

Review article

“How Culturally Sensitive Are Urban Weight Loss Programs?”

Marcia Magnus^{1*}

¹*Department of Dietetics and Nutrition, Florida International University, Florida, USA*

**Corresponding author: Dr. Marcia Magnus, PhD, Associate Professor of Dietetics and Nutrition, Florida International University, AHC 5, Room 318, Miami FL 33199, USA*

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Abstract

The purpose of this research project was to develop a Checklist which could be used to quantify the cultural sensitivity of weight loss program among multiethnic Blacks and Hispanics. The Checklist was then applied to 60 weight loss program in Miami and Fort Lauderdale to test the hypotheses that 1) Cross-Cultural Nutrition Sensitivity Score will be higher: a) in programs whose facilitators who had an undergraduate degree in nutrition compared to those facilitators who did not have training in Nutrition, and b) among at-cost meetings versus free meetings.

The Checklist was developed from a nutrition education assignment among undergraduate nutrition students and revised over 15 semesters. The Checklist was validated among nutrition professionals, and then among multiethnic Blacks and Hispanics who were enrolled in a university weight loss program. They were asked to designate each cultural feature as: Very Crucial (3 stars), Crucial (2 stars), or Not That Crucial (1 star).

The Checklist was administered to a convenience sample of 60 weight loss programs in Miami and Fort Lauderdale to quantify the level of cultural sensitivity. The most frequent (15.3%) cultural feature was sharing of testimonials of ethnic nutrition success stories. The least frequent cultural feature was the use of traditional games which were adapted to nutrition (1.1%). The mean Cultural Sensitivity score among 60 weight loss programs was 6.67 ± 2.98 or 26.7%. Weight Watchers programs had significantly higher mean Cultural Sensitivity scores than other programs. BS-trained facilitators had a mean Sensitivity score which was almost three times higher than non-BS trained facilitators. The mean Sensitivity score of at-cost programs was twice as high as free programs.

Keywords: Cross-Cultural Nutrition Sensitivity and Competence; Weight Loss Multicultural Participants

Introduction

It is estimated that by 2050, 40% of the American population will be non-White [1]. Review of the literature on ethnic food consumption among multiple ethnicities indicates that ethnic food consumption is a main predictor of food intake among non-White Americans with Arab Americans have the highest frequency of ethnic food intake (Table 1). Although dietary acculturation—the process by which immigrants and their descendants adopt the dietary practices of the host country—has been documented among immigrants [2], the need for cultur-

ally sensitive nutrition programming for non-White Americans may increase. However, 85% of registered dietitians are White females, 4% Asian, 3% Hispanic, and 3% Black/African American [3].

Health disparities refer to the difference in which disadvantaged social groups such as the poor, racial/ethnic minorities, women and other groups who have persistently experienced social disadvantage or discrimination systematically experience worse health or greater health risks than more advantaged social groups. Obesity rates vary by race. In 2012, Whites had

