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"Las penas con pan duelen menos": The role of food and culture in Latinas with disordered eating behaviors

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Abstract

This study elucidated the experiences of eighteen Latina adults (mean age = 38.5 years) from "*Promoviendo una Alimentación Saludable*" Project who received nutritional intervention as part of the clinical trial. Half of the participants were first generation immigrants from Mexico (50%), followed by U.S. born with 16.7%. Remaining nationalities represented were Bolivia, Colombia, Guatemala, Honduras, Peru, and Venezuela with 33.3% combined. The average duration of living in the U.S. was 11.1 years. The mean body mass index (BMI) at baseline was 36.59 kg/m^2 (SD=7.72). Based on the DSM-IV, 28% (n=5) participants were diagnosed with binge-eating disorder, 33% (n=6) with bulimia nervosa purging type and 39% (n=7) with eating disorder not otherwise specified. Participants received up to three nutritional sessions; a bilingual dietitian conducted 97.8% of sessions in Spanish. In total, fifty nutritional sessions were included in the qualitative analysis. A three step qualitative analysis was conducted. First, a bilingual research team documented each topic discussed by patients and all interventions conducted by the dietitian. Second, all topics were classified into specific categories and the frequency was documented. Third, a consensus with the dietitian was performed to validate the categories identified by the research team. Six categories (describing eating patterns, emotional distress, Latino culture values, family conflicts associated with disturbed eating behaviors, lack of knowledge of healthy eating, and treatment progress) emerged from patients across all nutritional sessions. Considering the background of immigration and trauma (60%, n=15) in this sample; the appropriate steps of nutritional intervention appear to be: 1) elucidating the connection between food and emotional

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distress, 2) providing psychoeducation of healthy eating patterns using the plate method, and 3) developing a meal plan.

Keywords

eating disorders; culture; food; nutritional; Latinas; eating patterns

"*Las penas con pan duelen menos*" (the sorrows with bread hurt less) is a popular Latino saying that reflects the centrality of food in Latino culture. Family ties, cultural identity and comfort are some of the roles that food plays in Latino culture (Lindberg, Stevens, & Halperin, 2013; Weller & Turkon, 2015). Latinos/Hispanics are the fastest growing population in the United States (U.S.). It is estimated by the U.S. Census Bureau that by 2030, one in every three children will be Latino (US Census, 2012). Latinos, compared to European Americans living in the U.S., are disproportionately affected by low socioeconomic status, food insecurity, overweight, and obesity (Coleman-Jensen, September, 2012; Macartney, Bishaw, & Fontenot, 2013; Ogden, Carroll, Kit, & Flegal, 2014; Skinner & Skelton, 2014). The eating patterns of Latino are influenced by cultural norms and the experience of immigration. Although there is considerable variation by culture of origin within Latinos, a traditional Latino diet typically includes a number of staples: tortillas, beans, rice, and eggs (Schlomann, Hesler, Fister, & Taft, 2012). Carbohydrate intake has declined over the past few decades in Central and South American countries; however, carbohydrates – primarily rice – still constitute a significant portion of daily intake (Bermudez, Falcon, & Tucker, 2000; Bermudez & Tucker, 2003). In these same countries, the consumption of refined, processed and calorically dense foods has increased in recent years given industrialization and urbanization (Bermudez & Tucker, 2003; Popkin, 2001). Despite these overall trends, many Latinos, mothers in particular, value traditional food and feel strongly about cooking traditional foods for their children in the home (Lindsay, Sussner, Greaney, & Peterson, 2011).

Latino eating patterns change significantly as a result of immigration and these changes increase the risk for obesity as much as four fold (Gardner, Winkelby, & Viteri 1995; Kaplan, Huguet, Newsom, & McFarland, 2004). Immigration brings about changes in eating patterns through a number of mechanisms including: economic stressors, shifts in eating schedules, and convenience. After immigrating to the U.S., it is not uncommon for Latinos to find meats and produce more expensive making processed foods an attractive and affordable alternative given their lower cost (Schlomann et al., 2012). Many Latinos often work long hours or multiple jobs (Statistics USBoL, 2000); consequently, rather than eating three meals and an occasional snack as is customary, Latinos in the U.S. regularly only eat one or two meals per day and seek convenient choices at mealtimes. Agne, Daubert, Munoz, Scarinci, and Cherrington (2012) conducted focus groups with overweight and obese Latinas in the U.S. One participant expressed, "With work, you buy something real quick because they only give you short break." Indeed, Schlomann and colleagues (Schlomann at al., 2012) reported similar findings. Participants described fast food as a "temptation" due to its affordability and convenience. There is also evidence that children instigate post-immigration dietary changes. For example, Guarnaccia, Vivar, Bellows, and Alcaraz (2012)

