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HEALTHY AGING RESEARCH

Physical activity in older adults: Planning, delivering, and evaluation plan for the Eat Better Move More Intervention

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Abstract

Among North Carolina adults, greater than 50% do not engage in the recommended amount of physical activity. More than 75% eat fewer than the recommended five or more servings of fruits and vegetables daily, and 60% are overweight or obese. An intervention was developed for older adults in North Carolina. The purpose of this article is to describe the process for establishing the Eat Better Move More intervention for older adults in North Carolina.

Citation: Nies MA, Troutman-Jordan M, Lim WY (2015) Physical activity in older adults: Planning, delivering, and evaluation plan for the Eat Better Move More Intervention. Healthy Aging Research 4:13. doi:10.12715/har.2015.4.13

Received: December 24, 2014; **Accepted:** February 16, 2015; **Published:** February 23, 2015

Competing interests: The authors have declared that no competing interests exist.

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Introduction

The purpose of this article is to describe the process for initiating the Eat Better Move More (EBMM) intervention for older adults in North Carolina (NC). An intervention that can overcome barriers to older adults' participation in physical activity and healthy nutrition could, over the long term, have a substantial impact on public health. Engaging with older adults in the community and encouraging physical activity and improved nutrition reduces risks for older adults who experience health disparities. Mobilizing a community of older adults can have a major impact on the health of the entire community as expectations surrounding physical activity and nutrition can be changed by older adults who then influence their families and friends to make positive health choices.

Among NC adults, 62.3% do not engage in the recommended amount of physical activity, 76.8% eat fewer than the recommended five or more servings of fruits and vegetables daily, and 63.1% are overweight or obese [1]. Older adults are less likely to engage in physical activity than other age groups, and a trend toward declining physical activity with increasing age has been observed [2].

Description of intervention

The Eat Better Move More program [3] was developed for local Older Americans Act Nutrition Program sites and the Administration on Aging's national You Can! Campaign [4]. Eat Better Move More incorporates being physically active, eating a nutritious diet, obtaining preventive screenings, and making healthful choices in an easily accessible, user-friendly format tailored to community-dwelling older adults. Eat Better Move More has demonstrated positive results for multiple indicators of nutrition and physical activity. Eat Better Move More, was a community-based physical activity and nutrition program [3], delivered free-of-charge at community sites at times that were easily accessible to participants.

The 12-week program was comprised of mini-talks on nutrition and ways to increase physical activity. Each weekly session included an objective, preparation list, and content to be covered. For example, for week 1, the objective was for participants to recognize the importance of steps to healthier eating: Eat Better, and know how to use a step counter: Move More. Preparation included having step counters ready for

each participant and showing people how to use and reset the step counters. Covered content included a general overview of information to better nutrition and increased physical activity for better health. Nutritional mini-talks emphasized the benefits of eating more fruits and vegetables, the relationship of dairy foods with bone health, the importance of dietary fiber, and sensible portion sizes for older adults who are underweight or overweight [4].

The physical activity mini-talks included information on stretching, movement, walking in all types of weather, and healthy weight. The Eat Better Move More program included specific directions for the preparation and content of each session. Each session was comprised of an objective, preparation and start-up instructions, mini-talk script, activities to "eat better" and "move more", and tips and tasks for participants. The Eat Better Move More program is simple, ready-to-use, and designed to fit modest local agency resources.

Participants checked their food choices and recorded the number of steps they took each day on "Tips & Tasks" sheets. These take-home sheets briefly reviewed the week's nutrition and physical activity mini-talks, and included a table for each participant to record the number of food group items eaten and steps taken each day. The step goal was personalized to each participant's ability [4]. A new goal with a modest 10% increase was suggested if the participant had reached the previous week's goal. Weekly walking groups were offered as part of the Eat Better Move More intervention. These were offered according to participants' time availabilities and preferences [3].

Procedures

Recruitment and retention

The participants were recruited using posters, brochures, word-of-mouth, community organizations, and contacts with grocery stores, beauty shops, and churches. Directions to meet at senior centers for an orientation to the project were provided by the investigators for interested participants. Senior centers were familiar to participants in this community and facilitated recruitment. Inclusion criteria were: age 60 or older, ability to travel to the senior center, and the ability to participate in physical activity as determined by the Physical Activity Screening Questionnaire. Individuals who responded, "yes" to any one of the 11 items on the Physical Activity Screening Questionnaire had to obtain physician consent to participate or were excluded from the study.

Eat Better Move More intervention

We visited the sites and provided an overview of the study and what participation entailed. Interested individuals were screened based on inclusion criteria. Those interested in participating provided informed consent. The participant completed a demographic form, and baseline data were collected by a research assistant. Using a random numbers table, individuals were randomized to the intervention or delayed intervention control group. Participants in the intervention group were notified of the location and times of the weekly Eat Better Move More sessions.

For intervention participants, a minimum of two group-walking sessions per week were organized and led by the research assistant. *Measures*. The Physical Activity Questionnaire measured physical activity level [5]. Participants completed the Timed Up and Go test [6]. Nutritional intake and health behaviors were measured with the Nutrition and Health Questionnaire [4]. The Barriers to Being Active Quiz measured barriers to physical activity [3], and the Successful Aging Inventory, Physical Activity Self Efficacy Scale, Profile of Mood States Short Form, and the Brain Health Questionnaire were administered. Blood pressure, heart rate, and body mass index were measured with standard, reliable and valid measures used in primary care.

Control group participants were notified of the delayed control intervention start date. Intervention participants were placed into groups of 10 so that everyone could participate in small group sessions and have time to ask any questions. Thus, four to five sequential rounds of the Eat Better Move More group sessions were provided to accrue enough participants. Participants were asked to not discuss the intervention with those in the control group. After the series of groups were completed, delayed entry control participants were offered the chance to attend Eat Better Move More sessions. The delayed control

group participants were administered the same questionnaires as the intervention group and the research assistants measured blood pressure and heart rate as they did with the intervention group.

A research assistant and program manager were responsible for conducting the Eat Better Move More group sessions. The research assistant and program manager were trained by the investigators to deliver the weekly sessions. Once they were trained, the research assistant and program manager conducted mock Eat Better Move More sessions in order for the investigators to assess competency in delivery of the intervention. The research assistant, program manager, and investigator collected pre- and post-intervention data. Participants were encouraged to attend all of the weekly sessions. Each participant signed in on the class sign-in sheet for every educational or walking session.

Detailed records of every class attended by each participant were kept. At the end of each week, the research assistant compiled the participants' records of classes attended, which were sent to the investigators. Each participant received a water bottle at baseline and a t-shirt at the 12-week data collection. Intervention participants were informed that to increase their physical activity, they were to wear a step counter every day for 12 weeks. They had a personal goal to increase the number of steps they took each week. Participants were also instructed of the need to keep records of how many steps they took each day and changes made in their eating patterns. They brought the Tips & Task sheets to the Eat Better Move More meeting each week. The research team measured their height, weight, heart rate, and blood pressure at the beginning of the study and at 12 weeks.

Evaluation

To determine the effects of the intervention versus the control group, we compared demographic characteristics and health outcome variables at baseline between the intervention and control group using a paired t-test to evaluate differences between groups. We conducted repeated measures analysis to determine changes in health outcomes over time.

Process evaluation

An on-going process evaluation was conducted during the entire course of the intervention to determine if any changes need to be made. Participants' satisfaction was determined by completing the Participant Form, which asked, "What did you like best of Eat Better Move More?" and "What did you like least of Eat Better Move More?" The findings of this intervention study will be reported in future publications.

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