# Disordered Eating and Cultural Distinctions: Exploring Prevalence and Predictors among Women in Israel

Marjorie C. Feinson, PhD, and Adi Meir, MA

*Falk Institute for Behavioral Health Studies, Jerusalem, Israel*

## ABSTRACT

**Background:** Cultural differences in serious eating problems among adult women have important treatment and prevention implications yet remain relatively unexplored. This is the first study to examine these issues among Israel's multi-cultural adult population.

**Method:** Disordered eating behaviors (DEB) are assessed with 14 DSM-related symptoms (including binge eating) in a multi-cultural sample of 485 women. Prevalence rates and clinical predictors of DEB severity are examined for three culturally distinct groups of Jews.

**Results:** Second generation Israeli-born and first generation Israelis of Sephardic and Ashkenazi origins differ significantly in DEB prevalence (19.4%, 11.4%, 13.9%, p<.05). Regarding clinical predictors, self-criticism is strongest predictor for second generation while weight is strongest predictor for both first generation groups.

**Conclusions:** Prevailing wisdom largely attributes eating disturbances to cultural thinness norms. However, substantial differences between culturally distinct groups of Israeli Jews, similarly exposed to westernized norms, challenge the prevailing wisdom. Culturally sensitive interventions warrant additional research and more illuminating explanatory models than "one size fits all."

## INTRODUCTION

Socio-cultural explanations attribute many eating problems to westernized norms that glorify and promote a thin body ideal. This perspective assumes that females are exposed to and pressured by thinness norms, internalize them, and develop unhealthy eating behaviors in an attempt to conform to such norms. The influence of thinness norms, however, has been challenged by findings of eating problems among ethnic groups with larger body sizes that do not conform to thin body ideals, such as African Americans (1-5) with the implication that other socio-cultural factors are involved. For example, Black women who frequently interacted with White individuals (presumably with more exposure to thinness norms) were no more likely to meet criteria for binge eating disorder (BED) than Blacks with low exposure (6). Striegel-Moore and colleagues concluded, that "… the amount of exposure to white social norms may be irrelevant for an understanding of risk for BED" (6). This observation also may apply to adult women with out-of-control eating behaviors such as binge eating and compulsive overeating (6, 7).

Perhaps more germane to adult women is a socio-cultural explanation that highlights bi-cultural conflict (8). When the values, beliefs and practices of particular ethnic/racial groups diverge from dominant cultural norms, the disparity can produce tensions, pressures, and emotional distress (8). Women may turn to food for comfort, as a way of coping with conflicting demands of a bi-cultural existence. A related explanation focuses on changing societal norms and transitions that contribute to conflicting gender role expectations, especially for women from more traditional backgrounds (9, 10). Changing circumstances and expectations may trigger an increased vulnerability to a range of mental health problems for more traditional groups and possibly account for an increase in eating disorders, as found among Japanese women following World War II (11). A recent analysis

**Address for Correspondence:** ✉ Marjorie C. Feinson, PhD, Falk Institute for Behavioral Health Studies, Kfar Shaul, Givat Shaul, Jerusalem 91060, Israel ✆ Falk1@012.net.il

of disordered eating and religious observance revealed no significant differences between the most and least traditional respondents, specifically ultra-Orthodox and Secular women in Israel (12). In brief, studies of socio-cultural factors other than beauty ideals and thinness norms are needed (13) and may be particularly pertinent to understanding cultural aspects of eating disturbances among adult women.

Accordingly, the present study addresses some of these issues by focusing on the relationship between cultural origin and disordered eating with a multicultural sample of adult women in Israel spanning a broad age range (21 to 80). The heterogeneity of the Israeli population provides a unique opportunity for such an exploration. This analysis compares prevalence and clinical predictors across three distinct cultural origin groups: second-generation Israel-born Jews, and two groups of first generation Israeli Jews – those whose parents were born in North African or Middle Eastern countries (i.e., Sephardic) and those whose parents were born in Europe or the Americas (Ashkenazi).