found that Latino children come to prefer American-style food such as hot dogs, soft and fruit drinks, chips, and desserts and, as a result, pressure their parents to make these less-traditional options available in the home (McArthur, Anguiano, & Gross, 2004). Across qualitative investigations examining changes in eating patterns as a result of immigration, nearly all participants "negatively described changes in diet since immigration" (Schlomann et al., 2012). These changes have a significant impact as duration of residence in the U.S. has been found to be positively associated with obesity in Latinos (Oza-Frank & Cunningham, 2010).

Latinos are not only an at-risk population for overweight and obesity, but for disordered eating as well (Franko, Jenkins, & Rodgers, 2012; Marques et al., 2011; Reyes-Rodriguez et al., 2010). Traditionally, eating disorders have been considered to be confined to middle-upper class white females; however, a survey of adult Hispanics living in the U.S. found an estimated lifetime prevalence of 0.08% for anorexia nervosa, 1.61% for bulimia nervosa, 1.92% for binge-eating disorder, and 5.61% for any binge eating (Alegria et al., 2007). These estimates are consistent with those exhibited by predominately European American samples living in the U.S. (Hudson, Hiripi, Pope, & Kessler, 2007); but other studies pose that the prevalence of disordered eating behaviors in Latina women is higher than in non-Latina white women (Granillo, Jones-Rodriguez, & Carvajal, 2005; Robinson et al., 1996).

Nutritional interventions are a common component of prevention and treatment programs for overweight, obesity, and disordered eating but, more often than not, past studies have relied on predominantly European American samples (Knowler et al., 2009; Stice & Shaw, 2004; Stice, Shaw, & Marti, 2006). Nutritional interventions for individuals with disordered eating, in particular, can pose a number of challenges given the complexity of disordered eating. For example, nutritional interventions are aimed to reteach the recognition of hunger and satiety cues, confront specific food fears, facilitate healthy eating goals, and restore and/or maintain healthy body weight; further, nutritional interventions should be rooted in good science, and be ready to address the anxiety, distress, resistance, and noncompliance often exhibited by clients with disordered eating (Hart, Russell, & Abraham, 2011; O'Connor, Touyz, & Beumont 1988). Some recommendations have been made for adapting sound nutritional interventions for Latino populations. Nutritional interventions for this population should, beyond the aforementioned, be culturally sensitive including bilingual and bicultural facilitators and materials, incorporate traditional Latino values – such as *confianza* (trust), *simpatía* (harmony), and *respeto* (respect) – and traditional foods, and include a client's family and support network (Farrell et al., 2009; Mier, Ory, & Medina, 2010). These and other adaptations were made as part of a cultural adaptation of eating disorder treatment for Latinas in the U.S. However, culturally sensitive nutritional interventions, interventions considerate of cultural norms and values, food preferences, and the impact of immigration, remain relatively unexplored from an empirical standpoint.

Accordingly, the aim of the current study was to examine the content of nutritional sessions that participants of PAS Project- "*Promoviendo una Alimentación Saludable*" (Promoting Healthy Eating Habits) (Reyes-Rodriguez, Bulik, Hamer, & Baucom, 2013) received as part of a small pilot clinical trial for eating disorders. Close attention was paid to the challenges faced by Latinas in overcoming their eating disorders, dietary patterns and factors associated

with eating patterns, and cultural sensitivity with consideration for cultural norms and values, food preferences, immigration, and eating patterns across generations.

