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Evaluating the Get Into Fitness Today (GIFT) Program: Weight Loss and the Roles of Education and Empowerment

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Evaluating the Get Into Fitness Today (GIFT) Program: Weight Loss and the Roles of
Education and Empowerment

by

Emily Koby Novicki

A thesis submitted in partial fulfillment
of the requirements for the degree of
Master of Arts
Department of Anthropology
College of Arts and Sciences
University of South Florida

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Abstract

This study investigated the effects of Get Into Fitness Today (GIFT), a health program for adults that promotes balanced nutrition, physical activity, and weight loss through weekly meetings that provide education and social support. In addition to investigating the effects of GIFT, this evaluation sought to better understand explanatory models used by participants and program staff, and the roles of education and empowerment in weight loss and health education. This mixed methods, case study evaluation consisted of quantitative analysis of existing program records for 664 participants, 40 hours of participant observation of class sessions with ten GIFT groups, and follow-up interviews with 17 participants of three case study groups. Supplementary sources of information included a community health focus group and nearly 1000 goal forms completed by participants. Through analysis and triangulation of the multiple data sources, it was found that participants who complete the program are highly satisfied and have positive outcomes, but only about one-third of participants finish the program. The data suggests that at least some participants stop attending because they do not find the educational material to be novel or the classes to be especially engaging. While both staff and participants share the dominant, individualistic explanatory model of obesity, a new model that is strengths-based, focused on health rather than weight, and aims to empower individuals within structural constraints may be more appropriate.

Chapter 1: Introduction

Introduction

It is widely acknowledged that an unprecedented proportion of the population of the United States is overweight and obese (Flegal, et al. 2010). The “obesity epidemic”, as this phenomenon is referred to in both the popular and academic press, has evoked a range of responses among public health professionals, journalists, medical professionals and lay people, ranging from “sin taxes” on sugary beverages and snack foods to the size acceptance movement (Brownell and Frieden 2009; Gilman 2008; Moffat 2010; Saguy and Riley 2005). This project focused on exploring the effects of Get Into Fitness Today (GIFT), a program run by Hillsborough County Health Department (HCHD) that promotes balanced nutrition, fitness and weight loss among adults. This study was conducted using an anthropological perspective, since many aspects of obesity and weight loss are inextricably linked to culture – food preferences and social customs, body size preferences, explanatory models of obesity, among others. The anthropological perspective provides valuable insights into how obesity is constructed as both a medical and social problem, and the best strategies for programs like GIFT to use in order to help participants become healthier.

GIFT aims to improve behaviors related to overweight and obesity, which in turn is related to a host of health problems. Obesity results from a caloric imbalance in which too many calories are consumed through food and not enough are burned through physical exertion, leading to surplus in calories that results in weight gain (Centers for Disease Control and Prevention 2009b). Overweight individuals are at an increased risk

for type II diabetes, coronary heart disease, some types of cancers, hypertension, stroke, osteoarthritis, liver and gallbladder disease, sleep apnea, and respiratory problems, among others (Centers for Disease Control and Prevention 2009c). Further, excess weight is associated with knee, hip and back pain (Andersen, et al. 2003; Shiri, et al. 2009).

The prevalence of obesity has more than doubled since the 1960s, but has appeared to leveled off in 2003-2004 (National Center for Health Statistics 2010). Despite this, the prevalence of obesity in Hillsborough County is 24.8%, well above the Healthy People 2010 goal of 15% (Florida CHARTS 2007; U.S. Department of Health and Human Services 2000). Another 39.4% of adults are overweight; almost two-thirds of all adults in the county are either overweight or obese. GIFT seeks to help adults in Hillsborough County attain a healthy weight through increased knowledge of BMI, increased fruit and vegetable consumption and increased physical activity in order to prevent chronic diseases associated with overweight and obesity, namely type II diabetes. According to the 2007 Behavioral Risk Factor Surveillance Survey data, only 26.1% of adults in Hillsborough County eat five servings of fruits and vegetables daily, 27.4% engage in no leisure-time physical activity and only 33.7% met moderate physical activity recommendations (Florida CHARTS 2007).

Program Description

GIFT classes meet weekly for one hour at workplaces, community centers, libraries, churches, coffee shops and private homes. A trained Community Health Advisor (CHA) leads each group; some are paid employees, but others are volunteers. Each class consists of three twenty-minute segments: a lesson on a health topic, social support, and exercise. The lessons cover new topic each week regarding fitness, nutrition, or diabetes prevention and teach skills like reading food labels and controlling

portions. During the social support portion of the class, participants share information, ideas and encouragement. In addition to setting overall goals for the six weeks, participants also set a smaller, more specific goal for each week. Progress (or lack thereof) towards weekly goals is discussed among participants, and goals for the coming week are shared (to increase accountability). The final portion of the class is a physical activity chosen by the CHA, taking into account limitations of the physical space and the abilities of participants. Activities vary greatly; examples include taking a group walk, stretching, doing a workout DVD and learning strength and flexibility moves.

Goal setting is an important aspect of the program. In Week 1 participants set medium-term goals (usually the six weeks of the program session) for themselves using a checklist of possible goals on a form called the Commitment and Contract to Change. Some flexibility is built in to the goal setting, however, as the “other” option allows participants to write in their own goal. They are also encouraged to set a reward for themselves for meeting their goals (a “positive reward”) and some kind of punishment if they do not (a “negative reward”). Each week (including Week 1), participants create an action plan, which is essentially a short-term goal setting exercise. In their action plan, participants write out what their small goal is for each week (such as eating an additional vegetable daily or only drinking more water), why they have this goal, when they will accomplish it, what impediments they face, and how they will overcome those impediments.

Participants are also highly encouraged to keep a food diary on a form provided by the program. The form includes spaces to mark off the number of fruits and vegetables eaten, glasses of water imbibed and minutes of physical activity completed, in addition to space to write out foods eaten for breakfast, lunch and dinner. Participants weigh in each week, but their weight is not publicly announced. Rather, it is recorded on their food diary, which is then submitted by CHAs to HCHD for monitoring purposes. If

groups are particularly passionate, they can continue beyond the six weeks and move into an extended 24-week curriculum. New CHAs are often recruited from among successful participants.

Program History

The program originates with a community health assessment conducted in 2006-2007 that found, in line with epidemiological statistics, the general public perceived overweight and obesity to be the largest health problem facing their community. However, the survey data also revealed what staff called “a disconnect” between what the public viewed as the most pressing health problems and what they perceived as the riskiest behaviors. In other words, people felt that obesity was an imminent problem, but did not cite sedentary lifestyles and poor diet as most important risk behaviors to address (Hillsborough County Health Department 2006-2007). Using this information, the leadership at HCHD decided that an education program was necessary in order to both reduce obesity (and therefore chronic diseases) and address this disconnect between cause and consequence.

Originally they envisioned a community-based initiative called “Neighborhood by Neighborhood” in which health department staff would train interested individuals, who would then pass along the information through their social networks. The inspiration came from a recent program in conjunction with beauty salons and barbershops in which barbers and stylists would distribute educational cards about stroke and heart disease to their clients. During this same time period, HCHD submitted an unsuccessful grant proposal for a weight loss program for African-American and Hispanic women ages 18-36 called “Fit and Fabulous” that utilized the Transtheoretical Model and social support. Feeling both program concepts had merit, they pulled elements from both to create

GIFT. They soon decided on the basics of the program: a focus on nutrition and physical activity, a lesson each week and a personal log.

