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Assessing perception of Family Nutrition Program characteristics and nutrition education needs of low socioeconomic status individuals

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ASSESSING PERCEPTION OF FAMILY NUTRITION PROGRAM
CHARACTERISTICS AND NUTRITION EDUCATION NEEDS OF LOW
SOCIOECONOMIC STATUS INDIVIDUALS

A Thesis

Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
requirements for the degree of
Master of Science

in

The School of Human Ecology

by
Denise Marie Holston
B.S., Louisiana State University, 2001
May 2004

DEDICATION

This thesis is dedicated to my friends and family who supported me through my graduate studies.

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ABSTRACT

The Louisiana Family Nutrition Program (FNP) reaches up to 120,000 food-stamp recipients and other low SES individuals per year through direct and indirect nutrition education methods. To be effective in eliciting behavior change, a nutrition education program must be developed to be consistent with the needs, motivations, and concerns of the target audience; therefore, it is important that the needs, motivations, and concerns are being met by FNP. The purpose of this study was to determine, through the use of focus group discussions (FGD), whether nutrition education needs of FNP participants are being satisfied by the program. Nutrition education needs cover a broad scope of concerns, including: knowledge of the program, time and place of nutrition education sessions, nutrition education materials, and delivery methods. Five FGD were conducted with 34 FNP participants in five FNP parishes. The PRECEDE/PROCEED theoretical model was used to classify information from FGD into predisposing, reinforcing, and enabling factors. Results suggested that participants learned of FNP through the nutrition educator or community agencies such as Head Start and Office of Family Support. Although all participants were knowledgeable about the program itself, some indicated that lack of knowledge about meeting times and locations of nutrition education sessions was a barrier to participation. Other barriers to participation in FNP were minimal, but did include lack of transportation, lack of childcare, lack of interest, and time nutrition sessions were held. Participants' families and personal barriers to dietary change influenced use of information in FNP. Program characteristics including, program availability, nutrition information, and delivery methods were enablers to FNP participation. Preferred delivery methods of nutrition education included a variety of

methods. Information obtained from this study is used to provide recommendations for FNP.

CHAPTER 1 INTRODUCTION

The purpose of this study was to determine, through the use of focus group discussions (FGD), if the nutrition education needs of participants are being satisfied by the Family Nutrition Program (FNP). “Nutrition education needs” cover a broad scope of concerns, including, but not limited to, knowledge of the program, nutrition education materials, delivery methods, and time and place of nutrition education sessions. Focus group discussions were used to obtain information regarding predisposing, reinforcing, and enabling factors study subjects encountered when participating in the FNP and their preferred methods of nutrition education delivery.

Justification

Louisiana has one of the highest poverty rates in the country with approximately 16% of the total population living in poverty (1). Low socioeconomic status (SES) is associated with an increased risk of nutrition-related chronic diseases including cardiovascular disease (CVD), type 2 diabetes mellitus, and cancer (2-8). Due to economic constraints, individuals with low SES have limited ability to acquire and, therefore, consume food rich in protective nutrients, such as fruits and vegetables (6). Low SES negatively influences nutrition-related behaviors, including food purchasing, preparation, and consumption (5, 7, 9, 10-13).

Louisiana’s FNP, known nationally as the Food Stamp Nutrition Education Program (FSNEP), provides nutrition education for food stamp recipients and other eligible low-income individuals to increase the likelihood that they will make healthy food choices consistent with the Dietary Guidelines for Americans and the Food Guide

Pyramid (14) on a limited budget. Food stamp eligibility is based on federal guidelines (15). At the time of this study, FNP was available in 35 parishes throughout Louisiana. Louisiana's FNP reaches over 50,000 and 72,000 people per year through direct and indirect contacts (16), respectively; therefore, it is important to determine if program characteristics are meeting the needs of the target audience.

Research on the FSNEP program is limited; only one study has shown that participation in FSNEP has led to increased skills in food resource management and dietary improvement (17). Because most states adopted FSNEP relatively recently, the program's effectiveness has not been adequately studied. There are no published studies evaluating Louisiana's FNP.

Effective nutrition education programs must create an environment for behavior change among the target audience (18). Behaviors are classified by the needs, perceptions, attitudes, and beliefs of the target audience. Summative evaluation is one way to determine the needs, perceptions, and attitudes of the target audience once a nutrition education program has been implemented. Information obtained from summative evaluations is used to improve the nutrition education program's characteristics, which include, but are not limited to: program activities, delivery, and nutrition education materials (19-20).

Several studies have used FGD in summative evaluations on nutrition education in other programs (21-22). Focus groups discussions are a type of qualitative research method that can be used to explore the beliefs, needs, concerns, and motivations of a group of people (23). Questions are asked during the FGD that are bound to a theoretical framework which serves as the guiding principle for the direction of the research (24).

Focus group discussions bound by a theoretical framework provide a more structured path for the research and allow others to assess the quality of the research findings (25). Questions used in the present study were based in the PRECEDE/PROCEED theoretical model (26).

To the author's knowledge, no statewide evaluations have been conducted on the Louisiana FNP to determine if the program's characteristics meet the needs, motivations, concerns, and perceptions of the target audience. This study is warranted because issues of the target audience must be satisfied in order to create an environment conducive to behavior change.

Objectives

Focus group discussions, using questions based on the PRECEDE/PROCEED theoretical model, were used to:

1. Determine study participants' awareness of the FNP.
2. Determine why study participants participate in FNP.
3. Identify barriers and enabling factors study participants have using the program and information provided in FNP.
4. Determine preferred nutrition education delivery methods and enabling factors associated with current FNP delivery methods.
5. Provide recommendations from results of the FGD for future revisions of the Louisiana FNP.

Assumptions

Assumptions made prior to the study were:

1. Focus group discussions are an effective method of determining barriers and predisposing, enabling, and reinforcing factors in this population.
2. Participants are truthful in their responses.
3. Responses of participants are not influenced by the group dynamics.
4. Participants are representative of the target population.

Limitations

1. The moderator was not indigenous to the target population.
2. A convenience sample of volunteers was used.
3. The small sample size may not be representative of the entire target population.
4. Some responses of the participants may be influenced by group dynamics. For example, dominant participants may prevent the other participants from being fully involved in the discussion.

Definitions

1. Family Nutrition Program (FSNEP in other states): a federal/state educational program which is part of the Louisiana State University Agricultural Center's (LSU AgCenter) Extension Family and Consumer Sciences program, which teaches low-income individuals to make healthy food choices on a limited budget.
2. FNP Participants: individuals living in Louisiana who are eligible to participate in the food stamp program.

3. Food Stamp Eligibility: monthly gross income less than \$973 for a household of one; \$1,313 for a household of two; \$1,654 for a household of three; \$1,994 for a household size of four; and \$2,334 for a household of five (10).
4. Gross Income: a household's total income before any tax deductions have been made.
5. Food Stamp Program: a federal/state program designed to help low-income families buy food needed for good health.
6. Focus Group Discussion: a group interview where a moderator guides the interview and a small group of individuals discuss issues that the moderator raises (27).

CHAPTER 2 REVIEW OF LITERATURE

Health Risks Associated with Low SES

With over 16% of the total population living in poverty, Louisiana is one of the poorest states in the country. This estimate is greater than the national poverty rate of 12.1% (1). Socioeconomic status can be measured by a variety of variables including income, education, and occupational status. Income is the strongest of the SES predictors (29-30). Low SES is correlated to high overall mortality rates and the incidence of type 2 diabetes mellitus (2-5), cancer (5-7), and CVD (6-8). Health risk factors for CVD such as obesity (31, 32), physical inactivity (32, 33), and cigarette smoking are also more prevalent among low SES individuals (32-35). Low SES adversely affects health (28), in part because low SES individuals have limited access to healthcare services (2).

Obesity is a risk factor for type 2 diabetes mellitus (2), CVD (35), stroke, hypertension, and some cancers (43). An inverse relationship exists between obesity and SES (31, 36-43). Obesity was strongly associated with low SES in females. In contrast, in males, thinness, defined as a BMI less than 20 kg/m² was associated with low SES in males (37).

Townsend and associates reported similar findings (38). Using data from the 1994-1996 Continuing Survey of Food Intakes by Individuals (CSFII), the relationship between overweight and food insecurity were examined. Food insecurity was positively correlated with low income. Overweight, as defined by a BMI over 27.3kg/m² in women and 27.8 kg/m² in men, was positively correlated with low income in women, but not

men. Further, occurrence of overweight was most prevalent in the lowest category for education and income (38).

Low SES is associated with prevalence of type 2 diabetes mellitus (3-4, 44). The Behavioral Risk Factor Surveillance System, a telephone survey, was used to determine prevalence of diabetes among females (3). Data obtained were also weighted to account for differences in age, and ethnic distribution. Diabetes was twice as prevalent in females with annual incomes less than \$25,000 compared to females with higher incomes (3). Females with diabetes were more likely than women without diabetes to be unemployed, nonwhite, divorced or separated, and less educated (3).

The Third National Health and Nutrition Survey (NHANES III) data were used to evaluate the relationship between the prevalence of diabetes and income in 4,978 black and white males and females (4). Prevalence of diabetes was significantly associated with low income in white males and females and black females; however, this association was strongest and most consistent in black and white females. An inverse relationship existed between years of education and occupation and prevalence of diabetes in females; however, this relationship was not consistent in males (4). Although studies by Beckles (3) and Robbins (4), suggested that prevalence of diabetes is associated with low SES, both failed to control for weight, which is a confounding factor for diabetes. This is important because obesity often results in diabetes (2).

Low SES is positively associated with the incidence of cancer (6) and is an ideal marker for low survival rates once a person has cancer (45). Socioeconomic factors and the incidence of and survival from breast cancer among black and white females were investigated (45). Low SES significantly affected patient survival and reoccurrence of

disease. In black patients, low SES had no statistically significant effect on patient survival; however, SES negatively affected patient outcome (45).

Minority groups and individuals of low SES are at higher risk for CVD than white individuals and those of higher income (46-47). Low SES individuals have a 25% greater chance of dying from CVD than those of high SES (32). Using data from NHANES III, effects of ethnicity and SES on six risk factors (smoking, hypertension, obesity, inactivity, hypercholesterolemia, and diabetes) for CVD were examined (8). Females in the high income group were the least likely to get CVD; however, income was not as strongly correlated in males. This study had a high response rate and included study participants from both genders and various races; however, responses were self-reported and bias could have been introduced (8).

The Whitehall study also investigated the relationship between CVD and SES (48). Study participants included 17,530 individuals ages 40 to 64 at the beginning of the study in 1968. Individuals in the low occupation status category had a 53% higher prevalence of angina pectoris when compared to individuals in the high occupational category. Further, at the 10-year follow-up, coronary mortality rate was 3.6 times higher in the lowest category for occupation than those in all combined categories (48).

Low SES individuals (n=1,132) attending primary care clinics in Louisiana were randomly selected as study participants in an investigation to determine the prevalence of high risk behaviors and obesity in this population (33). Approximately 47% of study participants had a sedentary lifestyle. Those who did participate in physical activity were young and had more years of education than those who did not. Forty-six percent of study participants were current or former cigarette smokers. Dietary fat intake was only

assessed in half of the study sample; however, data suggested that approximately 64% had a dietary fat intake higher than the recommended level of less than 30% of calories from fat (33). High fat intake and overall poor dietary habits are a risk factor for CVD, cancer, and stroke (49). Moreover, 64% of participants were classified as obese with a mean body mass index (BMI) of 30.9 (33).

Dietary Patterns of Low SES Individuals

Dietary patterns of low SES individuals are important because there is an inverse relationship between dietary quality and prevalence of chronic disease (50-52).

Consumption of nutrient dense food, such as fruits and vegetables, reduces the risk of cancer (53-55), CVD (56), and ischemic stroke (57-58); however, access to nutrient dense food is often limited among low SES individuals and their families (6). It is sometimes difficult to afford enough food to meet basic needs, let alone nutritious foods (59). Low SES affects not only dietary quality, but also other nutrition related behaviors (5, 7, 9-11, 60). Nutrition related behaviors include practices related to food shopping, preparation, and consumption. Low SES individuals are more concerned with the price of foods than high SES individuals and SES is the strongest predictor of their dietary behaviors (7, 9). Low SES households spend approximately 35% less than high SES households on food per week (61).

Specific nutrient consumption is inadequate in low SES individuals (10-12). Using data from 1994-1996 CSFII and the Diet and Health Knowledge Survey (DNKS), food consumption patterns of food stamp program participants and non-participants were examined (10). A large proportion of low SES adults had inadequate intakes of fiber, and vitamins A, C, E, and folate when compared with the high SES group. These findings are

probably due to the deficiencies in milk, vegetable, and fruit consumption in low SES individuals (11). Low SES individuals were also likely to exceed the recommendations for total fat, saturated fat, and sodium. These large nationally recognized food intake surveys had an ethnically diverse population with a wide range of demographic locations, which allows generalization of the results (10).

Limited financial resources have an adverse effect on an individual's consumption of food from specific food groups (7, 9-11, 13). Data on food choices of low SES household's were obtained from the USDA 1987-1988 Nationwide Food Consumption Survey (NFCS) (13). Compared to the total population, low SES households consumed fewer foods from the dairy, fat, fruit, and vegetable groups. Consumption of foods from the fats and oils group was 5% less than a higher SES population, and consumption of foods from the fruit and vegetable group was 21% less. Individuals in low SES households ate 3% more meat, seafood, and poultry, 14% more eggs, 11% more flour and cereal, and 12% more added sugar than high SES households (13). Fat consumption among low SES individuals were lower than those of Gleason and coworkers (10); however, the NFCS did not include consumption of foods away from home; therefore, fat consumption may have been underestimated (13).

Fruit and vegetable consumption has been shown repeatedly to be inadequate in low SES individuals (7, 9, 11, 13). This is of particular interest because compelling epidemiologic evidence suggests an inverse relationship between fruit and vegetable consumption and several types of cancer (62). Conversely, diets containing adequate amounts of fruits and vegetables can lead to a reduced risk of cancer (53-54).

Barriers exist among low SES females to purchasing, consuming, and preparing fruit and vegetables. Income, transportation, children's preferences, limited storage space, perishability, and high costs of fruits and vegetables are barriers to consumption and purchasing. Taste and texture of fruits and vegetables were also influential on participant's decision to not purchase and prepare these foods (7, 9, 60).