ETHNIC GROUP	EXTENT OF ETHNIC FOOD INTAKE			
659 Mexican-American adults [11]	35% of energy intake from tortillas and tacos			
1449 nationally representative Mexican-American women and 1404 men[12]	Average number of times cornbread and corn tortillas were consumed per month			
		Born in Mexico	US-born, Spanish-speaking	US-born, English-speaking
	Women	33.7	12.4	6.8
	Men	34.0	14.7	6.8
301 Mexican-American children, Salinas CA [13]	Daily servings of traditional foods			
	Food secure Indiv		Very low food security Indiv	
	Tortillas:	1.0, (0.4-2.5)	1.0, (0.4-2.5)	
	Beans:	3.0, (3.0-7.0)	3.0, (3.0-7.0)	
520 Arab Americans, Dearborn MI, [14]	% Daily Consumption of Arabic foods			
	206 Men		314 Women	
	Those with diabetes:	92±14%	94±13%	
	297 had NGT:	82±24%	19±11%	
	118 had IGT:	96±8%	94±13%	
763 nationally representative sample of adult African immigrants [15]	Mean Dietary Change (SD): Low change=7–10; Moderate change= 5–6; High change=1–4			
	Nigerian--	4.3 (3.1)		
	Ethiopian--	5.2 (2.8)		
	Other Sub-Saharan countries--	5.5 (3.0)		
548 Western Alaskan Natives living in 7 remote communities [16]	Overall, traditional foods accounted for 22% of energy intake.			
	Fish, fish roe:	52.3% of traditional food energy intake		
	Seal oil:	17.0%		
	Game meat:	14.2%		
88 Alaskan Natives from 3 Western Alaska Yukon-Kuskokwim region [17]	Traditional food consumption in servings/person/day:			
	Mean- 4.3;			
	Median- 3.2, 95% confidence interval: (3.6,5.0)			
91 Jamaican Americans, South Florida [18]	13.6% of protein intake derived from 4 ethnic foods			
	21.5% of sodium intake derived from 5 ethnic foods			
	12.1% of energy intake derived from 3 ethnic foods			
Post-menopausal women, nationwide [19]	Mean genistein (a soy-based isoflavone) intake was: 270.9μ among African American women, 310.3μ Hispanic Americans, 833.6μ Whites, 6398.3μ Chinese Americans, 11,165.7μ Japanese Americans			

Table 1. Extent of Ethnic Food Intake among Non-White Americans.

an obesity prevalence of 34.6%, compared to 47.8% among Blacks and 42.5% among Hispanics [4].

High blood pressure – a major risk factor for coronary heart disease, stroke, kidney disease and heart failure – is nearly 40% higher among Black Americans than in Whites. Black Americans experience a higher rate of strokes, have more severe strokes; and they are twice as likely to die from strokes as White Americans. African Americans are 2.1 times as likely as Whites to have diabetes, and are twice more likely than Whites to experience complications of diabetes such as amputations of lower extremities. American Indians/Alaska Natives are 2.3 times as likely as non-Hispanic Whites of similar age to have diabetes. Hispanics are 1.7 times as likely to have diabetes as Whites, with Mexican Americans – the largest Hispanic subgroup – more than twice as likely. Black Americans are more likely to develop and die from cancer than any other racial or ethnic group. Their death rate is 20% higher than the death rate for Whites. Black American men are two and a half times more likely to die from prostate cancer, and are more likely than any other racial group to suffer colorectal cancer. Although diabetes prevalence for Whites is 8%, it is 18% for Native Americans, 15% for Black Americans, and 14% for Latinos [5].

Diets which are high in fruits and vegetables are associated with a lower risk for several chronic diseases. A nationally representative sample showed that the prevalence of eating fruits and vegetables five or more times per day was significantly higher among Asian/Pacific Islander men (25.1%), compared to men of multiple/other races (27.1%), and non-Hispanic White men (19.5%). Compared with non-Hispanic White women (28.8%), the prevalence of eating fruits and vegetables five or more times per day was significantly higher among Asian/Pacific Islander women (35.9%) [6]. Another nationally representative sample showed that Whites consumed significantly more servings of fruits and vegetables than either Black Americans or Mexican Americans. Whites averaged 4.90 servings of fruits and vegetables (SD=3.53) per day, compared with 4.57 (SD=3.40) daily servings for Mexican Americans and 3.99 (SD=3.38) for Black Americans [7].

Review of the literature indicates that there are no published tools which quantify the level of cultural sensitivity of cross-cultural nutrition programs. A Cross-Cultural Nutrition Checklist was identified as an appropriate tool to assess the level of cultural sensitivity of nutrition programs. First, a Checklist is easy and simple to use. Second, it guides professionals to include program components which are important to the target population. Third, the Checklist can be used to help nutrition program planners move along the Continuum of Cultural Competence from Cultural Blindness (we are all the same) towards Advanced Cultural Competence where the learning needs of the target population are met, and cultural norms (fatalism) not merely tolerated but honored [8]. Fourth,

checklists are routinely used in care delivery among the health professions and this may facilitate adoption.

