

Primary care providers need a variety of nutrition and wellness patient education materials

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Kenner MM, Taylor ML, Dunn PC, Gruchow HW, Kolasa K. Primary care providers need a variety of nutrition and wellness patient education materials. *Journal of the American Dietetic Association* 99:462-466 (1999).

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Abstract:

Objective: To assess and document the need for nutrition and wellness patient education materials. Design The results of open-ended interviews and focus groups were used to develop a mail-type survey. The 46-item survey addressed barriers to using nutrition and wellness education materials as well as format, education/reading level, foreign languages, and topics needed. North Carolina Cooperative Extension Service (NCCES) family and consumer education agents distributed surveys to family and general practices throughout North Carolina.

Subjects: Of the 721 primary care providers surveyed, 303 (42%) returned usable surveys. Respondents practiced in 89 of the 100 counties of the state served by NCCES family and consumer education agents.

Statistical analysis performed: Descriptive statistics and independent sample t tests were used to analyze survey results.

Results: Limited time with patients and inability to obtain materials because of cost or being unsure of sources were most often identified as barriers to using nutrition and wellness materials. Of the 26 topics surveyed, 6 had mean levels of need greater than or equal to high need (mean score [greater than or equal to] 4): weight control for adults, smoking cessation, changing dietary fat intake, exercise guidelines for healthy adults, general stress management guidelines, and healthful eating for older adults. Twenty-four of the 26 topics had mean levels of need greater than or equal to moderate need (mean score [greater than or equal to] 3). Topics with moderate need included guidelines for overweight children and adolescents, nutrition for chronic disease prevention, and healthful eating for various stages of the life cycle. The combined mean score for topics dealing with weight control and exercise for adults, adolescents, and children was greater than the score for high need (mean score [greater than] 4). Eighty-three percent of respondents preferred 1-page, printed handouts. Forty-five percent requested materials in Spanish.

Applications: Dietitians who work in a variety of settings can use techniques similar to those described here to determine the patient education materials practitioners need for the populations they serve. The information obtained from this study will be used to develop 1-page, printed handouts. A registered dietitian and a food and nutrition specialist with NCCES will develop and pilot-test the handouts. These materials will be made available to primary care providers in North Carolina via local NCCES family and consumer education agents, many of whom are registered dietitians.

Article:

Poor dietary choices and nutrient intake can be linked to many chronic diseases that are leading causes of death for North Carolinians and other Americans (1). Nutrition assessment and counseling are essential for the prevention and treatment of many of these diseases. One of the nutrition goals of Healthy People 2000 is to "increase to at least 75 percent the proportion of primary care providers who provide nutrition assessment and counseling and/or referral to qualified nutritionists or dietitians" (2, p 95). The Report of the US Preventive Services Task Force recommends health promotion and disease prevention activities, including nutrition counseling, as part of the practice of primary care providers (3). To increase the effectiveness and quantity of nutrition counseling being provided by primary care providers, The American Dietetic Association (4) and the Society of Teachers of Family Medicine (5) have developed nutrition education modules for physicians.

Physicians cite many barriers to providing nutrition and health promotion education to their patients (6-12). The North Carolina Cooperative Extension Service (NCCES) food and nutrition specialists and agents often receive

telephone calls from people requesting nutrition and wellness information and education materials. Such requests to NCCES suggest a need for nutrition and wellness education materials among North Carolina primary care practitioners. The goal of this research was to assess and document the need for nutrition and wellness patient education materials by family and general practitioners in North Carolina. Questions addressed were what nutrition and wellness topics are needed most and what delivery medium is preferred.

METHODS

Focus Groups and Open-ended Interviews

Focus groups and open-ended interviews with general and family practice physicians and other primary care providers were conducted to determine barriers to using nutrition education materials, topics for which they need materials, format in which the materials should be presented, and education/reading levels that these materials should target. Participants for these sessions were recruited by 2 researchers (K.K. and M.M.K.) and included staff from several family practice clinics in North Carolina. Participants in the focus groups and open-ended interviews included family and general practitioners, physician assistants, a nurse practitioner, and a registered nurse.

The focus groups and interviews were conducted using guidelines described by Krueger (13) and Gilmore and Campbell (14). A moderator and an assistant moderator participated in all focus groups but 1 in which only a moderator was present. Analysis of the focus group and open-ended interview sessions followed Krueger's (13) note-based analysis strategy; however, audiotapes were not available to verify direct quotes because of failure of the recording equipment. All analyses were completed by the member of the research team who was involved with each session.

Survey

Information obtained from the focus groups and open-ended interviews was used to develop a survey instrument. The 46-item survey was developed according to guidelines described by Dillman (15) and Gilmore and Campbell (14) for a mailed survey. Questions were closed ended, but space was provided for additional comments for 5 of the 10 questions. Survey questions addressed barriers to using nutrition and wellness patient education materials, preferred delivery mediums, education/reading levels the materials should incorporate, foreign languages needed, and topics needed. Demographic questions were also included.

