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Eating Disorders and Disordered Eating in Israel: An Updated Review

Yael Latzer[1]*, Eliezer Witztum[2] and Daniel Stein[3]
[1]*Eating Disorders Clinic, Psychiatry Division, Rambam Medical Center, Affiliated With the School of Social Work, Haifa University, Haifa, Israel*
[2]*Psychiatry Division, Faculty of Health Sciences, Ben Gurion University of the Negev, Beer Sheva, Negev, Israel*
[3]*Pediatric Psychosomatic Department, Safra Children's Hospital, The Chaim Sheba Medical Center, Tel Hashomer, Affiliated With the Sackler Faculty of Medicine, Tel Aviv University, Tel Aviv, Israel*

Israel presents a unique opportunity to study the role of socio-cultural parameters in the development of mental disturbances because of the exceptional diversity of the Israeli society. In the present review, we aimed to analyse the current state of disordered eating in Israel by means of an extensive literature review. The following are the main findings of our review: The frequency of maladaptive eating among female and male Israeli Jewish adolescents is higher in comparison to many other Westernised countries. Among different Jewish sub-populations, Kibbutz women have been found until recently to show higher rates of disordered eating in comparison to other Israeli samples. Recent studies show no such difference between Kibbutz members and the general Israeli population. No clear-cut findings emerge with respect to the influence of immigration and degree of Jewish religious affiliation on the occurrence of disordered eating. In contrast, disordered eating is less prevalent in Israeli-Arabs compared with Israeli-Jews. Moreover, diverse Israeli-Arab groups show different rates of disordered eating. We discuss the high rate of disordered eating in Israeli youth in light of Israel being a culture in transition that is constantly exposed to the risk of terrorism. The changes in the rates of disordered eating in the Kibbutzim are discussed in light of the dramatic societal changes occurring in these communities within a relatively brief period of time. The low rates of disordered eating in Israeli-Arabs reflect the traditional non-Westernised characteristics of their society, whereas the differences between diverse Arab sub-populations depend upon the degree of exposure to Westernised influences and the presence of conflicts between modern and traditional values.

Keywords: Israel; eating disorders; disordered eating; culture; socio-cultural

INTRODUCTION

Traditionally, the development of eating disorders (EDs), including anorexia nervosa (AN) (Prince, 1985) and bulimia nervosa (BN) (Stice, 1994), has

*Correspondence to: Prof. Yael Latzer, Eating Disorders Clinic, Psychiatry Division, Rambam Medical Center, Affiliated With the School of Social Work, Haifa University, Haifa, Israel.
E-mail: latzer@zahav.net.il

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been related to a host of socio-cultural parameters. Both disorders have been conceptualised until recently as representing culture-dependent syndromes, namely as syndromes that cannot be understood separated from their cultural context (Prince, 1985), and that are restricted to a limited number of cultures by virtue of psychosocial factors (Stice, 1994; Swartz, 1985).

Recent studies cast doubt, however, on the definition of AN as culturally dependent. This is because the current prevalence of AN in many non-Westernised cultures is often similar to that found in Western societies, and the recent increase in its incidence in Western countries appears to reflect greater use of treatment facilities rather than a genuine change (Keel & Klump, 2003). By contrast, BN is still conceived to represent a culturally dependent syndrome, as a sharp increase in the incidence of the disorder has occurred in Westernised countries in the latter half of the 20th century, and its appearance in non-Westernised cultures is still infrequent, and almost always in the context of some exposure to Western influences (Keel & Klump, 2003).

Israel presents a unique opportunity to study the role of socio-cultural parameters in the development of EDs and disordered eating-related preoccupations and behaviours because of the exceptional diversity of the Israeli society. Israel is a multi-cultural nation to which Jews have immigrated from a multitude of countries within an exceptionally brief period of time. Furthermore, Israeli society includes many ethnic and religious groups and has a multitude of educational systems and schools, according to the degree of religious background and the residential living style. It is anchored in ancient traditions, yet poised at the apex of cutting-edge technology.

The aim of the present review article is to analyse the current state of art concerning EDs and disordered eating behaviours in Israel, according to an extensive literature review by means of the PUBMED, PSYCHLIT, PSYCHINFO and ERIC, as well as relevant Hebrew references. Disordered eating is a broad construct, including subclinical EDs (EDs not otherwise specified (EDNOS)) (Lilenfeld et al., 2000), as well as aberrant preoccupations, attitudes and behaviours, related to shape, weight, body image and food that do not reach the levels of EDNOS. Unlike full-blown EDs, disordered eating is not a psychiatric diagnosis achieved with accepted diagnostic criteria (e.g. American Psychiatric Association, 1994; the DSM-IV, 1994), but rather represents a broad spectrum of subsyndromal features of EDs. This term is often used in the description of maladaptive ED-related features (e.g. Cachelin, Viesel, Strigel-Moore, & Barzegarnazari, 2000; Latzer, Vander, & Gilat 2007c; Pike & Rodin, 1991; Striegel-Moore, Silberstein, Frensch, & Rodin, 1989).

The first part of the present review paper focuses on EDs and disordered eating behaviours and attitudes within the larger Israeli society. We then turn to the association between socio-cultural issues and disordered eating in diverse Israeli subpopulations. The paper places a special emphasis on reviewing disordered eating among new immigrants, the Kibbutz population and the Israeli-Arab population. Additionally, it considers the influence of Jewish religion and its observance level and religious affiliation on EDs and disordered eating. In the last part of the paper we will discuss the disordered eating phenomena in Israel as a reflection of the Israeli culture. We relate in particular to socio-cultural influences on disordered eating of the Israeli society being a culture in transition that is constantly exposed to traumatic events, focusing additionally on the association between the diversity of exposure of different Israeli socio-cultural subgroups to Westernised ideals and the occurrence of disordered eating in these populations.

