

Motivation for Eating and the Nutrition Transition in the Philippines

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INTRODUCTION

To a large extent, the growing epidemic of global obesity can be explained by rapid changes in dietary patterns that are taking place in both developed and developing societies (Rigby et al., 2004). Specifically, traditional diets that were rich in grains, fiber, fruits and vegetables, are giving way to modern diets that are high in fat, sugar, and sodium (Popkin, 1994). The United States, as one example, progressed through the nutrition transition over a period of approximately 100 years and has now fully transitioned from a traditional to modern diet (Popkin, 2001a). Currently, the U.S. diet derives approximately 33% of calories from fat (Popkin et al., 2001) and the U.S. has achieved one of the highest levels of obesity in the world (23.5%) (Flegal et al., 2002). The prevalence of American obesity continues to climb at alarming rates (a 55% increase between 1980-1994) (Mokdad et al., 2003).

Other countries are going through similar nutrition transitions, but at accelerated rates and often with more harmful results (Popkin, 2002). The global epidemic of overnutrition and obesity poses one of the major public health challenges of the coming century (James, 2004). It has been argued that the nutrition transition is an expected consequence of the demographic and economic changes that accompany development (Popkin, 2001a). But it is possible that some aspects of the nutrition transition are not inevitable in that they occur in response to malleable social environments that are the product of evolving human cultures (Hawks, 2001). It therefore becomes worthwhile to consider the relationship between various cultures, the social environments that they produce, and the differential impacts that are exerted on individual eating habits.

In the past, the mechanics of the nutrition transition have largely been expressed in terms of the types of food people eat, or how much they eat. For example, the relative proportion of fat intake, the number of fruit and vegetable servings, or measures of overall caloric intake have been used to evaluate nutritional status at the population level (Hawks and Gast, 1998; Popkin, 2001b). At the same time, it may

be helpful to broaden the inquiry to include *why* people eat (Gast and Hawks, 1998). By exploring individual motivations for eating, the larger relationships between individual consumption, various social environments, and human cultures might be revealed. The broader ecological perspective obtained from this line of investigation may be useful in refining our understanding of the nutrition transition, identifying innovative health promotion initiatives, and developing public health policies that can address negative aspects of the nutrition transition in a meaningful way (Nestle and Jacobson, 2000; Popkin, 2002; Rigby et al., 2004).

This exploratory study begins to investigate the motivation for eating among women from two distinct populations in the Philippines: rural working women and urban college females. Given the presence of very different social and cultural pressures in relation to food, it was hypothesized that individual motivations for eating would differ significantly between these two populations. Specifically, we looked for differences in personal motivation for eating in relation to environmental, physical, social, and emotional cues for eating, and we attempted to evaluate the relationship between individual motivations for eating and the cultural pressures associated with them.

METHODS

Population and Sample: The population for this study was urban college women and rural working women in the Philippines. Analysis was based on a convenience sample of 177 urban and rural women ages 18 years and older either attending an urban university or working in a rural area of the Philippines. The university and worksites used in this study were selected on the basis of convenience. The sample of college women was drawn from a general education class on the campus of a university in Manila. A general education class was chosen to achieve the maximum representation, and all female students in the selected course were surveyed in order to minimize bias due to self-selection. The sample of working women was taken from worksites in

Bacolod, a rural province in the Philippines. All females working in each of the selected worksites were also surveyed.

Instrument: To identify the different motivations for initiating food consumption among the two samples of women we used the Motivation for Eating Scale (MFES). The MFES is a valid and reliable 43-item self-report questionnaire with four different subscales each measuring a different motivation for initiating food consumption (Hawks et al., 2004). The four subscales include environmental eating, emotional eating, physical eating, and social eating with reported alpha coefficients ranging from .75 to .95. Retesting after two weeks ($N = 88$) has yielded correlation coefficients that range between .55 and .77 for the subscales. When completing the MFES respondents are asked to identify their level of agreement with the different situations or conditions that most often exist when they choose to eat. The scale ranges from almost never (score = 1) to almost always (score = 5). The higher the score for the subscale the more often it is used as a motivation for initiating food consumption. The MFES was originally developed in English. For the two samples used in this study it was translated to Tagalog by a native speaker, back translated, and pretested prior to administration. Paper and pencil surveys were used to collect the data from 68 college women in Manila and 109 working females in Bacolod. Additional questions were added in relation to various demographic and descriptive variables including age, physical activity, height, and weight. Self-reported heights and weights were used to calculate body mass index (BMI).

RESULTS

Demographics: The college sample was significantly younger (mean=19.3, $SD=1.905$) and more likely to be underweight (38.6% Vs 15.7%), while the community sample was older (mean=34.2, $SD=12.605$) and more likely to be overweight or obese (12.7% Vs 2.1%). There were no significant differences between the samples in the level of physical activity. Approximately 70% of both samples reported that they exercised less than three times per week (see Table 1).