They also decided to recruit lay health advisors, who they called “Community Health Advisors” (CHAs) and received a grant from the Office of Minority Health for their training. They originally envisioned 20 CHAs, but quickly realized that it was extremely difficult to find individuals in each neighborhood that were willing to teach the classes without compensation. Changing tactics, they decided to allocate general funds to the program and hire five ethnically and linguistically diverse CHAs to teach the classes. In the beginning, CHAs were responsible for finding a site and recruiting participants in addition to teaching the classes. At first they focused on specific zip codes deemed most at need, but have since expanded eligibility to all residents of Hillsborough County. Participants also used to receive incentives like gift cards, visors, and water bottles for participating, but now that the program is well established, they no longer spend money on incentives and spend very little on advertising. The program director feels that word of mouth generated by the success of their participants has become their advertising (Cindy Hardy, Personal communication, 7/30/10).

Today, most participants come from one of two sources: workplace wellness initiatives and doctor referrals. HCHD has had considerable success marketing GIFT among employers, since there is no cost to employers (aside from printing the program materials) and employees can participate during their lunch hour or immediately before or after work (thus maintaining productivity). Employees are asked to volunteer to receive training and teach the weekly classes to their co-workers. Doctor referrals are the other main source of participants. HCHD developed their own referral pad after learning that scholarly literature indicates that patients are more likely to follow-up on a referral if they are given an official piece of paper. They have forged partnerships with doctors in the Tampa Bay area and regularly receive referrals from several practices.

When a patient is referred, a HCHD staff member calls him or her, explains the program and invites them to join a GIFT group. It should be noted that participants also learn of the program through word-of-mouth and a radio commercial aired on a station popular among African-Americans.

Other aspects of the program have also undergone changes over time. The program began with six lessons, but eventually expanded to 24 weeks worth of lessons (approximately six months). The educational materials have been improved over time through feedback of participants and CHAs, but the director feels that the lessons are now “finished” and they have moved beyond asking participants “What do you need?” (Cindy Hardy, Personal communication, 7/30/10). The program has also moved away from a more open-door policy of encouraging participants to bring friends and family. Feeling that the classes were being treated as “social hour” rather than a serious commitment and that the extra participants were diluting their aggregate results, the leadership at HCDH has enacted a strict “no visitors” policy.

Anthropological Issues

Obesity has captured the attention of journalists, academic researchers, public health professionals, industry executives, and lay people alike. Various groups United States simultaneously view the obesity phenomenon as a medical, social, political and moral problem. In such a contested space, the need for an anthropological approach is clear, in order to ensure that the program is sensitive to the needs and perspectives of its participants in order to be the most effective. Since there are several explanatory models of obesity currently in use, it is critical to determine whether the explanatory model underlying the program corresponds with the model (or models) used by participants. Kleinman (1978) first introduced explanatory models as a way to describe the very different ways in which doctors and patients conceptualize the acquisition and

treatment of diseases, but the crux of his idea is broadly applicable to interactions between the public and health care professionals of many stripes. These concepts will be more fully explored in the next chapter.

Anthropology also has much to contribute to evaluation, thanks to its emphasis on local, contextual knowledge. In fact, evaluation anthropology is considered an emerging subfield of applied anthropology (Butler 2005; Copeland-Carson 2005). Often evaluations are simple pre- and post-tests designed to uncover whether a program has achieved specific, narrow, pre-determined objectives. While pre- and post-tests certainly have a role in evaluation, the ethnographic, qualitative approach of anthropology provides a more comprehensive, nuanced view of program effects of than can be detected through pre- and posttests alone (Britan 1978; Patton 2005). Case studies, a technique used in this study, are highlighted as a particularly good way to apply anthropological methods to evaluation (Butler 2005). Participant observation, direct observation, and semi-structured interviews were also utilized in this project to achieve a more nuanced understanding of the achievements of GIFT and its opportunities for improvement.

In addition to enriching evaluation methodologically, anthropology has made several important conceptual contributions. One is the idea of “comparative study of how people *evaluate*, that is, the ways of knowing, being and valuing exhibited by different societies and cultures overall” (emphasis original) (Copeland-Carson 2005: 8). Others have also praised anthropology’s sensitivity to values, bringing attention to both the values of diverse stakeholders and values held by evaluators that underpin scientific endeavors (Butler 2005; Patton 2005). Finally, evaluation has also been positively impacted by anthropology’s reflections and debates about representation within writings and presentations, since evaluators too have difficulty representing multiple and sometimes divergent perspectives among stakeholders (Patton 2005). As Patton (2005: 37) explains, “Anthropology’s insistence on being clear about whose perspective is being

presented has influenced evaluation's struggle with this complex methodological, analytical, reporting, political and values-laden challenge."

Research Questions

The following research questions guided the research process:

1. What are the effects of the program?
2. In what ways does the program meet (or fail to meet) the needs of the intended audience?
3. How does the conceptual model of weight loss employed by the program correspond to the conceptual model used by participants? What implications does this have for the program?
4. What are the roles of education and advocacy within the program?

Instead of taking the traditional route of testing for specific hypotheses, I have taken what is known as a goal-free approach (McKenzie and Smeltzer 2001; Patton 1979; Scriven 1991). Rather than entering the study with specific, preconceived objectives the program should accomplish, a goal-free approach instead searches for all program effects (McKenzie and Smeltzer 2001; Scriven 1991). This approach was chosen to avoid overlooking positive program effects or areas in need of improvement due to overly narrow criteria for program success. This was particularly appropriate in this instance, as the program manager only tracks five variables for quarterly reports to the state: 1) number of GIFT groups, 2) number of participants, 3) total pounds lost, 4) number of participants with self-reported increase in fruit and vegetable consumption and 5) number of participants with self-reported increase in physical activity. In the absence of specific objectives or targets for the program, a goal-free approach is highly appropriate.

Research Setting

This research was conducted through an internship with Hillsborough County Health Department (HCHD) from July-December 2010. HCHD is a state agency operating under the Florida Department of Health in partnership with the county government whose mission is to “promote, protect, and improve the health of all people of Florida” (Hillsborough County Health Department 2010). To this end, the HCHD provides a wide range of clinical services, conducts epidemiological surveillance, and monitors environmental health hazards, among other services and supports. Rather than one central office, the agency is broken up among several offices located in various parts of the county. My internship with the Community Health Division took place at their offices just outside of Ybor City and later in Spring Hill, both in Tampa. Although I was occasionally asked to help with GIFT activities, I was given a great deal of autonomy in my internship. I spent the vast majority of my time independently working on evaluation activities, but being in the thick of the program’s day to day operations was illuminating.

Over the course of my internship I also had several opportunities to interact directly with ten different GIFT groups. As part of a larger workplace wellness initiative, a white-collar service agency created a GIFT group for each lunch period in all seven of its branches, and I was asked to assist with the beginning and ending measurements (weight, BMI waist size, body fat percentage) at three branches (a total of 7 groups). This took me from urban areas of Hillsborough County in Tampa to more rural areas in the perimeter of the county. One of these seven groups allowed me to observe every session and served as one of my case study GIFT groups. This group, which I will henceforth refer to as the “workplace group”, was located at in an office building in downtown Tampa. I also the opportunity to observe what the program staff refer to as “community groups”: a group that met at a community center (which I will call the “community center group”) and another that took place at a public library (the “library

group”), both in low-income neighborhoods. While all classes took place in well-appointed conference rooms, the workplace group was composed of ethnically diverse and well-educated white collar workers taking part in a workplace wellness initiative, while the community center and library groups were almost entirely African-American and Hispanic women with varying levels of education who were referred to the program by their doctors.

The participants of these various groups do not make up one community, in fact quite the contrary. The program seeks to serve all of Hillsborough County, a diverse, large, and populous geographic area. The variety in the research setting regard to both socio-economic status and geography is thus appropriate and can even be seen as a strength of the research.

