European Eating Disorders Review
Eur. Eat. Disorders Rev. **12**, 197–202 (2004)

Presence of Disordered Eating among Mexican Teenage Women from a Semi-Urban Area: Its Relation to the Cultural Hypothesis

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The idea of culture as a risk factor for eating disorders has been supported by the higher frequencies of such disorders in the industrialized countries. In a non-urban area of the state of Michoacan, Mexico, we found elevated frequencies of dangerous eating behaviours among teenage girls. We used a checklist, previously employed in a survey of Mexico City teenagers, with a sample of 458 girls (mean age = 16.5 yr). We found that 27.9 per cent of them were seriously concerned about weighing too much, 14.3 per cent practised dieting or fasting in order to lose weight and 2.4 per cent binged and vomited. These percentages are higher than those of a sample of Mexico City girls. Nevertheless, we suggest that culture should still be considered a risk factor, and propose that a more precise definition of the term is needed in order to understand its effects upon the presence of disordered eating.

Keywords: eating disorders; culture; Mexico; teenagers

INTRODUCTION

Culture has been proposed as an important risk factor for the eating disorders (ED) (Garfinkel & Garner, 1982). Epidemiological information seems to support this, as comparisons among populations point to higher prevalences in industrialized countries which support the thin beauty ideal (Davis & Yager, 1992; Pate, Pumariega, Hester, & Garner, 1992).

If the hypothesis of a relation between culture and ED is valid, an increase in cases would be expected to accompany cultural change whenever this goes in the direction of adopting cultural elements from the industrialized countries. 'Americans export ED along with McDonald's hamburgers, Disney movies, and images of Michael Jordan', says Joan Brumberg (2000). A recent report from the Fidji islands shows this clearly: after the introduction of television with United States programming, the frequencies of attitudes and behaviours associated with increased risk for eating disorders rose among adolescent girls (Becker, Burwell, Gilman, Herzog, & Hamburg, 2002).

Seemingly contradicting the cultural hypothesis, studies show that ED are present in almost every

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Published online in Wiley InterScience (www.interscience.wiley.com). **DOI**: 10.1002/erv.571

ethnic group in the United States, even if the frequency of specific syndromes varies (Crago, Shisslak, & Estes, 1996; Joiner & Kashubeck, 1996). As for their relationship to socioeconomic status, while some authors found that risk attitudes and behaviours are more prevalent in the economically privileged groups, this relationship does not hold when the full-blown cases are considered (Rogers, Resnick, Mitchell, & Blum, 1997). Also, the relation between ED and socioeconomic status could be different for each syndrome (Gard & Freeman, 1996). Nevertheless, for reasons detailed below, we think that this information does not oppose the idea of an association between culture and ED but points instead to the need to reconsider which are the cultural elements common to different social groups that could be responsible for the shared presence of disorders.

In the context of our current research on the culture–ED relation, we planned to conduct a comparison between teenage girls from Mexico City and girls from a rural or semi-urban area. A previous study with a representative sample of Mexico City students had found teenage girls to be very much weight-concerned, and frequently dieting and employing other methods to lose weight (Unikel et al., 2000). We thought that non-urban girls, being members of cultural groups which are supposed to appreciate full-sized women, should be less affected by the thin ideal of beauty. Also, we supposed that they should be less influenced by other elements proposed as risk factors for the ED, such as emphasis on individuality and personal success (Bhugra, Bhui, & Gupta, 2000) or the superwoman ideal (Steiner-Adair, 1986). Accordingly, we expected to find lower frequencies of disordered eating among these girls.

As a first step towards the planned comparison, we conducted an exploratory study of disordered eating and associated factors among girls from two high schools in semi-urban locations in the state of Michoacan, Mexico. We did not conduct diagnostic interviews, so it was not possible to assess the prevalence of full-blown ED. However, the study's design allowed for the estimation of frequencies of problematic eating attitudes and behaviours.

Much to our surprise, weight concerns and problematic behaviours were as frequent in this population as in the Mexico City sample. We consider this as an indication of the possible significance of disordered eating as a health problem in the Mexican female population. Also, the finding, instead of contradicting the hypothesis that cultural elements play a role in the genesis of ED, prompts a new consideration of a heuristically useful way of understanding culture and cultural change in the context of ED.

OBJECTIVE

Our objective was to evaluate the presence of problematic eating attitudes and behaviours in teenage women from a semi-urban area in Mexico in the context of previous data on these same attitudes and behaviours in girls from Mexico City.