FULL AND SUBSYNDROMAL EATING DISORDERS

Only a few community-based studies have been performed to assess the prevalence of EDs in Israel. Scheinberg, Bleich, and Kolovsky (1992) surveyed 1112 Israeli female soldiers between the ages 18 and 20, and found 2.4% with a subsyndromal ED, 0.2% with AN and 0.5% BN. However, the results of this study cannot be generalized, as it includes only specific age groups and specific populations (not all Israeli female adolescents are recruited to the army).

Mitrany, Lubin, Chetrit, and Modan (1995) surveyed all Israeli ED treatment facilities (there were 24 such inpatient and ambulatory centres) over a 5-year period (1989–1993). Of the 632 new cases identified (almost all were females, and most were adolescents), 60% were diagnosed with AN, 17% with BN, 4% with AN and BN and 20% with EDNOS. From these results, the authors extrapolated that the mean annual incidence for all EDs among Jewish Israeli female adolescents was 48.8 per 100 000, for AN 29.0 per 100 000 and for BN 8.6 per 100 000. As the authors themselves acknowledged, the results of this study, which were markedly different from most epide-

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miological data [e.g. (Hoek & van Hoeken, 2003; Keel & Klump, 2003)], were confounded by serious methodological problems, casting doubts about their validity. Most likely, these figures represented an underestimation of the actual incidence due to incomplete data accrual.

Stein, Meged, Bar-Hanin, Blank, Elizur, and Weizman (1997), Stein et al. (1999), Stein, Bronstein, and Weizman (2003) evaluated the rate of subsyndromal restrictive and bingeing/purging-type EDs in a series of female 10–12th graders and army recruits according to the combination of a pathological EAT score (>22 points) and the presence of some of the DSM-IV criteria for AN or BN. Between 12 and 21% of the subjects were identified as having a subdyndromal restrictive-type ED, and 8–19% were identified as having a subdyndromal bingeing/purging-type ED. Individuals with subsyndromal EDs had greater rates of core ED-related traits (e.g. obsessionality or impulsivity) than non-ED participants, supporting, the validity of this distinction. The authors attribute the relatively high rates of subsyndromal EDs in their studies (most studies report rates in the range of 5–15% e.g. Shisslak, Crayo, & Estes, 1995) to the use of broad ED definitions (e.g. they included patients who binged or purged only sporadically) and self-report questionnaires, rather than structured clinical interviews (Keel, Crow, Davis, & Mitchell, 2002).

Another analysis was carried out by Latzer and Gilat (2000, 2006) on all calls (19 776) received by the only Israeli crisis hotline (ERAN) over a period of 4 years from individuals suffering from EDs. The results revealed a steady increase in the rate of EDs among female adolescent callers, from 1.7% in 1994 to 3.1% in 1997, with EDs being the second most frequently identified problem among this group of callers. About one-third of the total ED-related callers could be identified as AN, another third as BN, about a quarter as binge eating disorder (BED) and the rest as ED-NOS. The authors relate the over representation of AN among the hotline callers to the inclination of AN patients to refrain from treatment, making it more likely that they might turn to a crisis hotline when distressed (Latzer, Gilat, & Golan, 2003).

EATING-RELATED ATTITUDES

Eating Attitudes Among Israeli Elementary School Children

In recent years, combined with the increase in the incidence of EDs, average age at onset has tended to decrease (Garfinkel, Lin, Goering, & Spegg, 1995; Hoek & van Hoeken, 2003). Extensive dieting, fear of becoming overweight and binge-eating have been identified in girls as early 9 years old (Maloney, McGuine, Daniels, & Spector, 1989). The early appearance of preoccupation with weight and dieting is considered an important risk factor for a later development of maladaptive eating behaviours (Polivy & Herman, 1985; Striegel-Moore, Silberstein, & Rodin, 1986).

As it is important to identify children at risk as early as possible, Sasson, Lewin, and Roth (1995) replicated Maloney et al.'s (1989) study with Israeli children. The researchers used the Ch-EAT (a modification of the Eating Attitudes Test-26 (EAT-26) for children) to examine eating attitudes and behaviours among students (boys and girls) of grades 3–6 (elementary school) and 7–11 (high school) in Jerusalem, Israel. This Israeli study substantiated the findings of Maloney et al. (1989) within an American sample, namely that dieting attitudes and behaviours can begin very early, clearly prior to adolescence. An impressive percentage of students throughout the surveyed age range revealed preoccupation with food, thinness and weight loss: 54% expressed a desire to lose weight and 41.6% showed behaviours geared towards losing weight. Girls exhibited a significantly greater tendency than boys to want to become thin, to attempt to lose weight and to be preoccupied with dieting. This eating-related preoccupation among girls increased with age from the eighth grade onwards, in sharp contrast to the boys' relatively low preoccupation that decreased with age. Interestingly, this Israeli sample of preadolescent girls expressed a greater wish for thinness and engagement in dieting behaviours than preadolescent girls in other modernized Western countries (Moore, 1988).

Halevy and Halevy (2000) examined cognitive, socio-cultural, and behavioural components of eating disturbances in 251 boys and 280 girls from three schools in Jerusalem (fifth–eighth grade). Girls scored consistently higher than boys on all weight-control behaviours. Greater frequency and severity of discontent with one's own body and of other pathological eating-related attitudes and behaviours were positively associated with 'social age'. Seventh graders scored significantly higher than sixth graders, suggesting the seventh grade to be a period of increased vulnerability.

In another study conducted by Flaisher-Kellner (2001) among 136 children of grades 2–5 (mean age 9.6) from four primary schools in Haifa and 98 of

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their parents, the students were presented with different age-matched female figures (Thompson & Gray, 1995). Significantly more girls than boys expressed dissatisfaction with their body shape and felt heavier than a socially ideal figure. Additionally, the higher the body mass index (BMI) of the students, the more dissatisfied were they with their physical appearance.