## METHODS
### STUDY SAMPLE
The sample was recruited from primary health care clinics located in Jerusalem metropolitan areas and surrounding suburban neighborhoods. Clinics in specific neighborhoods were selected in order to achieve a socio-economically and culturally diverse sample broadly reflective of the adult female population (e.g., neighborhoods consisting primarily of Russian immigrants, a rural population, Arab Muslims, Ultra-Orthodox Jews, etc.), Under Israel's universal health care, neighborhood clinics provide services without charge and utilization rates are relatively high (14, 15). Inasmuch as many visits are for routine tests by nurses, prescription refills, or referral forms, the sample is more broadly reflective of the community than a clinical population. This was substantiated by a majority of interviewees reporting no treatment for any health problems in the previous year.

While clinics were specifically selected according to socio-demographic considerations, the recruitment of women within clinics was random. To maximize randomness and demographic diversity, interviewers entered the clinics at different hours of the day and on different days of the week. All women at least 20 years of age were invited to complete a self-report screening questionnaire (SQ) after receiving an explanation that it was part of a community study of eating behaviors, that participation was voluntary, and responses were anonymous and confidential. SQs in Hebrew, Russian or English took 3 to 5 minutes to complete. A final SQ question asked about participating in a 30-40 minute telephone interview. Those interested provided contact information (first name, phone number, best time to call) and signed the SQ indicating consent to be called. This procedure, of briefly meeting interviewers in person, but the full interview being done by telephone, was successful in encouraging participation while also providing a degree of anonymity for those reluctant to answer questions in face-to-face interviews. All procedures and instruments were reviewed and approved by the appropriate review boards in addition to approval by the medical directors of each participating clinic.

### MEASURES
*Disordered Eating Behaviors (DEB)* is a term frequently used in the literature and refers to a broad range of binge eating, out-of-control eating and related problematic behaviors. DEB is distinguished from psychiatric diagnoses of anorexia and bulimia, which are less prevalent among adults. Although self-report screening questionnaires (SRQs) tend to yield higher scores than interview assessments, they are considered effective research instruments where clinical diagnoses are not required (16, 17). They may be particularly appropriate for assessing secretive or shameful behaviors, such as out-of-control eating behaviors (16, 18). Accordingly, an easily administered screening questionnaire (SQ) with clinically relevant symptoms that could be easily translated into Hebrew and Russian was developed for this study. Specifically, more than half of the 14 DEB-SQ items are consistent with DSM-IV symptoms, particularly the proposed category of binge eating disorder (BED). All items are unambiguous and devoid of confusing or unfamiliar terms. For example, the terms "binge eating" or "bingeing" are not used. Even "loss of control," a central feature of binge eating, was avoided by asking: "Once you begin eating, do you have a hard time stopping?" To minimize the potential for recall bias, all SQ items are in the present tense and answered with a five-item Likert scale: always, often, sometimes, rarely, not at all.

Three DEB categories, arrayed along a severity continuum, reflect both the number and frequency of symptoms: serious disordered eating (DE) requires answers of "often" or "always" to more than one-third of the 14 symptoms, and suggests a clinically meaningful condition; "considerable" DEB includes answers of "sometimes" or

"often" to more than one-third of the symptoms and is suggestive of sub-threshold conditions; minimal DEB contains answers of "rarely" or "never." DEB *alpha* reliability for the total sample is .80 with similar *alphas* for each cultural group. (Additional data for all measures available upon request.)

*Weight:* Numerous studies reveal that self-reported height and weight correlate well with actual heights and weights and are "sufficiently valid to use in epidemiological and survey studies" (19), although a recent analysis raises some concerns (20). Interviewees were asked: For your age and height, do you consider yourself to be a healthy weight? Those answering "no" specified whether they were underweight (slightly or very) or overweight (slightly or very) and categorized accordingly as healthy weight, overweight or obese. Inasmuch as studies show that obesity is consistently underestimated by self-report (21, 22), the current findings are likely to under-estimate the true prevalence of obesity among respondents.