Low SES status can adversely affect food-shopping behaviors for all foods. Food purchasing behaviors were examined in 1,003 households (5). Individuals with lower incomes less frequently purchased fruits and vegetables than those with higher incomes. Fewer types of fruits and vegetables were purchased in the low income group, suggesting that low SES individuals consumed a fewer number of fruits and vegetables and on a regular basis. Individuals who had a lower occupational status and income were more likely to purchase foods containing high amounts of sugar, salt, and fat, and low amounts of fiber (5).

Food Stamp Nutrition Education Program (FSNEP)

The FSNEP cooperates with agencies including the United States Department of Agriculture (USDA), the Cooperative Extension Service (CES), and the State Food Stamp agency. Funds for FSNEP have been available since 1981 as part of the federal Food Stamp budget. The first state FSNEP program was developed in Wisconsin in 1986 (63). By 1996, ten years after the program was implemented, 21 states, including Louisiana, had adopted the program. The goal of FSNEP is to provide educational programs that increase the likelihood that all food stamp recipients will make healthy food choices consistent with the most recent dietary advice as reflected in the Dietary

Guidelines for Americans (64) and the Food Guide Pyramid (65) within a limited budget (14).

To participate in FSNEP, each state must devise their own nutrition education component based on the core elements encouraged by the Food and Nutrition Service (FNS) of the USDA. Core elements are food security, food safety, dietary quality, food resource management/shopping behaviors, and systems and environmental changes. Funding is provided as part of the state Food Stamp Administration budget and has a 50% state match requirement (14). The FNP in Louisiana is funded by the USDA FNS, Louisiana Office of Family Support (OFS) and is coordinated through the Family and Consumer Sciences (FCS) division of CES, of Louisiana State University's AgCenter. The program is available in 35 parishes throughout Louisiana (16).

A federal FNS regulation requires that participation in FNP is targeted to those persons who are eligible to receive food stamps; however, a parish can offer nutrition education through FNP funding to those individuals who are not eligible for food stamps as long as at least 50% of the audience is at or below 185% of the federal poverty level (66). In order to serve other low income individuals, each implementing state must apply for a waiver to this regulation (67). Louisiana's FNP has 9 approved waivers from the following programs: Commodity Food Distribution Program; Temporary Emergency Food Assistance Program (TEFEP); School Lunch Program; Summer Food Service Program; Head Start (HS); Special Supplemental Nutrition Program for Women, Infants and Children (WIC); LA Chip; Medicaid; Family Independence Temporary Assistance Program (FITAP); and Kid Med program.

An FCS agent, also known as an FNP supervising agent, participates in the education process (66). The agent is responsible for supervising the nutrition educators' work, which includes FNP outreach and program delivery on a weekly basis. The FNP agent also collaborates with the community partner agencies such as, HS, OFS, Council on Aging (COA), Food Stamp Agency, commodity distribution sites, senior citizen centers, congregate meal sites, and housing developments to recruit potential participants. In addition to these activities, FNP agents must submit quarterly reports describing outreach activities within the respective parish to the state FNP office (66).

Nutrition educators are responsible for FNP program implementation at the parish level. Nutrition educators recruit and enroll eligible individuals for the FNP program. Nutrition educators are also required to conduct nutrition education activities and report their number of contacts into the FNP Reporting System and the AgCenter's Planning and Reporting System (PARS) (66).

Each Louisiana FNP parish can individualize their nutrition education program to meet the needs of their target audience (68). The nutrition activities of 24 FNP parishes are listed in Appendix A. Nutrition information is disseminated through newsletters, food demonstrations, individual interventions, group sessions, videos, and public service announcements (68). Louisiana's FNP develops their own nutrition education materials, uses material adapted from other agencies, or uses materials from other agencies (67). The lesson series includes topics such as: "Eating on the Go," "Check out the New Food Label," and "Save Money when you Buy Food." The FNP works in collaboration with other community agencies to disseminate nutrition education (68).

The FNP reaches participants through direct and indirect methods. Direct contact methods include formal educational classes conducted at Food Stamp Offices or community agencies serving low-income individuals, lessons conducted over the telephone, videotape viewing, and individual interventions. If an individual is reached by direct contact, they are encouraged to fill out an enrollment form. During the 2003 federal fiscal year (FFY), 50,355 individuals were contacted using direct teaching methods (16).

Indirect methods include newsletters, brochures, flyers, and displays (16). Participants who are reached by indirect methods do not have to fill out an enrollment form. In the same 2003 FFY, 72,711 individuals were reached by FNP through indirect contacts, such as receiving nutrition education newsletters through the mail and viewing nutrition education displays and billboards (16).

FNP is marketed through outreach activities (66). All FNP personnel conduct outreach activities. Collaborative agencies are recruitment sites for potential FNP participants. Participants are given a promotional brochure, information about the program, and possible benefits associated with participation during outreach activities. The FNP outreach activities reached over 40,000 individuals during the 2003 FFY (16).

Currently, no national FSNEP reporting system exists to identify the degree to which the programs serve the target population. Due to the lack of a reporting system, it is challenging to evaluate effectiveness of the program (67). As a result, state agencies must develop their own methods to evaluate program characteristics and effectiveness (67). Further, no uniform, central information exists demonstrating how state agencies are meeting program goals because no requirement exists to report progress toward

meeting goals and objectives throughout the FFY; however, some state agencies do report this to regional offices (14, 67).

Federal regulations do require that each implementing state report the number of individuals reached through FNP by direct and indirect contacts (14). In Louisiana, each FNP parish must submit monthly and quarterly reports to the state office which describes separately the outreach activities performed and the number of direct and indirect contacts made within the given time period. Nutrition educators in each parish must mail copies of completed FNP enrollment forms to the state office (66).

In addition to submitting quarterly reports, FNP nutrition educators and supervising agents must report the number of FNP contacts and FNP outcome statements in PARS. In this system, the supervising agent and nutrition educator must enter a plan of work (POW) annually. The POW establishes yearly objectives for both groups. Lesson evaluations are entered into the FNP reporting system; however, these are done monthly. Lesson evaluations consist of completion of the FCS survey which asks the participants to indicate what they have learned and what they intend to change after completion of an FNP lesson (66). The survey does not quantitatively measure knowledge gained after completion of the nutrition education lessons. A summary of evaluations used in 26 of the 35 FNP parishes is listed in Appendix B.

Only one published study could be found on effectiveness of a state FSNEP program, and that study suggests that participation in the program has led to increased skills in food resource management and dietary improvement (17). In that study, the changes made in nutrition behaviors by participants after completion of the Texas FSNEP program, Better Living for Texans Program (BLT), were investigated.

Participants for the study were selected from those individuals who participated in the BLT program during the FFY 1998 (17). Out of 1,720 eligible individuals, 481 (28%) were randomly selected to participate in the study. The survey was administered during August and September of 1999 (17).

Results suggested that after completion of the program, participants consumed more servings from the vegetable, fruit, and dairy food groups (17). Although not statistically significant, consumption of breads, cereal, rice, and pasta also increased following completion of the program. Participants also reported the use of safe food handling practices and food money management techniques (17).

The USDA FSNEP Final Report (2000) indicated that most FSNEP programs (78%) conduct process and outcome evaluations for their state programs (67). Process evaluations were used primarily to determine the number of individuals reached through the program and make recommendations for improving program content and delivery. State FSNEP programs also reported conducting outcome evaluations that measured the participant's nutrition knowledge gained, food-related behavior modification and attitudes about nutrition-related concepts. Each states' outcome evaluation methods varied, and comparisons of state FSNEP programs are difficult (67).

Nationally, state FSNEP programs reported several barriers to implementing nutrition education (66). The lack of federal regulations requiring states to report program outcomes makes it difficult to determine the overall effectiveness of the program. Federal regulations require states to report the number of individuals reached, but not specific outcome measures. Consistent, uniform data do not exist currently to determine if and how state implementing agencies are meeting their program objectives.

Development of a national reporting system would make it possible for states, as well as federal regulators, to track the number of participants reached through the program and determine if a state FSNEP is meeting program objectives. As described previously, Louisiana's FNP has implemented the FNP Reporting System, but it does not measure actual knowledge gained from the program or behavior changes made and sustained, but rather it identifies what concepts the participants were exposed to and the consequent actions they intend to make.

States implementing the FSNEP program have reported trouble recruiting and retaining participants because of skepticism of the importance of nutrition education among the target audience (67). Several states' with an FSNEP program reported only a small number of people attending scheduled nutrition education sessions. Other states implementing the program indicated that the lack of knowledge between the association of nutrition and chronic disease prevention might contribute to doubtfulness among the target audience in changing their dietary patterns (67).

Design and delivery of nutrition education to target audiences was a barrier to program implementation. Creating inventive approaches to reaching the target audience was time-consuming and interfered with daily responsibilities of staff. Members of the target audience consisted of people with heterogeneous characteristics including: culture, beliefs, gender, age, and family composition. Another barrier to implementing FSNEP is the high turnover rates of staff and difficulty in training staff. A major contributing factor to this is the low pay scale for nutrition educators. Additionally, conducting a needs assessment was also a problem faced by many state FSNEP programs. Lack of time and skills necessary to conduct this assessment are contributing factors to this problem (67).

Nutrition Education and Evaluation

A widely accepted definition of nutrition education is “any set of learning experiences designed to facilitate the voluntary adoption of eating and other nutrition-related behaviors conducive to health and well-being” (69). Nutrition is often a difficult subject on which to educate the general public because heterogeneity exists throughout the population, and there may be misconceptions and much misinformation regarding nutrition. Educating the population about nutrition is also difficult because of the complexity of dietary behaviors (70).

Methods to encourage behavior change must be included in a nutrition education program for it to be effective. Behaviors are classified by the needs, perceptions, attitudes, motivations, and beliefs of the target audience. In order for behavior change to occur, a nutrition education program must be developed consistent with the needs, perceptions, attitudes, motivations, and beliefs of the target audience (18).

One way to determine the needs, perceptions, and attitudes of a target audience is through evaluation. Evaluation should be done prior to program development and should be executed throughout program delivery. Two types evaluations are used to assess needs of the target audience: formative and summative. Formative evaluation is conducted prior to program development and summative evaluations are conducted throughout program implementation (19). Summative evaluation was conducted in the present study because the Louisiana FNP program is already being implemented. Thus, this review is limited to summative evaluation.

Summative Evaluation and Relevant Studies. Effectiveness of a nutrition education program in meeting the needs of the target audience can be described using

information obtained through summative evaluation. Although this type of evaluation is performed during program implementation or at the end of a program, it must be designed during program development (19-20). All information obtained through summative evaluation is used to improve continuously delivery and effectiveness of the program (19).

Summative evaluation is used to obtain feedback on all aspects of the nutrition education program including: program activities, presenter and presentations, nutrition education materials, and other characteristics of the program (19-20). Participants can also make suggestions to improve aspects of the program through this type of evaluation (19).

Several studies have used summative evaluations in nutrition education research to determine attitudes, perceptions, beliefs, and knowledge of the target audience (21-22, 71-72). Client satisfaction with the nutrition education component of WIC was assessed by Nestor and associates (21). Participants (n=2,138) who received nutrition education through WIC completed a client satisfaction survey. Focus group discussions were also conducted among some participants (n=29) and were used to determine participant satisfaction and recommendations for improving the nutrition education component (21).

The quantitative survey suggested that overall satisfaction with the nutrition education program of WIC was high (21). Thus, positive responses to the satisfaction questions ranged from 75% to 93%. During the FGD, participants indicated that nutrition education methods should include one-on-one lessons and small group settings. All FGD participants reported receiving written nutrition education materials; however, as many participants discarded the written materials used them as a reference. Participants also

indicated that people with poor reading skills had difficulty reading printed materials, but in-class discussion helped participants' understanding. Some participants were also not aware of nutrition education classes in the WIC program. These participants stated that if the topics being taught were of interest to them, they would attend. Only 1 out of 29 participants in the FGD stated that the nutrition education information presented in WIC was not useful. Use of videotapes, demonstrations, and pamphlets were recommended by other study participants to improve nutrition education delivery (21).

Nestor and associates (21) incorporated qualitative and quantitative evaluation methods; however, the study had limitations. Information from the small sample size cannot be generalized to the 800,000 California WIC participants. Generalization is also difficult because participants in the FGD were only recruited from 3 of the 629 California WIC clinics. Non-random, self-selection of participants by personnel at the WIC clinics may have biased the results. It was also difficult for study participants to express what types of educational methods they prefer if they had never been exposed to a particular method (21).

Summative evaluation was also used to determine barriers to participation in the EFNEP and an adult education class offered by the North Carolina CES located in a small rural county (72). Twenty EFNEP participants, out of a possible 114 people who used the program, completed a personal interview and a structured survey.

Barriers to participation in both nutrition education programs and classes existed among study participants. All participants indicated that there were barriers to using the information provided by Extension Nutrition Programs. Barriers included, knowledge of the various programs (n=9), inability to leave the home due to family responsibilities

(n=16), difficulty reading and understanding important information (n=16), lack of usefulness or relevance of nutrition information (n=9), and transportation (n=17). Information provided by participants suggested that participation in nutrition education would be easier if the program or lessons were made available to the participants at community centers, churches, and assistance agencies. Use of alternate educational methods such as videotapes or learning modules could also be used to reach potential program participants (72).

Focus Group Discussions

Focus group discussions are a type of qualitative research method that can be used to explore the beliefs, needs, and concerns of target audiences (73). Initially, FGD were used in marketing research (23, 73), but they have also been widely used in social science research due to the useful and innovative data that are obtained (25). Focus group discussions are used primarily in formative and exploratory research (25, 73). They are a means by which a group of people with similar backgrounds can share their beliefs, attitudes, and interests on a topic of concern (23-24).

Focus group discussions require a moderator, an assistant moderator, and participants representing the population of interest (24). The ideal number of participants in each FGD is six to ten (24); however, the number has ranged in some studies from four to twelve (24, 73-74). Before the FGD begins, a set of carefully planned, open-ended questions is constructed. The questions are constructed to elicit the most valuable and detailed information regarding the beliefs, attitudes, and perceptions about the topic of interest. The questions that are asked during the FGD are based on a theoretical framework that serves as the guiding principle for the direction of the research (24).

Focus group discussions bound by a theoretical framework provide a more structured path for the research and allow others to assess the quality of research findings (25).

