Disordered eating has traditionally been viewed as a disease of the more prosperous industrial countries. It is now becoming recognized in many other parts of the world (Lee and Lee, 2000; Oyewumi and Kazarian, 1992), though different in nature, severity, and frequency from that seen in the West and Japan. Emerging data suggest that younger women in developing countries may be moving toward a Western body-image dissatisfaction, which is already evident in their peers in the industrialized world (Ford et al., 1990; Nasser, 1988; Soomoro et al., 1995). Similarly, comparative studies of non-European migrants and their children living in the West suggest that cultural exposure may cause immigrants from cultures where thinness is not highly valued to adopt Western positive valuations of thinness (Ford et al., 1990; Gunewardene et al., 2001; Nasser, 1988). However, there is a lack of studies examining ethnic differences within developing countries in disordered eating despite the fact that certain values and practices intrinsic to non-Western cultures might be important for the development of disordered eating (Littlewood, 1995; Mukai et al., 1994). The high variability of incidence found across very different populations and climates suggests that sociocultural or ecological factors play a substantial role in the etiology of eating disorders (DiNicola, 1990; Littlewood, 1995). Mumford and Whitehouse (1994) have found that among Asian girls a propensity toward disordered eating was related more to a traditional rather than to the influence of Western cultural values of feminine beauty.

Objective: The population of Oman is a heterogeneous mix of nationalities providing a natural setting for studying the cross-cultural differences in the presence and severity of eating disorders as well as an opportunity for evaluating the performance of measurement instruments for these disorders. Method: Disordered eating screening instruments (the Eating Attitude Test and the Bulimic Investigatory Test) were administered to Omani teenagers, non-Omani teenagers, and Omani adults. Results: On the Eating Attitude Test, 33% of Omani teenagers (29.4% females and 36.4% males) and 9% of non-Omani teenagers (7.5% of males and 10.6% females) showed a propensity for anorexic-like behavior. On the Bulimic Investigatory Test, 12.3% of Omani teenagers showed a propensity for binge eating or bulimia (13.7% females and 10.9% males). Among the non-Omani teenagers, 18.4% showed a tendency toward bulimia, with females showing a slightly greater tendency than males. In contrast, barely 2% of Omani adults showed either a presence of or a severity of disordered behavior with food. Conclusion: Omani teenagers scored significantly higher than other ethnic groups and Omani adults. This finding is discussed in the light of emerging evidence from many parts of the world suggesting that cultural transition, compounded by demographic constraints, plays a significant role in abnormal eating attitudes. J. Am. Acad. Child Adolesc. Psychiatry, 2002, 41(9):1124–1130. Key Words: cross-cultural, anorexia, bulimia, Oman, Arab-Islamic.
to chronic lifestyle disorders in countries whose economies and culture are in transition, it has yet to be established whether dieting in such countries is caused by a changing lifestyle. In other words, it is yet unclear whether dieting in the traditional societies is due to newly acquired attitudes toward food consumption or simply is an inherent part of globalization (Fedoroff and McFarlane, 1998).

These uncertainties cast doubt on the notion that disordered eating is primarily a “disease” of the developed world (Halmi, 1996). The question therefore remains as to whether dieting is a culture-bound or a culture-reactive phenomenon (DiNicola, 1990).

Numerous screening instruments have been developed or validated to facilitate easy identification and to measure the severity of eating pathology in various linguistic and cultural groups (Al-Subaie et al., 1996; Lee et al., 1998; Srivasan et al., 1998; Stephens et al., 1999). As eating disorders are protean and without central features (Littlewood, 1995), such comparisons are likely to be inadequate (Weiss, 1995). The gold standard for eating pathology often derived from the DSM-IV (American Psychiatric Association, 1994) tends to emphasize dieting. This approach appeared to be problematic in cross-cultural studies, where it was observed that there was less emphasis on dieting (Weiss, 1995). Some authors (e.g., Littlewood, 1995) have called for the development of a culturally sensitive measure of eating pathology, and indeed such efforts have been made (Srivasan et al., 1998). Although such attempts may be culturally and ethnographically appropriate, screening instruments such as these are likely to hamper much needed international comparison in the light of emerging evidence that eating pathology is becoming a universal problem (le Grange et al., 1998; Lee and Lee, 2000; Oyewumi and Kazarian, 1992).