Eating Attitudes Among Israeli Adolescents

Between 60 and 80% of Israeli female adolescents are dissatisfied with their weight and shape, although the vast majority of these youngsters are of normal or even low weight (Harel, Kani, & Rahav, 1997, Harel, Ellenbogen-Frankovits, Molcho, Abu-Ashas, & Habib, 2002; Neumark-Sztainer, Palti, & Butler, 1995; Stein et al., 1997). An international study of health behaviour among school children (World Health Organization, Health Behaviour in School-Aged Children-WHO-HBSC) was conducted in 28 Westernised countries in 1994 (Harel et al., 1997), and in 44 Westernised countries in 1998 (most countries in Western and Central Europe and North America participated in one of the two studies or both). In both studies, the frequency of dieting behaviour at the time of evaluation was the highest among Israeli-Jewish adolescents compared with all other participating countries for both girls (34.5% and 28%, respectively) and boys (8.9% and 11%, respectively) (Harel et al., 1997, 2002). In a more recent study undertaken in 2001–2002, Israel ranked the second among 33 Westernised countries, surpassed only by Denmark, with 26% of Israeli girls engaged in dieting behaviour at the time of assessment (Harel, 2007).

It is important to note that only 6% of the respondents reported that they were dieting under professional supervision, highlighting that around a 13% of Israeli youngsters diet without such supervision. Moreover, almost 50% of all students engaged in physical activities to lose weight, 3% reported purging behaviours (vomiting and laxative use) and another 2% used diet pills (Harel et al., 2002).

A study conducted by Neumark-Sztainer et al. (1995), which assessed eating attitudes and behaviours among Israeli adolescent females, showed that whereas only 17% were overweight, 47% reported dieting when assessed and 74% reported dieting in the past. In another two studies assessing maladaptive eating-related behaviours (EAT-26, 1270 participants) (Latzer & Tzischinsky, 2003) and preoccupations (Eating Disorders Inventory-2 (EDI-2) 1316 participants) (Latzer & Tzischinsky, 2005) in 12–18 years old Jewish-Israeli girls, almost 20% were found to show pathological EAT-26 scores, with 16–18-years- old girls having the highest EAT-26 and EDI-2 scores compared to the other age groups. More recent studies using the EAT-26 in Israeli adolescents have also demonstrated that around 20% of the females (and 5% of the males) interviewed had pathological EAT-26 scores (Greenberg, Cwikel, & Mirsky, 2007; Maor, Sayag, Dahan, & Hermoni, 2006).

Gur, Canetti, Bachar, and Stein (2003) analysed the findings on the EAT-26 in all students between the ages of 12–16 who were studying in the only school of a suburban upper class community during 2001. One hundred and forty-five of all 730 female students (20%) and 53 of all 775 male students (6.8%) had a pathological EAT-26 score. A constant rate of pathological EAT scores was found in the male students regardless of their age (6–10%), whereas among females, a significant increase was noted in 16-year-old participants (29%) compared to younger populations (18–21%).

Compared to participants with normal EAT-26 scores, both male and female students with pathological EAT results scored higher on all EDI-2 scales, as well as on other scales evaluating core ED features, for example, perfectionism and selflessness (Gur et al., 2003). Interestingly, male students with pathological EAT-26 scored higher than females with pathological EAT-26 scores on all EDI-2 subscales.

Eating Attitudes Among Israeli Adolescents From Diverse Socio-Cultural Backgrounds

Israel includes several types of socio-cultural residential settings, such as urban, communal village and Kibbutz frameworks. In addition, Israeli Jews differ in their level of religiosity and there are several types of Arab sub-populations (Muslim, Christian, Druze, Bedouin and Circassian). Unfortunately, the literature concerning possible differences in eating-related attitudes and behaviours among these populations is scarce.

Apter, Abu Shah, Iancu, Abramovitch, Weizman, and Tyano (1994) assessed eating attitudes, using the EAT-26, among healthy Jewish girls in five high-schools. The highest mean EAT-26 scores were shown by the Kibbutz students (14.1 ± 1.7), and the lowest by the students of two boarding schools (10.2 ± 1.5), with 27.3% of the Kibbutz and 16.2% of the two boarding school students representing maladaptive eating-related behaviours (EAT-26 > 20).

DOI: 10.1002/erv

Different results were obtained in another two studies that administered the EAT-26 (Latzer & Tzischinsky, 2003) and the EDI-2 (Latzer & Tzischinsky, 2005) to 12–18-year-old Jewish girls in several educational settings in northern Israel: urban-secular, Kibbutz and two boarding schools, one secular, and the other a religious boarding school. The secular boarding school students were found to have the most pathological EAT-26 and EDI-2 scores. These findings suggest that eating-related pathology may increase in the face of adverse conditions for growing up (most of the students of the two boarding schools were from problem families of particularly low socio-economic background), although religiosity in itself may have, in this case, a protective influence. In contrast to Apter et al.'s (1994) findings more than 10 years earlier, the Kibbutz students in these two studies had the lowest EAT-26 and EDI-2 scores, a finding that will be discussed in a later section of our paper.

IMMIGRATION TO ISRAEL AND EATING DISORDERS

From 1948 to 2006, Israel experienced a few large immigration waves. The first one took place in the 1950s, bringing to Israel about one million immigrants. In the late 1980's and early 1990's, another massive wave immigrated to Israel from the Former Soviet Union (FSU) (around a million immigrants) and Ethiopia (close to 100 000). New immigrants currently comprise approximately 15% of the Israeli population. Similar to other countries which absorb large numbers of immigrants, economic, social and cultural difficulties may arise in these populations as a result of the cultural gap between Israel and the countries of origin.