Questions were tested with selected nutrition and public health faculty at 3 universities in North Carolina for content validity, then reworded to improve clarity. Physicians, nurse practitioners, registered and practical nurses, physician assistants, and medical office staff were selected by proximity to pilot-test a draft survey to determine readability, clarity of questions, and ease of answering questions. The variety of reviewers ensured that all who might answer the survey would understand the questions and directions.

Based on county size and population, 5 to 15 sets of survey packets were sent to the 102 NCCES family and consumer education agents who had food and nutrition responsibilities. A survey packet included a cover letter to the physician, the survey, and a return-addressed, stamped envelope. The cover letter explained the goal of the project and stated that the person in the practice who was primarily responsible for nutrition education could complete the survey. NCCES agents also received a letter that requested their assistance and explained the procedures by which the surveys were to be distributed to local family and general practices. Agents were responsible for selecting the local family and general practice physicians who would receive the survey packet. Researchers provided the agents with a return-addressed, stamped postcard to indicate the actual number of surveys they distributed.

Table 1
Demographic characteristics of survey respondents

| Characteristic | No. | % |
|-------------------------------------|-----|----|
| Serve patients living in | | |
| Rural areas | 201 | 66 |
| Suburban areas | 63 | 21 |
| Urban areas | 30 | 10 |
| Other | 9 | 3 |
| Total | 303 | |
| Practice is | | |
| Private | 206 | 68 |
| Public/community health | 27 | 9 |
| University hospital and clinic | 21 | 7 |
| Rural health clinic | 14 | 5 |
| Other | 13 | 4 |
| Hospital owned | 11 | 4 |
| Health maintenance organization | 8 | 3 |
| Military or Veterans Administration | 3 | 1 |
| Total | 303 | |
| Position in the practice is | | |
| Physician | 226 | 74 |
| Physician assistant | 22 | 7 |
| Nurse practitioner | 14 | 5 |
| Nurse | 14 | 5 |
| Other | 9 | 3 |
| Resident | 7 | 2 |
| Office administrator/secretary | 6 | 2 |
| Dietitian/nutritionist | 5 | 2 |
| Total | 303 | |

Table 2
Barriers to using nutrition and wellness education materials as reported by survey respondents

| Barrier statements | Extent of barrier | | | | | |
|---|-------------------|----|-----------|----|--------|----|
| | Often | | Sometimes | | Rarely | |
| | No. | % | No. | % | No. | % |
| Time with patients limited (n=296) | 157 | 53 | 116 | 39 | 23 | 8 |
| Unable to obtain materials because of cost or because unsure of sources (n=290) | 110 | 38 | 120 | 41 | 60 | 21 |
| Patients with low reading/education levels (n=293) | 60 | 20 | 178 | 61 | 55 | 19 |
| Materials not culturally relevant (n=294) | 51 | 17 | 135 | 46 | 108 | 37 |
| Patients not interested (n=295) | 29 | 10 | 152 | 52 | 114 | 39 |

[TABULAR DATA FOR TABLE 3 OMITTED]

Additional surveys were distributed at the East Carolina University School of Medicine family practice clinics. Respondents were given instructions about returning completed surveys. All study protocols were approved by the Institutional Review Board of the University of North Carolina at Greensboro.

Statistical Analysis

Data were analyzed using the Statistical Package for the Social Sciences for Windows (version 7.0, 1995, SPSS, Chicago, Ill). Independent sample t tests were conducted to determine differences between groups of respondents. An independent sample t test of the probability of selecting an answer vs the probability of not selecting that answer was also conducted. Nonresponses were considered missing data and were eliminated before analysis; therefore, different analyses have different sample sizes. Statistical significance level was set at P [less than] .05 for all tests.

RESULTS

Of the 102 NCCES family and consumer education agents asked to participate, 92 (90%) distributed 721 surveys to family and general practices throughout North Carolina. Three hundred eight surveys were returned. Cardiologists completed 4 surveys, and 1 physician completed only the demographic data; these surveys were not analyzed. In total, 303 surveys were returned and analyzed, which gave a 42% response rate. Surveys came from practitioners serving citizens in 89 of the 100 counties in North Carolina. Table 1 shows the demographic characteristics of the respondents. Table 2 shows to what extent - often, sometimes, or rarely - certain items were barriers to using nutrition and wellness patient education materials.

Most respondents (83%) ranked 1-page, printed handouts as the most preferred delivery format for nutrition and wellness patient education materials. The preference for 1-page, printed handouts was significantly higher (P [less than] .05) than the preference for posters (12%), a home video (11%), a waiting room video (8%), and an interactive computer program (2%) (total is greater than 100% because some respondents ranked 2 or more as the most preferred format).