Studies of Arab cultures suggest that in the past, thinness was socially undesirable whereas plumpness was regarded as a symbol of fertility and womanhood (Abou-Saleh et al., 1998). Our understanding of eating disorders among Omani populations is limited, although it has been observed that some patients who have sought treatment at Sultan Qaboos University Hospital in Oman had eating disorders (Al-Adawi et al., 1999). Studies designed to investigate eating habits and behavior in developing countries like Oman could add significantly to our knowledge of eating disorders and substantiate the emerging view that eating disorders are becoming a global challenge.

An interrelated aim of this study was to survey eating attitudes in Oman. Oman is an Arab-Islamic country that lies on the eastern side of the Arabian peninsula. It is bordered on the east by the Indian Ocean and on the west by Saudi Arabia and the United Arab Emirates. Oman is mainly desert with the population centers along the coast. Due to its isolation and because of the mainly desert terrain, Oman developed its own history and subculture (Al-Adawi et al., 1997). There are about 1.4 million Omaniis with 0.6 million expatriate workers from all continents of the world (Statistical Yearbook, 2000).

Many studies have examined dieting behavior in adolescent girls. However, given the fact that eating disorders also affect boys (Ricciardelli et al., 2000; Strober et al., 2001) and adults (Nakamura et al., 1999), this study examined disordered eating among adolescents and adults of both sexes. The population of Oman is a heterogeneous mix of nationalities, which provides a natural setting for studying the cross-cultural differences in eating behavior as well as an opportunity for evaluating the performance of measuring instruments for eating disorders.

METHOD

A sample of Omani students was recruited from three state schools in the Muscat metropolitan area. These schools were selected because they drew students from a cross-section of Omani society. A second sample, non-Omani students, was drawn mostly from American, British, and Western European adolescents residing with their parents who worked in various multinational and government agencies in Muscat. A third sample, Omani adults, was recruited from Sultan Qaboos University and the towns around the university. This group represented a cross-section of the diverse sociocultural mix in Oman.

A brief explanation of the study was given to all participants, and they were assured that the data would be confidential. Their oral consent was obtained. Invitations were extended to the students, who were interviewed during class time and instead of a lecture were asked to give their time toward this study. It was explicitly stated that their responses would have no influence on their grades or examination performance. The students were asked not to discuss the questionnaire among themselves to avoid peer influence. The questionnaire for Omani adults was administered in the identified areas that have been subjected to various health education programs as part of community health development projects.

Individuals with known sensory or cognitive impairments that could affect proper completion of the questionnaire were excluded from the sample. The study was approved by both the Ethics Committee for Human and Clinical Research and Medical Research Committee (Project No. 96) of the College of Medicine, Sultan Qaboos University.

Assessment Measures

The two assessment measures, the Eating Attitude Test (EAT) (Garner and Garfinkel, 1979) and Bulimic Investigatory Test (BITe) (Henderson and Freeman, 1987), were translated by experienced staff members into Arabic by using a method of back-translation suggested by Ko and Cohen (1998) to make them dialectically adaptive to an Omani sample. A conscious effort was made to ensure conceptual, semantic, and technical equivalence between the source measures and the target measures. The translated versions of the assessment tools
were given to Omani subjects, whereas non-Omani students consisting mostly of Caucasian expatriates attending English-medium/speaking schools in Muscat, the capital of Oman, were given the original English version of the EAT and BITE.

**Eating Attitude Test.** The EAT is a 40-item self-report that measures symptoms associated with anorexia nervosa (Crisp, 1970). The EAT has been validated in various cross-cultural studies (Lee et al., 1998; Stephens et al., 1999). In a majority of studies, its performance has been found to be acceptable, including its shorter version (EAT-26), in the Arab world (Al-Subaie et al., 1996; Nasser, 1994).

The EAT was scored using the Garner and Garfinkel (1979) system in which the three categories at the nonanorexic end of the 6-point Likert scale scored 0; the other categories scored 1, 2, and 3 for each question. The scores on the individual questions were summed up to obtain a composite score. As in Al-Subaie et al. (1996), subjects who scored 30 or greater on the composite score were considered to have the propensity toward anorexic-like attitudes and behavior.