Many studies have shown that youngsters who have immigrated to a new country are at a greater risk to develop disordered eating, or in this respect any psychiatric disturbance, in comparison to native-born young people, as a result of the heightened distress associated with immigration (Katzman, Hermans, van Hoeken, & Hoek, 2004; Nasser, Katzman, & Gordon, 2001). Young females may be at an additional risk of developing disturbed eating if emigrating from a non-Western country such as the FSU or Ethiopia to Israel because of their inclination to adopt the norms of the absorbing society, in this respect norms that reinforce the thin body ideal (Fichler, 1995; Nasser, 1988b). Alternatively, disturbed eating may result from the stress associated with immigration that may bring newly arrived immigrants to use food as a means to cope with depressive symptoms associated with acculturation or to disguise these symptoms.

Young female immigrants may strive to achieve the thin Western ideal of beauty to overcome doubts as to their own identity and feelings of estrangement from the mainstream Israeli teen society, believing that being thin will help them to identify and fit into their new culture (Davis & Katzman, 1999). In this respect, Greenberg et al. (2007) recently found that 7.9% of young Russian female immigrants living in Israel for 3 years or less have pathological levels of disturbed eating attitudes and behaviours as assessed with the EAT-26 compared to both native Israeli females (19.6%) and Russian female immigrants living in Israel for a longer period of time (18.8%). The authors relate these findings to the inclination of veteran immigrants to adopt Western cultural norms in a way that may bring them closer to Israeli born young women. To our knowledge, the issue of disordered eating in new immigrants from Ethiopia to Israel has not been studied yet, probably because this group is highly secluded and inaccessible to research.

We hypothesized that the problems associated with the immigration from the FSU and Ethiopia to Israel would be reflected in the presence of increased rates of EDs in the new immigrants in comparison to Israeli-born individuals. Surprisingly, this has not been the case. Despite the massive immigration that Israel has experienced since the late 1980s, the number of immigrants seeking treatment for EDs has thus far been exceedingly low relative to their percentage within the Israeli population. This finding, albeit speculative because of the lack of valid epidemiological studies, is based on an examination of visits to the largest outpatient ED clinic in Israel located at the Rambam Medical Centre in Haifa. This clinic has been operating since 1991 and receives about 150 new patients each year. However, since its establishment, only four women from the former USSR and one Ethiopian woman have been treated at this clinic for an ED. Similarly, as of yet, only one case study describing the development of an ED in a new immigrant from the FSU has been published in Israel (Iancu, Kikenzon, Ratzoni, & Apter, 1993).

One putative explanation for this unexpected finding is the inclination of minority groups to seek less clinical assistance in comparison with the general population, particularly in the case of psychiatric disturbances, including EDs (Cachelin et al., 2000; Cachelin, Rebeck, Viesel, & Strigel-

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Moore, 2001; Pike, Dohm, Striegel-Moore, Wilfley, & Fairburn, 2001). This tendency may apparently exist also among new immigrants to Israel (Ben-Ari & Azaiza, 2003). Another possible explanation relates to the inclination of general practitioners to under diagnose an ED in minority groups in comparison to native-born individuals, (Becker, Franko, Speck, & Herzog, 2003) (it should be nonetheless noted that this study has been undertaken in the USA, and the findings might be different in Israel). Both explanations cast doubt as to whether the low incidence of EDs among FSU immigrants to Israel is a genuine finding, although an extensive literature search located only one published study of AN in the FSU (Korkina, Tsyvilko, Marilov, & Koreva, 1992).

EDS AND JUDAISM

Food is an important part of religious observance and spiritual ritual for many different faiths, including Judaism. The role of food in Jewish cultural practices and religious beliefs is complex and varies among individuals and communities. 'Kashrut' refers to laws pertaining to food in the Jewish religion. 'Kosher' means that a specific food is permitted or 'clean', whereas anything 'unclean' (such as pork and shellfish) is strictly forbidden. The Jewish 'food laws', originated more than 2000 years ago, still contribute nowadays to a formal code of behaviour that reinforces the identity of a Jewish community.

Food is an integral part of Jewish feast days such as New Year's Day and Passover. The food eaten in Passover, a feast commemorating the birth of the Jewish nation, helps to tell the story of the Exodus, when the Israelites left Egypt; for example, bitter herbs recall the suffering of the Israelites under the Egyptian rule.

Fasting in the Bible is classified into four basic categories: as an act of mourning the dead, as an act of penitence, as an auxiliary to prayer and as a preparation for encountering the divine (Lambert, 2003). Ritualised fasting is also an important part of later Judaism. Yom Kippur—the Day of Atonement—for example, one of the most important days for every Jew, is a Jewish fast that lasts from dusk till dusk. Another fasting day occurs in the 9th day of the month of Av (Jewish month, typically falls around July/August) to remember and mourn forever the day Jerusalem was conquered and ruined. Furthermore, prominent Jewish religious figures in Eastern Europe in the 18th and 19th century tended to fast to abolish any physical pleasure as an act of atonement for the sins of the entire community (Haline-Dickens, 2000).

Several groups can currently be identified in terms of their level of religiosity (Barak & Golan, 2000):

1. *Ultra-Orthodox Jews*, who believe in totally observing the old Jewish traditions and laws. Ultra-orthodox Jews tend to live in segregated neighbourhoods. The two genders are kept separate during the schooling process, free selection of dates is discouraged and sexual relations are restricted until marriage. Women are expected to marry at an early age, thereafter keeping a traditional female role. Mass media, especially television, are strictly forbidden.
2. *Orthodox Jews*, who keep most Jewish traditions and law traditions, yet are open to modern life. Orthodox Jews are somewhat less observant of the traditions of sexual segregation and of traditional gender roles. Most of them serve in the army, are exposed at least to some extent to the general Israeli mass media and are less inclined to live in segregated neighbourhoods.
3. *'Traditional' Jews*, who observe some of the Jewish traditions and laws, yet most of their daily life is conducted in a secular manner.
4. *Secular Jews*, who do not observe Jewish laws and only sporadically keep Jewish traditions, except those enforced by civil law such as marriage or divorce laws.

