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A Wellness Needs Assessment of Persons with Disabilities in Northern Florida: Physical Activity and Nutrition

Stacey Griner, MPH, CPH, RDH; Jessica King, PhD, CHES; Jamie L. Pomeranz, PhD

ABSTRACT

Engaging an individual with a disability in health promotion activities may be challenging. This challenge is demonstrated by the prevalence of obesity among people with disabilities (PWDs) being higher than those without, and PWD twice as likely to be physically inactive. The combination of physical inactivity and high prevalence of obesity supports a need for health promotion activities. To examine the need for wellness promotion activities for PWDs, we surveyed consumers at a Center for Independent Living in North Central Florida (CILNCF). A survey was developed with items from the Physical Activity Scale for Individuals with Physical Disability (PASIPD) and nutrition items from Florida's Behavioral Risk Factor Surveillance System (BRFSS). Among 36 participants, 25% reported exercise was difficult due to their disability and only 6% reported their attendant assisted with exercise. Participants reported doing less than the national recommendation of medium-strength exercise (83%) and hard-strength training activities (80%). Participants reported not meeting daily guidelines for fruit (42%) and green vegetable consumption (41%). Results demonstrate a lack of physical activity and adequate nutrition among PWDs. Community service organizations such as the CILNCF represent an ideal location to administer physical activity and nutrition education and interventions.

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BACKGROUND

People with disabilities (PWDs) experience higher rates of negative health behavior including poor nutrition and lack of physical activity (Centers for Disease Control and Prevention [CDC], 2014a; CDC, 2014b). In one report, 30% of PWD reported no physical activity, compared to 13.5% among persons without disability (CDC, 2014c; Rimmer & Marques, 2012). PWDs living in the United States are twice as likely to be inactive than those without a disability (Rimmer & Marques, 2012). Lack of physical activity and adequate nutrition are associated with chronic diseases, including heart disease, diabetes, stroke, and some cancers (CDC, 2014b; CDC, 2014c; Washburn, Zhu, McAuley, Frogley, & Figoni, 2002).

The Center for Independent Living (CIL), an organization providing a multitude of services to people with disabilities, provides several opportunities for health promotion activities (CIL, 2013). Moorhouse et al. (2011) surveyed CIL directors nationwide to rank health behaviors from least to most important. Directors of CILs identified nutrition as the greatest priority (25.6%), with only 38% reporting they provide adequate nutrition services for their consumers. Physical activity (15.1%) was ranked fourth, with only 33% of CILs reporting their center provides adequate and appropriate physical activity

services for PWDs (Moorhouse, Pomeranz, Barnett, Nami, & Curbow, 2011). This lack of adequate services at resource centers represents a missed opportunity for intervention, as PWDs represent 20% of the population, a number expected to increase (Brault, 2012). The purpose of this study was to improve understanding of this gap by assessing nutrition and physical activity status from the perspective of CIL consumers.

METHODS

We created and administered a survey to consumers at a CIL in North Central Florida (CILNCF) in 2014. The survey contained 13 demographic questions, 9 physical activity questions, and 6 nutrition questions. Physical activity questions were modified from the Physical Activity Scale for Individuals with Physical Disability (PASIPD), a survey created and evaluated by PWDs (Washburn, Zhu, McAuley, Frogley, & Figoni, 2002). Five of the original 9 items on leisure and household activity were included, asking participants to recall activity from the past 7 days. The modified survey has a Cronbach's alpha of 0.79. Nutrition items were modified from Florida's Behavioral Risk Factor Surveillance System (BRFSS) questions (Florida Department of Health, 2008). Five of the original 6 nutrition questions were included,

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predominantly on food behavior. This survey asked participants to recall nutrition related behavior over the previous 7 days as opposed to 30 days as indicated by the original BRFSS survey. Cronbach's alpha for the modified survey was 0.65.

The survey was administered via iPads and Qualtrics software. Initial data collection took place over a 9-day period in the CILNCF waiting room. Due to low response, an e-mail outlining the purpose of the study along with a link to the consent form and survey was sent to CIL employees and consumers with an e-mail address on file. Data were exported from Qualtrics and analyzed in SPSS (Version 21). Descriptive analyses were conducted and participant averages were compared to national nutrition and physical activity recommendations (Office of Disease Prevention and Health Promotion, 2008; United States Department of Agriculture, 2010).

RESULTS

Participants (n=36) responded to three types of questions: demographics, nutrition questions, and physical activity questions.

Demographics

Of those that participated in this study, 55% were women, and 78% identified as white (Table 1). There was a range of disabilities represented in this study, including physical, cognitive, and developmental disabilities. About 72% of the participants were between the ages of 18 and 54. The most common education levels were high school graduates (36%) and some college completed (25%). Most participants were currently or permanently unemployed (58%).