Outline

The next chapter will provide an overview of literature regarding obesity. Several social scientists have noted that obesity is a contested space in which various entities are engaged in “framing wars”. This chapter will expand upon their work and describe five explanatory models seen in the literature and popular press that provide different perspectives on the causes and solutions of obesity. The five models include the dominant public health model, biocultural model, biomedical model, critical anthropological model and fat acceptance model. The ways in which women individuals adopt, transform, combine or reject models will be investigated.

Chapter 3 describes the methodology used in this study in detail. A pragmatic, mixed-methods approach was taken to capitalize on existing program records while also expanding knowledge of participants’ perspectives on and experiences with the program. Three main methods were used in this study: quantitative analysis of existing program records, participant observation of three case study GIFT groups, and semi-

structured follow-up interviews with participants. This chapter will describe in detail how the research was carried out, including sampling and recruitment strategies, data management and the analysis plan. Also included are the research context and research questions.

Chapter 4 presents the results from the analysis of the data collected for this study, organized according to methodology and theme. This includes quantitative analysis of a database of 664 participants on weight change, waist circumference change, food diary completion, attendance, change in knowledge, fruit and vegetable consumption, physical activity and participant satisfaction. Also covered are themes emerging from the 40 hours of participant observation about CHAs, explanatory models and challenges faced by participants. The results from the 17 semi-structured interviews are also discussed, including history of dieting, feedback on elements of the program, changes made due to participating in the program and suggestions for improving GIFT. Finally, the analysis of supplemental sources of information, namely the goal forms, is presented.

Chapter 5 offers a synthesis of the findings and makes connections to the literature discussed in Chapter 2, organized by research question. First the effects of GIFT are outlined, followed by a discussion of how the program meets and fails to meet participants needs. The explanatory models used by the program staff and participants are articulated, and finally roles of empowerment and education are explored. This chapter also includes implications for both public health and anthropology. It concludes with recommendations specifically for GIFT and broader recommendations for health promotion efforts regarding obesity.

Summary

This chapter has provided a broad overview of this study, including the setting and population. A description of the program was provided, along with an account of the development and evolution of GIFT. The anthropological aspects of this work were detailed, a topic which will be more fully explored in the discussion. Finally, a brief summary of the research approach, methodology and research questions were provided. Subsequent chapters will cover in greater detail the scientific literature informing this study, and its methodology and results. The final chapter will include a discussion of the findings, their implications and recommendations for future health promotion programs.

Chapter 2: Literature Review

Introduction

On the surface, obesity seems like a rather cut and dry medical issue, a condition created by a caloric imbalance in which too many calories are consumed through food and not enough are burned through physical exertion, leading to surplus in calories that results in weight gain (Centers for Disease Control and Prevention 2009b). According to recent estimates, 32.2% of adult men and 35.5% of women in the United States are obese, but prevalence rates appear to have leveled off after rising significantly during the 1980s and 1990s (Flegal, et al. 2010). Predictions are dire: one projection found that all American adults will be obese by 2048 and another found that life expectancy may decline for the first time in two centuries because of obesity (Flegal, et al. 2010; Olshansky, et al. 2005).

However, a closer examination of scientific and popular literature shows that obesity is conceptualized in several different ways among academics and lay people alike. This study has thus adapted Kleinman et al (1978)'s assertion that doctors and patients can have very different explanatory models of disease; in order to achieve the best health outcomes doctors and patients must together negotiate a shared model. As Chaufan (2004:260) explains, "Explanatory frameworks matter because societies shape their public policies and decide the use of their resources depending on what they see as the source and cause of their problems." Kwan (2009) echoes this sentiment and adds that because frameworks prescribe solutions, they have the power to either reduce or exacerbate social inequalities.

In the case of GIFT, the program may utilize one explanatory model, while participants may use one or more alternative models. If there is conflict between the models, the program may need to change in order to achieve a shared model acceptable to both program staff and participants. The explanatory models used by participants may very well be different, since weight loss efforts are complex, unique and individual in nature (Adams 2008). Further, women are not a homogenous group and accept, reinforce and resist societal pressures regarding weight in different ways (Germov and Williams 1999).

Other researchers studying the social construction of obesity have also investigated explanatory models. One such example comes from Sobal (1995), who takes a historical approach. He argues that first a moral model was used in which individuals were blamed for their weight and punished as a mechanism of social control, but this was replaced by a medical model in the postwar era in which obesity became a disease. More recently, the fat acceptance movement has sought to demedicalize obesity and bring attention to fat discrimination and body acceptance, leading to a political discrimination model. Although Sobal presents them as sequential, he acknowledges that all three still operate today. A second classification system comes from, Stinson (2001)'s ethnography of a weight loss program that bears striking resemblance to GIFT. She found five explanatory frameworks simultaneously at work: 1) self-help, in which lifestyle changes result in improved health and weight loss, 2) work, in which the body is seen as a malleable substance that can be molded through discipline and hard work, 3) religion, in which religious language of temptation, sin, guilt and sacrifice is prominent, 4) addiction, as exemplified by Overeater's Anonymous, and 5) feminism, which is often faint and co-opted. In practice, however, the frames of religion, addiction and feminism are often translated into the language of self-help and work, which most closely fit dominant cultural values.

Saguy and Riley (2005) take a very different approach. They argue that four groups (antiobesity researchers, antiobesity activists, fat acceptance researchers, and fat acceptance activists) are currently engaged in “framing contests” over the causes and consequences of obesity. Finally, Kwan (2009) explores three cultural frames regarding obesity: a medical frame (represented by the CDC), social justice frame (represented by the National Association to Advance Fat Acceptance or NAAFA), and market choice frame (represented by the Center for Consumer Freedom). These previous works informed this study to varying degrees, but ultimately I developed a unique set of explanatory models in the literature regarding obesity. Five models have been identified and will be explored: the dominant public health model, a biocultural anthropological model, a biomedical model, a critical anthropological model, and the fat acceptance model. Finally, the ways in which individuals adopt, transform, combine or reject models will be investigated.

Public Health Model

Basic Tenets

The public health model is the dominant explanatory model used in the United States by professionals and lay people alike. The major tenant of this model is that being overweight is unhealthy (Stinson 2001). As discussed in Chapter 1, overweight individuals are at an increased risk for type II diabetes, coronary heart disease, some types of cancers, hypertension, stroke, osteoarthritis, liver and gallbladder disease, sleep apnea, and respiratory problems, among others (Centers for Disease Control and Prevention 2009c). Further, excess weight is associated with knee, hip and back pain (Andersen, et al. 2003; Shiri, et al. 2009). It is due to these health issues, and the high prevalence of overweight and obesity described above that obesity is seen as a major health problem, an epidemic even, in both scientific and news media publications (Office

of the Surgeon General 2001; Saguy and Almeling 2008). There is a serious sense of urgency felt among public health professionals to take action regarding the most serious health issue facing the nation (Saguy and Almeling 2008; Saguy and Riley 2005).

The determination of overweight and obesity, and therefore who needs help, is generally made using body mass index (BMI). BMI is a height-to-weight ratio based on age and sex that provides a rough indicator of body fat percentage (Centers for Disease Control and Prevention 2009a). For most adults, a BMI of 18.5 to 24.9 is considered a healthy weight, 25.0 to 29.9 is overweight, and anything above 30.0 is considered obese (Centers for Disease Control and Prevention 2009a). Overweight and obese individuals are highly encouraged to reach a BMI in the healthy range (18.5-24.9) in order to reduce their risk for chronic diseases (Centers for Disease Control and Prevention 2009c). Weight loss is promoted in order to improve health, not to improve appearance or conform with the societal preference for thinness (Kwan 2009).