Judaism and Disordered Eating in the USA

The data concerning the association between Judaism and EDs in the USA are conflicting. Sykes, Leuster, Mekia, and Gross (1988) have found a higher prevalence of both AN and BN in American patients of Jewish background than in the general population. Baruchin (1998a) has found that the reported rate of EDs among American Jews (13%) is higher than their overall representation in the general population (2%). The author, nevertheless, acknowledges that the interpretation of this data is limited, as it relates only to one specific treatment facility in New York. Furthermore, New York Jews have been found to seek treatment for a mental disorder in general (Sanua, 1989), and for EDs in particular (Sykes, Leuser, Melia, & Gross, 1989), to a greater extent than the non-Jewish population residing in the same area.

Several hypotheses have been proposed to explain the relationship between Judaism and EDs in the USA. Steiner-Adair (1994) suggests that in

DOI: 10.1002/erv

Jewish-American families, ED-related preoccupations may be used to avoid mental pain or to deal with issues related to interpersonal conflicts, including those associated with being a second or third generation of a holocaust survivor. She further regards the development of EDs in Jewish-American women as an attempt to deal with feelings of inferiority associated with anti-Semitism, and as a means to change ones body to fit with the goal of achievement and assimilation, while moving away from the stereotype of the 'Jewish mama' to an allegedly less visible 'Jewish' prototype.

Sykes et al. (1989) emphasize the importance of food in Judaism. In keeping with this hypothesis, a study (Baruchin, 1998b) conducted in the Ultra Orthodox and Syrian Jewish communities in Brooklyn found that 1 out of 19 girls in these communities is diagnosed as an ED—a rate 50% higher than that reported in the general American population. This author suggests that young Jewish girls may turn to disordered eating as a means to deal with distress exactly because food is so central in the Jewish tradition. Food can assist Jewish religious women in their attempts to assert control over their lives in the face of age-specific conflictual developmental pressures: to excel scholastically, to help their parents care for their large families and, above all, to marry early and have a family of their own—often before they feel ready for it. In an environment where even cigarette smoking is strictly opposed for young women, EDs may become a way to act out their distress within the culturally sanctioned medium of food (Baruchin, 1998b).

By contrast, Gluck and Geliebter (2002), who compared 78 orthodox Jewish-American women with 48 secular Jewish women, found that although both groups had similar mean BMI, secular women scored significantly higher than orthodox women on body shape disturbances and laxative use, showed a trend towards more vomiting and diuretic use, although they had no excessive binge-eating. The secular women were, in addition, twice as likely to have a fear of becoming fat and were four times more likely to associate self-acceptance with shape and weight-related ideals.

Goldberg (2002) also found that among undergraduate Jewish-American female college students, an inverse relationship may exist between the degree of religiosity and the extent of body dissatisfaction and eating-related pathology. These findings may reflect the influence of another aspect of the Jewish Code of Behaviour (the 'Halacha'), namely that the merit of the Jewish women is within herself, that is, with her moral values, rather than with her physical appearance. Thus, as religious Jewish woman are expected to take on traditional gender roles of wife and mother, they are less likely to be exposed to pressures associated with physical attractiveness and with tasks requiring success and achievement outside home (Heilman & Witztum, 1997).

Whereas the latter two studies were conducted in communal settings, Dancyger et al. (2002), who compared eight Ultra Orthodox Jewish women to 82 non-religious and non-Jewish women, all treated in an ED day treatment programme in New York, did not find any difference in ED symptomatology presentation and course of illness between these populations. Combining all findings, we cautiously postulate that in American-Jewish women, religion may protect to some extent against the development of ED-related preoccupations and behaviours in non-clinical populations. However, when a full-blown ED is already apparent, the degree of religiosity no longer has such a protective impact.

Judaism and Disordered Eating in Israel

To the best of our knowledge, only one study (Latzer, Tzischinsky, & Gefen, 2007b) has examined attitudes towards eating and disordered eating in religious Jewish adolescent girls in Israel. These girls were studying in an Ulpana—a religious educational institution for girls. A significant difference in the extent of disordered eating was found between girls with high and low levels of religiosity, namely, the more religious the girl, the less was her eating disturbed. Additionally, older girls were found to show greater religiosity, more positive self-esteem and lower rates of unhealthy eating compared with younger girls. These findings are related by the authors to the inclination of more religious girls to be less influenced by the mainstream Westernised Israeli mass media, to place less emphasis on physical attractiveness, and to be less geared towards success and achievement outside home. Alternatively, rigidly controlled lifestyles and strict observance of religious traditions might reduce the need to control eating and weight as a means to handle the developmental pressures of adolescence.

ATTITUDES TOWARDS EATING AND EATING DISORDERS IN THE KIBBUTZIM

The term 'Kibbutz' refers to a life style in a relatively small, rural, basically communal, settlement that is

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conceptually based on extensive cooperation and a maximally egalitarian society, offering equal opportunities to all its members, regardless of age, gender or any socio-economic parameter. Nowadays there are approximately 200 Kibbutzim in Israel. Several psychosocial factors make the Kibbutz a unique framework, different from the mainstream Israeli way of life. At the start, equal opportunities make women's roles, development and positions more non-traditional compared with the rest of the Israeli society. In addition, in many Kibbutzim, children are raised together with their age group by special personnel and not at home with their parents. Thirdly, career development and occupational choice, as well as specific jobs offered by the Kibbutz system, are different from those of the Israeli society at large, in that they are mediated and influenced by the needs of the Kibbutz system and by available resources and opportunities, rather than by the wishes and needs of the individual. Lastly, Kibbutz members in general do not have a personal income, with the Kibbutz receiving all revenues and covers all personal as well as public needs.

Although these principles are still commonly held, many Kibbutzim are currently undergoing a social change in line with more accepted Israeli social norms. Primarily, many Kibbutzim now have the children sleeping with their parents. Nevertheless, most of the Kibbutzim still maintain their specific basic ideology and lifestyle (Barak & Golan, 2000; Ben Rafael, 1988).