The moderator and assistant are skilled professionals and, preferably, indigenous to the population they serve (75). During the FGD, the moderator asks each question in a non-judgmental tone, free of bias. The moderator of a FGD should have extensively researched the topic being discussed prior to the participants' arrival (75-76)

The duration of the FGD depends on the nature of the research, but is approximately two hours. Focus group discussions are video- taped, audio- taped, or both. After the completion of the FGD, the moderator and assistant view the tapes separately and transcribe the results. Researchers identify repetitive themes and ideas. The typical number of FGD conducted is three to five; however, new FGD are conducted until repetitive trends are identified and no new information emerges (77). The information obtained from the FGD is interpreted and used to generate hypotheses (25).

Like other evaluation techniques, FGD have strengths and limitations. Focus group discussions are held in an unrestricted, non-threatening environment that allows participants to discuss freely ideas or areas of concern (23). The use of open-ended questions in FGD allows for the voluntary expression of impressions (78). The unrestricted flow of ideas and beliefs allows for the exploration of areas poorly understood by researchers. Participants of FGD come from similar backgrounds, which enable them to feel comfortable enough to share their input on the topic(s) of concern. Focus group discussions do not require reading or writing; therefore, all participants can be involved, regardless of literacy level (25).

Limitations of FGD include that the moderator has limited control over the direction of topics or questions; therefore, impractical or useless information may be obtained. The role of the moderator in this situation would be to refocus the participant's attention on the question or topics of interest. Focus groups discussions are not an ideal evaluation tool when assessing beliefs, barriers, and perceptions of individuals (25, 79).

The information obtained through FGD is often difficult to evaluate or measure because interpretation can vary among researchers. A small number of FGD and participants are often included in a study; therefore, participants' responses may not be representative of the target population. This can be avoided by conducting at least three FGD. If new information and themes continue to emerge after the initial three FGD, subsequent FGD should be conducted until no further information is obtained.

Generalization to the total target population is further complicated because participants are often not randomly selected, but are recruited as volunteers (25). Generalization would be a problem because volunteers may possess different qualities than those who do not volunteer, simply because they are volunteers. Thus, information obtained from volunteers would not necessarily be the same as those who did not volunteer even though they may be of the same race, gender, and SES. The responses of the participants may be biased if one or more participants are dominant throughout the FGD (25). Bias of results can also ensue if the moderator poses questions in an inappropriate manner (25). A moderator can avoid introducing bias by remaining impassive throughout the FGD (78).

Information obtained from FGD have been used to determine the specific needs and concerns of a particular group of people when planning a nutrition intervention (7, 73, 76, 78-82) or make recommendations for improvements to existing nutrition

education programs (21-22). Focus group discussions have also been used in nutrition education research on minority groups (82-88) and to determine factors that affect consumption of certain foods in various study populations (7, 9, 89).

Several studies have used FGD to determine effective nutrition education delivery techniques and formats (21, 76, 78, 86, 90-91). Macario and associates used FGD to determine nutrition education needs of and effective delivery techniques for low-literacy persons in an adult education class (90). Unlike other studies, which only use FGD among participants, this study also included interviews with professionals. Professionals including nutritionists, literacy professionals, and healthcare providers were used to identify methods to determine if an individual has trouble reading and preferred methods of delivering nutrition education. Professionals indicated the importance of cultural differences and influences of children in nutrition education. Individual's reading level was usually determined if they were unable to fill out necessary medical forms (90).

The FGD among participants of the adult education class was used to determine barriers to eating a healthy diet, preferred delivery methods of nutrition education, awareness of healthy foods, and interest in learning about nutrition (90). Barriers included the high cost of fresh fruits and vegetables, lack of time to prepare foods, fast food consumption, erratic work schedules, and children's food preferences. Participants, as well as professionals, indicated that group discussions and demonstrations would be an effective method to learn about nutrition. Books containing photos, as well as radio and television nutrition messages, were also thought to be effective in delivering nutrition

information. The use of FGD in this study allowed participants to express their ideas and beliefs without having to read or write (90).

Another study used FGD to direct the design and development of a nutrition intervention for low-literacy audiences by determining the nutrition education needs of low literacy individuals who participated in the EFNEP (91). Unlike the study by Macario and associates (90), this study only included participants of the program. The study design included twelve FGD with 41 participants of various ethnic backgrounds. Participants indicated that nutrition messages using media would be beneficial. Clear, concise, and practical nutrition information was also important to the participants (91). Potential barriers to making dietary changes in this group included time, money, children's preferences, and lack of knowledge regarding healthy foods (91).

Nutrition education materials targeted to the public have been evaluated using FGD (78). Participants consisted of men and women recruited from a wellness center mailing list. Participants were asked to evaluate several different nutrition education materials. Evaluation by participants was based on visual attractiveness, quality of nutrition information, and usefulness. Data obtained from the study were used to make recommendations to improve the content of the nutrition education materials (78).

Theoretical Model: PRECEDE/PROCEED

Theoretical models serve as the framework on which qualitative research is based (25). The PRECEDE/PROCEED model is a suitable model for health education promotion (26). PRECEDE is an acronym for predisposing, reinforcing, enabling causes in educational diagnosis and evaluation and was developed in the 1970s. The PRECEDE framework is the needs assessment component of health promotion planning. In this

section of the model, predisposing, enabling, and reinforcing factors that contribute to particular behaviors are identified. The PROCEED component implements and evaluates the processes and outcomes of the health education program. PROCEED is an acronym for policy, regulatory, organizational constructs in educational and environmental development. In the PROCEED component of the model, evaluations are planned and implemented (26). Only the PRECEDE section of the model will be discussed.

The PRECEDE framework is divided into five phases, which move from right to left in the model: social, epidemiologic, behavioral and environmental, educational and organizational, and administrative and policy. All five phases are interrelated and use information from the previous phase (26).

Phase 1, the social diagnostic phase, addresses the social and cultural aspects that affect the quality of life and overall well being of the target audience (26). In phase 2, the epidemiologic diagnostic phase, health problems that may contribute to the quality of life aspects seen in phase 1 are identified. The epidemiologic phase uses information from epidemiologic data such as vital statistics, mortality rates, and prevalence of chronic disease to prioritize the social problems. Phase 3, the behavioral and environmental diagnostic phase, is used to identify behavioral or environmental factors that contribute to larger health problems seen in phase 2. Examples of behavioral and environmental factors include: ethnicity, genetic predisposition, age, gender, workplace conditions, and availability of healthcare (26).

Phase 4, the educational phase, consists of categorizing factors that may influence behaviors, in particular participation in nutrition education. Factors are classified as predisposing, enabling, or reinforcing. Predisposing factors are motivations or

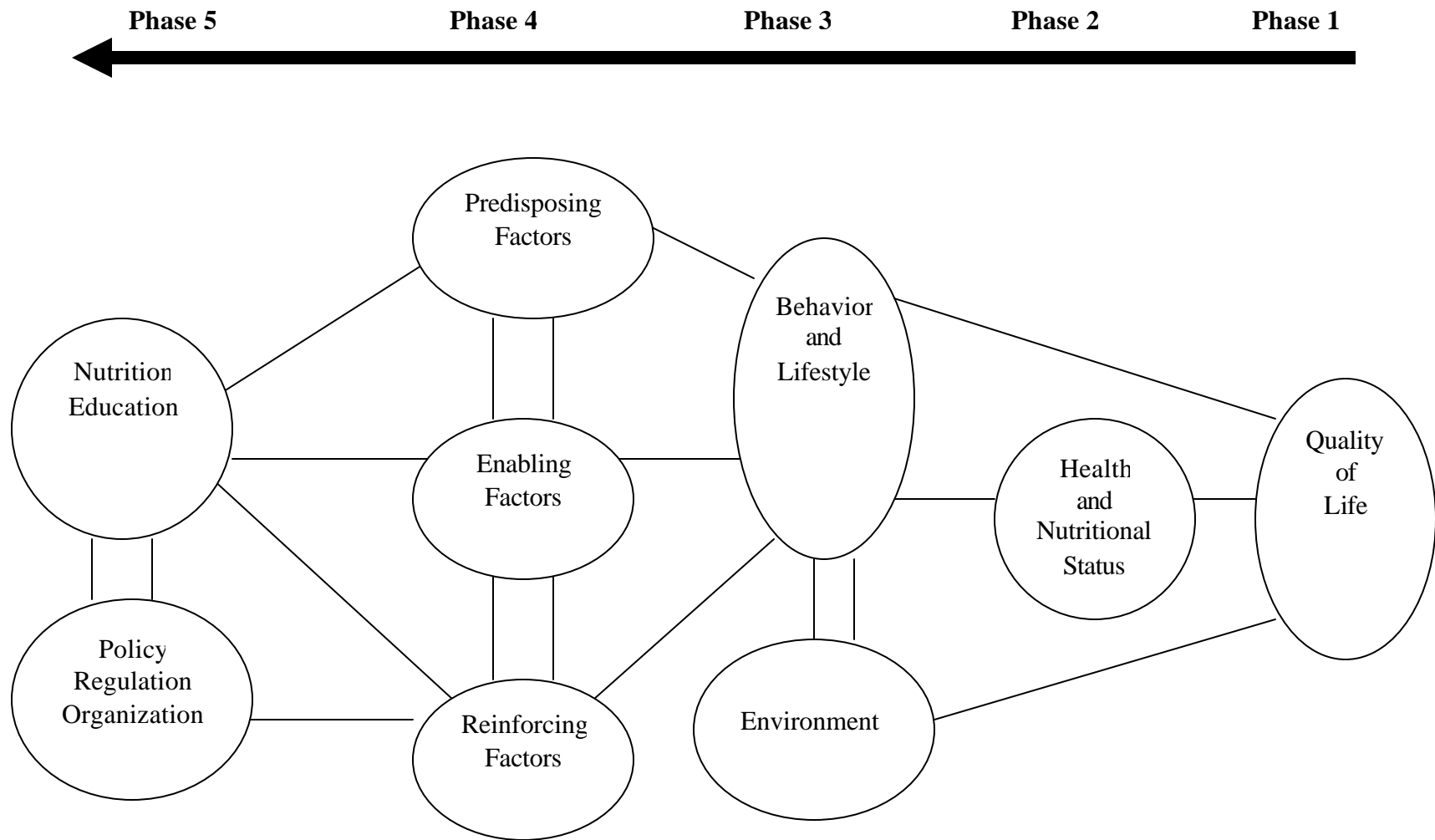


Figure 1: Adapted PRECEDE component of the PRECEDE/PROCEED model for the nutrition education needs of low SES individuals.

behaviors that attract someone to act in a certain manner prior to the behavior.

Predisposing factors can stem from beliefs, attitudes, and knowledge. Enabling factors can be negative or positive and are defined as the environment or resources that expedite an action or behavior. Negative enabling factors, also referred to as barriers, can adversely influence a behavior. Examples of enabling factors include skills, available materials, or barriers. The accessibility or availability of resources can facilitate a behavior. Reinforcing factors are reprimands or rewards that are anticipated after the implementation of a behavior. Reinforcing factors can act as incentives for the persistence of a behavior, or the consequences of an unwanted behavior. Family, friends, peers, and administrators can act as reinforcing factors of behaviors (26).

After identifying and evaluating predisposing, enabling, and reinforcing factors, researchers discuss the concerns that must be addressed in a program (26). The administrative and policy diagnostic analysis phase is the last phase of the PRECEDE framework. Considerations regarding budget development, coordination with other institutions, and resource allocation are taken in this phase. The administrative and policy diagnostic phase are of equal importance prior to implementation of the program. Administrative diagnosis specifically analyzes the policies and resources that could obstruct or facilitate the program's implementation. The policy phase estimates the level of compatibility of the new program's objectives and goals to those of established programs (26).

The PRECEDE/PROCEED model has been used in the past to develop nutrition education materials to increase calcium intake in low-income Vietnamese females (92). The model has also been used to determine the nutrition education needs related to

calcium consumption in Caucasian, African American (93), and Vietnamese females (85), to develop a peer nutrition education class for dietetic students (94), and to determine personal nutrition barriers of EFNEP paraprofessionals in Louisiana (95).

CHAPTER 3 SUBJECTS AND METHODS

Institutional Review Board Approval

This study was approved by the Institutional Review Board (IRB) of the Louisiana State University (LSU) AgCenter. A copy of the submitted application form, demographic survey, and consent form are found in Appendix C, D, and E, respectively.

Staff

A moderator and assistant moderator conducted the FGD. The moderator was a Human Nutrition and Foods (HNF) graduate student at LSU. Either an LSU extension associate or another HNF graduate student served as assistant moderator. The extension agent or nutrition educator of the participating FNP parishes also assisted with arranging chairs and tables in the meeting rooms for FGD and distributing the demographic surveys and consent forms as participants arrived. Neither the agent nor the nutrition educator was present in the room during the FGD. The moderator guided the FGD using a list of specific questions (Appendix F) about the nutrition education needs of the target population; satisfaction with Louisiana's FNP; and predisposing, enabling, and reinforcing factors to participating in the program. The moderator used probes to gain additional insight into responses or to clarify responses from participants. The role of the assistant moderator was to collect demographic surveys and consent forms, serve refreshments, and operate recording devices.

Question Construction

Open-ended questions were constructed based on the objectives of the study and guided by the PRECEDE/PROCEED model (26). Recommendations by Krueger and

Morgan (1998) guided question development and sequence. Open-ended questions, starting with a general question, and use of more specific questions as the FGD progressed were used (77).

Twenty-five questions that addressed objectives of the study and identified predisposing, enabling/barriers, and reinforcing factors which influence participation in FNP were included in the first draft. During revision, questions were eliminated if they did not meet the study objectives or identify factors described in phase 4 of the PRECEDE/PROCEED model. Questions were also eliminated if they were repetitive. Thus, the list of FGD questions was finalized at 12 questions. Questions were then grouped into thought units. Further clarification and revisions to the FGD questions were made following a meeting with the research team. The pilot FGD was also used to further refine the questions. Again, the PRECEDE/PROCEED model guided modification of the FGD questions for nutrition education needs of FNP participants (Figure 2). Table 1 provides a description of questions used in the FGD by type of question, matched objective, and factors identified.

The first FGD question, “What would you consider to be a healthy meal?” was the introductory question. This question was an “ice-breaker” and allowed easy conversation among the participants, but was not critical to the objectives of the study. Information obtained from this question was not included in the final results because it was beyond the scope of this thesis.