Recent literature suggests, however, that overweight people do not need to achieve a BMI under 25 in order to experience health benefits. Indeed, one popular standard within public health for “successful” weight loss is losing of initial body weight and maintaining that loss for at least one year (Wing and Hill 2001; Wing and Phelan 2005). Modest weight loss of 5-10% of initial body weight can help prevent hypertension and type II diabetes, and may improve lipid, glucose and blood pressure levels (Blackburn 1995; Goldstein 1992b; Oster, et al. 1999; Vidal 2002b). Whether overweight and obese individuals should aim for a 10% weight loss or a BMI under 25 has not been entirely resolved in this model.

Strategies for Weight Loss

The dominant public health paradigm posits that obesity is caused by caloric overconsumption and insufficient physical activity, and therefore, individuals must

overcome their condition through a combination of diet and exercise. Although weight loss can also be achieved through drugs or surgery, for most people it requires a “lifestyle change” (McKinley 1999). This lifestyle change is presented as a permanent modification of eating and activity levels, in contrast with time-limited dieting (Stinson 2001). The Centers for Disease Control and Prevention (CDC) recommend that individuals use the food pyramids (which are tailored for age, sex and activity level) as an aid in attaining “caloric balance”; increased consumption of fruits and vegetables is heavily encouraged (Centers for Disease Control and Prevention 2011b; Centers for Disease Control and Prevention 2011d; United States Department of Agriculture 2011). Regarding physical activity, the CDC recommends that people ages 18-64 engage in 150 minutes of moderate physical activity or 75 minutes of vigorous physical activity weekly, plus muscle-strengthening activities two or more days per week (Centers for Disease Control and Prevention 2010). Weight loss should occur slowly, with 1-2 pounds per week considered optimal (Centers for Disease Control and Prevention 2011e).

Education also play a critical role in reducing obesity, since it is perceived that many simply do not know how to eat more healthfully or are aware of the importance of exercise (Austin 1999; Saguy and Riley 2005; Stinson 2001). The idea is that once people have the necessary knowledge, they can make wiser choices and replace bad habits with good ones (Stinson 2001). Strategizing about the smartest choices is thus an important tool for weight loss (Stinson 2001). Despite evidence that theory-based behavior change programs are more successful than knowledge-based programs, education remains to be perceived as an indispensable component of weight loss (Cullen, et al. 2001).

Along with education, a number of tools and aids for weight loss are promoted in conjunction with the “eat less, exercise more” mantra by the CDC and are utilized in

GIFT. The first is finding social support, often accomplished through joining a group of others who are also trying to lose weight. The popularity of support groups is tied to the broader self-help movement, which is in turn fueled by values of individualism and self-improvement (Stinson 2001). Support groups are characterized by the lack of a professional leader or facilitator; participation costs little or nothing (Davison and Pennebaker 2000).

According to Stinson (2001) support group benefits are threefold. First, they provide a sense of community and the kind of psychological and emotional support that individuals do not receive in their current relationships. Second, through improved coping strategies and receipt of positive reinforcement, individuals may experience increased self-esteem. Finally, they are a potential site for social change. Although most support groups operate on an individual level, some have become more involved in the broader political and social issues facing their group (Stinson 2001). Regarding the efficacy of support groups, Davison and Pennebaker (2000) provide a simple metric: participation. They point out that, "Groups without value cease to be groups. Members vote with their feet" (Davison and Pennebaker 2000: 206). High turnover and large membership can diminish the effectiveness of support groups, since it takes time for participants to become familiar with each other and feel comfortable sharing (Stinson 2001). Competitive feelings among participants can also impede their effectiveness, this is particularly true for women and weight loss (Stinson 2001).

The second strategy, recording food intake in a "food diary", is also encouraged by the CDC as a weight loss aid (Centers for Disease Control and Prevention 2011c). The idea behind food diaries that all food intake must be recorded in detail in order to promote awareness of eating habits (and thereby avoid "mindless eating") and improve self-efficacy (Centers for Disease Control and Prevention 2011c; Mossavar-Rahmani, et al. 2004; Stinson 2001). Many studies have shown that food diaries promote weight loss

across a number of paper and digital formats, although the quality of self-monitoring may impact weight loss success (Baker and Kirschenbaum 1993; Boutelle, et al. 1999; Boutelle and Kirschenbaum 1998; Guare, et al. 1989; Helsel, et al. 2007; Kruger, et al. 2006; Yon, et al. 2007). A high level of detail and completeness is seen by some as critical, while other studies suggest it is the process of self-monitoring, rather than the level of detail, that is important because accuracy of self-monitoring is often poor (Baker and Kirschenbaum 1993; Goris, et al. 2000; Helsel, et al. 2007; Shay, et al. 2009).

The third strategy, goal setting, is widespread despite limited evidence on effectiveness (Cullen, et al. 2001; Shilts, et al. 2004). Most research on goal setting has been conducted in workplace and sports settings, where researchers have found that goals that are specific, proximate (short-term), and difficult yet achievable are the most effective (Shilts, et al. 2004). Feedback (knowledge of one's progress) and rewards are also critical components (Shilts, et al. 2004). However, reviews of goal setting in dietary and physical activity behavior change studies found that there is insufficient evidence to determine if these findings hold true for health behaviors (Cullen, et al. 2001; Shilts, et al. 2004). The authors of both reviews do conclude that there is sufficient evidence to recommend using goal setting as part of behavior change programs, even though the most effective goal setting strategies for health behaviors are unknown (Cullen, et al. 2001; Shilts, et al. 2004).

A final common strategy for weight loss is self-weighing, usually weekly, in order to reinforce incremental progress and drawing attention to weight. This technique is less commonly utilized, however, and it not currently endorsed by the CDC (Centers for Disease Control and Prevention 2011c; Linde, et al. 2005). There has been some concern raised about negative psychological ramifications, namely reduced body satisfaction (Welsh, et al. 2009). However, the evidence suggests that a weekly weigh-in

is a beneficial practice that promotes greater weight loss without psychological harm (Linde, et al. 2005; O'Neil and Brown 2005; VanWormer, et al. 2009; Welsh, et al. 2009).

Ideological Underpinnings

Even though the path to weight loss is made clear in this model, accumulated scientific evidence shows that most diets fail. Studies show that between 75-95% are unable to maintain their weight loss (Garner and Wooley 1991; Goodrick and Foreyt 1991; Kramer, et al. 1989; National Heart 1998; Stunkard and McClaren-Hume 1959; Wing and Phelan 2005). This is often interpreted by public health professionals and the public at large as evidence that people are not truly committed to lifestyle changes rather than a flaw in the “eat less, exercise more” approach (Saguy and Riley 2005; Stinson 2001). One example of this is a fact sheet produced by the Office of the Surgeon General that advises people to “Make fitness a priority....COMMIT TO IT” (emphasis original) (Office of the Surgeon General 2007).

This model is overwhelmingly individualistic (Honeycutt 1999; McKinley 1999; Ritenbaugh 1982; Sobal 1999; Stinson 2001). This is born out in the language used. Obesity is seen as risk factor for a number of secondary diseases rather than a state of being or a disease in and of itself. Risk factors are caused by individual choices and behavior, making obesity similar in this respect to smoking (Saguy and Riley 2005; Stinson 2001). “Like cigarette smokers who contract cancer, obese persons are assumed to have gotten what they asked for” (Stinson 2001: 176). Ultimately blame is placed squarely on the obese individual for any and all ill health (Kwan 2009).

In addition to the focus on the individual, this model also has moralistic overtones. Excess body weight has traditionally been seen in moral terms as an indicator of sloth and gluttony (Saguy and Almeling 2008). Overweight and obese people are viewed as being unable to control their desires, which is ultimately a moral failure

(McKinley 1999; Sobal 1999). Food itself is moralized and divided into “good” and “bad”, sacred and profane (Stinson 2001). Some have even argued that the pursuit of health has become a moral end in itself (Saguy and Almeling 2008). It is therefore not surprising that religious language is also used by dieters as a metaphor to describe their experiences, with guilt, sacrifice and temptation frequently surfacing as themes (Stinson 2001).