Methods

Participants

Eighteen Latina adults from *PAS* Project who completed the dietitian sessions comprised the sample included in the current study. The mean age of participants at baseline was 38.5 (SD= 8.4) and ranged from 18-50 years. Twenty-eight percent (n=3) of participants completed at least 9th grade, 39% (n=7) high school, and 33% (n=6) reported college studies. Most of the participants were married or living with a partner (78%) and 22% were single. Half of the participants were first generation immigrants from Mexico (n=9; 50.0%), followed by U.S. born with 16.7% (n=3). Remaining nationalities were represented by Bolivia, Colombia, Guatemala, Honduras, Peru, and Venezuela with 33.3% (n=6) combined. In terms of their length of living in the U.S., participants ranged from 14 months to 25 years with an average of 11.1 years (SD=5.9). The acculturation levels of participants were predominantly Latino-oriented bicultural (n=12, 66.7%), followed by Latino-like in both languages and cultural characteristics (n=3, 16.7%), equally bicultural and bilingual (n=2, 11.1%) and Anglo-oriented bicultural (n=1, 5.5%) measured by Acculturation Rating Scale for Mexican American -II (Cuellar, Arnold & Maldonado, 1995). This measure is designed to assess multifaceted integrative acculturation which includes; language use and preference, ethnic identity and classification, cultural heritage and behaviors, and ethnic interaction. Although the measure was originally developed for Mexican American, has been used with other Hispanic sub-groups. The mean body mass index (BMI) of participants at baseline was 36.59 kg/m^2 (SD=7.72). The eating disorder profile from participants was 28% (n=5) with binge eating disorder, 33% (n=6) with bulimia nervosa purging type, and 39% (n=7) with eating disorder not otherwise specified (EDNOS) according to the Diagnostic and Statistical Manual of Mental Disorders version IV (DSM-IV). No changes were observed in the eating disorder profile when using the current eating disorder diagnosis criteria from DSM-5 (APA, 2013). Other comorbidity conditions reported were moderate depression (mean Beck Depression Inventory=24.8) (Beck, Ward, Mendelson, Mock, Erbaugh, 1961) and history of trauma (60%, n=15). The full description of *PAS* Project methods is discussed elsewhere (Reyes-Rodriguez, et al., 2013).

Intervention

Each participant received up to three nutritional sessions as an adjunct to cognitive behavioral therapy (CBT) for eating disorders. Instead of a pre-set manualized intervention, we opted for a flexible, personalized approach in order to respond to the patient's specific needs. Nutritional sessions were conducted by a community registered dietitian nutritionist. Consistent with PAS Project and recommendations in the literature (Cabral & Smith, 2011), in order to develop a culturally sensitive treatment model, we actively matched the ethnicity of the dietitian with that of participants. A female bilingual Latina registered dietitian was recruited. Participants were offered the option of having their sessions in English, Spanish, or Spanglish. All sessions were audio-recorded with participant authorization and lasted approximately 60 to 90 minutes each. Frequency of nutritional sessions ranged anywhere

from a couple weeks to months, depending on a combination of external factors, patient eating behavior needs, and their readiness for a nutritional session based on their psychotherapy process. Nutritional sessions were aimed to provide psychoeducation around diet and healthy eating, and support participants in meal planning.

The first sessions were complemented with a comprehensive assessment in which a history of health conditions such as gastrointestinal symptoms, constipation, indigestion, and bloating were collected. The comprehensive assessment also included a brief physical nutritional exam in order to explore specific symptoms such as acanthosis nigricans, deficiencies on nails, skin problems, and pedal edema. This comprehensive assessment further served the purpose of facilitating personalism.

Data Collection

The study was approved by the Institutional Review Board at The University of North Carolina at Chapel Hill. The data were collected between March 2013 and September 2015.

Analysis Approach and Coding

The approach used for the qualitative analysis of the nutritional sessions was grounded theory (Strauss & Cobin, 1990). This approach generates a theory from data collected in a systematic fashion (Glaser & Strauss, 1967) and promotes the discovery of rich descriptions of patterns of behavior obtained from unique experiences with the phenomenon under discussion (Glaser, 1996). One advantage of grounded theory is that it allows the interconnection of theoretical systematic coding procedures and conceptualization in order to develop hypotheses that become integrated into a theory (Mertens, 2005).