Nutrition

Participants were asked about their plant-based protein consumption (such as beans, tofu, and lentils) for the past 7 days, and 75% (n=27) never or rarely met the daily protein requirements. In regard to vegetable consumption, 41% (n=14) never or rarely eat dark green vegetables, 56% (n=20) never or rarely eat orange-colored vegetables, and 40% (n=14) never or rarely ate any other vegetables (tomatoes, eggplant, lettuce, white potatoes). When asked about fruit, 42% (n=15) responded they rarely eat fruit, including fresh, frozen, or canned fruit, and most of the participants never or rarely drink 100% juice (77%, n=28). Table 2 shows the USDA guidelines.

Physical Activity

Participants were asked about their light, moderate, vigorous, and strengthening activities for the past 7 days. Most participants (80%, n=29) reported

stationary activities, such as reading, watching TV, playing computer games or doing crafts often or sometimes and 13% (n=5) often or sometimes do light housework. Most of the participants (83%, n=30) never or rarely do moderate intensity exercises including dancing, softball, wheeling basketball or similar activities. Approximately 80% (n=29) of participants never or rarely do vigorous intensity activities such as jogging, wheelchair racing, arm cranking. About 69% (n=25) of participants do muscle strengthening exercises such as lifting weights or wheelchair press-ups less than the recommended twice a week (Table 2). Additionally, one-fourth (n=9) of the participants stated that exercise was one of the major life activities made difficult due to their disability. Of the 17% (n=6) who reported having a personal care attendant to assist with activities, just 6% (n=2) reported that their attendant helps with exercise.

Discussion

The physical activity patterns and nutrition habits of PWD are influenced by a constellation of factors, including functional limitations, medical concerns, medications, lower income, and less utilization of preventive health services (Reichard, Stolze, & Fox, 2011; Van Riper, 2010). Results from this needs assessment demonstrate a lack of physical activity and adequate nutrition among PWDs when compared to national recommendations (Table 2). Many PWDs report an interest in increasing their levels of physical activity and nutrition; unfortunately, there are limited programs that target this population (Reichard, Stolze, & Fox, 2011). Community service organizations such as the CIL represent an ideal location to administer physical activity and nutrition education/interventions for PWDs.

This study highlights a need to involve not only those who are consumers of the CIL, but also personal care attendants as they may be essential in assisting with food preparation and physical activity. The results of this study also demonstrate a logical opportunity and location to address these needs. Those trained in the medical and psychosocial aspects of disability should consider methods and techniques to facilitate the independence of PWDs in performing physical activities and improving their nutritional intake. Further research should include qualitative inquiry involving CIL consumers and program directors to evaluate specific program needs for this population. Development and implementation of nutrition and physical activity programs should take a participatory approach eliciting feedback from people with disabilities.

Table 1
Sample Demographics

		N	Percentage
Gender	Male	16	44.4%
	Female	20	55.6%
Ethnicity	Not Hispanic or Latino	27	75%
	Other	7	19.4%
Race*	White	28	75%
	Black	7	22.2%
	American Indian	1	2.8%
Age	18-34	12	33.3%
	35-54	14	38.9%
	55-74	9	25.0%
	74 or Older	1	2.8%
Relationship Status	Never Married	11	30.6%
	Married	8	22.2%
	Divorced	12	33.3%
	Widowed	1	2.8%
	Separated	2	5.6%
	Living with Partner but unmarried	2	5.6%
Education	Less than high school	2	5.6%
	High school graduate/GED	13	36.1%
	Some college or vocational	9	25.0%
	College Graduate	6	16.7%
	Masters	6	16.7%
Income	\$15,000 or less	12	33.3%
	\$15,001 – 25,000	5	13.9%
	\$25,001 – 45,000	6	16.7%
	\$45,001 or more	5	13.9%
	Don't know	7	19.4%
Work Status	Unemployed and looking	11	30.6%
	Permanently unemployed	10	27.8%
	Employed part time	5	13.9%
	Employed full time	9	25.0%

*One participant identified as White and American Indian.

Table 2
Nutrition and Physical Activity Guidelines for Americans

<p>Nutrition (United States Department of Agriculture)</p> <hr/> <p>Fruit: 1.5 to 2 cups per day</p> <p>Vegetables: 2 to 3 cups per day</p> <p>Plant Based Protein Sources: 5 to 6.5 ounce equivalents per day</p>
<p>Physical Activity (Office of Disease Prevention and Health Promotion)</p> <hr/> <p>Weekly: 150 minutes of moderate-intensity or 75 minutes of vigorous intensity aerobic exercise</p> <p>Two or more days a week: Muscle strengthening activities that are high or moderate intensity involving all major muscle groups</p>

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