EDs were considered extremely rare in the Kibbutzim until the mid 1960s. However, assessment of the change in the annual incidence of AN among female Kibbutz members from the mid 1960s to the late 1980s yielded an overall increase of 800%, an increase considered significantly greater compared to the general Israeli society (Kaffman & Sadeh, 1989). The trend towards high rate of disturbed eating attitudes and behaviours in the Kibbutz in the 1980s and early 1990s was also described in non-clinical populations. Apter et al. (1994), who assessed Israeli schoolgirls of different residential settings in the late 1980s, found that more than 25% of Kibbutz girls had pathological EAT-26 scores, a significantly higher rate than that found in other groups of Israeli schoolgirls.

Kaffman and Sadeh (1989) relate the increase in full-blown AN to changes in the structure of the Kibbutz, particularly in terms of an increase in food availability and consumption, and to changes in women's perception of their gender role. Apter et al. (1994) attribute their finding to the unique situation of Kibbutz female adolescents in the 1980s, who are caught in a severe role conflict between the traditional nurturing female and the independent, sexually liberated 'new Kibbutz woman'. Thus, Kibbutz women are expected to simultaneously succeed at their work and career, as homemakers, and as liberated women free to choose their sexual partners.

From a different perspective, Kibbutz members have always tended towards greater use of medical services in general and mental health services in particular compared with the general Israeli population (Apter et al., 1994; Kaffman & Sadeh, 1989). A recent study has shown this trend to be present also in the case of EDs, namely the proportion of patients from the Kibbutzim seeking ambulatory treatment in the largest ED clinic in the north of Israel (16%) has been found to be considerably greater than their overall rate in the general Israeli population (1.8%), although Kibbutz members are not over-represented in inpatient ED treatment facilities. The timely use of outpatient facilities may have the important benefit of reducing the need for later inpatient interventions (Latzer et al., 2007c).

Several recent studies assessing Kibbutz schoolgirls in the late 1990s and early 2000s envisioned a change in this trend. In a preliminary study conducted by Latzer and Shatz in (1999, 2001), 19% of Kibbutz adolescent girls had a pathological EAT-26 score (i.e. EAT $>$ 20), a rate similar to that found in an urban Israeli population (Stein et al., 2003). Interestingly, just a few years later, the attitudes towards eating among female Kibbutz adolescents as assessed by the EAT-26 and the EDI-2 were already significantly less disturbed than those of adolescents in urban or rural residential settings (Latzer & Tzischinsky, 2003, 2005).

The authors attribute this change to a combination of three factors: first, in the last decade, the Kibbutz has undergone major socio-economic changes involved in the relocation of children to live with their parents, and in moving from an equal communal life style to privatisation. In line with these changes, the life style of Kibbutz women has become more similar to that of Israeli women in general.

This decrease in the rate of maladaptive eating-related preoccupations and behaviours can also be the result of a recent implementation of an ED prevention programme in the Kibbutzim (Latzer & Shatz, 1999), as a response to the increase in the rate of EDs during the 1970s and 1980s. Thirdly, the high availability and high standards of medical services in the Kibbutzim (Blank, 1995; Shlaski, 1997) combined with high awareness of health care

DOI: 10.1002/erv

and positive attitudes towards seeking professional help may have also potentially contributed to the decrease in the prevalence of EDs in the Kibbutzim (Apter et al., 1994; Kaffman & Sadeh, 1989; Latzer, Vander, & Gilat, 2008).

EATING ATTITUDES AMONG THE ISRAELI ARAB POPULATION

Approximately 20% (1.2 million) of the Israeli population consists of Israeli-Arabs, including Muslims (82%), Christians (9%) and Chircassian, Bedouins and Druze (9%) (Central Israeli Bureau of Statistics, 2005). Israeli Muslim Arabs, most of them belonging to the Sunni rite, are very conscious of their culture and religion and mostly do not socialize with the Jewish population. By contrast, the Christian Arab society in Israel is closer to the Jewish majority, although sharp distinctions do remain between the two cultures. The Druze, who pay homage to Jethro (Moses father-in-law), live in separate villages, mostly in the Galilee. They take an active part in the national political life, including an obligatory service in the Israeli army. Most of the Druze are agriculturists who preserve their traditional way of life. The Bedouins, once highly secluded in their nomad tradition, are nowadays more assimilated in the overall Israeli way of life, having the option to serve in the Israeli army. The Chircassians are a specific Muslim group that more than any Arab minority tend to live a secluded life in rural settings.

Israeli-Arabs not only face political and economic problems related to them being a minority in a Jewish state, but experience great cultural conflicts. Whereas the Jewish-Israeli population, on the whole, lives according to social codes and norms of modern Western society, the Arab minority, regardless of belonging to any specific sub-group, maintain more traditional norms and social customs, particularly with respect to gender roles, marriage and divorce, family relationships and childrearing (Becker et al., 2003; Ben-Ari & Azaiza, 2003; Cnaan, 1987). Nevertheless many of them are connected to cable TV and radio, and may be potentially influenced to some extent by the Israeli western way of life (Eisenstadt, 1989).

Not surprisingly, incidence rates of EDs in Middle Eastern Muslim countries (Saudi Arabia, Pakistan, Egypt, Sudan, Iraq and Iran), as well as in Arab minorities in Western countries (e.g. the UK) are generally significantly lower compared to modernized Western countries (Al-Issa, 1966; El-Sarrag, 1968; Nasser, 1986, 1988a,b).

In Israel, although there are yet no valid epidemiological studies, there is some evidence to suggest that the Arab population has a lower representation among referrals to ED clinics in Israel. For example, the largest ED ambulatory service in the northern part of Israel has received more than 1700 new referrals in the past 14 years, of whom only 2 AN and 8 BN patients were Israeli-Arabs (Latzer et al., 2008).