For the coding process, each session was listened to by either a bilingual research assistant or by the PI for an initial qualitative analysis process. All topics discussed by participants and all interventions conducted by the dietitian were catalogued in a table. Topics were classified as issues brought up by participants or interventions conducted by the dietitian. In a second analysis process, all topics were classified by specific categories (i.e., history of dieting behavior, portion sizes) and the frequency of each topic discussed across participants was documented. In a third analysis process, a consensus with the dietitian was performed in order to validate the categories identified by the research team.

Results and Discussion

A total of 50 out of 54 sessions were included in the qualitative analysis of the current study. Two participants completed only one or two sessions during treatment and one participant had completed only two sessions at the time the qualitative analysis was performed. Most of the participants (88.9%; n=16) completed three nutritional sessions and 49 of 50 sessions were conducted in Spanish.

Topics discussed by participants

Fourteen categories were identified in the first sessions, fifteen categories in the second sessions, and twelve categories in the third sessions (See Table 1). Six categories (describing eating patterns, emotional distress, Latino cultural values, family conflicts associated with

disturbed eating behaviors, lack of knowledge of healthy eating, and treatment progress) were discussed by participants across all three nutritional sessions. However, the frequency with which these categories were discussed by participants varied across the three sessions. For example in the first sessions, most of the participants (61.1%; n=11) discussed emotional distress (i.e., anxiety, depression, stress) and associated it with their disturbed eating behaviors. However, in the second sessions only 11.11% and in the third session only 5.55% discussed their emotional distress. For more than half of the participants, it was important to share their emotional states with the dietitian, especially during the initial visit.

Other prevalent topics across participants during the first sessions were describing their eating patterns and discussing their history of an eating disorder with 44.4% (n=8) each. As part of the CBT for eating disorders treatment, weekly monitoring sheets were assigned to each participant as part of the treatment process and were used in the nutritional sessions. Monitoring sheets were used in nutritional sessions in order to provide specific guidelines and feedback about their eating patterns during the treatment. Other topics that were present across all nutritional sessions, but not necessarily the most prevalent, were Latino culture/values and family conflicts associated with disturbed eating behaviors. In terms of culture/values, two participants mentioned the pressure of having to eat all the food on their plate because it is a family/culture value for Latinos. Other participants specifically mentioned that having any interpersonal conflicts with family members triggered their binge eating behaviors. This category was separated from the emotional distress category because participants explicitly mentioned how family conflicts were a direct trigger to their disturbed eating behaviors, especially binge-eating episodes.

As documented in the first sessions, the validation of their emotional distress in the nutritional treatment was very important, even though they already had a psychotherapeutic relationship in which their emotions were being validated. The stigma associated with obesity and the misperception that being overweight is due to lack of effort or laziness could be potential explanations for the desire to be understood and validated by the dietitian. Active listening and a nonjudgmental stance by the dietitian combined with a counselor role, which provided support were instrumental for trust development, and were consistent with Latino cultural values such as *confianza*, *simpatía*, and *respeto*. For example, the dietitian paid attention to all of the symptoms expressed by participants and provided guidelines about how to address the issues or made referrals to other professionals when appropriate. Ignoring topics brought into session by the participants that are out of the dietitian's area of expertise could be interpreted by Latinos as the professional not caring about them or their concerns. Also, the use of an individualized and flexible intervention approach was consistent with personalism, a Latino culture value that promotes close relationships through mutual respect, caring, and well-meaning.

In the second sessions, 66.6% (n=12) discussed their progress on changing eating patterns and 44.4% (n=8) talked about their setbacks and struggles with changing their eating habits. Treatment progress was increasingly reported by participants across sessions reaching its climax in the third sessions (77.8%; n=14). The second sessions were primarily devoted to discussing which recommendations made by the dietitian in the first sessions worked or did not work. During the third sessions, in addition to reporting their progress, participants

(44.4%; n=8) sought education about healthy eating patterns including balanced meals, food groups, their corresponding portions and clarifying information about artificial sweeteners and cooking fat options. Considering that only three dietitian sessions were provided by the project, participants used the last session to clarify their questions about healthy food choices, appropriate portions, and alternative food options.