The fundamental tenants of this model stem from prominent underlying cultural values (Austin 1999; de Vries 2007; Stinson 2001). For example, the belief that weight loss requires dedication and hard work stems from the cultural value of a self-made person and a strong (Protestant) work ethic (de Vries 2007; Stinson 2001). Further, in the United States the body is seen as a material object that can be “molded into the desired size and shape, if you only spend enough time, use the right tools, apply the correct techniques, and work at it hard enough” (Stinson 2001: 52-53). Emphasis on willpower reflects the Western tendency to separate mind from body. The body is “instinct, physical urges, drives and troublesome emotions that continually threaten to run amok”, and must be tamed by the rational mind (Gilman 2008; Stinson 2001: 169). The use of weight and BMI to as the marker of a “good body” comes from a high level of rationalization; Americans are “enamored of quantification and calculability” (Austin 1999; Stinson 2001: 117). It is through the rationalization of the body that ideal universal weight ranges are constructed and the relationship between weight and health is measured and quantified. Finally, part of the appeal of dieting comes from a powerful cultural narrative Stinson calls the “before-and-after story”, in which an deficient protagonist overcomes challenges through willpower, work and determination and emerges from his or her trials as a triumphant and improved person (Stinson 2001: 195).

In practice, this construction of obesity is strongly negative. In addition to being viewed as indulgent, overweight and obese people are perceived as lazy, unattractive,

unsuccessful, less competent and lacking in self-control or willpower (Germov and Williams 1999; Kolata 2007; Maddox, et al. 1968; McKinley 1999; Stinson 2001). Because of these biases, overweight individuals face considerable stigma. In their comprehensive review of the literature regarding stigma and obesity, Puhl and Heuer (2009) found inequities in workplaces, educational institutions and healthcare settings due to weight bias. Additionally stigmatization is pervasive in the media and is even found in close personal relationships (romantic partners, family members and friends). The authors point out that weight bias has increased substantially over the past decade, is rarely challenged in Western society, and results in decreased quality of life for overweight and obese individuals. For their part, public health professionals see it as their duty to raise awareness about the consequences of obesity, even if that means exacerbating stigma (Saguy and Riley 2005). One such public health researcher is quoted in an interview as saying, “We don’t want to have discrimination, but I think that can’t possibly be used as an excuse to censor information about the...cold reality of excessive overweight” (Saguy and Riley 2005: 885-886). Stigmatization is even seen by some public health professionals as a justifiable way to motivate individuals to adopt healthier behaviors (Puhl and Heuer 2010).

Despite the pervasive nature of this model, Moffat (2010) points out that public health experts are not worried about panic and alarmism but rather apathy among the public. They are concerned that obesity has become “normalized”; larger body sizes have become so prevalent that we, as a society, have forgotten what normal bodies look like. “Thus, the normal range of variation, or bell curve, has been skewed to the right, and with this shift there has been a decline in our ability to recognize obesity” (Moffat 2010: 9). Further evidence of this concern is seen in a recent study which found that both men and women are less likely to self-classify as overweight on the most recent National Health and Nutrition Examination Survey (NHANES) than the one prior, which

the authors interpreted as evidence of a “generational shift” towards larger body weight norms (Burke, et al. 2010).

Transition within Public Health

It should be noted that while there is a great deal of emphasis on awareness and personal responsibility in the public health model, there is an increasing recognition within public health of structural and environmental issues that contribute to obesity. These factors include: increased portion sizes in restaurants; widespread advertising of convenience foods; a lack of sidewalks, bike lanes and poor street connectivity; the greater expense of fresh produce compared to processed foods; and “food deserts” (areas where only those with the means to pay for private or public transportation can access the inexpensive and varied food found at supermarkets) (Cardello 2009; Cummins and MacIntyre 2006; Saelens, et al. 2003; Ulijaszek 2007; White 2007; Wrigley 2002). Environmental and community-based interventions such as community gardens are increasingly being implemented (Economos and Irish-Hauser 2007). Still, individual failures (i.e. sedentary leisure activities and poor dietary choices) are popularly seen as the biggest contributors to obesity (Boyce 2007; Henderson and Kelley 2005; Pereira 2006; Saguy and Riley 2005; U.S. Department of Labor 2008).

Biocultural Model

The second model is the biocultural anthropological view. It points out that humans have an evolutionary preference for energy dense foods, namely those that contain large quantities of fat and/or sugar (Maziak, et al. 2008; Ulijasek and Lofink 2006). Up until very recently, extra adipose tissue was considered desirable, since it provided a source of energy during times of scarcity and famine. Further, female fertility is linked to body fat, making sufficient stores energy (in the form of adipose tissue) a

reproductive advantage. Now that food is more plentiful, inexpensive and aggressively marketed than ever before, this preference is deleterious (Gilman 2008; Ulijasek and Lofink 2006). Or as Cardello (2009: 144) succinctly describes the situation, there is “too much high-calorie food that’s marketed too effectively to too many who can’t resist.” This dietary shift towards increased consumption of energy-dense food and decreased physical activity is sometimes described a nutrition transition (Ulijasek and Lofink 2006). However, despite these clear shifts, “how food use is structured socially and culturally has been slow to adjust to changing patterns of food security, as have perceptions of appropriate body size for health and beauty, which has contributed to the emergence of obesity in various societies” (Ulijasek and Lofink 2006: 339).

There are many social, cultural and environmental factors that contribute to the current “obesogenic environment”. Reasons for decreased physical activity include: the separation of housing and retail areas in communities, which discourages walking; use of automobiles as the primary mode of transportation; fewer jobs that require heavy labor and more sedentary service sector and technology occupations; and the popularity of television, video games and the internet as leisure activities (Boyce 2007; French, et al. 2001; Ulijasek and Lofink 2006). Factors related to diet include: consumption of sugar-sweetened beverages like soft drinks and food juices; consumption of calorie-dense micronutrient poor food such as fast food and many snack foods; larger portion sizes; more snacking and fewer structured meals; increased time constraints and the resulting reliance on convenience food; affordability and access to healthy food; and food deserts (Brown, et al. 2007; Daggett and Rigdon 2006; Nielson and Popkin 2003; Pereira 2006; Prentice and Jebb 2003; Ulijasek and Lofink 2006). Many of these factors are beginning to be acknowledged in the public health model; the difference is that the public health model tends to promote individual solutions while the biocultural model

takes a multi-level approach that alters the environment in order to trigger individual behavior changes.

The biocultural model also acknowledges that ideal body size varies across populations in terms of both aesthetics and health. It is well documented that ideal body shape and size varies considerably cross-culturally (Demarest and Allan 2000; Dutton, et al. 2004; Parker, et al. 1995; Parker and Keim 2004). However, Gilman (2008: 3) points out that, “Each age, culture and tradition has defined acceptable weight for itself, and yet all have a point beyond which excess weight is unacceptable, unhealthy, ugly or corrupting.” Regarding health, despite the adoption of universal BMI categorizations of overweight and obesity by the World Health Organization, the relationship between morbidity and BMI varies across populations (Ulijasek and Lofink 2006; World Health Organization 2011). For example, studies have show that some Chinese and South Asian populations experience increased risk for chronic disease than European populations (Ulijasek and Lofink 2006).