METHODS

Site

The sites comprised two public high schools in the state of Michoacan, Mexico. One is located in a town with 6489 inhabitants, the other in a town with 34 596 (Gobierno del Estado de Michoacán, 2003). According to the classification provided by the Mexican National Institute for Statistics, Geography and Information (INEGI), this means the towns are semi-urban and small urban, respectively (INEGI, 2003). Students attending the schools come from those towns, and also from smaller villages in the area.

Both sites can be reached via a two-lane paved road and have public services such as electricity and drinking water (Table 1). The main streets are paved, but those in the outskirts are not. Houses in the larger town are mostly made of concrete, while the smaller one has a majority of adobe-walled houses with wooden or tile ceilings. In the larger town, some national magazines and newspapers can be found, but there are no bookshops or movie theatres. Most of the participants in our study have TV at home and some of them have home access to the Internet. The population of the area is largely mestiza (mixed Spanish and Mexican Indian ancestors), but the small town is Purepecha Indian. The region produces avocado for the export market

Table 1. Public services and access to media of participants

Service	% with domiciliary service
Water	99.3
Electricity	99.1
Television	97.6
Telephone	65.9
Internet	12.4

and sugar for the national market. In the regional economy, the migration to the United States is also important (Gobierno del Estado de Michoacán, 2003; INEGI, 2003). The location was chosen because of our interest in cultural variations that could exert an influence on the presence of ED. We considered those variations could be present here, this being a place with a high level of migration to the United States (INEGI, 2003) and having the presence of the Purepecha ethnic group.

Population

The study population consisted of young women attending the two schools ($n = 458$). We chose to work with students in grades 10–12, as they are at the age of peak incidence of ED, from 15 to 18 years of age.

As a reference, we used an urban population of high school girls ($n = 1216$), who were not selected specifically for this study. The data were obtained from the Mexico City Student's Survey, considering only those pertaining to women of ages 15–18 (Unikel et al., 2000; Unikel, Saucedo, Villatoro, & Fleiz, 2002).

Instrument

We used a questionnaire consisting of three sections:

(1) Family, social and economic information
(2) The Eating Disorders Inventory (EDI) in its Spanish version (Garner, 1998), as validated in Mexico (Alvarez & Paredes, 2001)
(3) The checklist designed and employed by Unikel et al. (2000). This is composed of 11 questions about eating attitudes and behaviours with four response options ranging from 'never' to 'more than twice a week'. The response is considered to reflect a problematic attitude or behaviour when it is marked as happening twice a week or more. An algorithm designed by the authors allows to distinguish subjects at risk for ED. It combines the answers of the 11 questions, assigning them different weights according to the potential risk involved, and considers those subjects who have a high score on at least three of the following four dimensions—vomiting, restriction, bulimia, weight concern—to be at risk for an ED. In a study conducted by the second author of this paper, the algorithm adequately discriminated between patients at an ED facility and students (Unikel, 2003).

Procedure

School authorities and academic personnel were contacted and informed of the purposes and procedures to be employed in the study and their consent was obtained. We then visited the classrooms and informed the students about the study, explaining the voluntary nature of participation and assuring them of the confidentiality of their responses to the questionnaire. Those who agreed to participate received the questionnaire and guidance on the method of completion. One of the researchers was present during the process to answer subjects' queries. The services of the National Institute of Psychiatry in Mexico City were available in case a student was identified as at risk for an ED. The information obtained was made available to the school authorities, academic personnel and students in the form of a report of the frequencies found, accompanied by suggestions about ED prevention.

Analysis

Data obtained were statistically analysed with the SPSS program for Windows, version 10 (SPSS, Inc., 2000). We performed analyses of frequencies, then contrasted the population in the study with an urban one for reference and searched for correlations between attitudes and behaviours and social and economic data.

The comparison between populations was made on the basis of scores on the risk eating behaviours checklist (Unikel et al., 2000). In addition, we used the algorithm proposed by Unikel (2003) to distinguish subjects at risk for an ED. We did not conduct subsequent interviews in order to confirm a diagnostic of ED, so the concept of 'at riskness' should be interpreted only in the sense of a very high score on the checklist, signalling a very high concern with weight and the very frequent presence of dangerous weight loss practices.