*Emotional well-being:* A significant relationship between psychiatric problems and disordered eating symptoms has been documented in numerous studies (23-28). Two different but related aspects of emotional well-being are measured in this study: self-criticism and psychological distress. The Rosenberg Self-Esteem scale is a well established and widely-used 10-item measure of global self-esteem (29). A modified version adapted for this study reflects a more nuanced dimension, namely, self criticism (e.g., feeling critical of yourself, not good enough, much of what you do is inadequate, etc.) with three response categories (most of the time, sometimes, rarely). Higher scores reflect more self-criticism. *Alpha* reliability for the full sample was .74 with similar alphas for cultural groups.

Psychological distress was measured with the Brief Symptom Inventory (BSI), an 18-item questionnaire with well-established reliability and validity (30). Alpha reliability for the full sample was .87 with similar cultural group *alphas*, consistent with *alphas* in previous Israeli studies (31). More than one standard deviation above the mean defined psychological distress.

*Socio-demographic variables:* Cultural origin group is defined according to parents' place of birth. First generation respondents of Sephardic origin have parents who were born in North African or Middle Eastern countries (PBA/S: Parents born abroad/Sephardic origin). First generation respondents of Ashkenazi origin are women with parents born in Europe or the Americas (PBA/A: Parents born abroad/Ashkenazi origin). (The majority of first generation respondents were born in Israel; a small proportion within each group was born abroad but have lived most of their lives in Israel.) Second generation respondents are women born in Israel to Israeli-born parents (PBI). Interviewees excluded from these three cultural origin groups are missing cultural information or with parents from contrasting cultural origin groups or Muslims or Christians.

A single question assessed income sufficiency: Does the family income (total income of all family members) cover most of the basic daily needs and expenses (food, rent, clothing, transportation, etc.)? Three response categories (does not cover most expenses; covers part, covers all or most) classify respondents accordingly. Age and education groups conform to categories of Israel's Central Bureau of Statistics. Widowed and divorced respondents were combined into a category of previously married

## STATISTICAL ANALYSES

Pearson's chi-square and t-tests were used for socio-demographic comparisons. Correlations were calculated using Pearson's r for continuous variables and Spearman's rho for ordinal variables. Hierarchical regression for the full sample was computed with DEB as the dependent variable. Three clinical variables, weight, self-criticism (CSS) and psychological distress (BSI), were entered into the regression after the demographic variables (age, education, marital status). All possible interactions were checked, only the marital status-CSS interaction was significant and entered into the model. The regression for the full sample includes a cultural group variable which was significant. Accordingly, separate hierarchical regressions for each cultural group were computed, with variables entered in the same order as previously described.

## RESULTS

*Demographic Description:* Table 1 contains demographic characteristics for the full community sample and three cultural origin groups. The full sample is demographically diverse (column 1) and broadly representative of the Israeli adult female population (age 20+) regarding age, education, and marital status (32). Overall, close to 90% of respondents are age 25 and older and well educated (mean of 13.7 years). Cultural group comparisons reveal significant demographic differences: second generation respondents (PBI) are significantly younger and more likely to be single; Sephardic respondents (PBA/S) reported less education and less income compared to others.