Questions 2 and 3 were constructed to determine knowledge about FNP and reasons for participation. The second question, “How did you hear about FNP?” was a

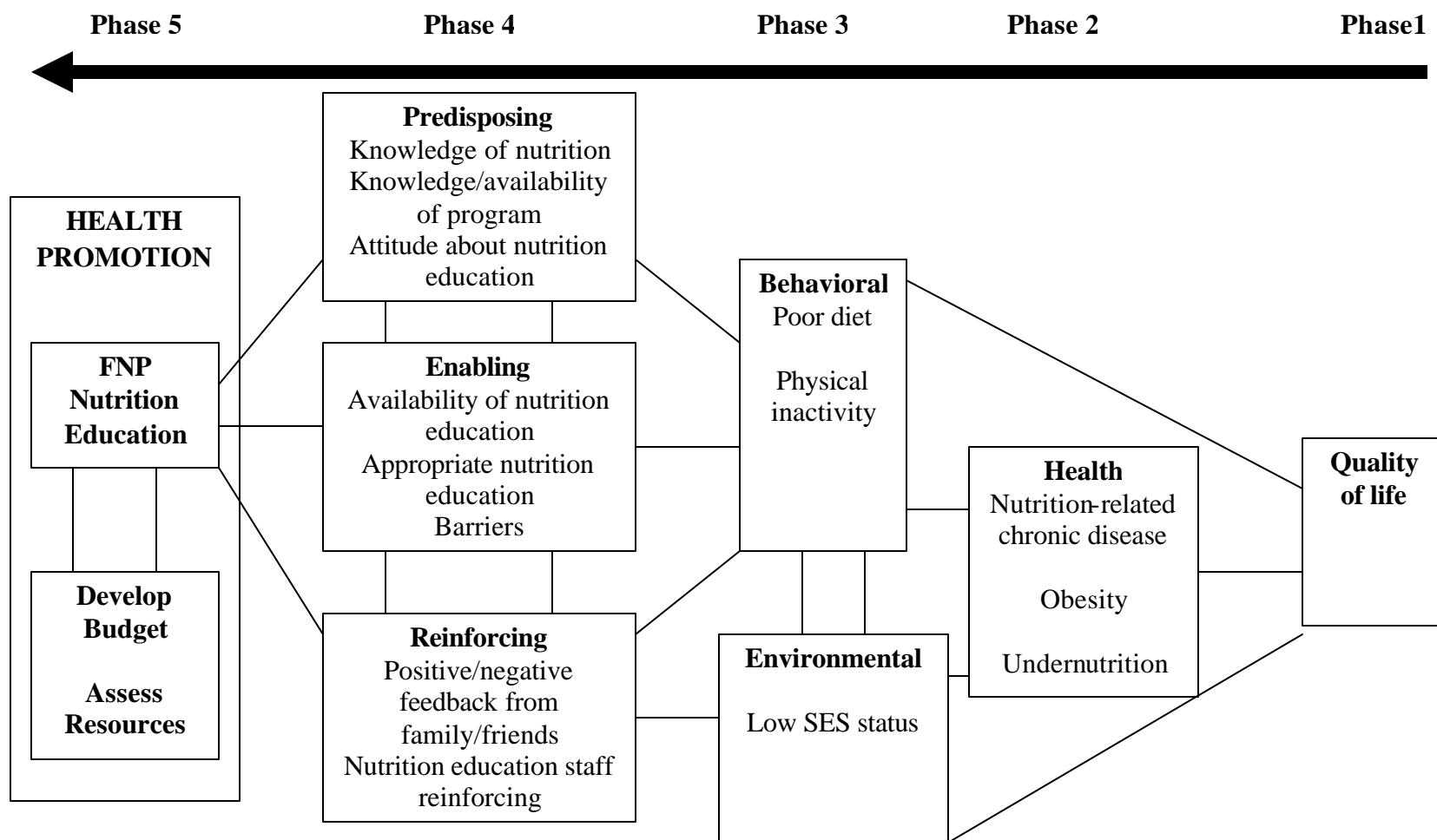


Figure 2: Model for nutrition education needs of FNP participants.

Table 1: Focus group discussion questions by type, matched objective, and factors identified.

#	FGD Question	Type	Matched Objective	Factors Identified
1	What would you consider to be a healthy meal?	Introductory	None	None
2	How did you hear about FNP?	Transition	<u>Objective 1</u> : Determine study participants awareness of FNP.	Predisposing
3	Why do you come to FNP meetings?	Key	<u>Objective 2</u> : Determine why study subjects participate in or express interest in FNP.	Predisposing
4	Is there anything that keeps you from participating in or attending the FNP seminars?	Transition	<u>Objective 3</u> : Identify barriers and enabling factors study participants have using the program and information provided in FNP.	Enabling/ Barriers
5	Do you think the ideas and topics presented in FNP are realistic? Are there any difficulties in following the things you learned in FNP at home?	Key	<u>Objective 3</u> : Identify barriers and enabling factors study participants have using the program and information provided in FNP.	Enabling/ Barriers, Reinforcing
6	What types of topics do you like or would you like to see covered in FNP?	Transition	<u>Objective 4</u> : Determine preferred nutrition education delivery methods and enabling factors associated with current FNP delivery methods.	Enabling/ Barriers
7	When you receive nutrition information, what format do you prefer to receive that information?	Key	<u>Objective 4</u> : Determine preferred nutrition education delivery methods and enabling factors associated with current FNP delivery methods.	Enabling/ Barriers
8	If you could change something about the FNP presentations or presenters, what would you change? Why?	Key	<u>Objective 4</u> : Determine preferred nutrition education delivery methods and enabling factors associated with current FNP delivery methods.	Enabling, Reinforcing
9	Is there anything else you would like to talk about regarding FNP?	Ending	None	None

transition question. This question was designed to provide information for the first objective in this study. Further, this question provided the link to guide participants to the more specific, core questions of the FGD. Question 3 was a key question in the FGD. Question 3, “Why do you come to the FNP meetings?” allowed participants to provide information about why they used FNP, which is the second study objective.

Question 4 was a transition question. This question shifted the focus of the discussion to identify barriers or enablers participants encountered in using FNP, which was the third study objective. Question 5 was a key question and was constructed to provide information which would allow the researcher to further identify any barriers or enabling factors that the study participants have using information in the program.

Questions 6 through 8 were constructed to determine preferred nutrition education delivery methods and enabling and reinforcing factors associated with current FNP delivery methods. Question 6, “what types of nutrition-related topics do you like or would you like to see covered in FNP,” was a transition question and shifted the focus of the conversation to characteristics of the program that participants considered useful. This question provided information on the types of nutrition information the study participants considered important or useful. Questions 7 through 8 were key questions. Questions 7 enabled participants to describe preferred delivery methods of nutrition education. Question 8 allowed participants to recommend changes for the FNP presentations or presenters. Question 8 also allowed participants to explain why they would make changes to the FNP presentations or presenters. Responses to questions 7 through 8 provided information on the usefulness of delivery methods used in FNP.

Information obtained from questions 2 through 8 were all used to make recommendations for revisions of the FNP.

The last question was the ending question. It allowed participants to provide additional information about FNP, which may not have been covered in the FGD questions.

Pilot Test

A pilot session was conducted in an FNP parish located in Central Louisiana at the local CES. Participants were recruited by the parish extension agent and nutrition educator. The study participants were all black females and had previously participated in FNP. All participants provided written consent prior to participation. Demographic surveys were completed also to test the survey before inclusion into the remaining FGD. Since the participants in the pilot session were FNP participants, it was assumed that they possessed similar characteristics to participants of the planned FGD.

The pilot session was conducted to evaluate the effectiveness and clarity of the questions constructed for the FGD. The pilot session was videotaped and audiotaped to obtain a record of participants' responses and reactions to the FGD questions.

After the pilot session was completed, tapes were transcribed to identify themes and potential problems with the FGD questions. Only one question needed to be clarified and all other questions were not modified from their original form. In question number 5 the term "realistic" was replaced with "practical." Because only this minor change was made to the FGD questions after the pilot session, data obtained from the pilot session were included in this thesis; however, data from the pilot and all remaining FGD were each analyzed separately.

Participating Parishes

Initially, a convenience sample of nine parishes with FNP was selected to take part in the FGD. Seven out of the nine original parishes declined to participate due to participation in another evaluation not associated with FNP, prolonged absence of a nutrition educator or extension agent, failure to respond to calls after repeated attempts, or failure to recruit an adequate sample size. Due to the low response rate from the initial nine parishes, eight additional parishes were invited to participate. Four out of the eight additional parishes declined to participate for the same reasons mentioned above. One FNP nutrition educator and extension agent were not able to participate during the study period; however, they did agree to participate if additional FGD were needed at a later date.

Out of the possible FNP parishes listed above, five parishes (including pilot) agreed to participate. Nutrition educators or extension agents in the respective Louisiana FNP parishes recruited the FGD participants. Announcements and fliers (Appendix G) were posted throughout these agencies asking for volunteers. The FNP nutrition educators or extension agents also telephoned individuals whom they thought might be interested in participating. For one FGD, a unique recruiting situation was used: individuals were participants of a mandatory program administered by the Office of Family Support (OFS). Because FNP conducts nutrition education during this program, individuals in this FGD were not recruited before the study. All individuals from this parish were informed of the nature of the study, asked if they would like to participate, and agreed to voluntarily participate upon arrival to the program.

Study Participants

Selection criteria for study participants were: 1) participated in at least one FNP nutrition education session, received FNP brochures, or seen FNP displays; 2) interest in discussing questions in a small group setting, and 3) ability to participate for approximately 90 minutes.

To arrange the time, date, and location of each FGD, approximately three conversations via telephone were held between the moderator and the extension agent of each participating parish. During the last telephone conversation, the approximate number of participants and finalization of details pertaining to the FGD were discussed.

Focus Group Discussions

The moderator arrived at site approximately 40 minutes prior to the designated start time for each FGD. During the time prior to the FGD, recording devices were set up and tested. Consent forms and demographic surveys were also assembled for distribution. Tables and chairs were arranged in a formation conducive to sharing information. Low-fat ginger snaps, apple juice, orange juice, and chilled water were made available. As the study participants arrived, they were greeted by the moderator, the assistant moderator, or the nutrition educator. After all participants had arrived, the moderator re-introduced herself and informed the participants of the purpose of the study. Consent forms were distributed and explained to the participants. Participants provided informed consent prior to administration of demographic surveys or participation in the FGD. The moderator or the assistant moderator witnessed the signature of the participants. At this time, the nutrition educator left the room. After answering any questions the participants had about the FGD, they were encouraged to participate in the

conversation, thanked for their participation, and recording devices (audio or video recorder) were started.

As the moderator was describing the purpose of the study, the assistant moderator distributed documents to any latecomers. Latecomers were those people who arrived during the introduction to the FGD; however, they were admitted only if the question sequence had not started. Before joining the discussion, the assistant moderator secured informed written consent from participants who arrived late. The moderator then began asking the questions. The entire FGD lasted approximately 80 minutes. After completion of the FGD, the moderator and assistant moderator secured all documents, and then distributed gift packages to each participant. Each gift package contained the following nutrition-education reinforcement items: a magnetic shopping list pad, a colander, a cutting board, a 5-piece measuring spoon set, a 5-piece measuring cup set, a 12 month nutrition calendar, and 5-piece bookmark set with nutrition messages. Each gift package was valued at approximately \$7.50. Additionally, the moderator's notes, all forms, and tapes were labeled by date, location, and time of each FGD.

Analysis

Immediately following the FGD, audio or video tapes were transcribed *verbatim*. Video tapes were used for the pilot session and one other FGD, but were discontinued after the second FGD because of insufficient room at various meeting sites or lack of sound clarity. Audio tapes were used for all FGD and were the only source of recording for the remaining three FGD. Transcriptions of the five FNP FGD were coded as Parish One, Parish Two, Parish Three, Parish Four, or Parish Five to ensure confidentiality. Thus, the actual names of the FNP parishes which participated will not be revealed.

After all FGD tapes were transcribed, each FGD was analyzed separately. For each FGD, responses were combined under each corresponding question for analysis. A summary of each question in the FGD was then constructed using responses for each FGD. For example, all comments and statements made by study participants in one parish for question 2 were combined to form one summary for that question. The same procedure was implemented for the remaining FGD and questions.

Summaries of each FGD question were used to identify trends, unifying themes, attitudes, interpretations, and ideas which emerged throughout the FGD. Responses to questions were also classified as predisposing, enabling, or reinforcing factors to participation in FNP and were then summarized in a table after results for each FGD.

Questions 1 and 9 were omitted from the final results. Information obtained from question 1 (introductory question) was not included because it was beyond the scope of this thesis. Additionally, question 9 (ending question) was not included because no useful and relevant information was obtained.

CHAPTER 4 RESULTS

Five FGD (including the pilot study) were conducted with FNP participants as part of this project to determine satisfaction of FNP characteristics and nutrition education needs of low SES individuals. Characteristics of FGD are shown in Table 2.

Table 2. Summary of focus group discussions conducted with FNP participants by date, total number of participants in the focus group discussion, and parish code name.

FGD	Date	# Participants	Parish Code Name
1	9/16/03	11	Parish One
2	9/18/03	5	Parish Two
3	9/19/03	3	Parish Three
4	10/1/03	6	Parish Four
5	10/15/03	9	Parish Five

A summary of demographic information on the participants is presented in Table 3. There were 34 participants (88% black; 100% female) in the study. The mean number of participants in each FGD was seven (span 3-11). Because of the small number of white participants, there was no attempt made to dichotomize and evaluate responses by race.

Data from each FGD were analyzed separately to control for variability among each group. Five summary tables (Tables 4 through 8) present information obtained from each FGD as predisposing, enabling, and reinforcing factors in the PRECEDE/PROCEED model.

Table 3. Summary of demographic characteristics of study participants by FGD.