RESULTS

Subjects, Family, Social and Economic Information

The population studied was composed of women students, grades 10–12. Mean age was 16.5 yr, SD = 1.4 yr. Most of the girls (77.1 per cent) were living with their nuclear family, but the father was absent in 14.7 per cent of the cases (Table 2). The predominant religion was Catholic (96.5 per cent). Access to media was almost universal in the

Table 2. Composition of participants' families

Family composition	%
Nuclear (parents and siblings)	77.1
Extended (also grandparents, uncles)	4.4
Other relatives (lives with relatives, but not with parents)	2.4
No father at home	10.3
Father migrated to United States	4.4
Other (only siblings, married)	1.3
Total	100

population, with 97.6 per cent of participants reporting having TV at home and 12.4 per cent reporting having home internet access (Table 1).

Regarding socioeconomic status, using parental occupation as a proxy, more than half the sample had a father employed in a low-level job (see Table 3). About one-third of the sample had a father employed in a higher-level job. Unemployment was low, only 0.2 per cent, as compared with the national 2.8 per cent unemployment in March 2003 (INEGI, 2003). Most of the parents had an educational level of junior high school or lower, ranging from 7 per cent with no school education to 15 per cent of fathers and 9.2 per cent of mothers having a professional educational level (Table 4).

Judging by the difference in educational and employment levels of fathers and mothers, we can assume that the majority of families keep traditional gender roles, with the mother staying at home and the father going out to work. They also have kept their daughters in school up to a higher level than that reached by most of the parents. This brings to mind Mara Selvini-Palazzoli's (1985) observation about the elevated frequency of anorexia nervosa among daughters of families going up in the social pyramid. These daughters, more educated than their parents, were the ones who, according to this author, expressed the conflict of adapting to modern life and its changes in women's roles.

Table 3. Occupation of participants' parents

Occupation	Mother (%)	Father (%)
Housewife	72.3	0
Country labourer, peasant, industrial worker, domestic worker	1.8	33.5
Technician, commerce employee	7.3	28.4
Peddler	2.2	4.5
Owner of store	6.9	15.3
Professional, teacher, manager, farmer	9	15.7
Retired	0.2	2.1
Unemployed	0	0.2
Total	100	100

Table 4. Highest educational level reached by participants' parents

Educational level	Mother (%)	Father (%)
Never attended school	7.3	7.5
Elementary, not completed	29.9	24.5
Elementary, completed	17.8	15.2
Junior high	17.6	19.3
Senior high	12.1	10.7
Technical studies	6.2	7.7
Teacher training college	3.7	3.9
University degree	4.4	6.4
Postgraduate studies	1.1	4.8
Total	100	100

Eating Attitudes and Behaviours

Using the risk eating behaviours checklist (Unikel et al., 2000), we found in the population frequencies of disordered eating, attitudes and behaviours higher than those of MC (Unikel et al., 2002) (Table 5).

We followed the algorithm proposed by Unikel (2003) for the detection of subjects at risk. With this, we found that 1.7 per cent of the sample could be at risk for an ED. This percentage is similar to prevalences of ED reported in industrialized countries

Table 5. Disordered eating among participants, and in Mexico City girls of the same age

Disordered attitude or behaviour	Participants (%)*	Mexico City girls†
Weight concern	27.9	19.6
Bingeing	14.3	6.8
Loss of control over eating	6.5	3.4
Self-provoked vomiting	2.4	1
Fasting to lose weight	4.2	2.9
Dieting to lose weight	10.1	5.1
Exercising to lose weight	17.7	15.5
Using pills to lose weight	3.6	2
Using diuretics to lose weight	7.9	1.2
Using laxatives to lose weight	3.5	0.7
Using enemas to lose weight	1.3	0.4

*Percentages of those reporting the attitude or behaviour twice a week or more frequently.
†*Source*: Unikel et al., 2002.

(American Psychiatric Association, 1994; Van Hoeken, Lucas, & Hoek, 1998). However, as we did not conduct subsequent diagnostic interviews, we cannot affirm that these subjects at risk are the same as cases of ED.

Tests for correlation between family composition, occupational and educational level of parents and subject's religion and the presence of disordered eating did not show statistically significant results.