**Table 1.** *Characteristics of Jewish Respondents according to Cultural Origin Group*

| Variables | Community sample[a] | | Israel (PBI)[c] | | Sephardic origin (PBA/S)[d] | | Ashkenazi origin (PBA/A)[e] | | $F / x^2$ |
|---|---|---|---|---|---|---|---|---|---|
| | n=567[b] | | n=108 | | n=175 | | n=202 | | |
| **Age (yrs)** | | | | | | | | | |
| <25 | 11.3 | | 25.0 | | 3.4 | | 7.4 | | $x^2=80.58$*** |
| 25-44.5 | 43.7 | | 56.5 | | 42.3 | | 32.7 | | |
| 45-64.5 | 35.6 | | 13.9 | | 48.6 | | 43.6 | | |
| >=65 | 8.8 | | 4.6 | | 5.7 | | 16.3 | | |
| Mean (sd) | 43.0 | (15.1) | 34.6[a] | (14.0) | 45.6[b] | (12.2) | 48.5[b] | (16.0) | $F=34.66$*** |
| **Education (yrs)** | | | | | | | | | |
| <12 | 17.6 | | 7.4 | | 34.3 | | 9.5 | | $x^2=106.64$*** |
| 12 | 25.4 | | 25.9 | | 36.6 | | 14.0 | | |
| 13-15 | 25.2 | | 33.3 | | 16.6 | | 27.5 | | |
| 16+ | 30.0 | | 33.3 | | 12.6 | | 49.0 | | |
| Mean (sd) | 13.7 | (3.3) | 14.4[a] | (2.7) | 11.9[b] | (3.1) | 15.1[a] | (3.1) | $F=55.51$*** |
| **Income Sufficiency** | | | | | | | | | |
| Insufficient | 18.2 | | 15.9 | | 30.5 | | 11.7 | | $x^2=42.91$*** |
| Partially | 33.2 | | 31.8 | | 39.7 | | 26.4 | | |
| Sufficient | 46.0 | | 52.3 | | 29.9 | | 61.9 | | |
| **Marital Status** | | | | | | | | | |
| Single | 18.3 | | 38.7 | | 9.5 | | 13.3 | | $x^2=43.19$*** |
| Previously married | 18.3 | | 12.3 | | 22.0 | | 22.4 | | |
| Married | 59.6 | | 49.1 | | 68.5 | | 64.3 | | |
| **Weight** | | | | | | | | | |
| Obese | 18.5 | | 17.1 | | 22.5 | | 16.3 | | n.s |
| Overweight | 27.9 | | 25.7 | | 30.1 | | 31.6 | | |
| Healthy | 51.5 | | 57.1 | | 47.4 | | 52.0 | | |
| **Self Criticism (CSS)** | | | | | | | | | |
| Self Critical | 18.9 | | 15.7 | | 14.5 | | 20.7 | | n.s |
| Not Self Critical | 81.1 | | 84.3 | | 85.5 | | 79.3 | | |
| Mean (sd) | 1.56 | (0.40) | 1.53 | (0.38) | 1.51 | (0.40) | 1.59 | (0.41) | n.s |
| **Psychological Distress (BSI)** | | | | | | | | | |
| Distressed | 15.2 | | 11.1 | | 14.9 | | 11.4 | | n.s |
| Not Distressed | 84.8 | | 88.9 | | 85.1 | | 88.6 | | |
| Mean (sd) | 1.74 | (0.61) | 1.64 | (0.53) | 1.77 | (0.67) | 1.64 | (0.57) | n.s |
| **Disordered Eating Behaviors (DEB)** | | | | | | | | | |
| Serious | 15.9 | | 19.4 | | 11.4 | | 13.9 | | $x^2=10.33$* |
| Considerable | 27.5 | | 36.1 | | 27.4 | | 24.9 | | |
| Minimal | 56.4 | | 44.4 | | 61.1 | | 61.2 | | |
| Mean (sd) | 2.38 | (0.58) | 2.51a | (0.54) | 2.28[b] | (0.58) | 2.33[b] | (0.55) | $F=6.38$** |

[a]Community sample includes respondents with missing cultural information, Muslim-Arabs and Christians
[b]Categories do not total 100% due to missing values.
[c]PBI respondents are 2nd generation Israelis.
[d]PBA/S respondents are 1st generation Israelis whose parents come from North Africa or the Middle East.
[e]PBA/A respondents are 1st generation Israelis whose parents come from Europe, North or South America.
DEB = Disordered Eating Behavior, CSS = Critical Self Scale, BSI = Brief Symptom Inventory, *p< 0.05, **p < 0.01, ***p< 0.001

## FREQUENCY OF CLINICAL CORRELATES

In contrast to demographic differences, there were no significant group differences regarding the three clinical correlates: weight, self criticism and psychological distress (Table 1, middle panel). Overall, almost half of the sample reported being obese or overweight (18.5%, 27.9% respectively) while almost one-fifth are self-critical (18.9%) and 15% are distressed.