Focus Group Session	All FGD	1 (Pilot)	2	3	4	5
Number of Participants	34	11	5	3	6	9
Mean Age (in years)	35	43	23	36	24	48
Race						
Black	30	11	3	3	4	9
White	4	0	2	0	2	0
Education Level						
<12 th grade	10	2	4	0	2	2
GED	3	1	1	0	1	0
High School Graduate	9	3	0	1	1	4
Some College/Technical	6	2	0	0	2	2
College/Technical Graduate	3	0	0	2	0	1
Mean # of children <18 years in the household	1.5	1.7	1.6	3	0.7	0.5
Mean # of adults in the household	1.4	1.4	1.2	1	1.7	1.5
Food Preparation						
Self	27	9	4	3	3	8
Family Member/Other	5	0	1	0	3	1
Food Shopping						
Self	27	9	4	3	3	8
Family Member/Other	5	0	1	0	3	1

Parish One

Knowledge of FNP and Reasons for Participation. Knowledge of FNP was identified as a predisposing factor to participation in nutrition education among study subjects in this FGD. Most (67%) of the participants stated that they heard of FNP through the nutrition educator. Three of the participants stated that the nutrition educator also made telephone calls or sent written letters inviting them to join the program. Participants also stated that they heard about the program through other community agencies or centers such as HS and the Town Hall where the nutrition educator conducted

FNP sessions. One participant stated that a flyer about FNP was displayed in a washeteria. Availability of FNP in Parish One is an enabling factor to participation.

Interest in nutrition and health was a predisposing factor to participation in FNP nutrition education. Most participants (n=10) indicated that they participated in FNP because they wanted to learn more about nutrition-related concepts. One participant stated, “It’s fun, it’s educational, and a lot of things you take for granted, and it’s not what you think it is.” Three participants cited the desire to learn about more specific nutrition concepts, such as learning to read food labels, as a reason for participation. Through these statements, the learning of new skills was a reinforcing factor to their participation in FNP.

Enablers and Barriers to FNP Participation. Transportation was a barrier to participation as expressed by 2 of the 11 participants. One participant indicated, and several others agreed, that transportation was not a problem because FNP nutrition education was held at convenient locations. Two other participants stated that the FNP nutrition educator reached them via telephone lessons. The only other barrier to program participation indicated by 2 participants was lack of awareness of when and where lessons would be conducted.

Enablers and Barriers to Using Information in FNP. Appropriateness of nutrition information presented in FNP was an enabling factor to participation. All participants thought that the topics and suggestions presented in the program were realistic. Eight participants also indicated that suggestions made in FNP were applicable to their daily lives. One participant mentioned that, “I learned a whole lot of things to help cut back on what I have been eating because also I had come up with a high

cholesterol, but going through this program, and striving to eat the right things, that'll keep it down..."

Personal barriers to dietary change were barriers to using information in FNP. Some participants indicated that, at first, habitual dietary practices made it difficult to implement practices suggested in FNP at home; however, once they tried suggestions made in FNP further, they realized it was possible. One participant indicated that actually implementing the recipes was difficult because of personal reasons as suggested in the statement, "you know, you can put it out there, but you can't make a person do it." Another participant stated that the taste or texture of some low-fat foods was a barrier to implementing practice: "...and whole wheat bread, it's good for you, but the loaf I got was tough."

Program Characteristics. Participants were satisfied with topics presented in FNP; therefore, it was determined that appropriateness of FNP topics was an enabling factor to participation. "Feeding young children" was mentioned as an appropriate topic as indicated in the statement, "well, she taught one on feeding young children and I thought I knew everything about that." Seven other participants agreed with this statement. When probed, participants indicated that they liked the FNP nutrition education materials on fast food. One participant added the statement, "and they're making it cheaper now, them 99 cent'll kill you." Participants did not cite any topics which they would like to see added to the curriculum.

A combination of teaching methods was suggested. Four participants indicated that they like educational sessions in a group format, brochures, and recipes. One participant stated, "Cause in a group setting like this we can learn from each other. Over

the telephone you can learn, and on the brochures and recipes you can read; I would go for all three.” Others agreed with that statement. Several participants mentioned that they liked the telephone format. In reference to telephone nutrition education, one participant stated, “yeah, and she breaks it down to your level, you can understand what she is saying and everything...” Another participant stated that they thought the use of recipes was a good idea and, when probed, 7 of 11 participants liked recipes, enjoyed using them, and shared them with friends and family.

All participants were satisfied with the FNP presenter (nutrition educator) and presentations. Participants were satisfied with the class size and duration of presentations. Most participants indicated that they would not change anything about the nutrition educator because, “she makes you feel welcome.” All participants who responded to the question (n=8) agreed with this statement and added other comments regarding their approval and satisfaction with the FNP nutrition educator. Comments made by participants included, “I wouldn’t change it, she makes you feel welcome and she also makes the material where you can understand it.” Four participants indicated that if they had questions about something in the presentations, they could call the nutrition educator during business hours at the extension office for clarification. One participant stated, “If I wanted to know something about a diet or something, I could always call and come up there and get my information.” Satisfaction with FNP nutrition educators and presentations was considered both an enabling and reinforcing factor to FNP participation because responses by participants indicated that the nutrition educators were motivational.

Table 4: Summary of responses made by participants in Parish One categorized as predisposing, enabling/barriers, and reinforcing factors.

Parish One
<p>Predisposing Factors</p> <ul style="list-style-type: none"> • Knowledge of FNP • Interest in nutrition education • Concern for personal health <p>Enabling Factors</p> <ul style="list-style-type: none"> • Availability of FNP • Nutrition information was appropriate • Nutrition education lessons were available at times convenient to participants • Nutrition educators were available and motivational to participants <p>Barriers</p> <ul style="list-style-type: none"> • Transportation • Personal barriers to dietary change • Lack of awareness of other time/locations FNP was offered <p>Reinforcing Factors</p> <ul style="list-style-type: none"> • FNP nutrition educator was reinforcing • Family/friends approved of information from FNP (positive reinforcement) • Health improved (n=1) • New skills (e.g. can read food labels and cut back on cholesterol)

Parish Two

Knowledge of FNP and Reasons for Participation. Knowledge of FNP was a predisposing factor to participation in FNP. All FGD participants heard of FNP through participation in another program at the OFS. Because nutrition education was offered in conjunction with another program, this was considered to be an enabling factor to participation in nutrition education. Participation in FNP was required through a mandatory program at the OFS, and all participants indicated that they would not participate in FNP otherwise.

Enablers and Barriers to Participation and Use of Information in FNP. The only barrier to participation indicated by participants was lack of childcare. Two participants indicated that suggestions made in FNP were practical; however, one participant thought that some information disseminated through the program was

conflicting with other dietary advice she had received. Two other participants expressed a lack of interest by suggesting that they did not read any of the nutrition education materials distributed in FNP. One participant suggested that her family created a barrier to implementing practices suggested in FNP and another indicated that she just didn't do them. One other participant stated that she taught her mother how to lower her salt intake as suggested in the comment, "she went and bought her some low sodium turkey breast."

Program Characteristics. Participants were not able to describe any topics presented in FNP which they liked; therefore, irrelevant or uninteresting FNP topics were considered to be a barrier to program participation. Participants did express their dissatisfaction with the topics in the statements "yeah, it was boring to me," and "she (the nutrition educator) has gone over basically the same thing." One participant indicated that she would like to see a topic about underweight children and two other participants stated that they would like to see a topic about losing weight. Participants also mentioned topics on food safety as a topic they were interested in learning more about.

Participants wanted a combination of formats for nutrition information, including: group discussions (n=1), recipes (n=2), hands-on activities (n=5), and taste tests/cooking demonstrations (n=4). Participants indicated that hands-on activities were preferred because, "just sitting here, that's boring." One participant added the statement, "it doesn't matter because I'm going to cook like I want to cook." All participants (n=5) indicated that they would not like to receive nutrition lessons over the telephone.

In this FGD, dissatisfaction with the FNP nutrition educator and presentations was considered a barrier to program participation. Most participants (n=4) felt that the FNP presentations were boring and repetitive as suggested in the statement, "I feel like it is the

same thing every time we come.” Participants indicated that the nutrition educator was knowledgeable; however, most (n=3) indicated that they often refrained from asking questions. Although contradictory to prior statements, two participants indicated that they might recommend family members with health problems to attend FNP sessions.

Table 5: Summary of responses made by participants in Parish Two categorized as predisposing, enabling/barriers, and reinforcing factors.

Parish Two
<p>Predisposing Factors</p> <ul style="list-style-type: none"> • Knowledge of the program • Negative attitude about nutrition education • Attendance at FNP required <p>Enabling Factors</p> <ul style="list-style-type: none"> • Availability of the program • Nutrition education was held in conjunction with another program <p>Barriers</p> <ul style="list-style-type: none"> • Barriers to participation were lack of childcare and interest • Family (n=1) posed a barrier to adoption of some FNP practices • Delivery of nutrition education was viewed as boring and repetitive • Current nutrition topics were viewed as boring • Nutrition educator may have been ineffective <p>Reinforcing Factors</p> <ul style="list-style-type: none"> • Positive feedback from family members (n=1) • Nutrition educator seemed knowledgeable

Parish Three

Knowledge of FNP and Reasons for Participation. Knowledge of the program and interest in nutrition and health were predisposing factors to participation. All participants (n=3) heard about FNP through collaborative agencies and the nutrition educator. All participants indicated that they participated in FNP to learn more about nutrition. One participant gave a more specific reason in the statement, “well, I have five children, so I get a lot from the brochures.”

Enablers and Barriers to FNP Participation. Only two out of three participants responded to this question. The following barriers to participation were cited by

participants: transportation difficulties, lack of advertisements on location and time of FNP education, and actual time nutrition education sessions are conducted.

Enablers and Barriers to Using Information in FNP. Appropriateness of information provided in FNP was an enabling factor to participation. All participants thought that the ideas and topics presented in FNP were practical. One participant added that the information presented in FNP is “easy to follow.” Additionally, none of the participants described any barriers to implementing suggestions made in FNP at home. One participant stated that her daughter was now eating more vegetables. Another participant stated that she received positive feedback from others.

Program Characteristics. Participants named several of their favorite FNP topics including: food labels, handwashing, healthy food preparation, fast food, and food safety. One participant stated that the FNP lesson on handwashing was “an eye-catcher.” Family/child nutrition was a topic mentioned by two participants that they would like to see covered in FNP.

Participants in this FGD suggested a variety of nutrition education delivery methods. These included brochures/newsletters (n=1), demonstrations (n=1), and videos (n=3). One participant stated that she would not like low-fat recipes and another participant disagreed stating that she liked the recipes. All participants (n=3) stated that they would not like to receive nutrition education over the telephone as suggested in a statement made by one participant, “I don’t have time to listen to her tell me over the phone.”

Satisfaction with the FNP nutrition educator and presentations was an enabling factor to participation in nutrition education. Participants stated that they would not

change anything about the FNP nutrition educator or presentations. One participant demonstrated her satisfaction in the statement, “if you changed it, they won’t be as effective, and you’ll make her something that she is not.” One other participant stated that the nutrition educator was very enthused when conducting nutrition education.

Table 6: Summary of responses made by participants in Parish Three categorized as predisposing, enabling/barriers, and reinforcing factors.

Parish Three
<p>Predisposing factors</p> <ul style="list-style-type: none"> • Knowledge of FNP • Interest in nutrition education • Interest in nutrition/health <p>Enabling factors</p> <ul style="list-style-type: none"> • Ideas/suggestions presented in FNP are practical • Interesting/relevant topics • Effective nutrition educator • Current nutrition education materials are adequate • Delivery of nutrition education is adequate <p>Barriers</p> <ul style="list-style-type: none"> • Time nutrition education is held • Transportation (n=1) • Lack of advertisements on location/time nutrition education is conducted <p>Reinforcing factors</p> <ul style="list-style-type: none"> • Feedback from child/peers • Positive reinforcement from nutrition educator

Parish Four

Knowledge of FNP and Reasons for Participation. Knowledge of FNP was a predisposing factor to participation. Most participants (n=5) stated that they had heard about FNP through the nutrition educator. One participant could not remember how she found out about the program. Two participants indicated that they were employed at a location where the nutrition educator had conducted nutrition education. Because FNP nutrition education was held at some participants’ place of employment

and place of residence (girls group home), this was considered to be an enabling factor to participation in FNP.

Interest in nutrition and health was a predisposing factor to FNP participation among FGD participants. All indicated that they participated in FNP because they wanted to learn how to be healthy. Two participants added that they wanted to know what to cook for their young children. Another participant added the statement, “Well, to see what information y’all had so I could incorporate it with what I already know and kind of compile the two.” A participant stated that she also participated to lose weight.

Enablers and Barriers to FNP Participation. Two participants indicated that limited information about FNP was a barrier. Although these two participants indicated that they had received nutrition education materials from FNP, they had never been to a session or class. In this FGD, 3 participants were residents in a group home where nutrition education was conducted; therefore, no barriers to participation were encountered among these participants. Two participants stated that depending on the time nutrition education was conducted they were not available due to school, work, or childcare.

Enablers and Barriers to Using Information in FNP. All participants thought the ideas presented in FNP were practical. One participant indicated that she now “notice when we don’t have vegetables.” Two other participants indicated that suggestions made in FNP were easily incorporated into their daily schedules. One other participant indicated that she had received positive feedback from clients at her place of employment (where nutrition education is conducted). Three participants said that making a list before shopping was helpful.

Most participants indicated that they encountered no difficulties in using suggestions made in FNP. One participant indicated that, “it’s not hard, but it takes time.” Another participant easily implemented healthy practices because “ she (the child) loves vegetables, like broccoli and cheese, lima beans.” One participant disagreed with that statement and indicated that her child did not like vegetables. Only one participant mentioned family during this question, but indicated that they did not create a barrier to practicing suggestions made in FNP.

Program Characteristics. Nutrition education content was an enabling factor to FNP participation because satisfaction with the FNP was high among participants. Three participants mentioned the FNP topic on food budgeting/shopping as a favorite. Three participants indicated that they would like to see a topic about healthy eating and disease prevention. Almost everyone (n=5) agreed that they would like to have a lesson on the food label. One participant indicated that a topic on processed food would be interesting, as suggested in the following statement, “Like Ramen noodles, a lot of people think it’s a good noodle, but it’s high in fat and sodium.”

Participants indicated that they would like to receive nutrition education in several different formats. These included: videos (n=5), text materials (n=4), and hands-on activities (n=3). A combination of techniques mentioned above was cited by three participants. When probed, the following statements were made about text nutrition education materials: nutrition education materials were not read (n=1), and nutrition education materials were easy to read (n=2). One participant stated that she liked videos because, “it (videos) catches my attention more than on a piece of paper.” Another participant indicated that hands-on activities “make it more interesting.”

Effectiveness of the FNP nutrition educator and presentations were both an enabling and reinforcing factor to program participation. Participants stated that no changes needed to be made to the FNP nutrition educator or presentations. More specifically, participants were complementary about the FNP nutrition educator. For example, one participant stated, “she (the nutrition educator) asks us was there anything we wanted, and since it was cold and flu season, when she starts back in October, she is going to start the handwashing thing.”