Initiating Food Consumption: There were no significant differences in the mean scores between the college and community samples on both the physical (22.94 and 23.40 respectively, $p=.556$) and social (10.44 and 10.48 respectively, $p=.915$) eating subscales. However, the levels of emotional and

Table 1: Distribution of respondents according to location and select demographic variables.

Variable	College (n=68)	Comm- unity (n=109)	p-value
Age			
<20	72.1%	10.1%	
20-29	27.9%	37.6%	
30+	0.0%	52.3%	.000
Exercise			
<3 times/week	67.9%	71.2%	
3+ times/week	32.1%	28.8%	.708
Body Mass Index			
Underweight	38.6%	15.7%	
Normal weight	58.3%	71.6%	
Overweight	0.0%	9.8%	
Obese	2.1%	2.9%	.003

environmental eating were significantly different. The level of emotional eating was especially high among the college females compared with the working females (27.4 and 21.84 respectively, $p < .001$). The urban college sample also scored significantly higher on the environmental subscale compared with the rural community sample (23.81 and 21.33 respectively, $p < .001$). For both groups, the highest per item scores were attained on the physical eating subscale, and the lowest per item scores were recorded on the emotional eating subscale (see Table 2).

DISCUSSION

In the Asian region, undernutrition is generally declining while overnutrition is increasing, in some cases quite rapidly (Ke-You and Da-Wei, 2001; Tee, 2002). The result for many Asian countries is the challenge of dealing with a double burden of nutritional diseases (Beaglehole, 2004). Growing rates of overweight and obesity in large countries like China and India hold serious health implications for the region if current trends are not arrested (Ke-You and Da-Wei, 2001; Tee, 2002). As a typical example in the region, the Philippines is following predicted trends associated with demographic changes, economic development and the nutrition transition. Diet composition in metro Manila is increasingly high in animal products, fat and sugar, and low in fruits, vegetables and fiber (Florentino et al., 1992). Not surprisingly, there has been a substantial increase in overweight, obesity, and the risk of diet-related non-communicable diseases in the Philippines, especially among women in urban areas (Adair, 2004).

While it is generally understood that overweight

Table 2: Mean subscale scores, and mean level of agreement per item, for MFES subscales.

<i>Subscale</i>	<i>College sample</i>		<i>Community sample</i>		<i>p-value</i>
	<i>Mean</i>	<i>Mean item</i>	<i>Mean</i>	<i>Mean item</i>	
Social	10.44	2.09	10.48	2.10	.915
Physical	22.94	3.28	23.40	3.34	.556
Environmental	23.81	2.16	21.33	1.94	<.001
Emotional	27.94	1.40	21.84	1.09	<.001

and obesity are a function of consuming excess calories relative to energy expenditure, the reasons why some individuals and not others have higher levels of energy intake, given a particular environment, are not clear. Eating in the absence of hunger, in response to various other motivations, may play a significant role (Birch et al., 2003). Non-hunger based motivations for eating might include environmental cues (the abundant presence of appetizing food in one's proximity), social cues (eating out with family and friends), or emotional cues (loneliness, boredom, anxiety, frustration, depression, etc.). Eating in the absence of hunger (non-physical eating) has been associated with weight gain and dysfunctional eating patterns (Birch et al., 2003). Obesity prevention and healthy weight management programs that are designed to help individuals match energy intake with energy expenditure may only be effective to the extent that motivations for eating in the absence of hunger are accurately identified and managed (Hawks et al., 2003; Hawks et al., 2004).

In this study it was found that social and physical (hunger-based) eating were similar for rural working women and urban college females in the Philippines. Given a rich Filipino tradition of primarily taking meals with family and friends, it is not surprising that social eating levels would be similar for the two groups in this study. Encouragingly, it was found that both groups had their highest per item scores in relation to physical eating, a positive indication that hunger based motivations may be the most significant reason for initiating food consumption among women in the Philippines.

However, college females were significantly more likely than their urban counterparts to eat for emotional and environmental reasons. Emotional eating is broadly defined as food consumption that occurs in response to various emotional states or cues such as boredom, loneliness, depression, or anxiety (Timmerman and Acton, 2001). Ongoing research supports the hypothesis that there is a relationship between this type of eating in western cultures and

such negative outcomes as ineffective weight control (Blair et al., 1990), binge eating (Waters et al., 2001), bulimic eating attitudes (Waller and Osman, 1998), and higher caloric intake (Braet and Van Strien, 1997). In non-western cultures such as the Philippines emotional eating may not currently represent the same degree of eating pathology as in western cultures. However there appears to be an acculturative process that links emotional eating with more severe eating pathologies under the growing influence of western culture (Waller and Matoba, 1999). In this study, the higher stress levels associated with college life may have contributed to increased emotional eating due to boredom, sadness, tiredness, anxiety, loneliness, and task-avoidance.