## FREQUENCY OF DEB

Among the 1,194 women who completed a screening questionnaire (data not shown), 14.5% have serious disordered eating behaviors. Among telephone interviewees (n=567), there are slightly higher rates of serious DEB, 15.9%, as shown in Table 1 (bottom panel). Also, there are significant DEB differences by cultural origin group: 19.4% for PBI; 11.4% for PBA/S; 13.9% for PBA/A (p<.05). Mean score comparisons with Sheffe post-hoc tests reveal that second-generation Israelis have significantly higher DEB scores than both Sephardic and Ashkenazi respondents (p<.01).

## BIVARIATE RELATIONSHIPS: DEB
## AND INDEPENDENT VARIABLES

Correlations within each cultural origin group reveal substantial variations (Tables 2a, 2b). For second generation Israelis (Table 2a), DEB is not significantly correlated with weight; in contrast, weight is the strongest correlation with DEB for both first generation groups (Table 2b) (r=.31, .27 p<.001 respectively). Another contrast is the DEB-self-criticism relationship; it is the strongest correlation for second generation respondents and less strongly related for Sephardic and Ashkenazi respondents (r=.32 p<.001 vs. .19 p.<05, .23 p.<.01 respectively). Weight and self-criticism were not significantly correlated, as one might expect to find more self-criticism among overweight and obese women. The absence of a significant relationship between DEB and income warranted excluding it from further consideration in multivariate analyses.

## MULTIVARIATE ANALYSES: INDEPENDENT VARIABLES ASSOCIATED WITH DEB SEVERITY

Hierarchical regression analysis for the full sample (available upon request) reveals that weight makes the largest contribution (8.2%) followed by self-criticism (3.9) while psychological distress (BSI) is not a significant predictor. After controlling for variations in demographic and clinical variables and entering all interaction terms, the unique effect of cultural origin group is significant (.008) contributing 1.2% to the explained variance of 20.5% (adjusted).

Hierarchical regressions for three cultural groups (Table 3) reveal substantially different patterns of predictors of DEB severity. Beginning with second generation Israelis (top panel), weight is not a significant correlate. However, self criticism and the interaction of self-criticism with marital status make significant contributions. In contrast, for both first generation groups (middle and bottom panels), weight is the strongest predictor followed by self-criticism. There also are considerable differences regarding the amount of explained variance; for second generation Israelis, the model accounts for almost 30%

**Table 2a.** *Bivariate Correlation Analysis: PBI Cultural Origin Group*

|  | DEB | Age | Education | Income■ | Weight■ | CSS | BSI |
|---|---|---|---|---|---|---|---|
| Disordered Eating (DEB) |  |  |  |  |  |  |  |
| Age | -.23* |  |  |  |  |  |  |
| Education | -.01 | .00 |  |  |  |  |  |
| Income Sufficiency■ | .02 | .14 | .32*** |  |  |  |  |
| Weight■ | .17◇ | .25* | -.04 | .11 |  |  |  |
| Self Criticism (CSS) | .32*** | -.01 | .18◇ | .04 | -.07 |  |  |
| Psychological Distress (BSI) | .23* | .01 | -.05 | .08 | .09 | .50*** |  |

Below the diagonal: Parents Born in Israel (PBI) (n=103).
DEB = Disordered Eating Behaviors, CSS = Critical Self Scale,
BSI = Brief Symptom Inventory
◇p< 0.10, *p < 0.05, **p < 0.01, ***p < 0.001
■Spearman›s RHO (ordinal data)