Topics discussed by the dietitian

Fourteen categories of topics brought up by the dietitian were identified in the first sessions, twenty-one categories in the second sessions, and sixteen categories in the third sessions. Table 2 presents all categories identified in the three nutritional sessions and the frequency with which the dietitian discussed each with participants. In the first sessions, psychoeducation about healthy eating (77.8%), emotional eating (55.6%), and dieting (55.6%) were the most common topics discussed by the dietitian. Presenting a visual of the plate method in order to illustrate to participants the concepts of nutritionally balanced meals, and appropriate portion sizes was the most frequent intervention made by the dietitian. In order to provide culturally appropriate meal planning guidance, participants received education on how to plan healthy meals using their traditional foods. Also, because many of the participants presented with cycles of dieting and ranged from overweight to obese, psychoeducation about why diets do not work for sustainable weight loss was necessary. In terms of emotional eating, the dietitian's intervention was devoted to helping participants understand the connection between their emotional states and their disturbed eating behaviors.

During the second sessions, psychoeducation on healthy eating (55.6%), personalized meal planning (55.6%), and psychoeducation about portion sizes (44.4%) were the most prevalent interventions utilized by the dietitian across participants. In the third sessions, psychoeducation about healthy eating (66.7%) followed by meal planning (50%), healthy food choices education (33.3%), and self-monitoring sheet discussion (33.3%) were the most prevalent topics discussed by the dietitian. For the second and third sessions, personalized meal planning was the most common intervention in comparison with sessions one. In part, this decision was made to prevent participants from misconstruing the meal plan as a prescribed dietary intervention rather than focusing on developing a healthy eating pattern. Psychoeducation about appropriate portion sizes was also a relevant topic for this group of Latinas because of the pressure to “clean” one's plate in many Latino households.

At the meal planning level, it was important to incorporate traditional foods while also addressing the role of carbohydrates and the appropriate portions of food staples such as tortillas and rice. Affordable food options (i.e., frozen vegetable and fruits, eating seasonal produce) was an essential aid to modifying their eating patterns in a realistic way while also debunking the idea that fresh food is the only healthy choice. Some challenges in the meal planning process were their lack of knowledge of other nutrient rich foods (i.e., nuts, seeds, fish), variety of vegetables (i.e., green leafy, cruciferous), and resistance to switching to whole grain. Integrating all family members as part of the meal planning (e.g., developing meal plan that works for whole family, encouraging family meals, addressing some eating dynamics with children) facilitated the adherence to new healthy eating patterns.

The most relevant nutritional counseling interventions were psychoeducation about diets, recognition and integration of Latino culture, family values, traditional foods and the clarification of certain myths. Most of the participants were overweight or obese (94%) with a history of several weight loss and diet attempts. Changing the diet mentality was one of the first interventions needed to end the dieting cycle and to begin eating more intuitively. Specifically, the intervention focused on switching participants' thoughts about food (e.g., no “bad” or “good” foods) from rigid to flexible and promoted more intuitiveness around the body's needs. The clarification of certain myths was also part of the psychoeducation intervention. Among the most common myths in this sample were: 1) no meals beyond a certain time of evening regardless of when the last meal was; 2) snacking frequently (i.e., every two hours) to maintain high metabolism; 3) having to eat specific foods to be healthy or lose weight; and 4) having all or nothing thoughts regarding their recovery process.

Another area of intervention was mindful eating. For some participants the feeling of hunger was uncomfortable and some were afraid to feel hunger. Considering the emotional distress experienced by these participants, the tendency to avoid any physical pain or discomfort was expected. Food was their emotional comfort and a way of staying connected to their countries and culture. Teaching them how to be self-aware, and not fearful, of their body's hunger and satiety cues was necessary.

According to our results, promoting healthy eating patterns in Latinas with eating disorders should be considered as a three-level intervention: 1) elucidating the connection between food and emotional distress, 2) providing psychoeducation on healthy eating patterns using the plate method, and 3) developing a meal plan (See Figure 1). In the current study, most who were first generation immigrants (93.3%) experienced the onset of their eating disorders after their immigration to the U.S. Emotional distress associated with immigration such as family separation, migratory status, economic stress and history of trauma (i.e., domestic violence, sexual abuse, abduction) were some of the factors contributing to depression and anxiety in most of the participants. The exposure to high levels of stress, as is experienced during immigration, has been shown to be associated with weight gain and unhealthy eating behaviors through the impact on stress on hormonal and metabolic changes (Adam & Epel, 2007; Torres & Nowson, 2007). Thus, it is imperative to acknowledge these mechanisms even though they are outside the scope of the current study.