Table 7: Summary of responses made by participants in Parish Four categorized as predisposing, enabling/barriers, and reinforcing factors.

Parish Four
<p>Predisposing</p> <ul style="list-style-type: none"> • Knowledge of the program • Interest in nutrition education • Interest in health/nutrition <p>Enabling</p> <ul style="list-style-type: none"> • Availability of FNP • Nutrition education is held at participants employment/residence • Nutrition educator is motivating/flexible • Nutrition education topics were of interest to participants • Family influences <p>Barriers</p> <ul style="list-style-type: none"> • Lack of advertisements about time/location of nutrition education • Time nutrition education is held <p>Reinforcing</p> <ul style="list-style-type: none"> • Positive feedback from children/clients • Learn skills (shopping lists/budgeting) • Financial gain from skills learned • Participants were able to incorporate suggestions made into FNP into their daily lives

Parish Five

Knowledge of FNP and Reasons for Participation. Knowledge of FNP and interest in nutrition /health were predisposing factors to program participation. Six participants indicated that they heard about FNP through the nutrition educator.

Nine participants also stated that they heard about FNP through participation in other community programs. In most cases, participants stated that the nutrition educator was conducting nutrition education at community agencies where they were. Because participants indicated that nutrition education was offered at a variety of locations throughout Parish Five, it was also determined that availability of FNP in the parish was an enabling factor to participation.

Most of the participants (n=7) stated that they participated in FNP to learn about nutrition. Four of these participants gave specific nutrition-related reasons for participation. For example, one participant stated, “well I have an overweight 3 year old.” Six participants stated that they participate in FNP because of the social interaction as suggested in the statement, “visiting and meeting other people.” One participant added, “I like the part where they have the orange juice and banana nut muffins.”

Enablers and Barriers to FNP Participation. In this FGD, participants suggested no barriers prevented them from participation in FNP. When probed about transportation 5 participants stated that transportation was not a problem. For example, one participant stated, “My transportation is real good and I call in for it.”

Enablers and Barriers to Using Information in FNP. Appropriateness of FNP nutrition education content was an enabling factor to program participation. When participants were asked if suggestions/ideas presented in FNP were practical, everyone who answered the question (n=8) thought that suggestions made in FNP were. Two participants used suggestions made in FNP to plan healthy meals for their children. For example, one participant stated, “Well, she gave me pamphlets and I look at those pamphlets and they help me with menus for my kids.” When the question was reversed,

“have you found anything not to be practical,” 4 participants answered “not yet.” One participant indicated that she used information from the program to help her lose weight.

Various barriers to implementing practices suggested in FNP were present in the group. Four participants stated that their family created a barrier to implementing some practices and suggestions made in FNP; however, two of these participants stated that they cooked healthy food regardless of their family’s objections. Two other participants indicated that personal dietary preferences were barriers preventing them from implementing practices suggested in FNP. For example, one participant stated, “I haven’t done the transaction with the 2% milk because I don’t like milk at all.” Another participant indicated that changing dietary habits was difficult as suggested in the statement, “For me to make a healthy meal for my family it means I have to change the way I eat and I didn’t like that too much, so it’s been life-changing.”

Program Characteristics. The following topics were mentioned as favorites among participants in the FGD: fast food (n=2), food budgeting/shopping (n=1), healthy cooking (n=3), and food safety (n=5). At first, participants did not mention the food safety topics; however, when probed all indicated that they liked the topic. One participant also suggested that there were no other topic she would like to see in the FNP nutrition education as indicated in the statement, “I think everything we talk about is covered. She showed us everything I think you could show.”

One participant stated that she liked to receive nutrition education in a group discussion. Three participants stated that they like to receive nutrition information through text materials. For example, one participant stated, “..mail something out every month, something like that.” Two participants like receiving recipes because they were

easy to read and made grocery shopping easier. One participant indicated that she liked watching videos; however, another participant did not. The statement, “it’s not like I don’t like watching them, but I don’t have time.”

Participants were satisfied with the FNP nutrition educator and presentations, which was an enabling factor to program participation in this FGD. Several participants (n=4) made statements indicating their approval of the FNP nutrition education. For example, one participant stated, “she speaks very loud and we can understand her.” Another participant added the comment, “very personable.” Comments made by participants also indicated that they were content with the FNP presentations. One participant stated, “When she comes to Mental Health, the setting is eye-catching.” Statements made by participants indicated that they were motivated by the FNP nutrition educator; therefore, the effectiveness of the nutrition educator was also a reinforcing factor to FNP participation.

Table 8: Summary of responses made by participants in Parish Five categorized as predisposing, enabling/barriers, and reinforcing factors.

Parish Five	
Predisposing factors	<ul style="list-style-type: none"> • Knowledge of FNP • Interest in nutrition education • Concern for personal health
Enabling factors	<ul style="list-style-type: none"> • Availability of FNP • Nutrition education content and topics were appropriate • Nutrition educators were available and motivational to participants
Barriers	<ul style="list-style-type: none"> • Personal barriers to dietary change • Family was a barrier; however, some participants continued to cook healthy regardless
Reinforcing Factors	<ul style="list-style-type: none"> • FNP nutrition educator was reinforcing • Family/friends approved of information from FNP (positive reinforcement) • Skills learned (grocery shopping techniques) • Improved health (weight loss n=1)

CHAPTER 5 DISCUSSION

This project was designed to assess participants' satisfaction with FNP, and the nutrition education needs of low SES individuals. Focus group discussions were used to obtain predisposing, enabling, and reinforcing factors study subjects had to participating in FNP and their preferred methods of nutrition education delivery.

Knowledge of FNP

The first objective of our study was to determine study participants' awareness of FNP. Knowledge and awareness of FNP resulted from recruitment efforts, which will also be discussed in this section. Knowledge of FNP was a predisposing factor to participation. Study participants learned of FNP through the nutrition educator and community programs where the nutrition educator conducted sessions. Statements made by FGD participants about how they learned of FNP were consistent with reported nutrition education and outreach activities for FNP parishes. For example, Natchitoches Parish reported that they conducted nutrition education at Cane River Children's Services, daycares, and schools, which parallels participants' reports about how they learned of FNP. The FNP supported collaborative relationships with other assistance and community agencies (66); therefore, these partnerships appeared to be an effective means of advertising or recruiting for FNP. Findings of our study were consistent with others who reported that nutrition education agencies, such as FSNEP and EFNEP, relied on collaborative relationships with community programs such as WIC, COA, and HS to recruit participants (96-97).

Results from our study suggested that recruitment efforts varied. For example, the Parish One nutrition educator made extensive efforts to recruit participants through community agencies and personal invitations. Peer educators such as, nutrition educators, have an important effect on attendance at nutrition education programs. The nutrition educator has the ability to motivate participants or potential participants to attend the program simply by the enthusiasm used when recruiting (22). The large number of FGD participants in Parish One (n=11) may have been indicative of the nutrition educator's efforts.

Lack of knowledge of nutrition education programs has been reported previously in the North Carolina CES (72). Lack of knowledge of FNP was not a problem in our study. Our study was limited to those individuals who had already participated in FNP; therefore, if study subjects had been recruited randomly from the entire food stamp eligible, low SES population then knowledge of FNP might not have been as consistent.

Participants in our study implied that they knew about FNP, but some indicated that they did not know about meeting times and locations of FNP sessions, suggesting that this was a barrier to participation in FNP. This is discussed below.

Reasons for Participation

The second objective of our study was to determine why study subjects participate in FNP. Results from Parish One, Parish Three, Parish Four, and Parish Five FGD indicated that the primary reason for participating in FNP was to learn about nutrition-related concepts, followed by social interaction. The desire to learn more about nutrition was considered a predisposing factor to participation in these parishes and is consistent with the FNP mission. No other published studies were found that determined why

individuals participate in nutrition education programs. The FNP is a nutrition education program for low SES individuals; therefore, it is assumed that most individuals participated to learn about nutrition and other related concepts. All subjects in the Parish Two FGD indicated they participated in FNP because of a requirement through participation in the OFS program. Mandatory participation in FNP was a predisposing factor to participation in the Parish Two FGD; however, participants in this FGD, stated that they would not participate in FNP otherwise, suggesting lack of interest in the program.

Enablers and Barriers to FNP Participation

The third objective of our study was to determine barriers or enablers study participants have using FNP. Barriers to participation in nutrition education have been reported in two WIC studies (22, 72). In agreement with these studies, results from our study indicated that participants did encounter barriers to program participation; however, barriers to program participation in our study were minimal. The primary barriers to participation in FNP were lack of interest, transportation, time, and lack of awareness of the program. Surprisingly, only one participant indicated that lack of childcare was a barrier to participation.

Statements made by all participants in the Parish Two FGD suggested a lack of interest in nutrition education, which may reflect mandatory participation. Others found that, in a study to determine factors associated with participation in a voluntary program, 120 individuals (17%) who declined to participate did so due to lack of interest in the program (22). Lack of interest in nutrition education may also pose a problem in recruiting and persuading individuals to participate in nutrition education.

Primary barriers to participation in a rural EFNEP in North Carolina were, lack of transportation, low literacy levels, family responsibilities/lack of childcare, uselessness of information, and lack of knowledge of extension programs (72). These findings were different from ours. Richardson and associates used interviews to determine barriers to participation among his study subjects (72). Questions in the interview and structured questionnaire used in that study specifically inquired about reading difficulties (72). Questions used in our FGD did not ask about reading difficulties and because FGD allowed subjects to actively participate without reading or writing, we were not able to speculate on the impact low literacy levels had. Further, participants who did have trouble reading FNP materials may not have been willing to disclose this information in the presence of other participants.

In a study of EFNEP participants (72), transportation and childcare posed a much greater barrier to participation than indicated in our study. Transportation as a barrier may have been minimal in our study because FNP nutrition education is often held at participants' residence, place of employment, or other locations they frequented. Further, Parish Five provides transportation to "special needs" individuals so transportation difficulties were further minimized.

Surprisingly, only one participant in our study mentioned lack of childcare as a barrier to participation. Most participants in our study had children in the household. It is not clear why participants did not relate childcare as a barrier to FNP participation; however, it can be speculated this was minimal because: 1) nutrition education was held during school hours (e.g. Head Start parent meetings); 2) study subjects did not participate in actual nutrition education sessions, but rather received nutrition education

over the telephone or through the mail; and, 3) FNP nutrition education was held at participants' residence.

In our study, knowledge of meeting locations and times of FNP was a barrier to participation. This is in contrast to knowledge of the actual program, as reported in a study of EFNEP participants (72). Since FNP relies heavily on marketing through other agencies (66), if an individual did not participate in those programs, then they may not have learned of meeting times and locations of FNP sessions. Outreach activities should advertise the program in all places frequented by low SES individuals, including local grocery and thrift stores, employment agencies, washeterias, and churches. Some FNP Parishes such as Concordia, Jefferson, Morehouse, Natchitoches, St. Landry, Webster, and Winn already do this in their outreach activities.

Damron and associates reported that time conflicts with work, school, or other activities were barriers to attendance at nutrition education sessions (22). Consistent with that study, participants in our study indicated participation in FNP depends on the time in which sessions are offered. Because more low SES individuals are now employed, participation in nutrition education programs has become more challenging (97). This is significant because low SES individuals may not be as readily available to participate in group nutrition education activities since they are employed. Family obligations may still prevent individuals from participating after work hours. Some participants in our study were only able to participate because they chose to take lunch breaks during the time FGD were conducted. Nutrition education activities conducted during lunchtime hours may be a viable solution to offer nutrition education.

Enablers and Barriers to Using FNP Information

The third objective of our study was to determine barriers to using information presented in FNP. Some participants in our study indicated that it was difficult to implement practices suggested in FNP because of their habitual dietary practices. Other participants did not cite any specific personal barriers to dietary change; however, most agreed that adopting healthy dietary practices was “life-changing” and “difficult at first.” Personal barriers to dietary change reported in our study might be attributed to lack of time and interest in changing dietary patterns and giving up favorite foods (98). High cost of nutrient dense foods such as fruits and vegetables could also contribute to the personal barriers to dietary change reported in our study (7, 9, 61, 82, 90-91). Perceived unpalatable tastes of low-fat foods, including fruits and vegetables, could be another explanation for difficulties in changing dietary patterns (7, 9, 18, 60, 90). This was implied by 3 participants in our study, and 2 participants stated, “..and whole wheat bread, it’s good for you, but the loaf I got was tough,” and “I haven’t made the transition to 2% milk.” The addition of taste tests and cooking demonstrations in FNP could minimize perceived unpalatability of low-fat foods. Nutrition educators could also suggest making subtle changes to participants’ favorite meals.

Family, especially children, had both positive and negative influences on participants’ decision to use information provided in FNP; therefore, they were positive and negative enablers associated with participation. Participants in three FGD indicated that it was difficult to use information suggested in FNP because of their families. Investigations among low-income minority populations indicated that children and family preferences influenced food procurement, preparation, and consumption (7, 9, 82, 84, 90-

91). One difference between information obtained in those studies and ours is that barriers to adoption of healthy nutrition-related practices caused by family and children were minimal in our study. For example, three participants cooked healthy regardless of their families' objections. Other participants stated that their children were eating more vegetables. This suggests that nutrition information disseminated through FNP was easily incorporated into most families' routine.

FNP Program Characteristics

Curriculum. Topics presented in the FNP curriculum were enabling factors to participation. Participants in all FGD except Parish Two were able to specifically identify topics that they liked in the FNP curriculum; therefore, it was assumed that applicability of FNP topics was an enabling factor to participation. Participants in all FGD also mentioned other topics they would like to see covered; however, these varied among parishes.

In Parish Two, FNP topics were viewed as boring and repetitive. Several possible explanations can be given for negative views about topics presented in FNP among participants in this FGD: 1) mandatory FNP participation and 2) general disinterest in nutrition and health. The nutrition educator in Parish Two should perhaps expand the FNP repertoire to include other topics.

The FNP topics mentioned by participants varied among all FGD. This may be due to differences in nutrition education activities among FNP parishes. Nutrition education for FNP is administered at the parish level (66); therefore, it is possible that participants in one parish could be exposed to different topics than participants in another parish. Further, within each parish, some participants may have been exposed to more

topics than others depending on their length of enrollment and the number of contacts with nutrition educators.