**Table 2b.** *Bivariate Correlation Analyses: Two Cultural Origin Groups*

|  | DEB | Age | Education | Income■ | Weight■ | CSS | BSI |
|---|---|---|---|---|---|---|---|
| Disordered Eating (DEB) |  | -.13 | .17* | .02 | .31*** | .19* | .10 |
| Age | -.16* |  | -.46** | .01 | .04 | -.06 | .08 |
| Education | .08 | -.08 |  | -.30*** | -.08 | -.15◇ | -.31*** |
| Income Sufficiency■ | .02 | -.01 | -.16* |  | .08 | .10 | .18* |
| Weight■ | .27*** | .11 | -.11 | .09 |  | .05 | .09 |
| Self Criticism (CSS) | .23** | .02 | -.02 | .25*** | .13◇ |  | .46*** |
| Distress (BSI) | .15◇ | -.04 | -.08 | .24*** | .11 | .38*** |  |

Above the diagonal: PBA/S (n=162).
Below the diagonal: PBA/A (n=183)
DEB = Disordered Eating Behaviors, CSS = Critical Self Scale,
BSI = Brief Symptom Inventory
◇p< 0.10, *p < 0.05, **p < 0.01, ***p < 0.001
■Spearman›s RHO (ordinal data)

**Table 3.** *Hierarchical Regressions: Variables Influencing DEB by Cultural Origin Group*

| Variables influencing DEB | Change statistics | | | Overall | | | |
|---|---|---|---|---|---|---|---|
| | R² change | F change | p | R² | df | F | p |
| PBI Jews (N=103) | | | | | | | |
| Age (yrs) | .055 | 5.879 | .017 | .055 | 1, 101 | 5.879 | .017 |
| Marital Status (MS) | .038 | 2.092 | n.s | .093 | 3, 99 | 3.397 | .021 |
| Education (yrs) | 0.000 | .003 | n.s | .093 | 4, 98 | 2.523 | .046 |
| Weight | .045 | 2.529 | n.s | .139 | 6, 96 | 2.577 | .023 |
| Self Criticism (CSS) | .108 | 13.586 | .000 | .246 | 7, 95 | 4.440 | .000 |
| Distress (BSI) | 0.000 | .020 | n.s | .247 | 8, 94 | 3.847 | .001 |
| MS x CSS | .119 | 8.617 | .000 | .366 | 10, 92 | 5.300 | 0.000 |
| Adjusted R² for total model = .297 | | | | | | | |
| PBA/S Sephardic Jews (N=162) | | | | | | | |
| Age (yrs) | .016 | 2.644 | n.s | .016 | 1, 160 | 2.644 | n.s |
| Marital Status (MS) | .002 | .174 | n.s | .018 | 3, 158 | 0.988 | n.s |
| Education (yrs) | .014 | 2.242 | n.s | .032 | 4, 157 | 1.308 | n.s |
| Weight | .102 | 9.164 | .000 | .135 | 6, 155 | 4.017 | .001 |
| Self Criticism (CSS) | .039 | 7.242 | .008 | .173 | 7, 154 | 4.616 | .000 |
| Distress (BSI) | .004 | .822 | n.s | .178 | 8, 153 | 4.137 | .000 |
| MS x CSS | .012 | 1.089 | n.s | .190 | 10, 151 | 3.532 | .000 |
| Adjusted R² for total model = .136 | | | | | | | |
| PBA/A Ashkenazi Jews (N=183) | | | | | | | |
| Age (yrs) | .025 | 4.649 | .032 | .025 | 1, 181 | 4.649 | .032 |
| Marital Status (MS) | .029 | 2.719 | n.s | .054 | 3, 179 | 3.392 | .019 |
| Education (yrs) | .004 | .710 | n.s | .058 | 4, 178 | 2.717 | .031 |
| Weight | .057 | 5.660 | .004 | .115 | 6, 176 | 3.793 | .001 |
| Self Criticism (CSS) | .037 | 7.620 | .006 | .151 | 7, 175 | 4.462 | .000 |
| Distress (BSI) | .002 | .393 | n.s | .153 | 8, 174 | 3.940 | .000 |
| MS x CSS | .005 | .529 | n.s | .159 | 10, 172 | 3.241 | .001 |