**Bulimic Investigatory Test.** The BITE is a 33-item self-report that measures both the symptom and severity of bulimia nervosa (Keel et al., 1998). The BITE has been validated in various cross-cultural studies (Bhugra et al., 2000). Its application in cross-cultural samples has been shown to be acceptable (Nobakht and Dezhkam, 2000). The BITE was scored using the Henderson and Freeman (1987) system in which the three categories at the nonbulimic end of the 6-point Likert scale scored 0; the other categories scored 1, 2, and 3 for each question. The scores on the individual questions were summed up to obtain a composite score. A score of 25 or higher on the composite score suggests a bulimic disorder in accordance with previous established specificity and sensitivity in the Arab world (Ghazal et al., 2001).

**RESULTS**

Table 1 describes the cultural grouping of the participants consisting of 106 Omani teenagers (age = 15.12 ± 0.58 years), 87 non-Omani teenagers from diverse industrialized countries of the West (age = 15.10 ± 0.48 years), and 100 Omani adults (age = 38.71 ± 5.43 years).

The averages of body mass index (BMI) for the Omani teenagers and the non-Omani teenagers were 21.91 ± 4.12 and 20.68 ± 3.32, respectively. The mean BMI for the adults was 27.42 with a standard deviation of 2.73. BMI was significantly different between the two teenage groups (p < .028).

Table 2 shows the distribution of both anorexia nervosa and bulimia in our three samples. The prevalence of anorexia nervosa among the adult group was only 2% and of bulimia was also only 1%. The adult group scored on average 18.5 ± 5.3 on the composite EAT score and 16.5 ± 4.4 on the composite BITE score. These values are low and indicate that anorexia nervosa and bulimia are rare among adult Omans. The rest of the discussion is based on only the teenage groups.

Among Omani teenagers, 33.0% (35/106) showed a propensity for anorexic-like behavior in the EAT (Table 3). The mean score for this group was (25.08 ± 5.84). In terms of gender, 29.4% (15/51) of females and 36.4% (20/55) of males showed disordered eating patterns. In the group of foreign teenagers, 9.2% (8/87) showed anorexic-like behavior. Their mean EAT score was 22.99 ± 6.02. About 7.5% of males and 10.6% of females showed disordered eating patterns. The proportions indicate that Omani teenagers are significantly more susceptible (p < .001). The average of the EAT composite score for the Omani teenagers was significantly higher (p = .016) than that for the foreign teenagers. The results suggest that the Omani teenagers are 4.9 times more likely to develop anorexic-like behavior than the non-Omani teenagers. The level of the EAT among Omani males is the same as among females (p = .392). When controlled for the effect of BMI, there was no significant difference between the Omani and non-Omani teenagers when their BMI was greater than 25 or less than 18.5. However, there was a significant difference between the two groups when the BMI was between 18.5 and 25 (p < .001) with respect to the EAT (Table 3).

**TABLE 1**

| Ethnicity and Gender of Omani and Non-Omani Teenagers and Omani Adults |
|-----------------------------------------------|-----------------|-----------------|---------------|
| Female Subjects                              | Male Subjects   | Total           |
| (n = 148)                                    | (n = 145)       | (N = 293)       |
| n    | %   | n    | %   | n    | %   |
| Omani teens                                  | 51              | 34.5           | 55            | 37.9 | 106 | 36.2 |
| Non-Omani teens                              | 47              | 31.8           | 40            | 27.6 | 87  | 29.7 |
| Omani adults                                 | 50              | 33.9           | 50            | 34.5 | 100 | 34.1 |

**Note:** Values represent mean ± SD.

**TABLE 2**

| Bulimic Invesitgatory and Eating Attitude Test Scores by Origin and Gender |
|-----------------------------------------------|-----------------|---------------|
|                                  | Female Subjects | Male Subjects |
|                                  | (n = 148)       | (n = 145)     |
| Bulimic Investigatory Test        |                 |               |
| Omani teens                      | 20.76 ± 3.50    | 20.87 ± 3.26  |
| Non-Omani teens                  | 19.09 ± 4.03    | 20.85 ± 4.35  |
| Omani adults                     | 17.22 ± 4.21    | 15.82 ± 4.61  |
| Eating Attitude Test             |                 |               |
| Omani teens                      | 24.57 ± 5.78    | 25.55 ± 5.91  |
| Non-Omani teens                  | 22.60 ± 5.71    | 23.54 ± 6.41  |
| Omani adults                     | 18.46 ± 5.52    | 18.54 ± 5.14  |

