

A Study of Abnormal Eating Attitude Among Jordanian Female College Students

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Background: Eating Disorders (ED) have been classically considered as a western culture bound syndrome and almost unknown in eastern cultures. Recent studies have shown increasingly abnormal eating attitudes among Arab women, and in particular young girls who are exposed to the western values through the media (global village).

Methods: Two hundred and one female college students were randomly chosen from the female nursing students from Princess Muna Nursing College (PMNC) and Jordan University (JU) with age range of (17-21) years. All participants were assessed using the Arabic Version of Abnormal Eating Attitude Scale, which consists of 40 items in a 6 points Likert scale.

Results: The results of the study showed that 12.4% (25 girls out of 201 screened girls) of the sample had abnormal eating attitudes and were over concerned with food and body image. The highest score with the mean of 40.8 (among the girls who scored above the cut off of 30) came from the lower social class. Girls from middle social class had the mean score of 40.5 and came second. The lowest mean score of 33 was obtained from girls belonging to the higher social class.

Conclusion and Recommendation: This study showed a high percentage of abnormal eating attitude among Jordanian girls who were screened in the sample. Girls who scored above the cut off point needed to be interviewed for the purpose of diagnosis and possible clinical intervention.

We believe that (ED) is not rare in the Arab cultures, therefore educating the public through the media and improving teaching to the junior Doctors and Nurses would probably help to unmask a serious disorder.

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Eating Disorders have been classically perceived as a western culture bound syndrome associated with cultural driven factors such as changing role of women, unrealistic expectation of thinness and attractiveness, and women liberation and feminine movements. Women have to be more attractive, slimmer and fit to compete in a world which has until recently been considered the world of men.

Drive for thinness is not universal, in many non-western cultures plumpness has been considered attractive and can be associated with fertility and caring. Furnham and Albahai¹ argued that in societies where food is plentiful the idea of slimness is constantly imposed via the media and peer pressure. In other countries, where availability of food fluctuates, idea of feminine attractiveness is often the opposite to slimness.

Nasser² found abnormal eating attitude and excessive concern about weight and shape among young females in the Egyptian culture (11.4%) using the Arabic version of eating attitude

test (EAT40) devised by Garner and Garfinkel³ and this was in keeping with screening survey on non-western cultures (15%)⁴. Nasser² argued that adolescent girls are experiencing a conflict between the western values of autonomy and the desire for achievement and old traditional values.

Al-Subaie et al⁵ conducted a similar screening on female students in Saudi Arabia using EAT26 which is a short version of EAT40 and found it to be useful and valid in screening large populations for eating disorders. Both Nasser's⁶ and Al-Subaie et al⁶ studies found EAT to be highly sensitive and reasonably specific in Arab cultures.

METHODS

The 210 girls who have been screened in this study were first, second and third year students at PMNC and JU. We screened 150 female students from PMNC which is a military college giving a Diploma in Nursing after 3 years of studying, and 60 female students from a Nursing College at JU which

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gives a Bachelor of Science in Nursing after about 4 years of studying. We screened more students from PMNC because of administrative and practical reasons. The age range was (17-21) which is the age we felt is particularly vulnerable to ED.

The Arabic version of EAT40 was used, the questionnaire was completed under supervision by the girls who were given numbers to ensure confidentiality. They were asked to state their age, the year of studying, their weight and height, their parent's occupation and education. 201 were valid and included as 9 students failed to answer all the items or did not state the needed information mentioned above. The occupation and the education of the parents were used to assess the social class. Only the girls who scored above the 30 cut off were approached to be interviewed using a semi-structured interview to diagnose ED. The interview was conducted by a psychiatrist and a clinical psychologist with high inter-rater reliability.

Demographic Data

This study has shown that 3 out of the 25 EAT positive girls (12%) come from professional class with higher education and higher income and none of the 176 EAT negative girls (0%) came from that social class. It has also been shown that 7 (28%) of EAT positive girls and 51 (28.9%) of EAT negative girls came from intermediate and skilled class with moderate income. Finally 15 (60%) of EAT positive and 125 (71.1%) of EAT negative girls come from semi-skilled and unskilled lower income class.

RESULTS

Twenty-five out of 201 screened girls have scored above the 30 cut off (12.4%). Out of those 25 girls who were considered positive on EAT, 15 came from low social class with mean score of 40.8 (Sd 11.13), 7 girls came from middle social class with mean score of 40.5 (Sd 14.38) and only 3 girls came from a high social class with mean score of 33 (Sd 1) (Table 1).

Table 1: Comparison between the mean of the scores and mean BMIs of EAT positive girls classified according to the social class.

Social class	EAT positive (n)	Mean of score (Sd)	Mean of BMIs (Sd)
Upper	3	33.0 (+1)	20.72 (2.08)
Middle	7	40.3 (14.38)	22.42 (2.23)
Lower	15	40.8 (11.13)	24.44 (2.53)

A comparison was made between the mean of scores and the mean of BMIs of girls who scored positive on EAT and the mean of scores and the mean of BMIs of girls who scored negative on EAT (Table 2). This table represents the mean and the Sd of the BMIs and scores of the two groups.