This low incidence may reflect different attitudes toward beauty in the Arab culture, where plumpness is considered attractive and a symbol of feminine nurturance (Dolan, 1991; Nasser, 1997). Alternatively, it may be associated with the inclination of Israeli-Arabs to refrain from seeking psychiatric assistance related to the stigma attached to seeking help from sources outside the family support network, especially sources belonging to the Israeli state, and to having lower knowledge about EDs and ED treatment facilities (Cnaan, 1987; Latzer et al., 2007c). This tendency towards lower treatment seeking has been found also in ethnic minorities diagnosed with EDs in other countries (Cachelin et al., 2000, 2001; Pike et al., 2001).

A few studies have attempted to assess whether different Israeli-Arab populations would show different rates of maladaptive eating-related preoccupations and behaviours. Apter et al. (1994) have administered the EAT-26 to schoolgirls belonging to five different Israeli-Arab subgroups: Muslims, Christians, Druze, Bedouins and Circassians. The authors have found that Circassian female adolescents have the lowest percentage (8.0%) of pathological EAT-26 scores (EAT-26 $>$ 20) and the Bedouins adolescents the highest (19.4%). Muslims (18.6%), Christians (15.4%) and Druze (14.3%) fared in-between.

The authors conclude that the degree of eating-related pathology depends upon the degree of exposure to Western body ideals and upon the presence of conflicts between modern and traditional perspectives in relation to the female gender role (Apter et al., 1994). Thus, Circassian adolescents live in small, relatively self-contained, endogenous communities (Eisenstadt, 1989) as compared to the other Arab groups. With mass media having relatively little impact on the norms and values of their life, Circassians tend to maintain the traditional female nurturing role, rendering them to be less concerned with thinness and dieting (Apter et al., 1994).

By contrast, the Bedouins in Israel have undergone in recent years a rapid social change (George, 1973). In one generation, most have moved from an

DOI: 10.1002/erv

isolated, rural, nomadic lifestyle to a sedentary, urban existence in new towns built hastily in the south of Israel. Bedouin women, formerly isolated, protected and often veiled, have entered the mainstream Israeli society, studying in universities and working in both white- and blue-collar occupations. This exposure is likely associated with an increasing personal and socio-cultural conflict, as virginity and sexual fidelity still remain supreme values in the Bedouin society.

Latzer, Tzischinsky, and Azaiza (2007a) recently examined the prevalence of disordered eating attitudes and behaviours among different subgroups of Israel-Arab schoolgirls. Their sample included 922 (81.5%) Muslim, 125 (11.1%) Christian and 84 (7.4%) Druze female students (7th–12th grades) from urban and rural residential settings from all parts of Israel. The percentage of each subgroup was decided by using a clusters sampling method. Compared with Druze and Muslim subgroups that had similar scores, the Christian subgroup had lower scores on all 'personality' EDI-2 sub-scales, but not on the 'core ED' Drive for Thinness, Bulimia, Body Dissatisfaction and Asceticism subscales. These findings suggest that the between-group differences in EDI-2 might actually reflect the existence within the Muslim and Druze subgroups of conflicts that are not specific to disordered eating that raise overall distress. For example, Muslims girls in Israel, who are by far less involved in the mainstream Israeli culture, less educated and of lower socio-economic status tend to report lower self-esteem (Latzer et al. 2007a) compared with Christian Israel-Arabs, thus rendering them more vulnerable to age-specific developmental conflicts, reflected in the EDI-2 dimensions of maturity fears, interpersonal distrust or social insecurity.

DISCUSSION

Israel provides an exceptional opportunity to study the role of ethnic and socio-cultural parameters in the development and maintenance of various psychological disturbances, including disordered eating syndromes, because of its unique socio-cultural background. As there are no valid Israeli studies with respect to the epidemiology of AN and BN, we have focused primarily on findings concerning disordered eating, a less defined entity. One important finding highlighted in our review is the high rate of disturbed eating in Israeli male and female adolescents in comparison to many other Western industrialized countries. This finding raises critical questions about the emotional well-being of Israeli adolescents.

Several processes might be of relevance for this increased risk. Exposure to the constant risk of terrorist threat as has been the case in Israel during most of the years of its existence, may increase risk-taking behaviours in adolescents, including those related to eating (Pat-Hornczyk, Peled, Miron, Villa, & Chemtob, 2007). The high rates of disturbed eating not only in Israeli female adolescents but also in males compared with other Western countries (Harel et al., 1997, 2002), lend further support for regarding disturbed eating as representing, at least in part, a reaction to stress that is not necessarily limited to one gender. Additionally, Israeli teens nowadays, who often do not identify with traditional religious, national and socio-cultural values (Harel et al., 2002), might be highly influenced by and adopt Western norms, including those related to the thin body ideal (Neumark-Sztainer et al., 1995). Thirdly, more perhaps than many other nations, Israel is a society in transition (Harel et al., 2002; Witztum, Stein, & Latzer, 2005), having envisioned major socio-cultural changes within a relatively brief period of time (e.g. continuous changes in the structure of the Israeli population owing to the massive waves of immigration or the continued switches between war and peace conditions encountered by the Israeli society). Psychological and psycho-physiological disturbances may increase within a relatively brief period in cultures in transition (Ogden, Troiano, Briefel, & Johnson, 2002), serving as one means to cope with high levels of distress characteristic of such cultures. In this respect, although the recent increase in the incidence of EDs in Hong Kong in comparison to other parts of China (Keel & Klump, 2003) has been associated by the authors with a greater influence of Western ideals, another compelling explanation may relate to the greater socio-cultural changes that have occurred in Hong Kong, relative to other parts of China, since the second World War.