| Note: Values represent mean ± SD. |
Among the Omani teenagers, 12.3% (13/106) showed a propensity toward binge eating or bulimia based on the BITE (Table 4). The mean score for this group was 20.82 ± 3.36. In terms of gender, 13.7% (7/51) of females and 10.9% (6/55) of males showed bulimic-like disordered eating patterns. Among the non-Omani teenagers, 18.4% (16/87) showed a tendency toward bulimia. The average composite score of all these teenagers was 19.90 ± 4.25. The proportion of females, 13.5% (7/51), was slightly greater than that of males, which was 10.9% (6/55). An Omani was only 0.62 times as likely as to show signs of bulimia than a non-Omani. This odds ratio is not significant. However, non-Omani males were significantly more likely to show signs of bulimia than females (odds ratio 7.06 with a 95% confidence band of 1.84–27.07).

**DISCUSSION**

The present study suggests the overall prevalence of abnormal eating attitudes and behavior among Omani school children to be 33.0% for anorexia as elicited by the EAT and 12.6% for bulimic tendencies as elicited by the BITE. This is in line with other studies (le Grange et al., 1998; Nasser, 1988), but whereas previous studies in the Arab world focused solely on young females (Al-Subaie et al., 1996; Nasser, 1994), the present study also examined eating behavior among males and adults. Our data revealed that 53.5% (23/43) of the cases identified as having a propensity toward eating disorder were males. This represented almost 24.2% (23/95) of all males in the total sample. This finding supports the broadly emerging consensus that eating disorders are not restricted to females (Field et al., 1999; Strober et al., 2001).

This result also unexpectedly revealed a sex difference in possible subclinical cases of eating disorders. The prevalence of both anorexia nervosa and bulimia was similar for both males and females. However, in the group of non-Omanis, males were more prone to bulimia than females. On the other hand, for reasons that will be discussed below, eating disorders appear to be rare in Omani adults as only 2% of adult participants showed propensities toward eating disorders.

The second part of the present study was to examine the hypothesis that disordered eating varies between ethnic groups. Previous studies have examined cross-ethnic differences (le Grange et al., 1998; Stephens et al., 1999), but our study differs significantly in its approach: students from Western countries, studying in Oman, were compared with their Omani counterparts within Oman. The population composition in Oman allows sampling across several national and cultural backgrounds within the country. In this sense, the study has an element of ecological validity (Brunswik, 1943). Even though the nationality composition of the foreign teenagers is different from that of other studies, our conclusions are similar (le Grange et al., 1998): Omani students have a higher percentage of positive scores on the EAT compared with non-Omani students. The reverse was observed for positive scores on the BITE. This study, along with emerging epidemiological studies, suggests that the rates of eating disorders in developing countries are fluctuating in a complex way and

---

**TABLE 3**

Distribution of EAT Score by Nationality and BMI

<table>
<thead>
<tr>
<th>Nationality</th>
<th>BMI</th>
<th>EAT</th>
<th>Omani</th>
<th>Non-Omani</th>
<th>Total</th>
<th>p Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;25</td>
<td>&lt;30</td>
<td>12</td>
<td>9</td>
<td>21</td>
<td>0.248</td>
<td></td>
</tr>
<tr>
<td>&gt;25</td>
<td>≥30</td>
<td>9</td>
<td>2</td>
<td>11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>21</td>
<td>11</td>
<td>32</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18.5–25</td>
<td>&lt;30</td>
<td>43</td>
<td>47</td>
<td>90</td>
<td>0.001</td>
<td></td>
</tr>
<tr>
<td>&gt;18.5</td>
<td>≥30</td>
<td>23</td>
<td>4</td>
<td>27</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>66</td>
<td>51</td>
<td>117</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;18.5</td>
<td>&lt;30</td>
<td>16</td>
<td>23</td>
<td>39</td>
<td>0.638</td>
<td></td>
</tr>
<tr>
<td>≤18.5</td>
<td>≥30</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>19</td>
<td>25</td>
<td>44</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: EAT = Eating Attitude Test; BMI = body mass index.

