

Review Article

Nutrition interventions for people with disabilities: A scoping review

Jessica L. King, M.S.^{*}, Jamie L. Pomeranz, Ph.D., and Julie W. Merten, M.S.

University of Florida, Department of Behavioral Science and Community Health, 1225 Center Drive, P.O. Box 100175 HSC, Gainesville, FL 32610-0175, USA

Abstract

Background: Approximately 19 percent of Americans have a disability. People with disabilities are at greater risk for obesity and poor nutrition, as well as resulting secondary conditions. CDC recommends interventions for this population to address this disparity.

Objective: The purpose of this article is to present the results of a scoping review of studies pertaining to community-based nutrition interventions among adults with disabilities.

Methods: Electronic databases were searched to discover articles pertaining to community-based nutrition interventions for people with disabilities.

Results: Sixteen journal articles published between 2002 and 2012 were reviewed. The reviewed community based nutrition interventions for adults with disabilities showed some success in improving health outcomes.

Conclusions: There is a need for future research, particularly interventions with objective outcome measures and including people with disabilities throughout the development and implementation of programs. Published by Elsevier Inc.

Keywords: Disability; Nutrition intervention; Obesity; Scoping review

While proper nutrition has emerged as a priority for the health of Americans, the nutritional needs and interventions for some certain populations, such as people with disabilities, remain largely understudied. As of 2010, there were 56.7 million people living in the United States (US) with a disability, representing approximately 19 percent of the population.^{1,2} Unfortunately, people with disabilities are more likely to experience more nutrition-related health disparities compared to people without disabilities.^{3,4} For example, people with disabilities are disproportionately more likely to be overweight or obese.^{5,6} Because obesity contributes to a variety of major medical concerns, such as heart disease, various cancers, diabetes, and increases disability-related complications, there is a critical need to intervene with people with disabilities to prevent further disability. Failure to intervene will result in greater medical costs and poor quality of life.

People with disabilities may experience functional limitations that may impact their ability to perform many tasks essential to proper nutrition. For example, people with disabilities may have limited time, energy or ability to perform the tasks needed for proper nutrition. Such tasks include

shopping for groceries, cooking, or even prepare meals (i.e. chopping and cutting foods).^{3,4} Additionally, people with disabilities often take medications which can complicate nutrient absorption and cause weight gain.⁴ In addition, people with disabilities are more likely to have lower incomes, limiting their ability to afford healthier foods.¹

The health risks associated with poor nutrition and obesity underscore the importance of evidenced based nutrition interventions. Research has shown that proper nutrition reduces the risk of developing other chronic diseases or secondary conditions that can affect quality of life.⁵ Unfortunately, people with disabilities are less likely to utilize traditional preventive health services, such as nutrition programs, because these services may inadequately address the unique physical and environmental barriers that impede behavior change.⁷ Thus, the purpose of this paper is to present the results of a scoping review of the current literature to determine the state of nutrition interventions for people with disabilities.

Methods

The authors conducted a scoping review of community based nutrition interventions for adults with disabilities. A scoping review was selected as it provides a preliminary assessment of the scope of existing research.⁸ Compared to

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^{*} Corresponding author.

E-mail address: jessking@ufl.edu (J.L. King).

a systematic review, in a scoping review the literature review does not include formal quality assessment and can be performed with relatively limited time and resources, while still offering an assessment of the extent of research evidence. Scoping reviews may also provide evidence toward the value of a future systematic review.⁸

Literature was gathered from ERIC, PubMed, ProQuest, and EBSCO electronic databases. Search terms included “nutrition,” “diet,” “food,” “weight loss,” “health promotion,” “disabled,” “disability,” “program,” and “intervention.”

Initial search revealed 6473 articles across all databases. Results were then narrowed to articles published since January 1, 2002, in peer reviewed journals, reducing the number of articles to 1795 (see Table 1). The authors selected this limited time frame to determine current research in the selected area. Titles and abstracts were reviewed to determine whether the articles met additional inclusion criteria: (i) participants aged more than 18 years with a disability, (ii) intervention conducted in a community-based setting (not exclusive home settings) and (iii) included a nutrition component within the intervention. Reference lists were cross-referenced and related sources were also examined. The resulting articles were examined for sample size, country of origin, study design, disability, recruitment methods, intervention design, outcome measures and results.

Results

Of the sixteen studies reviewed, thirteen were conducted in the US, two in the United Kingdom^{9,10} and one in Italy.¹¹ Sample sizes ranged from six to 195 participants. Five studies^{2,10–13} were cross-diagnoses studies, while the remaining studies focused on a single diagnosis (see Table 2). Cross-diagnoses studies included participants who had varying diagnoses resulting in different disabilities.

Six studies reviewed included a control or comparison group^{2,12,14–17} and of those, three studies represented randomized controlled trials.^{2,14,17} The remaining ten studies featured a single group design. Most commonly, participants were recruited through local community-based disability service centers such as Centers for Independent

Living or rehabilitation centers ($n = 10$). Participants were also recruited through mailings and flyers at local clinics ($n = 5$) and hospitals or referred by a health care provider ($n = 5$).

While an inclusion requirement was for the intervention to contain nutrition information, many of the studies provided education on several topics, most commonly exercise ($n = 13$) and stress management ($n = 6$). Other topics included emotional health, goal setting, sexual health, and disability specific coping strategies (e.g. managing medication interactions, communicating with health care providers). Given the variety of topics covered, eight studies defined their intervention as “health” or “health promotion,” while six other studies were titled as “obesity” or “weight loss” interventions and featured limited nutrition information. The interventions were primarily education-based, with an emphasis on increased knowledge. Thirteen interventions also included behavioral or skill training (food diaries, role playing, menu planning, grocery store visits, etc.). Twelve of the interventions utilized a group session format, three included both individual meetings and group sessions (calls, home visits, and consultations), and one study only included one-on-one meetings.

The majority of the studies assessed weight loss or body mass index (BMI) change ($n = 11$).^{5,9–11,13,15,16,18–21} Measurement of change varied from self-reported height/weight calculations to lipid testing. Another common outcome measure was improved health behaviors ($n = 10$). This included eating more fruits and vegetables, eating less fat or simple carbohydrates, and keeping a food diary. Two studies measured improved physical activity.^{15,17} Psychological outcomes such as self-efficacy were also measured in five studies.^{5,12,14,17,22} Each of the studies reported positive results based on specified outcome measures. No differences were found between studies that focused on intellectual disabilities or cross-diagnoses studies. Only one study¹¹ concluded the intervention as unsuccessful, though this may have been due to the high dropout rate.

Discussion

Many of the studies were promising and resulted in significant reported weight loss or reduced BMI. The majority

Table 1
Results of search strategy

Database searched	Number of papers found	
EBSCO	34	
ERIC	157	
Proquest	859	
PubMed	745	
	1795	→
Hand searching and checking reference lists	22	→
		Met the inclusion criteria $n = 12$
		↓
		Met the inclusion criteria $n = 4$
		↓
		16 studies available for review

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