Only one published study could be found which evaluated satisfaction with nutrition education topics among participants (21). In that study, most participants indicated that the topics presented in the WIC nutrition education curriculum were relevant and useful. Further, only one participant indicated that the nutrition education information presented in WIC was not useful to her (21). Findings of that study were consistent with ours because they reported that only a small number of participants were not satisfied with topics presented in the respective nutrition education programs. Further, study participants in both studies were all low SES females. Nestor and associates (21) did not disclose racial background of FGD participants; therefore, further comparisons cannot be made.

Program Delivery. Participant satisfaction was significantly related to effectiveness of the nutrition educator. With the exception of one FGD in our study, satisfaction with FNP nutrition educators and presentations was quite high among participants. Statements made by participants (n=14) in Parish One, Parish Three, Parish Four, and Parish Five FGD also implied that nutrition educators were not only effective communicators, but were also viewed as role models. Thus, the FNP nutrition educators and presentations were considered both enabling and reinforcing factors to FNP participation.

Parish Two FGD participants were not satisfied with the nutrition educator or presentations; therefore, this was a negative enabler or barrier to participation. This can be explained by several reasons. Participants in this FGD were dissatisfied with almost

every aspect of FNP evaluated in this study, so it may be that they were dissatisfied with the mandatory participation rather than the specific program elements. It is important to note that participants in Parish Two did view the nutrition educator as knowledgeable; however, they often refrained from asking questions because, “she might explain too much.” This statement may suggest the nutrition educator’s inability to bring information down to the participants’ level or present it in an interesting way. Participants clearly did not want to be there; therefore, questions may have prolonged the encounter.

Several investigations have reported the influential role of nutrition educators on participation in nutrition programs (9, 22, 71). In a study assessing WIC, the quality of interaction between the nutrition education staff and participants was generally high (71). Interactions included the ability of WIC nutrition educators to answer accurately participant’s questions, to be motivational toward participant’s attempt at dietary change, and to suggest specific solutions to barriers encountered by participants in making these dietary changes (71).

In another study conducted at WIC, attendance at nutrition education sessions was substantially influenced by the effectiveness of peer educators. Peer nutrition educators influenced participation by how effectively they conducted nutrition education and how concerned they were with encouraging participant attendance (22).

Shankar and associates reported that individuals had unfavorable experiences with previous participation in nutrition education programs (9). During previous program participation, study subjects indicated that peer educators’ lack of compassion about

difficulties when attempting dietary behavior change was discouraging. Further, participants indicated that the peer educators perceived them as ignorant (9).

Previous studies can be compared to our study since characteristics of participants were all female, low SES, and the majority were black (9, 22, 71). Further, WIC sites studied (22, 71) were similar to FNP parishes in our study. For example, it was reported that delivery of nutrition education activities varied across WIC sites (71). This is similar to the variability in nutrition education between each FNP parish in our study. Further, dissatisfaction with the nutrition educator, suggested by participants in Parish Two, may be explained by the past experiences with nutrition education cited by study subjects in the investigation by Shankar and associates (9).

Preferred Delivery Methods for Nutrition Education. Participants in our study suggested several methods for delivery of nutrition education. Statements made by participants were inconclusive as to whether they were already receiving nutrition education in the desired form through FNP; therefore, preferred delivery methods could not be classified as enablers or barriers.

Text materials, hands-on activities, cooking demonstrations/taste tests, interactive group discussions, and videos were suggested forms of nutrition education in our study. In all FGD, probes were used because people often have trouble recommending formats to which they had not yet been exposed (21). In two FGD, participants stated that they liked receiving nutrition education via the telephone; however, other participants did not like this delivery method.

Several studies evaluated preferred delivery methods of nutrition education through the use of FGD with a variety of target audiences and these findings indicate that

preferred nutrition education delivery methods include a variety of techniques (9, 21, 82, 90, 91,96). In a study by Hartman and associates (91), preferred delivery methods of nutrition education varied and included videos, consultations, hotlines, hands-on activities, group discussions, and pamphlets. Participants indicated that they would not like to receive nutrition education in a lecture-format. These findings are strikingly similar to those in our study. Participants in that study (91) were recruited from EFNEP and several ethnicities were represented. In our study, most participants were black. It was not determined if participants in our study had a low reading comprehension level although low SES is often associated with low reading levels (99).

Lectures are the least effective of all teaching methods and effectiveness can further be diminished by an ineffective lecturer (100). Remarkably, lectures are traditionally used in nutrition education settings although they have been found to be inadequate in creating behavior change (70). In our study, lectures were not suggested as a preferred delivery method of nutrition education. This finding was consistent with others (91). Highly educated individuals respond more positively to lectures than those who are less educated. Low SES individuals typically have limited education (29-30) implying that subjects in our study and Hartman's (91) were of low SES, and would respond poorly to lectures. Further, in lectures, the learner is passive. This probably explains why some participants in Parish Two stated, "just sitting here, that's boring."

The vast majority of participants in our study stated that they kept the nutrition education materials and even shared them with family and friends; however, text nutrition education materials such as brochures and newsletters were often thrown away (21, 91). One explanation for this might be participants may have discarded these

materials due to disinterest or trouble interpreting them. A small number of participants in our study reported doing this.

Information from our study indicated that participants in all FGD preferred hands-on activities. In a small sub-study of the national FSNEP report, case studies of six state FSNEP programs were evaluated to determine program characteristics (96). Hands-on, interactive group activities were the most effective method of presenting nutrition information to the target audience (96). Hands-on group activities were most effective because they require active participation and allow participants to process the information (100). These findings were consistent with our study and others (21, 82, 90, 91, 96). Nutrition education should move to a more learner-centered, interactive method of education (70). In doing this, clients will be more empowered and the nutrition educator will essentially become a facilitator. Collaboration among participants will enable participants to “internalize attitudes and/or behavior change” (70). Thus, facilitated group discussions will provide a more supportive setting than lectures (70). Facilitated group discussions may be a technique FNP could incorporate to reach effectively the clients; however, further training for the nutrition educators will be needed.

No participants in our study specifically mentioned one-on-one lessons as a preferred delivery method for nutrition education. A small number of participants in Parish Five reported that they liked to receive nutrition education via telephone, which could be considered a type of one-on-one delivery method. The majority of participants did not like the telephone method. This is interesting because, one-on-one nutrition education lessons have been found to be most effective when compared to group instructional methods (97, 101). Participants receiving one-on-one lessons reported

consuming a significantly greater number of meals and servings from the fruit and dairy groups when compared to participants receiving group nutrition education lessons (101). The one-on-one approach had been found to be costly (97). Again, with the exception of nutrition education lessons via telephone, Louisiana's FNP does not commonly use a one-on-one approach (14).

Limitations

There were several limitations of this study. First, the moderator was not indigenous to the target population. The majority of participants were black and over 30 years of age. The moderator in this study was a young, white female. It was unclear if study participants would be forthcoming with information during the FGD. Overall, participants were attentive throughout the FGD and most provided information to every question; therefore, it was determined that any barriers created by the moderator were minimized.

A convenience sample was used in this study which may not give an accurate depiction of all statewide FNP nutrition education activities. Several FNP parishes were unable to participate in the study due to difficulties in recruiting, prolonged absence of a nutrition educator/extension agent, or participation in other research not affiliated with FNP. This information may not be reflective of all FNP parishes.

Participation was limited to volunteers and may reflect a bias towards those who have high levels of involvement in FNP. Although, the FGD in Parish Two consisted of individuals who had to participate in FNP due to involvement in another assistance program, they voluntarily agreed to participate in the study. Thus, inclusion of these participants in the Parish Two FGD did minimize bias.

During the 2003 FFY, FNP reached over 50,000 individuals through direct contacts and 70,000 through indirect contacts. The small number of participants (n=34) included in this study may not be representative of the approximately 120, 000 individuals exposed to nutrition education from Louisiana's FNP either by direct or indirect contacts.

Recommendations

Data obtained from this study identified several essential components which should be incorporated into FNP nutrition education to meet the needs of the target audience. First, times and locations of actual nutrition education sessions should be posted at community agencies or areas where low-income individuals congregate.

Second, delivery methods for nutrition education should include a variety of techniques including, but not limited to: text materials, hands-on activities, videos, taste tests, and group discussions. Use of a variety of delivery techniques may make nutrition education more interesting for the audience. Additionally, incorporation of innovative delivery techniques such as facilitated group discussions could possibly make nutrition education more enjoyable.

Third, nutrition educators should have initiative and should be taught effective interpersonal and public communication skills. Effective communications skills should still be taught at the annual FNP conference; however, continuous communication training would further make the nutrition educators more effective.

Fourth, topics presented in FNP should be relevant to the target audience. As previously mentioned, nutrition educators could contact a small, informal needs assessment to determine what topics the clients are interested in. The needs assessment

would also enable nutrition educators to deliver nutrition education in the appropriate manner.

Finally, nutrition education activities in each FNP parish should become more standardized. One of the reason the nutrition education activities in each parish are varied is because some parishes have been implementing FNP for several years whereas as others have only been around for one year. Collaboration between “veteran” FNP parishes and “novice” FNP parishes may be beneficial.

Implications

Several implications could be drawn from this study. Currently, nutrition educators receive annual personal communication/public speaking training at the annual FNP conference. Nutrition educators, who have been recently hired or have been employed with FNP for less than 2 years, should receive more intensive communications training throughout the year. These novice nutrition educators should also be “paired” with a veteran nutrition educator. This would enable the nutrition educators to learn from one another and relieve a slight amount of supervisory duty from the extension agent.

Nutrition education for the target population should use a variety of delivery techniques and relevant topics. Nutrition educators should conduct a small, informal needs assessment among participants of the program in each parish. This is especially true when the nutrition educators meet with the same group of people (e.g. Head Start parents’ meetings). This would allow the participants to indicate what FNP topics they are interested in and how they would like to learn about them.

At the time of this report, Louisiana’s FNP had implemented an online message board to allow FNP personnel to communicate with each other. A section was included

for nutrition educators or others in the “field” to share experiences, and suggestions that have worked for them when delivering nutrition education to the target audience. FNP personnel are not currently using this message board. The message board system should be encouraged and detailed directions should be distributed to all FNP personnel. Using this system would enable nutrition educators to obtain innovative ideas on how to reach clientele from other nutrition educators who have been successful with a particular technique.

Future Directions

Using information from the study, FNP nutrition educators should be better able to meet the nutrition education needs of the clientele within their respective parish. A follow-up study should be conducted to determine how the FNP modified nutrition education. Additional FGD should be conducted within a year of this study to determine if nutrition educators have made recommended changes.

Future research is also warranted in this population to determine barriers and enablers to consumption of a healthy diet. Behavior change from participation in a nutrition education program begins with a precise understanding of the target populations attitudes, beliefs, perceptions, and needs; however, any attempt to fully change behavior must also understand human nutrition-related behaviors (102). By obtaining this information, FNP can further improve nutrition education.

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APPENDIX A
SUMMARY OF NUTRITION EDUCATION ACTIVITIES IN EACH FNP
PARISH

FNP Parish	Nutrition Education
Acadia	<ul style="list-style-type: none"> • Nutrition educator started working at the end of February 2003; therefore, the program in this parish is still being set up. • Outreach activities were being implemented. • Nutrition education at HS was being conducted and displays were set up at the OFS.
Bossier	<ul style="list-style-type: none"> • Mail out educational flyers to food stamp recipients.
Calcasieu	<ul style="list-style-type: none"> • Mail quarterly “Nutrition News” to EFNEP graduates.
Caldwell	<ul style="list-style-type: none"> • Educational programs at HS, pre-k, and kindergarten students on the Food Guide Pyramid, Handwashing, and Food Safety. • Direct contacts through classes are made at the COA • Displays are set up at the OFS and the health unit on Food Guide Pyramid, Healthy Pregnancy, and Calcium..
Caddo	<ul style="list-style-type: none"> • Mail out monthly “Nutrition News” to EFNEP graduates.
Concordia	<ul style="list-style-type: none"> • FNP clients are reached through group meetings, phone lessons, manned and unmanned exhibits, health fairs, grocery store promotions, and “Nutrition News” fact sheets. • Clients are reached at the following locations: community locations- town halls, churches, other sites where clients reside, store front missions, OFS, health unit, commodity sites, HS, schools, libraries, and the extension office. • All FNP topics are taught.
DeSoto	<ul style="list-style-type: none"> • Mail out monthly “ Nutrition News” to EFNEP graduates.
Iberville	<ul style="list-style-type: none"> • Provide “Nutrition News” to EFNEP graduates every other month.
Jefferson	<ul style="list-style-type: none"> • Conduct FNP nutritional education outreach to various urban target populations. • Provide FNP classes to students at schools, HS and pre-k centers; as well as to parent groups of these organizations. • Offer FNP nutrition classes, materials, programs and exhibits to identified limited resource audiences at urban housing authorities, community centers, and commodities distribution center. • Monthly FNP nutrition classes are provided to various schools throughout Jefferson Parish and at the OFS. • FNP “Nutrition News” are distributed to various community sites and businesses that serve food stamp recipients and limited resource families.
Jefferson Davis	<ul style="list-style-type: none"> • Nutrition educator started at the end of February 2003; therefore, the program in this parish was still being set up. • Outreach activities were being implemented at the time of this report. • Nutrition education at HS was being conducted and displays were set up at the OFS.
Lafourche	<ul style="list-style-type: none"> • FNP nutrition education sessions are held at OFS.
LaSalle	<ul style="list-style-type: none"> • Indirect contacts are made at the COA and HS.

Livingston	<ul style="list-style-type: none"> • This is a relatively new FNP parish; at the time of this assessment, little activity had been done since January 2003. • Contacts and outreach had been conducted at the OFS office, schools, HS, commodity sites, libraries, Kid Med. • At this time, the nutrition educator was establishing collaborative relationships with the above community agencies and determining how to reach the target audience.
Morehouse	<ul style="list-style-type: none"> • Displays and handouts were made available at the health unit and the WIC program. • Direct contacts are also made at daycare centers. • Children and teachers are demonstrated the importance of handwashing. • Displays are set up at Morehouse Home Health and the Bond House (assisted living home). • Topics included hypertension and Fats of Life. • At commodity distribution, “Fats of Life” handouts were given to approximately 250 families. This program meets every quarter.
Natchitoches	<ul style="list-style-type: none"> • Monthly displays at the COA—subjects include: diabetes, food guide pyramid and controlling hypertension through diet and exercise • Quarterly displays on general nutrition are set up at the Office of Community Services during commodity distribution • FNP nutritional displays are set up at health fairs. • Various nutrition lessons are presented weekly at local day care centers • Hand Washing program presented at schools • Conduct general FNP nutrition lessons weekly at the Community Enrichment Center (CEC). • Conduct monthly lessons on saving money and making good spending choices at the CEC. • Distribute the Nutrition News monthly at commodity food sites, OFS and COA. • Food safety lessons at Cane River Children’s Services. • Conducted the “Portions” program with a group of teenage girls that attended schools that met the waiver. • “Feeding Young Children” lesson was used in OFS parenting classes.
Ouachita	<ul style="list-style-type: none"> • Displays and handouts were made available at the COA. Topics included: Meals just for Two, and Making Spending Choices. • Monthly outreach is conducted through the Food Bank. • Direct contacts are also made through the Even Start Program. “Save Money when you buy Foods” lesson is used at this time.