DISCUSSION

The hypothesis of a relation between culture and ED had as its main basis the higher frequencies of the problem in urban settings of the industrialized countries. This difference in frequencies has not been proven in recent studies of urban areas in the developing countries, as, for example, Mexico (Mancilla et al., 1998; Torres, Pérez, Perches, Pierdant, & Ramírez, 2003). The absence of patients coming from rural areas in Mexico led us to believe that ED were absent outside of the big cities. Although our study does not demonstrate the presence of diagnosable ED in the non-urban area investigated, it shows an important presence there of the desire to be thinner and some dangerous behaviours associated with it. The question is: do the data obtained contradict the hypothesis of culture as an important element in the genesis of ED? We suggest that the answer is no.

We propose that considering, as some authors have done (Hoek, Van Harten, Van Hoeken, & Susser, 1998), that the presence of ED in people from a developing country disproves the cultural hypothesis comes from an imprecise use of the term 'culture'. Culture is a problematic concept even in the domain of the social sciences. Empirical researchers into the relation between culture and ED often use the word to mean a human group sharing values, beliefs and habits. There is a problem, first, in forgetting that culture is not a perfect unity, that people can share *some* values, beliefs and habits, while not sharing others. In this sense, saying that 'western culture' is part of the causal system of the ED is an oversimplification which avoids the necessary question of which cultural aspects are responsible for the disorder. Second, when attempting to make a 'transcultural' comparison, the boundaries between cultures are drawn rather simplistically, following the lines of ethnic group (another problematic term) or nationality (Crago et al., 1996; Gunewardene, Huon, & Zheng, 2001; Hoek, Van Harten, Van Hoeken, & Susser, 1998; Mumford, Whitehouse, & Platts, 1991).

We consider that the presence of high frequencies of disordered eating attitudes and behaviours in a population is a function of its sharing some cultural elements that are determinant in this kind of disorder. The ED/culture relationship could be better understood if we stopped using the concept of culture in its vaguest sense in favour of a more precise definition. The use of analytical tools such as the concepts of ideology, gender construction and gender demonstration (Courtenay, 2000) would allow a more useful vision of the relation between cultural values and individual practices. The use of these concepts has been widespread in the ED field, mainly by the feminist authors (Bordo, 1993; Chernin, 1985; MacSween, 1993; Malson, 1998). What is still rare is the empirical contrasting of these analyses (one remarkable example is Steiner-Adair, 1986).

Yet another line of research arising from this work is that of the ED—and related attitudes and behaviours—as a public health problem in Mexico. Maybe we should turn and look to the small towns, even villages, and ask ourselves how globalization is affecting the well-being of teenage girls. The meanings of media messages are not the same for all receptors. In social groups where the possibilities of development are scarce for women, it has been noticed that girls turn to beauty as their main tool for success (Williams, 2002). We suggest that disordered eating attitudes and behaviours could become—if they are not already now—a serious health problem among adolescents whose gender identity is being constructed in the losing pole of the social inequality balance.

REFERENCES

Alvarez, D., & Paredes, F. (2001). *Validación del Eating Disorders Inventory (EDI) en población mexicana*. Thesis for Degree in Psychology. Mexico City: Universidad Nacional Autónoma de México/ENEP Iztacala.

American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington: American Psychiatric Association.

Becker, A. E., Burwell, R. A., Gilman, S. E., Herzog, D. E., & Hamburg, P. (2002). Eating behaviours and attitudes following prolonged exposure to television among ethnic Fidjian adolescent girls. *British Journal of Psychiatry, 180*, 509–514.

Bhugra, D., Bhui, K., & Gupta, K. R. (2000). Bulimic disorders and sociocentric values in north India. *Soc. Psichiatry Psychiatr. Epidemiol., 35*, 86–93.

Bordo, S. (1993). *Unbearable weight: Feminism, western culture, and the body*. Berkeley, California: University of California Press.

Brumberg, J. J. (2000). *Fasting girls: The history of anorexia nervosa*. New York: Vintage Books.

Chernin, K. (1985). *The hungry self: Women, eating and identity*. New York: Harper and Row.

Courtenay, W. H. (2000). Constructions of masculinity and their influence on men's well-being: A theory of gender and health. *Social Science and Medicine, 50*, 1385–1401.

Crago, M., Shisslak, C., & Estes, L. (1996). Eating disturbances among American minority groups: A review. *International Journal of Eating Disorders, 19*, 239–248.

Davis, C., & Yager, J. (1992). Transcultural aspects of eating disorders: A critical literature review. *Culture, Medicine and Psychiatry, 16*, 377–394.

Gard, M. C., & Freeman, C. P. (1996). The dismantling of a myth: A review of eating disorders and socio-economic status. *International Journal of Eating Disorders, 20*, 1–12.

