

Impact of a Nutrition Education Intervention in Nutritional Indicators among Underweight Schoolchildren from Low-Income Households in Mexico City

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Learning Outcome: Implementing nutrition education intervention based on the Theory of Planned Behavior benefits underweight and low-income schoolchildren.

Little is known about the use of the Theory of Planned Behavior (TPB) to modify nutritional indicators in schoolchildren. Our aim was to measure the impact of a 4 month Nutrition Education Intervention (NEI) based on the TPB in nutritional indicators among underweight schoolchildren from low-income households in Mexico City. In 2010, a quasi-experimental school-based NEI consisting in sixteen weekly sessions was implemented in 49 underweight schoolchildren and their mothers. Topics, grounded on Mexican healthy eating guidelines, included: food hygiene; food variety; Mexican healthy diet; food groups consumption; healthy lunchbox; and physical activity. The nutritional indicators measured with standardized procedures were: consumption of cereals, fruits, vegetables, legumes and meats (measured with food frequency questionnaire administered to the mother), weight for age and sex adequation %, and triceps and subscapular skinfolds for age and sex adequation %. Frequencies and proportions and media and S.D. were calculated for qualitative and quantitative variables, respectively. Mc Nemar and Wilcoxon tests and t-test for two related samples were utilized to analyze data. The mean age of the study sample was of 6.5 (± 2.2); 51% were female. After the NEI, there was significant change in the consumption of vegetables ($p < 0.05$), meats ($p < 0.05$) and legumes ($p < 0.05$). The difference between the means of weight/age adequation % ($t = -6.177$, $p = 0.000$) was statistically significant. The proportion of schoolchildren with malnutrition (Weight for age and sex adequation % below 90 percentile) reduced significantly after the intervention ($p < 0.05$). NEI based on the TPB benefits underweight and low-income schoolchildren.

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Nutritional and Psychosocial Correlates of Overweight and Obese Community Dwelling Older Adults

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Learning Outcome: Participants will recognize the importance of psycho-social and physiological assessments in addition to nutritional assessment in the evaluation of overweight and obesity in older adults for weight management in community-dwelling elderly.

Background: Obesity rates continue to increase in the United States, particularly for minority adults and low socioeconomic groups. Older adults are failing to meet national dietary guidelines for nutrient and food intake. Adult healthy weight or body mass index, BMI (kg/m^2), has been found to associate with more healthful dietary intake as assessed by the Mini Nutritional Assessment (MNA) and a number of psychosocial variables.

Methods: This study investigated the influence of psychosocial and nutritional predictors on overweight and obese community-dwelling older adults (analyzed sample, $N=97$), controlling for age, sex, and self-rated physical health. We predicted that nutritional (MNA total score and Mid-upper Arm Circumference (MAC) and psycho-social variables, including geriatric depressive symptoms (GDS) and Life Regard (LR) would significantly contribute to BMI ($\text{kg}/\text{m}^2 \geq 25$, over and above the contribution of control variables. Analyzing data collected from a convenience sample of physically independent, community-dwelling older adults with BMI ($\text{kg}/\text{m}^2 \geq 25$, we conducted a regression analysis for the criterion BMI.

Results: The overall model explained 37% of the variance in the outcome, BMI. Controlling for age, sex, and self-rated physical health, the significant predictors included MAC ($\beta = .55$, $p \leq .001$) and LR ($\beta = -.17$, $p \leq .05$, one-tailed test).

Conclusions: In evaluation of community-dwelling older adults, higher mid-arm circumferences and life regard were significantly associated with lower BMI, whereas age, sex, physical health, education, and marital status were not.

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Be Well-Lake County: Living Well with Diabetes through Education and Lifestyle Management

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Learning Outcome: Participants will learn about a multi-level approach to diabetes self-management.

Diabetes is the 7th leading cause of death and a growing epidemic that disproportionately affects minority populations. To address the growing problem of diabetes in the medically underserved, culturally diverse residents of Lake County Illinois, the Lake County Health Department and Community Health Center (LCHD/CHC), in collaboration with the NorthShore University HealthSystem (NSUHS), created the Be Well-Lake County Diabetes Program (BWLC). The primary objective of BWLC is to provide patient-centered, culturally sensitive and evidence based education to promote patient self management goals and health literacy at the individual, family, and community levels. A series of six Diabetes Self-Management Education group sessions are facilitated by a Registered Dietitian. These sessions were adapted from the American Association of Diabetes Educators Curriculum in order to meet the cultural and literacy needs of the LCHD/CHC population (56% of the 524 patients diagnosed with diabetes are Hispanic and 34% are African-American). The interactive sessions are bilingual and open to family members. BWLC partners with the park district and NSUHS to provide incentives such as gym memberships and fitness classes led by a personal trainer. Additional program components include a community garden and a partnership with the Northern Illinois Food Bank. The impact of BWLC will be evaluated by monitoring changes from baseline in clinical indices and achievement of self-management goals. Preliminary analysis ($n=146$) showed reductions in HgbA1c (-0.66 ± 1.71 , $p < 0.0001$) and lower odds of LDL >100 (OR=0.63, $p < 0.01$) after 6 months. Subsequent analysis will compare patients participating in lifestyle interventions with a non-intervention group.

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Portion Controlled Frozen Meals at Lunch Are Associated with High Compliance and Perceived Benefits during a Weight Management Program

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Learning Outcome: Increase client compliance to portion control as a proven weight loss strategy by recommending incorporation of frozen single serve meals into the lunch eating occasion.

Dietary Guidelines for Americans 2010 cite strong evidence for the effectiveness of portion control for weight management. This intervention assessed compliance and perceived benefits associated with portion controlled frozen meals mainly consumed at lunch as a primary strategy in a minimally supervised weight loss program. Participants ($n=32$, BMI 31.2 ± 3.3) replaced at least ten meals (seven lunches and three dinners) per week with healthy portion controlled frozen meals as part of a 30 day calorie-controlled eating plan. Body weight, waist circumference and body composition (DXA) were measured to assess change from baseline. Weekly consumption checklists and an exit questionnaire were administered to determine compliance and perceived benefits. Ninety seven percent of participants reported consuming the frozen portion controlled meal for lunch every day and 99% met the goal of consuming three per week for dinner, resulting in average reductions of 2.9 ± 1.0 kg total body weight, 1.75 ± 0.4 kg fat mass, and 2.21 ± 0.15 cm waist circumference. Participants reported that single serve frozen meals helped them (% affirmative response): learn proper portion size (100%), feel better about eating habits (97%), feel healthier in general (94%), stay on track with the weight loss plan (90%), gain a sense of control over eating habits later in the day (87%), and feel more productive in the afternoon (81%). These results show high compliance and strong perceived benefits associated with a weight management program centered on portion controlled frozen meals at lunch.

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