---

**TABLE 4**

Distribution of Eating Attitude Test and Bulimic Investigatory Test Over Sex and Nationality

<table>
<thead>
<tr>
<th>Nationality</th>
<th>Eating Attitude Test</th>
<th>Bulimic Investigatory Test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. With Pathology</td>
<td>% With Pathology</td>
</tr>
<tr>
<td></td>
<td>Omani Male</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>Non-Omani Male</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Omani Male</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>Non-Omani Male</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>16</td>
</tr>
</tbody>
</table>
women have experienced emancipation due to education and modernization. Corollaries to this are cases where males are worse off in the climate of emerging acculturation. In a paternalistic society such as Oman, it is likely that males are juggling between two opposing cultural influences precipitated by economic and sociocultural transition (Katzman and Lee, 1997). Oman might be a typical developing country like Oman. First, is it possible that the rapid population growth in particular age groups that are vulnerable to adjustment difficulties is contributing to the present predicament? In the case of Oman, its population structure is like a pyramid with a large young base. The population has been growing since the late 1970s at an annual rate of 4.86% (Statistical Yearbook, 2000), one of the fastest in the world, making competition for social and occupational roles more intense and leaving many failed individuals behind (Easterlin, 1980). With such a demographic trend, it is likely that many individuals are carrying a greater risk of developing various adjustment difficulties (Kleinman and Cohen, 1997), including developing disordered eating.

Second, although Omanis, like other cultural groups in developing countries, are thought to have beliefs that protect them against developing eating pathology (Murthy, 1998), such culturally sanctioned beliefs appear to be eroding with the rising tide of acculturation and globalization (Wassenaar et al., 2000). Oman, once thought to be the “Tibet of Arabia” (Chatty, 2000), has seen oil revenues reshaping its landscape and, in the words of Smith (1988, p. 297), “money from oil has brought the Omanis progress through development that took a thousand years in Europe in less than 20 years.” Melikian (1988) has suggested that such changes have brought in their wake a disruption of interpersonal relationships; tribal identification has given way to a class system based on wealth, individualism has emerged, and the value of education has replaced the value of the family. Without a reference group or community to identify with, it is thought that some individuals may use eating as a coping mechanism (Katzman and Lee, 1997). Oman might be a typical developing, rapidly acculturating country where individuals are thought to juggle between two opposing cultural influences precipitated by economic and sociocultural transition (El-Islam, 1983). If a transitional state of values and norms do cause psychosocial stress within the Omani community, then certain psychosocial processes would appear to induce individuals to embrace disordered eating attitudes and behavior as coping mechanisms. In a paternalistic society such as Oman, it is likely that males are worse off in the climate of emerging acculturation and modernization. Corollaries to this are cases where women have experienced emancipation due to education (Chatty, 2000). Men in this climate are therefore relegated to juggling between two opposing cultural influences precipitated by economic and sociocultural transition (Al-Adawi et al., 2001; El-Islam, 1983). One implication of this is that males are likely to have more adjustment difficulties, which may manifest in either a culture-specific or a culture-reactive idiom of distress such as disordered eating (DiNicola, 1990). However, one conspicuous finding inconsistent with this view is that eating disorders have also been found in those societies where rapid modernization has not been so pervasive (Littlewood, 1995; Mumford and Whitehouse, 1994). Further studies are needed to examine psychosocial correlates of eating disorders in Oman.

Finally, Littlewood (1995) has suggested that eating disorders are camouflageing earlier patterns of communicating distress in various communities. He postulates that the emergence of “new” idioms of distress is supplanting previous cultural forms of communication, such as spirit-possession and conversion disorder (Al-Adawi et al., 2001). In other words, the present emerging eating disorders are like the “old wine” of psychosocial stresses manifesting in the new bottle of idiom of distress. This study is congruent with this view; patients seeking care in primary health centers were found to frame their idioms of distress in “psychological” rather than traditional somatic metaphors. Although there are no adequate statistical studies to indicate the incidence of psychological distress in Oman, it is clear that psychological disorders are not a minor problem. Many types of mental disorders encountered in other countries have been observed in Oman (Al-Adawi et al., 2001; Al-Sharbati et al., 2001).