Within the United States the ideal body size has become smaller over the past century both medically and socially, particularly for women. Both Boero (2007) and Rittenbaugh (1982) trace the origin of obesity as a disease back to life insurance height and weight tables. Insurance companies, acting upon the common knowledge that extremely overweight individuals are more likely to have poor health, begin charging obese clients higher rates. In order to facilitate this, they created charts to determine “ideal” weights (Ritenbaugh 1982). Over time, these standards have fallen so that the ideal height/weight ratio is lower than it was a hundred or even fifty years ago (Boero 2007; Ritenbaugh 1982). Rittenbaugh (1982) ultimately argues that the obesity epidemic has been “created” by insurance company charts and the lowered standards for ideal weight. Since Rittenbaugh’s work, the standard for a healthy weight fell again, from a BMI less than 27.8 to less than 25.0, making an estimated 29 million Americans

overweight overnight (Squires 1998). In the social sphere, Kolata (2007) traces the social history of the ideal female body, starting with the transition from the voluptuous Gibson Girl in the late nineteenth century to slimmer flappers in the 1920s. Spurred on by the growing availability of bathroom scales, full-length mirrors and photography, the ideal woman became slimmer and slimmer over the course of the twentieth century (Kolata 2007).

Despite societal and biomedical preference for slimness, many using this model have pointed out that being moderately overweight has health benefits (Campos 2004; Cogan 1999; Harrington, et al. 2009; Kolata 2007; Ritenbaugh 1982; Ulijasek and Lofink 2006; Ulijaszek 2007). The relationship between BMI and morbidity/mortality is usually U or J shaped, with increased risk of infectious disease at the lower range, and increased mortality and chronic disease risk at the upper range (Ulijasek and Lofink 2006). In fact, being moderately overweight (defined as a BMI between 24 and 27) reduces mortality (Cogan 1999). Evidence also suggests that overweight and obese individuals who are somewhat active and maintain a steady weight but do not diet are healthier than dieters over the long-term (de Vries 2007). Further, a recent meta-analysis found that the evidence does not support advising weight loss for overweight and obese individuals who are otherwise healthy, although exercise and a balanced diet are always beneficial (Harrington, et al. 2009). Evidence does suggest, however, that cyclical dieting (also called yo-yo dieting) is very harmful. Cyclical dieting refers to a cycle of weight loss and regain that is typical of dieting (particularly fad diets) and causes physical and psychological harm (Campos 2004; Cogan 1999).

Finally, many using this model have also taken issue with the validity of BMI measurements since it doesn't distinguish between fat and lean mass (Burkhauser and Cawley 2008). Additionally, it is less accurate for some groups (such as African Americans), which leads to misclassification using the established "universal" categories

described above (Burkhauser and Cawley 2008). Further, BMI was intended by its creators to be used at the population level, not for individual diagnosis (Keys, et al. 1972). No alternative is clearly agreed-upon, but research shows that anthropometric measures like skinfolds taken by experienced practitioners are more accurate (Nevill, et al. 2006). Other alternatives include total body fat, percent body fat, waist circumference and waist-to-hip ratio (Burkhauser and Cawley 2008). According to de Vries (2007), accumulated scientific evidence seems to suggest that fat distribution, diet and fitness are factors in developing secondary diseases rather than the amount of body fat, suggesting that hip-waist ratio may be of more use than BMI.

Biomedical Model

The biomedical model focuses on the genetic and physiological causes of obesity and minimizes the role of individual behavior choices. It has a great deal of overlap with the biocultural perspective regarding the role of genetics and human evolutionary preferences for high-fat foods (called the “thrifty genotype” in the biomedical model). Unlike the biocultural model, however, users of the biomedical model tend to minimize the role of individual choices and behaviors. Societal expectations, cultural traditions and the built environment play a very limited role; environmental factors are only important in that they have some influence on the expression of genes (Cummings and Schwartz 2003; Friedman 2004; Kolata 2007). As Friedman (2004: 563) explains, “Although environmental factors contribute to changes in the incidence of obesity over time, individual differences in weight are largely attributable to genetic factors.” Heritability of obesity is estimated to be 50-90%, meaning most of the variance of obesity is attributable to genes (Friedman 2004). This indicates that obesity is more strongly inherited than breast cancer, schizophrenia or heart disease (Cummings and Schwartz 2003: 454; Friedman 2004; Kolata 2007). In this model, obesity is seen as an

inherited disease, rather than a personal choice or character flaw (Cummings and Schwartz 2003).

Evidence for this position is drawn from a few landmark studies (Cummings and Schwartz 2003; Friedman 2004; Kolata 2007). Researchers who compared the weight class (thin, median, overweight, and obese) of 504 adult Danish adoptees with their biological and adoptive parents found that there was a strong relationship between the weight class of the adoptees and their biological parents and no relation with their adoptive parents. The results suggested that childhood family environment has little or no effect on weight in adulthood (Stunkard, et al. 1986). A study of 25,000 fraternal and identical twins, some of whom were reared together and some apart found that identical twins had very similar BMIs regardless of whether they had been reared together or apart. Greater variation was seen in the BMIs of fraternal twins, who only share some genes (Stunkard, et al. 1990). Another study found that even when the amount of additional calories consumed is controlled, identical twins gain nearly identical amounts of weight, but the amount of weight gained across pairs varied dramatically (Bouchard, et al. 1990). Other studies with twins and research showing clustering of obesity within families have provided further evidence of a strong genetic component of obesity (Cummings and Schwartz 2003; Friedman 2004; Kolata 2007).

The biomedical perspective also points out that body weight is regulated by the homeostatic system, which maintains weight within a narrow range, generally 10 – 20 pounds (Cummings and Schwartz 2003; Friedman 2004). Certain genes are responsible for balancing energy intake against energy expenditure. Despite variance in day to day eating and activity levels, this balance is maintained over the course of days and weeks; weight is remarkably stable (Cummings and Schwartz 2003). When obese people lose weight, the body responds by decreasing the metabolism (thereby conserving energy) and increasing hunger. These biological drives are the reason that most people regain

the weight they lose despite their best efforts (Cummings and Schwartz 2003; Friedman 2004). The impact of this phenomenon on dieters is best explained by Friedman (2003: 857):

“Those who doubt the power of basic drives, however, might note that although one can hold one’s breath, this conscious act is soon overcome by the compulsion to breathe. The feeling of hunger is intense and, if not as potent as the drive to breathe, is probably no less powerful than the drive to drink when one is thirsty. This is the feeling the obese must resist after they have lost a significant amount of weight. The power of this drive is illustrated by the fact that, whatever one’s motivation, dieting is generally ineffective in achieving significant weight loss over the long term.”

Maintaining a modest weight loss of approximately 10 pounds is possible, but once outside of the body’s narrow comfort zone (often called a “set point”), weight loss becomes very difficult to maintain (Friedman 2003; Kolata 2007). Only those who are able to maintain constant vigilance are able to keep off large amounts of weight long-term (Campos 2004; Kolata 2007).

In recent years, the focus within this model has turned to understanding the pathways between the body and the brain and within the brain that determine when and how much we eat (Kolata 2007). Many of these studies are undertaken with mice and rats in laboratories to better understand how the body signals hunger and satiety. These scientists believe “fat people are fat because their drive to eat is very different from the drive in thin people”; essentially, hunger is not the same experience for everyone (Kolata 2007: 168). Hormones that play a role in body weight and food intake, such as leptin and ghrelin, are currently under study. Leptin “is a mediator of long-term regulation of energy balance, suppressing food intake and thereby inducing weight loss”, and ghrelin appears to play a role in initiating eating (Klok and Drent 2007: 3). Research has now established that obese individuals are leptin-resistant, but the exact relationship between the leptin and ghrelin systems and obesity is not yet completely understood (Klok and Drent 2007).