The purpose of this study was to: 1) develop an instrument to quantify and improve the cultural sensitivity of nutrition programs, and 2) to test the cultural sensitivity of nutrition programs in an urban area--Miami/Fort Lauderdale.

The hypotheses under investigation were:

1. Some cultural features in the Cross-Cultural Nutrition Checklist will be perceived as more crucial to program participants than others.

2. The Cross-Cultural Nutrition Sensitivity Score will be higher: a) in programs whose facilitators who had an undergraduate degree in nutrition compared to those facilitators who did not have training in Nutrition, and b) among at-cost meetings versus free meetings.

Methods

Development of the Checklist

The Cross-Cultural Nutrition Checklist was developed in four phases. In Phase 1—the preliminary features of the Checklist were derived from the rubric of a nutrition education assignment in which undergraduate nutrition students planned a 6-session nutrition proposal for 15 culturally different populations. At the end of each presentation, students' peers voted on whether to fund the proposal this year or the following year. Every semester for 15 semesters, features of winning student proposals were incorporated into the Checklist.

In Phase 2--the Validation Study--a panel of ten experts--three nutrition professors, five registered dietitians, and two county Extension agents--assessed the face and content validity of the Checklist. The inclusion criterion for each member of the panel was a minimum of ten years of experience in implementation and evaluation of nutrition education programs with culturally different clients. The Checklist was designed to be administered to weight loss participants who would rate each cultural feature as: Very Crucial (3 stars), Crucial (2 stars), or Not That Crucial (1 star) to them personally. The Checklist was pretested with eight multi-ethnic Blacks (African American, English-speaking Caribbean American, and Haitian American) and nine multi-ethnic Hispanic Americans (Cuban American, Mexican American, Central/South American). Participants were faculty, staff and students who had enrolled in a university-based 16-week weight loss program. Since 67% of Miami-Dade county residents speak a language other than English at home, the reading level of the Checklist was assessed using the SMOG Readability Formula [9]. The reading level was reduced from thirteenth grade to fifth grade. To improve comprehension among Spanish-speaking and Haitian Creole-speaking participants, the Checklist was

translated and back-translated into Spanish and Haitian Creole. In Phase 3, the revised Checklist was administered to 150 students, faculty, and staff members who had enrolled in a university weight loss program over the course of two semesters. Weight loss participants were again asked to state how crucial--Very Crucial (3 stars), Crucial (2 stars), or Not That Crucial (1 star)--each cultural feature was to them. On average, program participants completed the Checklist in two minutes. Based on the mean ratings of cultural features by 150 weight loss participants, each Checklist feature was grouped into three categories and assigned points: Very Crucial--3, Crucial--2, and Not That Crucial--1. The maximum cultural sensitivity score of a nutrition program among all fifteen features was 25.

In Phase 4, the Checklist was administered to a convenience sample of 60 weight loss programs in Miami/Fort Lauderdale to assess the level of cultural sensitivity of the programs. Weight loss programs were selected because overweight and obesity are more prevalent among non-Whites than Whites and they represent a substantial health burden among non-Whites.

An Internet search was undertaken to identify programs throughout South Florida by using descriptors such as: nutrition classes, weight loss programs, hospital-based weight loss programs, diabetes support groups, sports nutrition classes, and bariatric support groups.

Through participant observation, each question in the Checklist was applied to the session. If the answer to each Checklist question was positive, the program scored the number associated with each question.

Data Analysis

Descriptive statistics (frequencies) were used to quantify the crucial classification of each feature, and how mean sensitivity score varied by feature. Analytical tests (T-tests and Chi square tests) were used to quantify how frequencies varied by age, race (Black/Hispanic), status (faculty/staff/student); and how mean sensitivity score varied by type of weight loss program, BS training, and cost of program. SPSS version 23 was used to conduct the data analysis.