Using paired 't' test showed that there is a significant difference between the BMIs mean of the EAT positive group and the EAT negative group ($p < 0.01$) and there is

also a significant difference between the scores mean of the two groups ($p < 0.001$).

Table 2: Comparison between EAT positive and EAT negative groups.

Variables	EAT positive N = 25	EAT negative N = 169	t value	p value
BMIs mean	23.3 (± 2.5)	19.3 (± 6.4)	4.7	$p < 0.01$
Scores mean	39.8 (± 9.8)	18.1 (± 6.9)	9.5	$p < 0.001$

Only EAT positive girls were approached for interview but 4 girls out of 25 declined to be assessed, probably because of the stigma of having a psychiatric disorder in girls who are pursuing a nursing career despite the confidentiality of this study.

Among the 21 girls who were actually interviewed, 2 cases of Bulimia Nervosa (0.99%) were diagnosed with typical over concern about weight and shape, morbid fear of fatness and weight control behaviour using mainly self-induced vomiting.

Table 3. Comparison of EAT scores in current study and other studies.

Study	Sample (n)	EAT negative n	EAT positive n (%)
Mann et al ⁷	262	244	18 (6.9)
Szmukler ⁸	1676	1559	117 (6.2)
Sabine et al ⁹	1010	927	83 (8.2)
Mumford and Whitehouse ⁴	204	174	30 (15.0)
Nasser ²	353	311	40 (11.4)
Current Study	201	176	25 (12.4)

DISCUSSION

There have been a number of methodological limitations in this study. Nursing college and University students were chosen because it was felt nursing students were easily accessible and more likely to show interest and be genuine and co-operate in the study. Their age group (17-21) represents a high risk age group but the important question is whether they represent the Jordanian population. The over-representation of low social class reflects the class distribution of the Jordanian society. It has been known that Nursing Schools attract people from low and middle social classes but in this study 3 girls belonged to a high social class and interestingly all of them (100%) scored above the cut off. In fact 3 out of 201 (1.49%) does reflect the actual percentage of upper social class in the Jordanian population, but it has to be kept in mind that the number was too small to make a statistically sound conclusion.

The study showed that there is a statistically significant difference between the mean of the BMIs of girls who were EAT positive and the mean of BMIs of girls who were EAT negative ($p < 0.01$). This probably indicates that EAT positive girls are larger in size compared to EATs negative girls and

that probably makes them more concerned about weight and shape and, therefore more vulnerable to EDs.

A comparison was made between the mean of the scores and the mean of the BMIs of EAT positive girls classified according to their social class. It showed a difference between the mean of the scores and BMIs but the numbers were too small to make a statistical conclusion. This is probably one of the methodological limitations of this study which indicates the need to screen a larger number of girls from high risk age group.

The Registrar General's Classification of Occupation OPCS¹⁰, which is concerned with classification of occupations independent of wealth status, was used. Parent's education and wealth were also included to assess the social class because of OPCS limitation.

The sample was divided into three classes i.e. upper, middle and lower social class. The Jordanian Statistics Department confirmed that OPCS has not been used in Jordan and the population is divided according to the family income. The family is considered below poverty line (lower social class) if the total family income is below 150 Jordanian Dinars (JD) per month which is about 217\$ per month. The family is considered rich (upper social class) if the family income is above 3000 JD (about 4347\$) per month. When the family income is in between, the family is considered as middle social class (limited income).

The age group of the study 17-21 is an important limitation because the classical age range for girls at high risk is 14-17 years. This age group was chosen because it was felt that girls at this age are at a high risk given that the majority of them come from rural areas; they leave their families for studying and become relatively more independent and are more likely to be exposed to different values and standards with western influence which emphasizes slimness and fitness.

CONCLUSION

This study is an exploratory study screening for abnormal eating attitude and eating disorders among a vulnerable age group in Jordan.

Traditional Arab and Islamic societies do not over-value thinness and they attach more significance to women's fertility and idealize motherhood. These values for a long time were thought to provide some protection against development of eating disorders. Teenagers and young women in the Arab world have been exposed to the western influence by the mass media where emphasis is on shape and weight. Models, actresses and women working in the show business have to be slimmer and more fit to compete, as thinness has probably become the most important sign of beauty. Therefore Arab women are undergoing a conflict between that Western influence which promotes women's independence and liberation, and the revival of Islamic fundamentalism which views the woman's role as a house wife and a mother¹¹.

The study showed a percentage of abnormal EAT (12.4%) and EDs (Bulimia Nervosa 0.99%) which is approximate to transcultural and Arab studies (see Table 4). The susceptibility of the Arab culture to developing such disorders could be based on easy accessibility of western values through the media and the readiness to assimilate them. Abnormal EAT and EDs may be the result of the conflict which Arab girls are undergoing³ between the traditional Arab and Islamic values and the Western influence which promotes autonomy and a desire for achievement^{12,13} or the vulnerability to EDs may be genetic in nature as concluded by twin studies¹⁴. Another possible explanation is that the genetic predisposing factor and the environmental precipitating factor i.e. the conflict between the western influence and the Arab values are both necessary contributors to the aetiology of Eating Disorders.

Finally there is a need to increase Doctors, Nurses and Public awareness about these disorders, probably through media and proper teaching of ETs to medical and nursing students.

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