Garfinkel, P. E., & Garner, D. M. (1982). *Anorexia nervosa: A multidimensional perspective*. New York: Bruner/Mazel.

Garner, D. M. (1998). *EDI2. Inventario de trastornos de la conducta alimentaria*. Madrid: TEA.

Gobierno del Estado de Michoacán. *Municipios*. Retrieved May 30, 2003, from http://www.michoacan.gob.mx/municipios.

Gunewardene, A., Huon, G. F., & Zheng, R. (2001). Exposure to westernisation and dieting: A cross-cultural study. *International Journal of Eating Disorders, 29*, 289–293.

Hoek, H. W., Van Harten, P. N., Van Hoeken, D., & Susser, E. (1998). Lack of relation between culture and anorexia nervosa: Results of an incidence study on Curacao. *New England Journal of Medicine, 338*, 1231–1232.

INEGI. *Datos demográficos*. Retrieved May 30, 2003, from http://www.inegi.gob.mx.

Joiner, G., & Kashubeck, S. (1996). Acculturation, body image, self-esteem, and eating disorders symptomatology in adolescent Mexican American women. *Psychology of Women Quarterly, 20*, 419–435.

MacSween, M. (1993). *Anorexic bodies: A feminist and sociological perspective on anorexia nervosa*. London: Routledge.

Malson, H. (1998). *The thin woman: Feminism, post-structuralism and the social psychology of anorexia nervosa*. London: Routledge.

Mancilla, J. M., Alvarez, G., López, X., Mercado, L., Manríquez, E., & Román, M. (1998). Trastornos alimentarios y factores asociados en universitarias mexicanas. *Psicología y Ciencia Social, 2*, 34–58.

Mumford, D. B., Whitehouse, A. M., & Platts, M. (1991). Sociocultural correlates of eating disorders among Asian schoolgirls in Bradford. *British Journal of Psychiatry, 158*, 222–228.

Pate, J. E., Pumariega, A. J., Hester, C., & Garner, D. M. (1992). Cross-cultural patterns in eating disorders: A review. *Journal of the American Academy of Child and Adolescent Psychiatry, 31*, 802–809.

Rogers, L., Resnick, M. D., Mitchell, J. E., & Blum, R. W. (1997). The relationship between socio-economic status and eating-disordered behaviours in a community sample of adolescent girls. *International Journal of Eating Disorders, 22*, 15–23.

Selvini-Palazzoli, M. (1985). *Self-starvation: From individual to family therapy in the treatment of anorexia nervosa*. New York: Jason Aronson.

SPSS, Inc. (2000). *Paquete estadístico para las ciencias socials (SPSS) para Windows, versión 10.0.7 en español*. Software. Chicago, Illinois: SPSS, Inc.

Steiner-Adair, C. (1986). The body politics: Normal female adolescent development and the development of eating disorders. *Journal of the American Academy of Psychoanalysis, 14*, 95–114.

Torres, M., Pérez, A., Perches, S., Pierdant, R., & Ramírez, A. (2003). Anorexia nervosa y bulimia en estudiantes universitarias (UASLP) 2002. Poster at the Xth Congress of Research in Public Health, Instituto Nacional de Salud Pública, Cuernavaca, México, 2003.

Unikel, C. (2003). *Factores de riesgo en los trastornos de la conducta alimentaria*. Thesis for Doctoral degree in Psychology. Mexico City: Facultad de Psicología, UNAM.

Unikel, C., Villatoro, J., Medina-Mora, M. E., Fleiz, C., Alcántar, E., & Hernández, S. (2000). Conductas alimentarias de riesgo en adolescentes mexicanos. Datos en población estudiantil del Distrito Federal. *Revista de Investigación Clínica, 52*, 140–147.

Unikel, C., Saucedo, T., Villatoro, J., & Fleiz, C. (2002). Conductas alimentarias de riesgo y distribución del índice de masa corporal en estudiantes de 13 a 18 años. *Salud Mental, 25*, 49–57.

Van Hoeken, D., Lucas, A. R., & Hoek, H. W. (1998). Epidemiology. In H. W. Hoek, J. L. Treasure, & M. A. Katzman (Eds.), *Neurobiology in the treatment of eating disorders* (pp. 97–126). Chichester: John Wiley and Sons.

Williams, L. S. (2002). Trying on gender, gender regimes, and the process of becoming women. *Gender and Society, 16*, 29–52.