Results

The cultural features of the Checklist which were rated as Very Crucial were: use of culturally sensitive food models, sharing the results of ethnic nutrition research, describing ethnic superfoods, and testimonials of ethnic nutrition success stories (Table 2). The least Crucial features were: use of ethnic music, proverbs, and use of your local heroes as role models. Among weight loss participants, there were no significant differences among crucial ratings of Checklist features by age, race (Black/Hispanic), or status (faculty/staff/student).

How would you rate these features in a weight loss program for you? 3=Very Crucial 2=Crucial 1=Not That Crucial	Participants' Ratings of how Crucial the Cultural Features of Nutrition Programs were (N=150) Mean Rating±SD (Very Crucial=3, Not That Crucial=0)
Describe ways to enjoy ethnic foods and reduce their harmful effects of some ethnic comfort foods	2.67±.57
Share success stories with food and health	2.63±.55
Share ethnic websites	2.48±.61
Use ethnic food models	2.39±.57
Share nutrition data about your ethnic group	2.39±.80
Use your language	2.32±.60
Compare the higher health risk of your ethnic group to Whites	2.22±.67
Adapt your ethnic games to include a food focus (Food Mah Jong)	1.90±.88
Use ethnic symbols	1.86±.68
Describe your ethnic healing systems	1.79±.78
Include your ethnic music	1.72±.89
Include your ethnic proverbs	1.71±.76
Use your local heroes as role models	1.69±.61

Table 2. Classification of Crucial Ratings of Cultural Features of the Checklist.

Figure 1 presents The Checklist for Developing and Assessing Culturally Sensitivity of Nutrition Programs. The Checklist is designed to be used by health and nutrition program planners

to assess the current level of sensitivity in nutrition education programs. It can also be used as a planning tool in the development of culturally sensitive programs.

The Checklist for Developing and Assessing Culturally Sensitivity of Nutrition Programs

To assess the cultural sensitivity of your nutrition program, answer the following questions and circle the number which is associated with each feature.

In your program:

- 3--Are culturally sensitive food models used?
- 3--Are the results of ethnic nutrition research shared?
- 3--Are ethnic superfoods and nutritional strengths of ethnic cuisines described? (Jamaican Jerk seasoning, Indian tandoori, and Chinese five-spice are heart-healthy spices)?
- 3--Are testimonials of ethnic nutrition success stories shared?

- 2--Are inquiries made about clients' history of using traditional healing systems?
- 2--Is the health status of the ethnic group compared to the White population?
- 2--Are ethnic nutrition websites shared?
- 2--Do posters promote the use of interpreting services?

- 1--Is ethnic music used?
- 1--Are ethnic proverbs used?
- 1--Are local heroes used?
- 1--Are cultural symbols (flag colors, Yin/Yang, Native American dream catcher) used?
- 1--Are traditional games adapted to nutrition and used (nutrition dominos)?

To determine your program's cultural sensitivity score, add all the numbers which you have circled: _____

Maximum possible score: 25

Your program's cultural sensitivity score: $\frac{\text{___}}{25} \times 100 = \text{___} \%$

Figure 1.

The most frequent cultural feature in 60 weight loss programs was sharing of testimonials of ethnic nutrition success stories and this had a frequency of 15.3% (Table 3).

The least frequent cultural feature was the use of traditional games which were adapted to nutrition.

