

Detection of eating disorders in 16-20 year old female students — perspective from Islamabad, Pakistan

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Abstract

There are no studies on eating disorders in Pakistani adolescent girls. This study was conducted to determine the opinions, and behaviours pertaining to dieting and body size among 16 to 20 year old female school and college students in Islamabad, Pakistan. This was done through a five-item questionnaire to determine the SCOFF score. The SCOFF acronym has been derived from 'S' from the word "sick" in question number 1. 'C' from the word "control" in question number 2. The 'O' comes from the word 'one' in the original question number 3; this original question number 3 of the SCOFF asks about having lost more than 'one' stone weight in the past three months. This question was rephrased to read as whether more than 15 pounds or 6 kilogrammes have been lost. The two 'F's come from questions number 4 and 5 denoting words "fat" and "food", respectively. A total of 1,134 female students participated in the study and 736 (64.9%) respondents scored two or higher on the SCOFF scale; 461 (66.5%) out of 693 were aged 16 to 18, while 275 (62.4%) out of 441 were aged 19 to 20. Results indicated a need for developing clinical practice guidelines for general practitioners and paediatricians to proactively identify and treat potential eating disorders in young Pakistani women.

Keywords: Eating disorders, Adolescents, Pakistan.

Introduction

Anorexia nervosa and bulimia nervosa are the two major eating disorders and both primarily manifest in adolescence. Compared to men, women are as much as three times more likely to experience these disorders.^{1,2} There is dearth of empirical information on eating disorders in Pakistan. A study of 180 female nursing and medical students in Karachi reported a prevalence rate of 21.7% for anorexia nervosa.³ Another study using SCOFF questionnaire reported that 307 out of 446 (68.8%) female university students scored two or higher; indicating

potential eating disorders and need for clinical assessment.⁴ SCOFF is an effective 5-question screening tool to identify individuals for clinical assessment so as to determine the presence of potential eating disorders.⁵ SCOFF acronym has been derived from 'S' from the word "sick" in question number 1. 'C' from the word "control" in question number 2. The 'O' comes from the word 'one' in the original question number 3; this original question number 3 of the SCOFF asks about having lost more than 'one' stone weight in the past three months. This question was rephrased to read as whether more than 15 pounds or 6 kilogrammes have been lost. The two 'F's come from questions number 4 and 5 denoting words "fat" and "food", respectively. SCOFF has a high validity, with sensitivity and specificity ranging from 53.3% to 84.6% and 89.6% to 93.2% respectively. Regarding reliability, an overall agreement between the SCOFF administration orally and written questionnaire has been reported to be 88.2% with a kappa coefficient of 0.811.⁶⁻⁸ There are no studies on eating disorders in adolescent girls in Pakistan. This study was conducted to determine the SCOFF scores, opinions and behaviours pertaining to dieting and body size among 16 to 20 year old women in Islamabad.

Methods and Results

The cross-sectional survey with convenience sampling was conducted in January and February 2011 among female school and college students in Islamabad, Pakistan, to detect eating disorders and study beliefs/behaviours on dieting and weight; using a pre-tested questionnaire with close-ended questions answered as either 'yes' or 'no', comprising the SCOFF questionnaire and additional questions. Female lecturers in four schools and colleges approached students in the classes and after obtaining verbal consent and ensuring complete confidentiality, distributed the questionnaires and collected the completed ones. Only those students aged 16 to 20 were invited to participate in the study. Each of five SCOFF questions answered affirmatively was assigned one point; a score of two or above suggests a likely case of either bulimia or anorexia nervosa. Eating disorders are frequently characterised by and sometimes even presented as severe dieting, dissatisfaction with one's body size, and self esteem determined by one's

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Table-1: SCOFF* questionnaire results cumulative, and disaggregated by age.

Question	Age											
	16		17		18		19		20		Cumulative	
	N = 128		N = 225		N = 340		N = 295		N = 146		N = 1134	
	Yes (%)	No (%)	Yes (%)	No (%)	Yes (%)	No (%)	Yes (%)	No (%)	Yes (%)	No (%)	Yes (%)	No (%)
Do you make yourself sick because you feel uncomfortably full?	46 (35.9)	82 (64.1)	103 (45.8)	122 (54.2)	154 (45.3)	186 (54.7)	124 (42)	171 (58)	48 (32.9)	98 (67.1)	475 (41.9)	659 (58.1)
Do you worry you have lost control over how much to eat?	46 (35.9)	82 (64.1)	86 (38.2)	139 (61.8)	131 (38.5)	209 (61.5)	106 (35.9)	189 (64.1)	51 (34.9)	95 (65.1)	420 (37)	714 (63)
Have you recently lost more than fifteen (15) pounds or six (6) kilograms in a three month period?	19 (14.8)	109 (85.2)	39 (17.3)	186 (82.7)	61 (17.9)	279 (82.1)	49 (16.6)	246 (83.4)	30 (20.5)	116 (79.5)	198 (17.5)	936 (82.5)
Do you believe yourself to be fat when others say you are too thin?	42 (32.8)	86 (67.2)	99 (44)	126 (56)	124 (36.5)	216 (63.5)	132 (44.7)	163 (55.3)	58 (39.7)	88 (62.3)	455 (40.1)	679 (59.9)
Would you say food dominates your life?	89 (69.5)	39 (30.5)	140 (62.2)	85 (37.8)	209 (61.5)	131 (38.5)	179 (60.7)	116 (39.3)	89 (61)	57 (39)	706 (62.3)	428 (37.7)

*SCOFF acronym has been derived from 'S' from the word "sick" in question number 1. 'C' from the word "control" in question number 2. The 'O' comes from the word "one" in the original question number 3; this original question number 3 of the SCOFF asks about having lost more than 'one' stone weight in the past three months. This question was rephrased to read as whether more than 15 pounds or 6 kilogrammes have been lost. The two 'F's come from questions number 4 and 5 denoting words "fat" and "food", respectively.