Another specific factor that should be considered is the potential contributing role of emotional and physiological changes due to the starvation process on disordered eating behaviors. Although this specific topic was not discussed in the nutritional sessions, it was material of discussion in the psychotherapy sessions. Some participants reported experiencing starvation during the border crossing such that, often, for months they did not know when and what they would eat, as well as experiencing food insecurity due to economic stressors. The physiological consequences of starvation have been documented (Sidiropoulos, 2007) with even short starvation periods potentially leading to changes in cognitive processes (Benau, Orloff, Janke, Serpell, & Timko, 2014) and obsessive rituals (Keys, Brozek, Henschel, Mickelsen, & Taylor, 1950). Some of the participants had associated their past food insecurity experiences with emotional distress, even when this food insecurity was no longer a risk. The cycle of food deprivation and overeating

establishes the positive association between food insecurity and overweight or obesity (Alaimo, Olson, & Frongillo, 2001; Dietz, 1995; Polivy, 1996; Townsend, Peerson, Love, Achterberg, & Murphy, 2001).

As mentioned previously, the nutritional sessions were part of a small pilot randomized clinical trial so only three nutritional sessions were allocated. Having only three nutritional sessions limited the scope of the nutritional intervention and therefore any potential of a long term recovery process. Nutritional intervention is an essential component to the treatment of eating disorders that should be provided during all stages of treatment (Ozier & Henry, 2011). Also, the small sample size and the lack of representation of participants from all of the Latin American and Hispanic countries limit the generalizability of results. Notwithstanding these limitations, this study provides some guidelines for nutritional interventions with primarily less acculturated Latinas who are dealing with eating disorders.

Conclusion

Our results highlight the importance of establishing an emotional connection with Latinas in order to facilitate the next steps of intervention such as psychoeducation about healthy eating patterns and meal planning. Developing a meal plan that works for the whole family is important in order to avoid burdening the patient with extra meal planning efforts. Addressing the eating dynamic with children is important to avoid the tendency of modeling distorted eating behaviors for their children. To this point, we observed two extreme tendencies of forcing their children to finish all of the food on their plates even when their children were not hungry or allowing them to only eat the “good foods” while promoting dieting behaviors in their children. Finally, the integration of traditional foods and teaching appropriate portion sizes was necessary to maintain connection to their cultural backgrounds and countries while in a faraway land.

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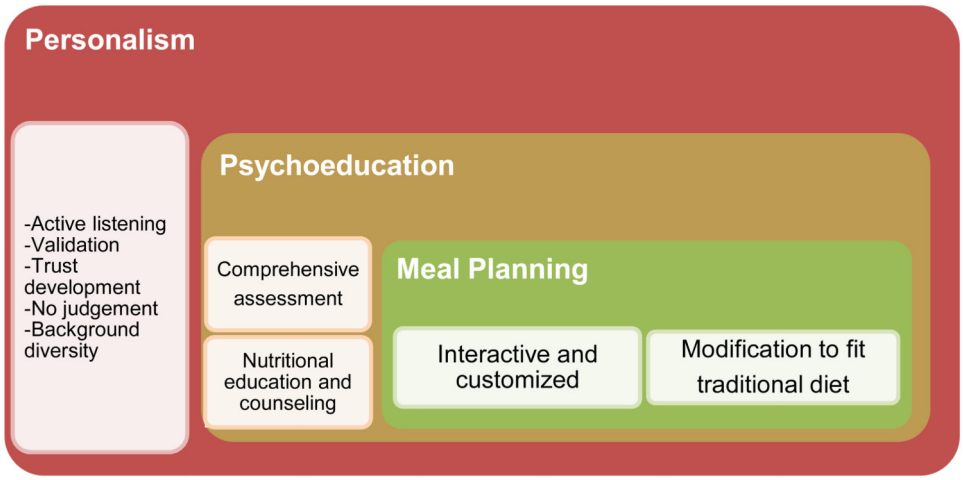