Cultural Feature	Percent
Are traditional games adapted to nutrition and used (nutrition dominos)?	1.1%
*Are cultural symbols (flag colors, Yin/Yang, Native American dream catcher) used?	2.4%
Is ethnic music used?	2.4%
Are ethnic proverbs used?	5.9%
Is the health status of the ethnic group compared to the White population?	7.1%
Are ethnic superfoods and nutritional strengths of ethnic cuisines described? (Jamaican Jerk seasoning, Indian tandoori, and Chinese five-spice are heart-healthy spices)?	8.2%
Do posters promote the use of interpreting services?	8.2%
Are local heroes used?	8.2%
Are ethnic nutrition websites shared?	9.4%
Are culturally sensitive food models used?	10.6%
Are the results of ethnic nutrition research shared?	10.6%
Are inquiries made about clients' history of using traditional healing systems?	10.6%
Are testimonials of ethnic nutrition success stories shared?	15.3%

Table 3. Frequency of Cultural Features in South Florida Weight Loss Programs (N=60)*.

The mean Cultural Sensitivity score for 60 weight loss programs was 6.67±2.98 or 26.7% (Table 4).

There were significant differences in Cultural Sensitivity score by type of program, training and cost of program.

TYPE OF NUTRITION PROGRAM	%	MEAN CROSS-CULTURAL NUTRITION SENSITIVITY SCORE (Max=25)	p-value
Weight Loss programs (at-cost)	33.3	5.28±2.76*	0.000
Overeaters' Anonymous	21.4	2.43±0.88	
Wellness center/private RD	19.0	3.32±0.67	
Health food stores	11.9	6.61±1.30	
Fitness centers (at-cost)	2.4	24.00	
Hospital based programs	2.0	2.80±1.52	
At-cost programs	54.8	8.83±3.47*	0.010
Free programs	45.2	4.22±1.52	
BS Nutrition trained	31.0	11.38±3.22*	0.001
Non-BS trained	69.0	4.68±2.22	
Total		6.67±2.98 (26.7%)	

Table 4. Culturally Sensitivity of South Florida's Nutrition Programs (N=60).

The weight loss programs which had significantly higher mean Cultural Sensitivity scores were: Weight Watchers programs, at-cost programs, and programs which were led by BS-trained facilitators. BS-trained facilitators had a mean Sensitivity score which was almost three times higher than non-BS trained facilitators. The mean Sensitivity score of at-cost programs was twice as high as free programs.

Discussion

There are several limitations to this study. First, the Checklist was developed based on the perceptions of multi-ethnic Blacks and Hispanics. The Checklist did not assess which cultural features were important to other non-Whites—namely Asian Americans, Native Americans, and Arab Americans. Second, the Checklist was developed based on the perceptions of multi-ethnic Blacks and Hispanics who were enrolled in a weight loss program. By virtue of their enrollment in the program, they may have different perceptions about cultural features than overweight/obese individuals who are not enrolled

in weight loss programs. Third, data were not collected on the level of acculturation among multi-ethnic Blacks and Hispanic weight loss participants. Nevertheless, this is the first published data on the cultural features which are important to weight loss participants. Future research may wish to assess the relationship between acculturation and participants' perceptions of the importance of cultural features of the Checklist.

One of the salient cultural issues in obesity prevention among non-Whites is weight perception—the discrepancy between an individual's actual weight status and personal perception of weight status. Weight perception typically occurs as underestimation of weight status. When respondents review the body mass index (BMI) silhouettes, obese persons generally perceive themselves as overweight, overweight persons describe themselves as normal weight, and normal weight see themselves as underweight. The prevalence of weight misperception among overweight individuals varies by race: Non-Hispanic Blacks 55.4%, Mexican Americans 49.1%, and Non-Hispanic Whites 33.9% [10]. Planners of weight loss programs may need to assess the prevalence of weight perception before they can design culturally relevant interventions.

Conclusions

These data suggest that the Checklist provides an effective tool which health and nutrition program planners can use to plan nutrition programs, to assess the level of cultural sensitivity of existing nutrition programs, and to increase the level of cultural sensitivity in the program. In this way, program planners may invest their time incorporating the cultural features which are important to participants into the program, thereby maximizing the program's cultural sensitivity and effectiveness.

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