Kibbutz communities might serve as a micro-cosmic socio-cultural laboratory more than any other social group in Israel because of the dramatic changes occurring in these relatively homogenous communities within a relatively brief period of time. Initially, when the Kibbutz was the explicit product of a unique, clearly articulated ideology, with the members highly involved and devoted to the Kibbutz ideology, there was an impressively low rate of reported EDs. Later, a dramatic increase in the rate of both full blown EDs and disturbed eating

DOI: 10.1002/erv

syndromes was observed, simultaneously with the Kibbutz becoming more open to the norms and values of the Israeli society at large, generating a conflict between the traditional Kibbutz norms and mainstream Israeli ideals. Still, more recently, the rate of disordered eating among Kibbutz adolescent girls dropped again to ranges similar to those of the general Israeli population, paralleling the socio-cultural process of assimilation of the Kibbutz into the general Israeli way of life. Although the recently reported high rate of referral of Kibbutz women to ambulatory treatment because of an ED relative to their prevalence in the general population (16% vs. 1.8%, see Latzer et al., 2008), might contradict this trend, it seems to represent a greater orientation of Kibbutz members towards health-seeking in comparison to mainstream Israeli society, rather than an increase in disturbed eating.

The lower rates of disordered eating in the traditional Arab-Israeli society in comparison to the Westernised mainstream Israeli society (Latzer et al., 2007a, 2007c) are in line with Keel and Klump's (2003) hypothesis that the rate of disturbed eating within a specific culture is proportionate to the degree of exposure to Western values.

The greater rate of eating-related pathology in Arab/Bedouins in comparison to Arab/Chircassians lends further support to the risk associated with greater exposure to Westernised ideals, as well as to the greater likelihood of individuals living in a culture at transition, as the Arab/Bedouins are, to develop psychological and psycho-physiological disturbances. Ruggerio and Sassaroli (2003), in an extensive study of disordered eating in Mediterranean countries, have similarly found that the highest incidence of disordered eating is found in those societies in which the conflict between modern Western ideals and traditional norms is the highest, as is the case in Israeli-Arab/Bedouins.

Altogether, our review emphasizes that the specific Israeli socio-cultural structure provides an opportunity to study the disposition to disordered eating not so much from the dichotomy of culture versus genetics and non-shared environment (Kaye, Strober, & Jimerson, 2004), but rather in relation to the contribution of social instability. Namely, it is the rapid societal change, the occurrence of social instability, rather than the characteristics of the specific society that might increase the risk to develop disordered eating, and perhaps also clinical forms of EDs. These processes cut through the entire Israeli society. New immigrants, who go through a major change as a result of their immigration have to integrate into the Israeli society that by itself is undergoing rapid changes, a process likely exacerbating the difficulties they endure. Similarly, Kibbutz members have experienced multiple socio-cultural changes of seemingly opposite directions within a relatively brief period of time, and Israeli-Arab/Bedouins are continuously torn between their loyalty to traditional norms and their wish to be integrated in a rapidly changing mainstream Westernised Israeli society that is not always keen to accept them.

Our study and previous research (Nasser et al., 2001) support the notion that living in a culture in transition may increase the risk for disordered eating. A similar process has been observed by DiNicola (1990), namely that what is detrimental is not so much the maladaptive influence of a specific culture to predispose to an ED (i.e. ED as a 'culture-dependent syndrome', see Swartz, 1985). Rather, it is the changes occurring within a Westernised culture that idealizes thin physique that increase the risk to develop disordered eating. According to this process, referred to by DiNicola as a 'culture reactive syndrome', rapid changes occurring within a culture may interfere with the cultural conditions for the development of a stable identity, likely increasing the risk for psychopathology. This author further argues that data on factors predisposing to an ED are mostly the result of quantitative epidemiological research. This methodology, while enabling an identification of the factors associated with the development of a clinical disorder, lacks the ability to generate theoretical formulations as to how these factors, in our case socio-cultural processes, operate to predispose to the disorder. Qualitative, in addition to quantitative data, are required to assess the putative role of socio-cultural influences in the predisposition to EDs (DiNicola, 1990).

Limitations

The main limitation in any analysis of EDs in Israel is the lack of epidemiological studies on these disorders, precluding any definite conclusions as to the role of socio-cultural factors specific to the Israeli society in the predisposition to an ED. This is unfortunate, as research has shown that Israeli youngsters are at continued high risk for disordered eating, and as hypotheses do exist to account for this trend, for example, Israel being a culture in transition, a culture exposed to a constant risk to its existence or a culture that is constantly developing.

We are left with the relatively poorly defined construct of disordered eating. Furthermore, in most of the reviewed studies, disordered eating is defined

DOI: 10.1002/erv

with self-report questionnaires rather than with structured clinical interviews, usually considered the more valid procedure in the study of EDs (Shisslak et al., 1995). Nevertheless, current research usually regards disturbed eating as clinically relevant (Garfinkel et al., 1995; Shisslak et al., 1995) because individuals with disturbed eating may share many characteristics common with patients with full-blown EDs (Garfinkel et al., 1995; Stein et al., 1997), and because between 15 and 45% of these individuals may progress to full-blown syndromes within several years (Shisslak et al., 1995). The lack of valid epidemiological data does not also allow us to conclude whether the changes noted in the prevalence of disordered eating in the Kibbutzim in the latter half of the 20th century and the low rates of disordered eating in the Arab society, particularly in several of its subgroups, reflect a genuine finding, or are the result of inconsistencies in the reporting of these behaviours, in sampling methods, and/or in treatment-seeking behaviours.

CONCLUSION

The picture that emerges from the current data on weight loss and eating behaviours of Israeli youth is highly disturbing, primarily as between 1994 and 2002 these problems have continued to deteriorate (Harel, 2007) in the context of an already grave condition (Harel et al., 1997, 2002). Whereas our review does not generate solutions to this serious situation, it contributes to such an endeavour, by emphasizing the risk associated with living in a culture that is both in transition and in constant socio-political stress for the development of at-risk behaviours, in our case disordered eating. This calls for the urgent elaboration of adequate interventions that would assist young Israelis to better deal with the maladaptive conditions they are faced with.

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