Although eating disorders have been described as a possible “culture-bound syndrome” with roots in Western cultural values and conflicts, current clinical reports and epidemiological observations suggest that eating disorders occur in many parts of the world. With historical records suggesting that eating disorders may have existed for centuries, it appears that eating disorders fluctuate in a complex way and might not be a “pet mental disturbance of modern affluent cultures” as previously suggested (Szwartz, 1985). Emerging evidence from many parts of the world suggests that cultural transition compounded by demographic constraints plays a significant role in abnormal eating attitudes.

Limitations

Some of the limitations of the current study need to be highlighted. Data collection by questionnaire is not...
ies from different parts of the non-Western world have reliable because of two interrelated reasons. First, stud-
ies between the groups of Omani and non-Omani adolescents whose BMI were in the “normal” range (18.5 and 25). This, in turn, could limit the generalizability of the finding. Despite this, the finding could still be deemed reliable because of two interrelated reasons. First, studies from different parts of the non-Western world have suggested that “fear of fatness” as the sine qua non of contemporary Western anorexia nervosa, but this is largely absent in developing countries such as Oman (Al-Adawi et al., 1999; Littlewood, 1995). It is plausible therefore that Omani adolescents have differed from their Western counterparts because of the absence of such preoccupation. Second, it is also possible that distress is perceived and communicated differently in Oman than in Western culture (Srivasan et al., 1998). However, it is not clear why the differences should occur in subjects with normal BMI rather than those with a propensity toward eating disorder, specifically those who were under/over weight. Perhaps in subjects with abnormal BMI, such cultural constraints have already been eroded with the “reality” of the distress. Considering that distress and stress are often expressed in sociocultural contexts (Kleinman and Cohen, 1997; Srivasan et al., 1998), future studies ought to establish psychometric properties of the instruments on Omani samples as well as developing culture-specific assessment instruments using a “local” gold standard.

Clinical and Psychosocial Implications

The results of this study have direct implications for cross-cultural research, diagnosis, and clinical practice as well as the formulation of preventive strategies. Although further prospective work needs to be done to examine the sociocultural correlates of eating disorders, the idea that eating disorders are uniquely Western may be considered questionable because the present study indicates an existence of such disorders in Arab-Islamic adolescents of Oman. A more comprehensive inquiry into eating disorders among adolescents in Oman may be worthwhile. Health planners in the country ought to allocate more time and resources for adolescent health care, bearing in mind the population structure of Oman with a preponderance of youths at the base. Presently, the services for people with eating disorders are handled in the psychiatric hospitals. These services are often limited to custodial care for severely dysfunctional patients. The stigma of mental illness and the issues of secrecy, denial, and lack of motivation on the part of the sufferers (Wlodarczyk-Bisaga and Dolan, 1996) make it unlikely that eating disorder as a “disease” entity will be openly recognized among patients and the public at large. This means the conditions in Oman might remain unacknowledged like other instances of the “epidemic of silence” in developing countries (Ainsworth and Teokul, 2000). Therefore, health education should be instituted to recognize and to fur-
ther assess the magnitude of the problem in the country as well as devising culturally sensitive interventions.

REFERENCES

Abou-Saleh MT, Younis Y, Karim L (1998), Anorexia nervosa in an Arab cul-
ture. Int J Eat Disord 23:207–212

Ainsworth M, Tokul W (2000), Breaking the silence: setting realistic prior-
ities for AIDS control in less-developed countries Lancet 356:55–60

Al-Adawi S (1993), A glimpse into traditional outlook towards health: a lit-


A (2000), Awareness and social acceptance of people with epilepsy: a sur-
vey from Oman. Neuropsy J 5:18–21

Al-Adawi S, Ghassany H, Al-Naamani A et al. (1999), Sub-clinical eating dis-

Al-Adawi S, Salmi A, Martin RG, Ghassani H (2001), Zar: group distress and
health. Ment Health Rel Cst 4:47–61

Al-Sharbatyi MM, Viernes N, Al-Hussaini A, Azaad ZAJ, Chad P, Al-Adawi
S (2001), A case of bilateral prosthesis with unsteady gait for one-year in Oman:

Al-Suhaidi A, Al-Shammari S, Bangweye E, Al-Sabhan K, Al-Shehri S, Bannan
AR (1996), Validity of the Arabic version of the Eating Attitude Test. Int J
Eat Disord 20:321–324

American Psychiatric Association (1994), Diagnostic and Statistical Manual
Psychiatric Association

