

Positive Research Results: Pregnancy—A Special Time for Nutrition

Pregnancy—A Special Time for Nutrition was field-tested to determine changes attributable to the use of the program. Between September 2001 and February 2002, the Market Enhancement Group, Inc. completed a telephone market-research study with 100 pregnant women in California. The purpose of the project was to identify changes pregnant women made in their food choices and their knowledge of nutrition after going through the program in a self-study format.

Methodology

First a screened questionnaire was used to qualify respondents for the study and to establish baseline information on nutrition knowledge and attitudes. At the end of this preliminary interview respondents were sent *Pregnancy—A Special Time for Nutrition*.

- * A second questionnaire was then completed with all respondents approximately two weeks later.
- * The final phase of the research was completed in January and February 2002 in the respondents' eighth month of pregnancy. The purpose was to measure changes in dietary and exercise habits since the first survey.
- * The 100 survey respondents were divided into two groups:
 - 50 middle and high income
 - 50 low income further divided into two groups
 - 25 Spanish speaking respondents (all received booklet in Spanish)
 - 25 English speaking respondents

Results

During the screening survey, 46 percent of respondents indicated that they were familiar with the Food Guide Pyramid. Purported familiarity with the Food Guide Pyramid was higher than actual knowledge about the number of daily servings they should consume from the various food groups at baseline. By the final survey respondents continued to build and improve upon their base of knowledge about ideal dietary behavior. (Table 1)

Table 1: Changes in knowledge over time

| Foodgroup | Baseline | Immediate PI* | Six Months PI* |
|----------------------------|----------|---------------|----------------|
| Bread, cereals, and grains | 14% | 72% | 87% |
| Vegetables | 11% | 82% | 90% |
| Fruits | 36% | 70% | 79% |
| Milk and dairy | 28% | 86% | 92% |
| Meats, beans and nuts | 35% | 70% | 79% |

*Post-intervention

Outstanding Program Reviews!

Respondents' impression of the booklet was highly favorable at both post-intervention interviews. On a 10-point scale, women gave the booklet a mean rating of 9.2 immediately after reading the booklet and 9.4 in their last trimester. Over 70 percent rated the booklet a perfect "10" (excellent) in the final survey.

Positive Changes in Knowledge

The number of respondents indicating they learned new information about pregnancy and their diet rose from 60 percent to 64 percent in the final survey. The importance of proper diet (54 percent) and impact of diet on baby (47 percent) were the two most important things learned from the booklet. In addition, 70 percent said that the booklet helped them find solutions nutrition during breastfeeding in the common concerns section. Eighty-two percent of the respondents who said they did not learn new information indicated that the booklet reinforced their prior knowledge.

A quarter of survey respondents said that the booklet helped them plan physical activity four or more times per week. Upper income respondents (38 percent) were more likely than lower income respondents (12 percent) to indicate a willingness to improve activity levels. By the final survey, nearly half of all survey respondents said that the booklet helped them plan physical activity.

Program Improves Dietary Patterns

Pregnancy - A Special Time for Nutrition incorporates Dairy Council of California's individualized learning model to maximize positive behavior change. Fifty-five percent of survey respondents reported that their diet had changed after reading the booklet initially. In the final survey 67 percent of respondents reported that their diet had changed since reading the booklet, implying that it continues to be used and has an extended "shelf life." A significant number of survey respondents have improved their consumption patterns for key Food Guide Pyramid food groups. (Table 2)

Table 2: Percent of respondents changing consumption

| Foodgroup | Immediate PI* | Six Months PI* |
|----------------------------|---------------|----------------|
| Bread, cereals, and grains | 31% ate more | 39% ate more |
| Vegetables | 25% ate more | 31% ate more |
| Fruits | 42% ate more | 52% ate more |
| Milk and dairy | 24% ate more | 44% ate more |
| Meats, beans and nuts | 19% ate less | 30% ate less |
| Sweets | 33% ate less | 44% ate less |
| Fats and oils | 33% ate less | 34% ate less |

*Post-intervention

The Transtheoretical Model of Behavior Change has been used extensively to promote optimal health by promoting positive behavioral change. The "Stages of Change" model recognizes that an individual's progress through a series of stages by identifying the need to change, contemplating a change, making a change, and finally sustaining the new behavior. Questions based on the behavior change theory immediately after reading the booklet placed most respondents in either the preparation stage (27 percent), to make better food choices or the action stage (27 percent), by including better food choices. In the last trimester, respondents appeared to have made progress in moving along the behavior change continuum from precontemplation to maintenance. The percent of respondents in the contemplation and preparation stages decreased by 10 points each. Respondents moving into the action phase increased from 37 percent to 43 percent. The percent who considered themselves in the maintenance phase increased significantly from 12 percent to 29 percent.

Conclusions

Pregnancy—A Special Time for Nutrition is a valuable component of prenatal health care education. The program met its major objectives of improving the knowledge and eating behaviors of pregnant women. The program design is flexible to accommodate group settings or self-instructional formats. This study demonstrates its effectiveness with a range of socioeconomic classes in either the English or Spanish format. Since the evaluation the program materials have been updated to align with the USDA's new MyPyramid. Summary and Conclusions