The respondents chose 2 reading/education levels that the materials should target. Thirty-eight percent preferred 2 sets of materials, 1 for patients with higher education levels and 1 for patients with lower education levels. Thirty-three percent favored a set of materials for both groups of patients to use. Nearly half of the respondents (45%, n=133) indicated that they needed materials in a language other than English. All but 1 of these requested education materials in Spanish (n=132). The proportion of respondents who needed materials in another language was not significantly different from the proportion of those who did not need materials in another language.

Respondents rated their level of need for 26 topics on a 5-point scale, with 1 being "already have useful materials" and 2 through 5 being low, moderate, high, and very high need, respectively. Table 3 shows the frequency of responses and mean levels of need. The mean level of need scores were calculated using only the responses for low, moderate, high, and very high need.

The proportion of respondents indicating that they already had useful materials was small, ranging from 0.7% to 11% for all 26 topics. Smoking cessation and changing dietary fat intake, which had high mean levels of need (mean scores of 4.4 and 4.3, respectively), also had 2 of the highest proportion of respondents indicating that they already had useful materials, 9% and 8%, respectively.

Several topics could be grouped into similar categories. Mean level of need was determined for each category. The category comprising weight control and exercise for adults, children, and adolescents had the highest mean level of need (mean score=4.1); it was followed by the stress management and family relations category (mean score=4.0) and the healthful eating through the life cycle category (mean score=3.5).

DISCUSSION

The 42% response rate is within the range of response rates of similar surveys, that is, 11% to 63% range (6-11). Respondents to this survey differ from those in similar, published surveys in which 71% to 96% of respondents were from urban/suburban areas (8,9). The majority of our respondents (66%) serve patients who live in rural areas, and 51% of North Carolinians live in rural areas (16). Therefore, our sample population is more representative of the population of North Carolina than the populations of similar studies (8,9).

Of the 26 nutrition and wellness topics surveyed, 24 had mean level of need scores greater than or equal to the score for moderate need (mean score [greater than or equal to] 3). This result, combined with the low percentages of respondents stating that they already have useful materials, suggests that the family and general practitioners surveyed need these education materials. Overwhelmingly, respondents wanted 1-page, printed handouts as the delivery format. This preference reflects concerns noted in the study of Dodds et al (9) that patient education materials are often too lengthy. Lengthy, complex education materials are common, and often they are above the reading abilities of patients (17-21). Respondents requested materials for both high and low education/reading levels, which suggests that physicians are concerned that all patients receive usable, appropriately targeted information.

Respondents cited time and inability to obtain materials most frequently as barriers to using nutrition and wellness education materials. These were also cited as barriers to providing nutrition and wellness education in other studies (79). Orleans et al (6) recommended written materials for patients as a way to overcome the barrier of limited time with patients. In contrast, our respondents reported that limited time to spend with patients is a barrier to using written education materials. This response suggests that these practitioners may not view education materials as a substitute for the nutrition and wellness education provided by health professionals but as a supplement to it.

Forty-five percent of respondents indicated that they needed materials in a foreign language, with Spanish being the language most requested. This is not surprising. In 1995, 84,000 residents of North Carolina, 11% of the total population, were of Hispanic origin (16).

As nutrition knowledge changes and public attention shifts from one topic to another, the need for various topics is bound to change. Health care practitioners in other parts of the country might want different topics or formats of delivery. Topics that our respondents wanted may differ from those that dietitians and nutrition educators think are more important to the health and well-being of the populations they serve. For all of these reasons, dietetics professionals survey their audiences before devoting their time and energy to the development of education materials.

Our respondents, practitioners working in family and general practices in North Carolina, have at least a moderate need for materials about most of the nutrition and wellness topics on our survey; currently, they do not have useful materials. They are also unable to obtain materials because of cost or lack of knowledge of sources. The results of this survey support the development of scientifically based nutrition and wellness patient education handouts by NCCES and distribution of the handouts at no or low cost by NCCES family and consumer education agents.

APPLICATIONS

Many dietetics professionals endeavor to develop education materials for the practitioners, patients, and customers they serve. The techniques used in this study, focus groups and a survey, can be used by dietitians to determine the specific needs of those they serve. Education materials can then be developed to meet those needs. For example, the results of this study are being used as market research for the development of nutrition and wellness patient education materials by NCCES. A registered dietitian and food and nutrition specialist with NCCES will develop 1-page, printed handouts in English and Spanish based on the grouped categories of topics. Handouts on the topics found to have the highest level of need, weight control and exercise, will be developed, pilot-tested, and distributed first. Other materials will follow. The materials will be offered at no or

low cost to primary care practitioners throughout North Carolina via NCCES family and consumer education agents, many of whom are registered dietitians.

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