Bhugra D, Bhui K, Gupta KR (2000), Bulimic disorders and sociocentric val-
ues in north India. Soc Psychiatry Psychiatr Epidemiol 35:86–93

Brunswick E (1943), Organismic achievement and environmental probability.
Psychol Rev 50:253–272

Chavez D (2000), Women working in Oman: individual choice and cultural

Crisp AH (1970), Anorexia nervosa “feeding disorder”, “nervous malnutri-
tion” or “weight phobia”? World Rev Nutr Diet 12:452–504

DiNicolia VF (1990), Anorexia multiforme: self-starvation in historical and
cultural context, part II: anorexia nervosa as a culture-reactive syndrome.
Transcult Psychiatr Rev 27:245–286

Dunn G, Pickles A, Tansella M, Vazquez-Barquero JL (1999), Two-phase epi-
demiological surveys in psychiatric research. Br J Psychiatry 174:95–100

Easterlin RA (1980), Birth and Fortune: The Impact of Numbers on Personal
Welfare. New York: Basic Books

El-Islam MF (1983), Cultural change and intergenerational relationships in
Arabian families. Int J Fam Psychiatry 4:321–328

Federoff IC, McFarlane T (1998), Cultural aspects of eating disorders. In:
Cultural Clinical Psychology: Theory Research and Practice
Rathner G, Messner K (1993), Detection of eating disorders: time for a change
of emphasis. Psychol Med 23:175–184

Littledwood R (1995), Psychopathology and personal agency: modernity cul-
ture change and eating disorders in South Asian societies. Br J Med Psychol
68:63–64

Mollkian I (1988), Arab socio-political impact on Gulf life styles. In: The
Arab Gulf and the Arab World, Pridham BR, ed. London: Croomhelm

Nasser M (1988), Comparative study of the prevalence of abnormal eating
attitudes among Arab female students of both London and Cairo univer-
sities. Psychol Med 16:621–625

Nasser M (1998), Screening for abnormal eating attitudes in a population of

Nassiri K, Dezhkam M (2000), An epidemiological study of eating disor-
ders in Iran. Int J Eat Disord 28:265–271

Oyewumi LK, Kazarian S (1992), Abnormal eating attitudes among a group of

Rathner G, Messner K (1993), Detection of eating disorders: time for a change
of emphasis. Psychol Med 23:175–184

Ricciardelli LA, McCabe MP Banfield S (2000), Body image and body change
methods in adolescent boys: role of parents friends and the media. J
Psychosom Res 49:189–197


Stomoroo GMM, Crisp AH, Lynch D, Tran D, Joughin N (1995), Anorexia

Swartz L (1985), Anorexia nervosa as a culture-bound syndrome. Psychol Med
49:189–197

Swartz L (1985), Anorexia nervosa as a culture-bound syndrome. Psychol Med
49:189–197

Stephens NM, Schumaker JE, Sibley TE (1999), Eating disorders and diet-
bing behavior among Australian and Swazi university students. J Soc Psychol
139:153–158

anorexia nervosa: a controlled study of eating disorders in first-degree rel-
atives. Int J Eat Disord 29:263–269

20:725–730

Wassenaar D, le Grange D, Winsnip J, Lachenicht L (2000), The prevalence
of eating disorder pathology in a cross-ethnic population of female stu-
dents in South Africa. Eur Eat Disord Rev 8:225–230

Psychiatr Clin North Am 18:537–553

Wlodarczyk-Bisaga K, Dolan B (1996), A two-stage epidemiological study of
abnormal eating attitudes and their prospective risk factors in Polish school-
girls. Psychol Med 26:1021–1032

Keel PK, Klump KL, Leon GR, Fullerson JM (1998), Disordered eating in

King BM, Bhugra D (1989), Eating disorders: lesson from a cross-cultural
study. Psychol Med 19:955–958


Ko C, Cohen H (1998), Intracultural comparison of eating attitudes in native
Koreans and Korean Americans using a korean translation of the eating

comparative study of female high school students in Hong Kong Shenzhen
and rural Hunan. Int J Eat Disord 27:317–327

inventory: a study of Chinese patients with eating disorders in Hong
Kong. Int J Eat Disord 23:177–188

Littlewood R (1995), Psychopathology and personal agency: modernity cul-
ture change and eating disorders in South Asian societies. Br J Med Psychol
68:63–64