Adjusted R² for total model = .110
PBI - Parents Born in Israel
PBA - Parents Born Abroad
DEB = Disordered Eating Behaviors, CSS = Critical Self Scale,
BSI = Brief Symptom Inventory

compared to 13.6% and 11% for Sephardic and Ashkenazi respondents respectively. In brief, these findings document a complex reality regarding cultural aspects of disordered eating. Along with substantial differences between first and second generation groups, there also are strong similarities for first generation respondents from distinctly different cultural backgrounds.

## DISCUSSION

In general, there is a dearth of data concerning serious eating problems among adult women from diverse cultural origins. While socio-cultural factors have been considered central to their development, our understanding of the relationship remains "relatively rudimentary" (33). The current study highlights cultural considerations by comparing prevalence and clinical predictors for three culturally distinct groups of Israeli Jews.

Beginning with the prevalence of disordered eating in this study, it is estimated at 15%. This is based on a 14.5% rate among those who completed screening questionnaires (n=1194) and a slightly higher rate of 15.9% for telephone interviewees (n=567). It is important to note that the overall rate of 15% is comparable to other studies of eating problems among adult women. These include a 13% rate with "probable" binge eating (1), and a 14% rate with regular binge eating (2), 12% meeting diagnostic criteria for binge eating disorder, binge eating, or eating disorder not otherwise in a U.S. population study (34) and 17% with disordered eating among primary care users in Israel (35).

The prevalence rate varies considerably by cultural origin with lower and similar rates for Sephardic and Ashkenazi Jews (11.4%, 13.9%; ns) compared to a higher rate of 19.4% for PBI respondents (p<.05). Indeed, the PBI rate is substantially higher than for adult women in community studies from the U.S. At first glance, one explanation points to a greater exposure to Israel's westernized norms. There are, however, several caveats. First, assuming that societal norms influence the development of eating disturbances, it is unclear which specific norms are involved, particularly for adult women whose disturbed eating patterns largely reflect binge eating. Second, if westernized norms are major contributors, equally high rates should be found among Ashkenazi women (PBA/A) with cultural roots in highly westernized countries (Europe, Americas). Third, without specifically assessing respondents' level of awareness and internalization of specific norms (36), the attribution of eating problems to cultural norms remains purely speculative. Fourth, all three cultural origin groups have similar levels of exposure to Israeli norms and, thus, would be expected to have similar rates of disordered eating.

Indeed, the concept of "biculturality," which "… assumes the possibility of vitality, effectiveness and fulfillment in the

process of experiencing two cultures," may be particularly relevant to lower rates for first generation respondents. Having been born in Israel, albeit to immigrant parents, may produce identification with two cultures, rather than a conflict in having to choose one or the other. In this regard, "biculturality" may turn out to be an important protective factor rather than a risk factor (37). In addition, the lowest rate of disordered eating found among Sephardic respondents might reflect stabilizing aspects of Sephardic culture, as recently described by Feinson and Meir (38).

Regarding the substantial influence of weight found in many studies (25, 35, 39-41), the contribution of weight is not consistent for Israelis. Obesity is the strongest predictor of DEB severity for Sephardic and Ashkenazi women, but not at all significant for second generation Israelis. This finding is similar to variations for adult Black, White, and Hispanic women in a U.S. study (42).