Table-2: Answers to additional questions, cumulative and disaggregated by SCOFF scores.

	SCOFF Scores													
	0		1		2		3		4		5		Cumulative	
	N = 132 (11.6%)		N = 266 (23.5%)		N = 349 (30.8%)		N = 272 (24%)		N = 101 (8.9%)		N = 14 (1.2%)		N = 1134	
	Yes (%)	No (%)	Yes (%)	No (%)	Yes (%)	No (%)	Yes (%)	No (%)	Yes (%)	No (%)	Yes (%)	No (%)	Yes (%)	No (%)
Do you think you should be dieting?	12 (9.1)	120 (90.9)	71 (26.7)	195 (73.3)	121 (34.7)	228 (65.3)	111 (40.8)	161 (59.2)	52 (51.5)	49 (48.5)	11 (78.6)	3 (21.4)	378 (33.3)	756 (66.7)
Are you dissatisfied with your body size?	24 (18.2)	108 (81.8)	86 (32.8)	180 (67.7)	137 (39.3)	212 (60.7)	121 (44.5)	151 (55.5)	59 (58.4)	42 (41.6)	9 (64.3)	5 (35.7)	436 (38.5)	698 (61.5)
Have you tried dieting in the past 12 months?	6 (4.6)	126 (95.4)	40 (15)	226 (85)	80 (22.9)	269 (77.1)	96 (35.3)	176 (64.7)	51 (50.5)	50 (49.5)	11 (78.6)	3 (21.4)	284 (25)	850 (75)
Does your weight affect the way you think about yourself?	23 (17.4)	109 (82.6)	77 (28.9)	189 (71.1)	139 (39.8)	210 (60.2)	134 (49.3)	138 (50.7)	60 (59.4)	41 (40.6)	9 (64.3)	5 (35.7)	442 (39)	692 (61)

SCOFF acronym has been derived from 'S' from the word "sick" in question number 1. 'C' from the word "control" in question number 2. The 'O' comes from the word "one" in the original question number 3; this original question number 3 of the SCOFF asks about having lost more than 'one' stone weight in the past three months. This question was rephrased to read as whether more than 15 pounds or 6 kilogrammes have been lost. The two 'F's come from questions number 4 and 5 denoting words "fat" and "food", respectively.

weight.^{7,9} We added four more questions on opinions and having actually tried dieting, dissatisfaction with one's body size, and whether weight affects thinking. All questions - with the exception of age - were required to be answered either affirmatively or negatively. Data was analysed using statistical package STATA version 12, applying chi-squared test to determine relationship between proportions of two age groups i.e. 16-18 and 19-20 years, and responses to the questions asked.

A total of 1,134 students aged 16 to 20 participated in the study, with 693 (61.1%) aged from 16 to 18 years, and the rest being aged 19 to 20 years. Responses to each of the

five SCOFF questions were disaggregated by age (Table-1). The responses to the four additional questions were disaggregated by SCOFF scores (Table-2). Highest number of affirmative responses on the SCOFF scale was for the question on whether food dominates one's life i.e. 706 (62.3%). Only 132 (11.6%) respondents replied negatively to all five SCOFF questions, while merely 14 (1.2%) replied affirmatively to all five SCOFF questions. Cumulatively, 736 (64.9%) respondents scored two or higher on the SCOFF scale; 461 (47.9%) out of 963 aged 16 to 18, while 275 (62.4%) out of 441 aged 19 to 20. Pearson chi-square test, using 95% significance level, revealed statistically significant difference ($p=0.039$) between the

two age groups and dissatisfaction with one's body size; with 19-20 year olds more dissatisfied with their body size compared to 16-18 age group. No statistically significant associations were found between the two age groups and other attributes inquired in the study.

The study raises alarm about the possibility of substantial and unrecognised burden of eating disorders in adolescent and young adult women in Pakistan. Although the study was limited to female students of public-sector schools and colleges in Islamabad, but 736 (64.9%) respondents scored 2 or above on the SCOFF questionnaire. This cut-off score raises the index of suspicion for eating disorders and suggests a need for clinical assessment to identify and, if warranted, treat eating disorders.

Conclusion

General practitioners and paediatricians need to develop practice guidelines so as not to miss an opportunity to address eating disorders when providing consultations to adolescent girls and young adult women. Additionally, health education targeted towards parents of adolescent girls, school teachers as well as adolescents themselves would help address eating disorders in the country. Finally there is a need for nationally representative surveys to determine the prevalence and correlates of

eating disorders. It would help ineffectively addressing morbidity associated with eating disorders.

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