Figure 1. Nutritional Intervention Model for Latinas with eating disorders

Table 1
Topics discussed by Latinas with disordered eating behaviors across nutritional sessions

Session	Categories	Frequency
1		
	Emotional distress (anxiety, stress, depression)	11
	Describing eating pattern	8
	Eating disorder history	8
	Dieting behavior history	7
	Lack of knowledge of healthy eating	7
	Struggle with overweight/obesity, weight gain	7
	Medical/health conditions	7
	Treatment progress	6
	Family conflicts associated with disturbed eating pattern	5
	Other factors associated with weight gain/unhealthy eating patterns (events, circumstances)	4
	Latino culture/values (i.e., have to eat all food on the plate)	3
	Desire to lose weight	3
	Immigration (i.e., stress related to immigration, more sedentary in the U.S.)	2
	Medication side effects and weight gain	1
2		
	Treatment Progress	12
	Setbacks, struggles with eating disorders (i.e., job schedule)	8
	Describing eating pattern	6
	Lack of knowledge of healthy eating	4
	Internal conflicts about ability to overcome ED (personal issues in the past)	4
	Medical/health conditions	3
	Latino culture/values	3
	Sleep problems	2
	Emotional distress (anxiety, stress, depression)	2
	Family conflicts associated with disturbed eating pattern	1
	Medication side effects and weight gain	1
	Other factors associated with weight gain/unhealthy eating patterns (events, circumstances)	1
	Social stigma and obesity issue	1
	Desire to lose weight	1
	Family support/improve family relationships	1
3		
	Treatment Progress	14
	Lack of knowledge of healthy eating	8
	Setbacks, struggles with eating disorders (i.e., job schedule)	5
	Medical/health conditions	4
	Describing eating pattern	3
	Weight loss	3

Session	Categories	Frequency
	Family support/improve family relationships	3
	Family conflicts associated with disturbed eating pattern	2
	Sleep problems	1
	Emotional distress (anxiety, stress, depression)	1
	Latin culture/values	1
	Internal conflicts about ability to overcome ED (personal issue in the past)	1

Table 2

Topics discussed by dietitian across nutritional sessions with Latinas with disordered eating behaviors

Session	Categories	Frequency
1		
	Psychoeducation of healthy eating	14
	Emotional eating	10
	Diets	10
	Medical history	9
	Monitoring sheet	7
	Psychoeducation about portion sizes	7
	History of eating disorder and diets	6
	Psychoeducation of weight loss	6
	Personalized meal plan	5
	Body function psychoeducation (i.e., metabolism, protein, vitamins)	5
	Nutritional Intervention goal	4
	Psychoeducation of health condition	4
	Mindful eating	4
	Treatment progress	3
	Food and family issues	3
	Binge eating exploration	3
	Participants' eating environment (where and with whom)	2
	Sleep hygiene	2
	Immigration and culture background issues	2
	Healthy food choices	1
2		
	Psychoeducation on healthy eating	10
	Personalized meal plan	10
	Portion sizes	8
	Healthy food options/meals	6
	Monitoring sheet	6
	Mindful eating	5
	Body function psychoeducation (i.e., metabolism, protein, vitamins)	5
	History of eating disorders and current status	4
	Diets	4
	Treatment Progress	3
	Emotional Eating	3
	Psychoeducation of weight loss	3
	Diet products	2
	Food and health issues	2
	Healthy food options/substitutes	1

Session	Categories	Frequency
3	Sleep hygiene	1
	Food and family issues	1
	Treatment goal	1
	Binge eating exploration	1
	Psychoeducation of health condition	1
	Stress coping strategies	1
	Psychoeducation on healthy eating	12
	Personalized meal Plan	9
	Healthy food choices	6
	Monitoring sheet	6
	Psychoeducation of health condition	4
	Treatment progress	4
	Portion sizes	3
	Body function psychoeducation	3
	Emotional eating	3
	Diets	2
	Sleep hygiene	2
	Binge eating exploration	1
	Eating and family issue	1
	Medical history	1
	Mindful eating	1
	Psychoeducation about weight loss	1