Pointe Coupee	<ul style="list-style-type: none"> • Lessons conducted at HS, local schools monthly on topics such as Calcium, food for the Young Child, Five-a-Day. • Lessons for adults are also conducted at the OFS on Meals for you and two, Making Spending Choices, and Food for the Young Child.
St. Charles	<ul style="list-style-type: none"> • Monthly distribution of educational materials at the COA, and Food for Seniors. • Conduct nutrition education at the OFS weekly. • This parish is in the process of hiring a nutrition educator and has plans to conduct nutrition education at HS and health units.
St. John	<ul style="list-style-type: none"> • At the time request, little or no activity because of absence of the nutrition educator since the previous December.
St. Landry	<ul style="list-style-type: none"> • Nutrition education is taught at HS, elementary schools, “Find Work Program,” homeless shelter, and daycares. • Nutrition education sessions consist of group instruction or individual instruction when needed. • Nutrition fact sheets and “Nutrition News” are mailed to participants and potential participants monthly. • Handouts are also distributed at sites where FNP displays are set up including: OFS, HS, health units, daycares, and schools.
Tensas	<ul style="list-style-type: none"> • Presented FNP lessons on different nutrition topics (nutrition facts label, fast foods and snacks, and heart healthy eating) to program participants. • Food stamp recipients were received FNP flyers at the food commodity distribution site
Webster	<ul style="list-style-type: none"> • “Shop Smart” classes were held at the CES. • Flyers and displays are set up at the OFS, COA, Volunteers of America, HS, health unit, and local churches. • The nutrition educator has been introducing herself and the program to many other community services and agencies to get FNP started at these locations • Classes are held at schools and the Boys and Girls club.
West Feliciana	<ul style="list-style-type: none"> • Educational sessions are conducted at HS and schools. • FNP displays and educational materials are distributed at the OFS. All available FNP lessons are used. • FNP 4-H programs are also held at elementary schools
Winn	<ul style="list-style-type: none"> • Educational activities include group lessons at HS, daycares, home economics classes, elementary school classes, COA, and “Senior Foods” group. • Individual instruction methods are also used with clients at the COA, health unit, or OFS. • FNP displays and exhibits are set up at the library, OFS, commodity food sites, HS, and parent /teacher meetings at schools.

APPENDIX B
EVALUATIONS USED IN FNP PARISHES

FNP Parish	Evaluation
Acadia	<ul style="list-style-type: none"> • FCS survey
Bossier	<ul style="list-style-type: none"> • No information provided on evaluation for this parish
Calcasieu	<ul style="list-style-type: none"> • No evaluations were reported for this parish
Caldwell	<ul style="list-style-type: none"> • No formal evaluations conducted • Nutrition educators have received feedback from participants after nutrition education sessions
Caddo	<ul style="list-style-type: none"> • No evaluations were reported for this parish
Concordia	<ul style="list-style-type: none"> • FCS survey • Feedback is obtained from clients as to behavior changes made because of knowledge learned through FNP classes
DeSoto	<ul style="list-style-type: none"> • No evaluations were reported for this parish
Franklin	<ul style="list-style-type: none"> • FCS survey
Iberville	<ul style="list-style-type: none"> • No evaluations were reported for this parish
Jefferson	<ul style="list-style-type: none"> • FCS survey • Verbal feedback made by participants is made available to the state office through a monthly impact report
Jefferson Davis	<ul style="list-style-type: none"> • FCS survey
Lafourche	<ul style="list-style-type: none"> • FCS survey
LaSalle	<ul style="list-style-type: none"> • No evaluations were reported for this parish
Livingston	<ul style="list-style-type: none"> • No evaluations were reported for this parish; however, at the time of this report, Livingston was a relatively new FNP parish and the nutrition educator is conducting outreach activities
Morehouse	<ul style="list-style-type: none"> • No evaluations were reported for this parish
Natchitoches	<ul style="list-style-type: none"> • Gather feedback from participants by asking various questions after lessons have been taught. • Participants the “Portions” class did food recalls and listed dietary changes they made in journals.
Ouachita	<ul style="list-style-type: none"> • Feedback from participants by asking various questions after lessons
Pointe Coupee	<ul style="list-style-type: none"> • FCS survey • Results are submitted to the PARS database
Richland	<ul style="list-style-type: none"> • FCS survey
St. Charles	<ul style="list-style-type: none"> • No evaluations were reported for this parish
St. John	<ul style="list-style-type: none"> • Little or no activity because of the absence of the nutrition educator since the previous December.
St. Landry	<ul style="list-style-type: none"> • FCS survey
Tensas	<ul style="list-style-type: none"> • No evaluations were reported for this parish
Webster	<ul style="list-style-type: none"> • Gather feedback from participants by asking various questions after lessons have been taught
West Feliciana	<ul style="list-style-type: none"> • FCS survey
Winn	<ul style="list-style-type: none"> • FCS survey • Checklists • Group discussions

**APPENDIX C
INSTITUTIONAL REVIEW BOARD
SUBMITTED FORM**

IRB/IACUC Proposal No.:

Approval Date:

Expiration Date:

APPLICATION FOR USE OF HUMAN SUBJECTS IN RESEARCH

Investigators: Carol O'Neil, PhD, LDN, RD

Department: Human Ecology

Title of Project: Use of focus group discussions to determine nutrition education needs of low socioeconomic status individuals

Objectives of the research: 1) Identify predisposing, enabling, and reinforcing factors that individuals, who are eligible to participate in FSNEP, have regarding dietary behaviors and food patterns. 2) Identify possible barriers that individuals who are eligible to participate in FSNEP face regarding the consumption of a nutritious diet and optimal health. 3) Collect the opinions of individuals who are eligible to participate in FSNEP about the possible revision of the content and delivery methods of FSNEP. 4) Make recommendations for the content of future FSNEP programs using the information that is obtained during the study.

Note: Researchers are to complete items 1-8 to the best of their knowledge and with sufficient detail to allow reviewers to assess the appropriateness of the procedures used in the research.

In seeking consent of participants, information will be provided as follows:

1. Description of procedures to be followed involving human subjects:

Human subjects will participate in focus group discussions, which are, planned discussions designed to obtain perceptions on a defined area of interest in a permissive environment. Their responses will be video and/or audio taped for transcription.

2. Description of methods to be used to maintain confidentiality of data.

The identity of the participants will remain confidential. Numbers will replace subjects' names when transcribing the tapes. The FNP/field agent will not be present for any of the FGD nor will she view any video tape or listen to any audio tape. She will have access only to final transcripts that will not contain any participant's name or other identifiers of the participants. Results will also be available to only the principal investigator, the graduate student working on the project, and that student's committee members and will be kept in area with limited accessibility. No individual data will be published. Only collected data will appear in any publication.

3. Description of drugs, appliances, or other materials to be used in this project:

Video and/or audio tapes will be used in this project.

4. Description of expected benefits to participants and society:

FNP participants will benefit from this research.

After analyzing the data, the nutrition curriculum will be revised to specific nutritional areas to which individuals have barriers.

5. Description of expected risks to participants:

The actual risks to participants is imperceptible.

6. Description of possible specific alternative procedures that might be used in lieu of those proposed:

This project has no alternative procedures. This is the most appropriate way to obtain an actual description of what the participant's lifestyle and culture is truly like and to determine their personal barriers to practicing good nutritional behaviors.

7. The principal investigator pledges assurances to the Institutional Review Board as follows:

- | YES | NO | |
|-------------------------------------|--------------------------|---|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Human subjects will be volunteers |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Subjects will be free to withdraw at any time |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | The data collected will not be used for any purpose not previously approved by the subjects |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Subjects will be guaranteed confidentiality |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Subjects will be informed beforehand of the nature of their activities and responsibilities |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | The nature of the subjects' activities and responsibilities will not cause any physical or psychological harm |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Individual performances will not be disclosed to persons other than those performing the research or those authorized by the subjects |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | If minors are to participate, valid consent will be obtained from parents or guardians. |
| <input type="checkbox"/> | <input type="checkbox"/> | If minors are to participate, valid consent will be obtained from parents or guardians |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | All questions will be answered |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | All volunteers will consent by signature |

8. Any exceptions or qualifications to the above assurances must be explained below:

N/A – no minors will participate in the study.

APPENDIX D
DEMOGRAPHIC SURVEY

Demographic Information

1. Name: _____
2. Age: _____
3. Gender: M or F (circle one)
4. Education Level:
 - ___ 8th Grade or less
 - ___ Less than 12th Grade
 - ___ High School Diploma
 - ___ GED
 - ___ Some College or Technical School
 - ___ College or Technical School Graduate
5. Race: (Check one)
 - ___ African American ___ Hispanic ___ White (Non-Hispanic)
 - ___ Native American ___ Asian or Pacific Islander ___ Other
6. Have you ever received nutrition education? YES NO
7. If YES, from which of the following have you received nutrition education from?
(Check all that apply)
 - ___ FNP ___ EFNEP ___ WIC _____ Other (Please Specify)
8. How many children (under 18) are in the household? _____
9. Total number of adults in the household (over 18) _____
10. Income (per year):

___ 10,000 or less	___ 30,001 to 35,000
___ 10,001 to 15,000	___ 35,001 to 40,000
___ 15,001 to 20,000	___ 40,001 to 45,000
___ 20,001 to 25,000	___ 45,001 to 50,000
___ 25,001 to 30,000	___ 50,001 or more
11. Who is responsible for food shopping in your household? _____
12. Who is responsible for food preparation in your household? _____

APPENDIX E
CONSENT FORM

Informed Consent

TITLE OF RESEARCH PROJECT: Use of Focus Group Discussions (FGD) to Assess the Nutrition Education Needs of participants Family Nutrition Program.

The purpose of this study conducted by the Louisiana State University (LSU) Agricultural Center investigators is to determine, through the use of focus group discussions, if concerns, such as nutrition education materials, delivery methods, and length and place of classes are being satisfied by nutrition education programs of the Louisiana Cooperative Extension Service programs. This information will be used to improve the existing materials or to design new nutrition education materials or curricula. You will be asked to answer written demographic questions, including age, race, and education level, and to participate in a FGD with other participants. There are no risks associated with this study. Individuals may receive no direct benefit from the study; however, the LCES programs will benefit through improved nutrition education curricula and individuals may benefit from improved educational curricula.

In order for the results of the FGD to be summarized more accurately, the FGD may be audio- or videotaped. Only LSU researchers involved in this study will have access to these tapes or to the transcriptions. Results of this study, including any publications, will not identify individuals by name. Data will be presented either in summary form or stripped of individual identifiers. You may choose not to respond to a specific question(s), either in the FGD or the demographic survey. You may withdraw from this study at any time without prejudice.

The study has been discussed with me and all questions have been answered to my satisfaction. I may direct additional questions regarding this study to Dr. Carol O'Neil, School of Human Ecology, at 225-578-1631. If I have questions about subjects' rights or other concerns, I can contact Dr. David Morrison at 225-578-8236.

With full knowledge of the above information, I voluntarily consent to take part in this study.

Name of participant (please print): _____

Signature of participant: _____ Date: _____

Mailing address: _____

(Street)

(City)

(Zip)

Phone: _____

Witness (please print): _____

Signature of witness: _____ Date: _____

APPENDIX F
FOCUS GROUP DISCUSSION QUESTIONS

Focus Group Questions

Introductory phrase: before we start with the actual questions, we will begin with a light talk about nutrition.

1. What would you consider to be a healthy meal? Why?
2. How did you hear about FNP?
3. Why do you come to the FNP meetings?
4. Is there anything that keeps you from participating in or attending the FNP seminars? If so, what are they? Probe: What would make it easier for you to attend these meetings?
 - a. Do you think the ideas and topics presented in FNP sessions are realistic? Practical? Probe: Can you give me an example of something that you have found to be practical? What about impractical?
 - b. Are there any difficulties in practicing or following the things you learned at FNP at home? If so, what are they?
5. What types of nutrition-related topics do you like or would you like to see covered in FNP?
6. When you receive nutrition information, what format would you prefer to get that information? What types of information do you like to receive?
7. If you could change some things about FNP presentations or presenters, what would you change and what is your main reason for changing it?
8. Is there anything else you would like to talk about regarding FNP?

APPENDIX G
RECRUITMENT FLYER

Volunteers Wanted

Volunteers are needed to participate in focus group discussions regarding the **Family Nutrition Program (FNP)**. Each focus group discussion will last about 1½ hours.

Volunteers must meet the following criteria:

- ✓ Have participated in one FNP nutrition education session, received FNP brochures, **OR** seen FNP displays
- ✓ Interest in discussing questions regarding FNP in a small group setting

Refreshments will be served and volunteers will receive **EXCITING FREE GIFTS** for participating.

If interested, please contact your FNP extension agent or nutrition educator for more information.

VITA

Denise Marie Holston was born to Wade and Linda Holston on August 20, 1978, in West Monroe, Louisiana. She graduated from St. Amant High School in May 1996. She received her Bachelor of Science degree in dietetics in May 2001 from Louisiana State University (LSU) in Baton Rouge, Louisiana. In June 2002, Denise continued her studies at LSU and pursued a master's degree in human nutrition and foods. During her studies, she worked as a community nutrition research graduate assistant for the Family Nutrition Program, which is part of the LSU AgCenter. She also worked as an assistant director at the Guardian Angel Daycare. Denise is a current member of the American Dietetic Association and Gamma Sigma Delta, an agriculture honor society. Denise intends to graduate in May 2004 and enter the dietetic internship program at LSU. After completion of the dietetic internship, Denise will be eligible to take the National Registration Exam for certification as a Registered Dietitian.