Higher levels of environmental eating in the absence of hunger have also been found to be associated with a variety of negative nutritional outcomes such as overeating and weight gain (van Strien et al., 1995; Bellisle, 2003), especially among children (Luch et al., 2000). Urban college females in the Philippines are more likely than their rural working counterparts to experience increased levels of environmental exposures to food, especially fast food. One study recorded high levels of eating at fast food malls among female university students in the Philippines which may be an indication of growing levels of environmental eating consistent with the findings of this study (Patricia and Azanza, 2001).

A further complicating factor for females in this study is the growing tendency to desire thinness, another western cultural influence. Traditionally, Filipino women have valued fatness over thinness, but as they are exposed to western ideals they begin to prefer thinness—along with restrictive dieting as a means for achieving it (Farrales and Chapman, 1999). Lower body weights for the college women in this study is probably both a function of lower age and a stronger desire for thinness accompanied by restrictive dieting practices. High levels of dieting, in response to western ideals, have been reported in other Asian countries, especially Taiwan and Japan (Adair, 2004). Not unexpectedly, those countries where body dissatisfaction and dieting are the highest also experience the highest levels of eating disorders (Tsai, 2000). Given the close ties between the U.S. and the Philippines, it is not surprising that Filipino college females might be exposed to and influenced by western ideals and unhealthy eating and dieting patterns. A large body of data from the U.S. suggests a significant link between body dissatisfaction, desire for thinness, dietary restraint, and eating disorders (Stice, 2001). While data remains scarce, there is

growing evidence that eating disordered attitudes and behaviors are becoming a significant problem in the Philippines as well (Lorenzo et al., 2002).

CONCLUSION

Current models of the nutrition transition predict certain nutritional changes in response to demographic changes and economic development. Those nutritional changes are certainly taking place in the Philippines. However, the role of cultural and social environments in shaping individual motivations for eating is less understood. This study found a significant difference in emotional and environmental eating between rural working women and urban college females in the Philippines. It is probable that higher rates of emotional and environmental eating among female university students is indicative of harmful patterns that may ultimately contribute to binge eating, unsuccessful weight management, and the development of eating disorders in the future. This is especially true given a western-influenced environment that favors thinness and excessive dieting practices, which have already been adopted at very high levels in other Asian countries.

One element of a meaningful public health strategy for mitigating the harmful aspects of the nutrition transition will necessarily involve a better understanding of individual motivations for eating and the sociocultural influences that determine them (Hawks and Gast, 1998). While the current study was limited by the use of convenience samples, the results nevertheless suggest different motivations for eating that exist within groups of females from within the same Asian country. The impact of western influences on the desire for thinness, dieting behaviors, and individual motivations for eating is a rich area for future research. Findings may lead to more robust ecological models of the nutrition transition, and will suggest more comprehensive solutions.

In the short-term, there is an urgent need to further evaluate various eating styles, disordered eating patterns, and nutritional outcomes among various groups in the Philippines and other Asian countries. As informed by this line of research, long-term strategies for providing healthy eating motivations and environments must become a public health priority. The current "Global Strategy on Diet, Physical Activity, and Health" proposed by the World Health Organization offers an encouraging step in this direction (Waxman, 2004), although local strategies that reflect specific social and cultural environments will be equally important.

ACKNOWLEDGEMENTS

This research was supported by grants from the College of Health and Human Performance, and the David M. Kennedy Center for International Studies, both at Brigham Young University, Provo, Utah, USA.

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KEYWORDS Culture. Obesity. Nutrition. Health. Ecology

ABSTRACT Individual motivations that prompt various eating styles can play a central role in the development of unhealthy eating habits and obesity within the context of the nutrition transition. This study was conducted to compare motivational eating styles among two convenience samples of women in the Philippines. The first sample consisted of urban women attending a university in Manila ($n = 68$), while the second included working women in the rural province of Bacolod ($n = 109$). The Motivation for Eating Scale (MFES), a 43-item self-report questionnaire, was used to assess four different motivations for eating: environmental, emotional, physical (hunger-based), and social. It was found that the college sample was younger ($p < .001$) and more likely to be underweight ($p = .003$), while the community sample was older ($p < .001$) and more likely to be overweight or obese ($p = .003$). No differences in physical and social eating were found between the two samples, but the college females had significantly higher levels of environmental and emotional eating ($p < .001$). Other research has shown that environmental and emotional eating may be associated with binge eating, weight gain, and the development of eating disorders. The potentially negative eating styles found in higher levels among the college female population in Manila need to be studied more fully and addressed through prevention and education programs before they lead to more serious and widespread eating problems such as overnutrition, weight gain and eating disorders.

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