Self-criticism is a significant predictor of DEB severity and particularly influential for second generation Israelis (PBI). The consistent and significant role of critical self-judgments, together with an insignificant contribution of psychological distress, is noteworthy, and may warrant a shift not only in assessment and treatment interventions, but perhaps in prevention strategies as well (43). These findings also support several other studies that recognize a critical view of the self as an important risk factor vis-à-vis eating disturbances in adulthood (e.g., 44, 45). A forthcoming analysis will shed further light on the relationship between self-criticism and DEB.

Another striking group difference is that the regression model explains more than twice as much variance for second generation respondents compared to their first generation counterparts: 29.7 % vs. 13.6%, 11% (respectively). Apparently, the same correlates are not similarly meaningful for culturally distinct groups. Clearly, additional variables not currently included are needed in order to better understand disordered eating severity among Sephardic and Ashkenazi Jews. Meanwhile, these different predictor patterns reveal the limitations of a single explanatory model that "… a given risk factor applies to all cases" while highlighting the need for a "… more complicated explanatory model than 'one size fits all'…" (46).

Indeed, some researchers have observed the need to investigate a broad range of common risk factors, together with factors unique to specific groups (47). Some risk factors that have begun to be explored include specific events or experiences such as family dysfunction and childhood abuse (48), physical abuse and bullying by peers (26) and sexual assault (49). Experiences of emotional abuse in childhood were explicitly linked to the development of eating problems in a recent qualitative study of Israeli women (50). The analysis of 25 personal narratives by Feinson and Ben Dror (50) uncovered a broad range of emotionally abusive experiences including emotional neglect and abandonment, death or illness in the family without the presence of nurturing adults, geographic dislocation, and the aftermath of the Holocaust. Most interviewees directly attributed their eating problems to these experiences because, as children, food helped to ease the pain and suffering when there was nothing else. A forthcoming analysis of the Israeli quantitative study will provide a detailed exploration of abuse issues in childhood and the connection to DEB in adulthood.

## CONCLUSION

Several methodological caveats are relevant to the findings. First, categorizing diverse groups into a single origin group obscures unique cultural characteristics which may influence the findings. Also, a full understanding of cultural influences necessitates measuring the degree of identification with beliefs and traditions of particular cultural groups (36), including attitudes toward eating, the meaning of food, and family behaviors vis-à-vis eating rituals and meals. Finally, eating disturbances develop over time and cross-sectional studies do not capture developmental processes nor do they permit causal inferences. They are, however, extremely useful in identifying meaningful correlates, which, as this analysis reveals, differ significantly among Israeli Jews from diverse cultural origins.

These limitations notwithstanding, the study contains important methodological advantages. Respondents come from a part of the world and cultural groups not previously studied. Moreover, this community-based study focuses on adult women from a broad age range, in contrast to the majority of studies that utilize convenience samples of high school and college students. While several North American studies show higher rates of eating problems among Jews (51, 52), the present analysis reveals considerable heterogeneity within a Jewish sample. Also, the complex relationship between disordered eating and cultural origin is explored with multivariate analyses that reveal strikingly different patterns of predictors. Moreover, the important contribution of critical self-judgment, rather than psychological distress, provides an intriguing insight, with treatment and prevention implications. Another methodological advantage is a clinically meaningful instrument for assessing disordered

eating with a multicultural population. The absence of adequately standardized instruments with documented utility for use with older individuals (1), makes the assessment of eating problems challenging (8, 53, 54), especially for respondents whose primary language is not English. Therefore, our culturally-sensitive screening questionnaire was developed from widely used instruments measuring eating pathology. Although not subject to rigorous psychometric evaluation, the findings indicate acceptable internal consistency as a measure of disordered eating with a multicultural community sample (54), where symptom patterns rather than diagnoses are the focus.

In summary, the complexity of serious eating problems among adult women from diverse cultural backgrounds requires additional exploration. Expanding the research agenda to include a broad spectrum of socio-cultural risk factors has significant implications for prevention policies and treatment strategies. Undoubtedly, the heterogeneity of adult women with eating problems warrants the development of more illuminating explanatory models than "one size fits all."

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