1	67	53.8
Recommend client to a Psychiatrist or other mental health professional	126	29	23.0	72	57.2	25	19.8
Distribute sample menus	126	52	41.3	50	39.7	24	19.1
Recommend popular diet books	126	30	23.8	79	62.7	17	13.5
Recommend to a physician who specializes in obesity surgery. (i.e. bariatric surgery)	126	54	42.9	56	44.5	16	12.7
Recommend client to a hospital-based weight control program	126	17	13.5	42	33.4	67	53.2
Recommend the patient to a support group	126	15	11.9	56	44.5	55	43.6

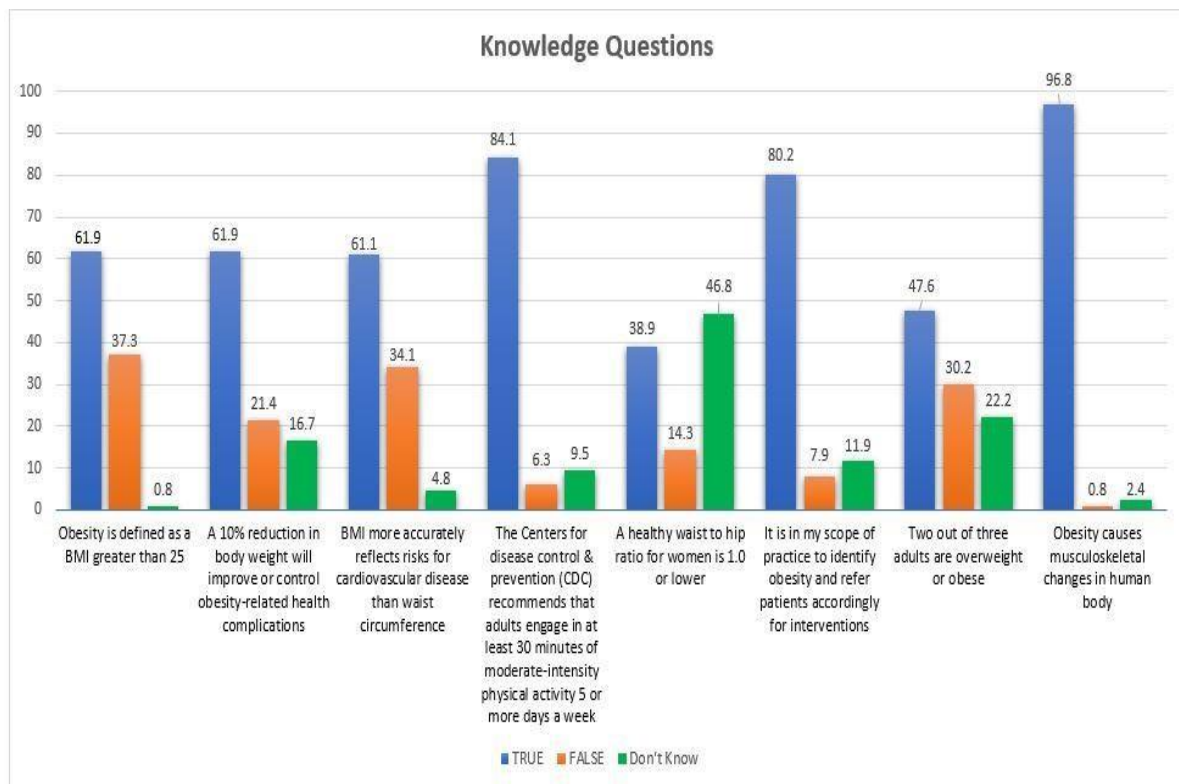


Fig.1. Knowledge Questions

As a health care professional, a physical therapist experienced obese patients along with other pathological conditions, e.g. osteoarthritis, low back pain etc. For a physical therapist it is important to know what patient is expecting from you and for that it is not necessary that you feel empathy for him. The current study shows almost half of the participants (48.4%) disagreed to the statement, “it is difficult to feel empathy for obese patient”. In support of this 61.6% undergraduate and registered nurses shows the same disagreement (Poon and Tarrant., 2009).

With regard to the knowledge, three fifth of the physiotherapists answered incorrectly about definition of obesity.

Conclusion

As the obesity epidemic continues to increase, a better understanding of obesity is necessary for the effective identification and treatment of obese people. It can be concluded from the results that majority have difficulty in differentiating between overweight and obesity so, an education program for physiotherapist is strongly recommended. As physiotherapists are health professionals that promote physical exercise which is a basic component of weight loss management.

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