It is hoped that better understanding these hormonal processes will lead to therapeutic interventions for obese people (Klok and Drent 2007; Kolata 2007).

Critical Anthropology Model

The critical anthropological perspective is a reaction to the dominant public health model. Critiques include: the medicalization and individualization of obesity; the common practice of describing obesity as an “epidemic”; the promotion of obesity as a health problem for profit; the stigmatization of minorities, women and the poor; and the normalization of disordered eating, among other criticisms. This model does not comment on the etiology of obesity, but rather the way it is socially constructed.

Medicalization

One criticism is the way in which obesity has been medicalized despite the lack of clear evidence for a link between mortality and excess weight (Boero 2007; de Vries 2007; Germov and Williams 1999; Harrington, et al. 2009; McKinley 1999). In fact, the medicalization of obesity is so well entrenched that thinness has become synonymous with health (Germov and Williams 1999; McKinley 1999). Rittenbaugh (1982) argues that obesity is a “culture-bound syndrome”, in essence a Western folk illness that does not exist in other parts of the world. She explains, “the changing biomedical standards [for body size] have paralleled changing cultural values, rather than the accumulation of biomedical knowledge” (Rittenbaugh 1982: 357). More recently Chaufan (2004) delved into the social construction of diabetes (which has many parallels with obesity) and points out that social failures are often veiled as personal failures by constructing them as medical problems. Chaufan concludes, “Indeed, calling something a ‘medical’ problem because it affects the body shows a narrow understanding of causation, as much public health research has historically shown” (Chaufan 2004: 266).

Interestingly, several authors note a subtle shift in the literature from obesity being described as risk factor for disease to obesity being a disease in and of itself (de Vries 2007; Gilman 2008; Kolata 2007; Moffat 2010; Saguy and Riley 2005). On a pragmatic level, Moffat (2010) notes that defining obesity as a disease allows for treatment to be covered by medical insurance. However, some have argued that change in terminology signals a shift away from assigning individual responsibility and an expansion of the purview of medicine (de Vries 2007; Saguy and Riley 2005). The obese thus become patients that must be cured; they are expected to undergo treatment, be it dieting or surgery (de Vries 2007; Moffat 2010). Overweight becomes a state of being that individuals are “not expected to want to be in and cannot possibly enjoy” (de Vries 2007: 62). However, the implications of this shift may be overblown, since there are many diseases that have a clear biological etiology that are still seen as the result of individual behavior choices, such as sexually transmitted infections (Saguy and Riley 2005). Although there is disagreement about the manner or degree to which obesity has been medicalized, there is no doubt that it has become a medical issue (Boero 2007).

Individualistic

Several social scientists have pointed out that the individualistic “eat less, exercise more” mantra is problematic because it masks societal contributions (the built environment, social class differences, etc) and prevents people from questioning or examining the stigmatization of obesity (Boero 2007; Saguy and Almeling 2008; Stinson 2001). Others have questioned the utility of behavior change messages not on the grounds of victim-blaming, but that these messages fail to address people’s lived experiences (Austin 1999; Warin, et al. 2008). Warin and colleagues (2008: 98) point out that, in most behavior change

interventions “food, bodies and eating are disembodied and disengaged from the social contexts in which people live their lives.” In their ethnographic study of 30 Australian mothers from lower and upper socioeconomic backgrounds, the women saw being a mother as their primary identity and linked food to their role as a mother and nurturer. The strong relational component of mothering conflicts with the individualistic health messages that encouraging them to eat less and move more. Further, analysis by socioeconomic status (SES) revealed that women of higher SES faced greater challenges in accessing safe places to be active and purchasing healthy food. Warin and colleagues conclude that the gendered and economic aspects of obesity cannot be ignored when developing public health messages and programs. Obesity is a “complex social issue” that cannot be resolved through simplistic and individualistic messages (Warin, et al. 2008: 108).

Characterization as an Epidemic

The high prevalence of obesity is often characterized as an “epidemic” by news stories, scientific publications, and reports issued by prominent health organizations (Gilman 2008; Moffat 2010; Saguy and Riley 2005). Anthropologists and other social scientists have taken issue with this descriptor, arguing that it invokes a sense of moral panic, fear and chaos and further legitimizes the individualization and medicalization of obesity (Boero 2007; de Vries 2007; Gilman 2008; Moffat 2010; Saguy and Riley 2005). Moffat (2010) takes a different approach, and criticizes the use of the term “epidemic” not for its fear-mongering properties, but its lack of usefulness fr

om a public health perspective. Strategies that have historically worked for epidemics of infectious diseases required swift and straightforward action, but obesity

will require thoughtful, multifaceted interventions. The “quick fix” mentality of an epidemic is therefore counterproductive.

Promotion of Obesity for Monetary Profit

Many have pointed out that there are a multitude of entities that have a vested financial interest in sustaining the idea that obesity is an enormous health problem, including weight loss, pharmaceutical, medical, insurance, fitness, apparel, fashion, food, and diet industries (Boero 2007; Germov and Williams 1999; Gilman 2008; Kolata 2007; Sobal 1999). Others have noted that research centers and academic departments have also benefitted from the grant money available to study obesity, and thus have professional interests to protect (Kolata 2007; Moffat 2010). That is not to say that all of these researchers are deceitful. As Kolata (2007: 190) puts it:

“...when your support, and your money, comes from making sure that the growing number of obese and overweight people is a major public health priority, there may be at least subtle pressures to emphasize the dire consequences of weight gain and the importance of losing weight, whether or not the science fully backs these claims.”

Moffat (2010) issues a reminder, however that in our capitalistic healthcare system, profit is garnered from many diseases and conditions; obesity is hardly unique in this regard.

Stigmatization, Particularly of Women, Minorities and the Poor

As described earlier, there is a great deal of stigmatization associated with obesity. Because women are held more strictly to the thin ideal, they experience more stigma than men and have a higher incidence of eating disorders (Austin 1999; Boero 2007; Saguy and Almeling 2008; Saguy and Riley 2005). Within some minority groups, such as African-American and Puerto Rican woman, there has been less body

dissatisfaction due to different conceptions of the ideal body, there is evidence that this is diminishing (Saguy and Almeling 2008; Stinson 2001).

Minorities and people of low socioeconomic status are disproportionately likely to be overweight and thus face stigmatization (Ernsberger and Kolestsky 1999; Sobal and Stunkard 1989; Wang and Beydoun 2007). Obesity is both a cause and effect of poverty: weight stigma and discrimination can lead to low-wage work or unemployment and thus cause poverty, and low-income individuals have lower dietary quality and fewer places to be physically active, which contribute to weight gain (Darmon and Drewnowski 2008; Ernsberger and Kolestsky 1999). Despite the clear inverse relationship between socioeconomic status and weight and the many studies on reduced access to both safe places to be physically active and affordable healthy foods in low-income neighborhoods, the poor are still blamed for their weight (Saguy and Riley 2005). In their interviews with antiobesity researchers, Saguy and Riley (2005) found that while they recognized structural issues affecting low-income and minority groups, they tended to fall back on behavioral issues when discussing solutions.

Within this context, overweight and obese individuals can reduce the considerable stigma levied against them by professing that they are too large (called “fat talk”) and taking steps to lose weight (McKinley 1999; Nichter 2000). Ritenbaugh (1982) calls dieting a sick-role behavior because engaging in it brings individuals in line with social norms and earns them praise. Similarly, Gilman (2008: 6-7) calls dieting “a process by which the individual claims control over her body and thus shows her ability to understand her role in society.” It is therefore not surprising that body dissatisfaction has become normative in the United States (Germov and Williams 1999; McKinley 1999).

Normalization of Disordered Eating

Several social scientists have pointed out that in our quest for thinness, our relationship with food has become less healthy (Austin 1999; Boero 2007; Cogan 1999). Hunger has been separated from appetite; the emotional (and pleasurable) aspects of eating are downplayed in favor of assuaging the physiological hunger in the most calorically efficient manner possible (Cogan 1999; Stinson 2001). Foods are thus labeled “good” and “bad” not based on taste or enjoyment, but in terms of their caloric content (Stinson 2001). These unhealthy attitudes toward food have been normalized by both the media and nutritional public health (Austin 1999). An analysis of articles in the *New York Times* on obesity found that by and large, successful dieters are praised for their iron will and constant vigilance regarding both caloric intake and expenditure, traits usually associated with eating disorders (Boero 2007). The tools that make such vigilance possible are the “scientific progress” of rationalizing and quantifying food (Austin 1999). Austin (1999) argues the invention of calories and nutrition labels, rather than being helpful, are tools that promote “magical thinking” about the amount of control we have over our bodies and our weight and sustain eating disorders.

Fat Acceptance Model

The first, the fat acceptance movement, consists of a number of size acceptance groups, lay activists, and size acceptance researchers. The most notably and visible size acceptance group is the National Association to Advance Fat Acceptance (NAAFA). NAAFA characterizes itself as a human rights organization and maintains that fat acceptance is a social and political issue rather than a health issue (Saguy and Riley 2005; Sobal 1999). The organization advocates for the rights of fat people and are working to make height and weight protected from discrimination in the same way as race or religion (Kwan 2009; Saguy and Riley 2005). It should be noted that fat activists

have reclaimed the term “fat”, much like the civil rights movement reclaimed “black” and gay rights advocates have reclaimed “queer”(Kwan 2009; Saguy and Riley 2005).

Fat activists see fat as a form of diversity and feel there are multiple causes of fat including genetics, metabolism and dieting history (Kwan 2009; Saguy and Riley 2005). Weight, for the most part is not within individual control and much credence is given to genetic explanations and the “set point” phenomenon described in the biomedical model (Saguy and Riley 2005). They do not see being fat as a health risk or disease, so the high prevalence (or “epidemic”) is not a concern (Saguy and Riley 2005). Activists also spurn “what they consider to be artificially contrived meanings associated with BMI. The BMI’s importance lies not with its ability to predict good or poor health, but instead how others use this number and its meanings to label, stigmatize and discriminate” (Kwan 2009: 38).

In order to provide evidence for their views, fat activists and researchers often cite the same studies as obesity researchers but come to very different conclusions (Saguy and Riley 2005). For example, those in the fat acceptance camp see the high failure rate of diets as evidence that weight is out of their control (Saguy and Riley 2005). Indeed, dieting is seen as dangerous (both physically and emotionally), and surgery and drugs are viewed as risky and ineffective (Kwan 2009; Saguy and Riley 2005). Another example comes from Campos et al (2006) who use existing literature to disprove many of the common claims about obesity, arguing that the “epidemic” is a statistical artifact, the evidence that high BMI causes health problems is overstated, and that there are no safe and effective tools for weight loss (but many harmful ones).

Fat acceptance researchers also tend to point out, like the biocultural anthropologists, that being overweight can be protective and that being underweight is actually riskier (Campos, et al. 2006; Ernsberger and Kolestsky 1999). Except at statistical extremes (BMI in upper 30s), BMI is a poor predictor of mortality. They critique

the studies that show a positive relationship between BMI and mortality, pointing out that they fail to control for confounding factors like fitness, exercise, diet quality, weight cycling, diet drug use, economic status, or family history. The studies that do control for confounders use self-report data of questionable reliability (Campos, et al. 2006).

As for the studies that show a 5 to 10% weight loss has beneficial effect, Campos (2004: 111) has this to say:

"Time and time again, the pattern of these stories does not change: Formerly sedentary people become physically active, start eating healthier diets, lose little or no weight, and enjoy drastic improvements in health. Somehow, the moral of these stories almost always becomes some variation on 'losing just 10 pounds can cut the risk of developing X in half.'"

Essentially, it is the increased exercise and improved diet that produces these positive results, and the weight loss is just a by-product (Campos 2004).

However, some fat acceptance researchers are wary of replacing emphasis on weight with fitness and nutrition, and feel that attention should instead be given to other factors like violence, prejudice, social isolation and materialism that detract from health (Saguy and Riley 2005). For their part, fat activists are also skeptical of this "fit but fat" approach and feel that it still contains the type of moralizing that fat activists work against (Saguy and Riley 2005).

Fat activists offer different explanations for why studies show that obese people have poor health outcomes. They point to neglectful health care, as many healthcare facilities are not equipped to accommodate people over 350 pounds (Saguy and Riley 2005). Additionally, fat activists draw on their personal experiences that doctors assume that all health problems they experience are due to their weight and do not fully investigate ailments (Saguy and Riley 2005). Further, they argue that fat people do not seek care because they want to avoid being admonished about their weight (Kwan 2009; Saguy and Riley 2005). Another argument is that repeated cycles of weight loss and

gain account for the increased risk of morbidity and mortality among the obese (Ernsberger and Kolestsky 1999).

Finally, fat activists offer many of the same critiques that critical anthropologists do. They also point out that a fixation on dieting and weight has contributed to disordered eating and promotes anorexia (Campos 2004; Saguy and Riley 2005). Campos (2004) agrees that people, especially women, diet not to improve their health but to escape the stigma and discrimination associated with obesity. Finally, fat activists also suggest that obesity researchers and the diet industries experience a conflict of interest (Saguy and Riley 2005). However, fat activists are much more oppositional than social scientists, referring to obesity researchers as the “fat mafia” (Saguy and Riley 2005). According to Kwan (2009: 40), “NAAFA considers its opponents to be narrow-minded, biased and essentially bad researchers who do not conduct objective research.” Fat activists also suggest that government panels are biased, claiming that rather than qualified epidemiologists, researchers who run weight-loss clinics or receive money from pharmaceutical companies are included (Campos, et al. 2006; Ernsberger and Kolestsky 1999).

Reactions and Responses to Explanatory Models

Individuals accept, reject, modify and combine these five competing models. It seems that most women accept societal pressures to become thin and use the public health framework as the path to weight loss. In Stinson (2001)’s ethnography of a commercial weight loss group, she noted that women talked about the stigmatization and the hurt and shame they have felt, but they chose to deal with it by conforming to societal expectations and losing weight. A qualitative study of 25 low-income white women had very similar findings, with women attempting to lose weight to incur social benefits rather than health benefits (Parker and Keim 2004). However, not all obese

individuals accept the dominant public health model. For example, Honeycutt (1999) interviewed eighty-six women and found three types of responses to societal pressure to be thin: “fat busters” who seek to lose weight and conform to societal expectations, “equivocators” who accept their body as it is, and “fat boosters” who advocate for fat acceptance.

Warin and colleagues (2008) found that a number of aspects of traditional public health programs did not reflect the way in which the women embodied obesity. For example, although they all had BMIs above 30, none of them considered themselves obese and used alternate descriptors like “chubby”, “fat” and “big-boned” to distance themselves the stigma of obesity. A study of men in the United Kingdom similarly found that men did not identify with BMI categories, instead feeling that you could be heavy while still being healthy and fit, and that universal standards are of limited value because every body is different (Monaghan 2007).

Conclusion

Several social scientists have noted that obesity is a contested space in which various entities have defined causes and provided accompanying solutions to obesity in very divergent ways. This chapter has expanded upon previous work regarding explanatory models of obesity and describes five explanatory models seen in the literature and popular press. The five models are: the dominant public health model, biocultural model, biomedical model, critical anthropological model and fat acceptance model. The ways in which individuals adopt, transform, combine or reject models was also briefly explored.

It should be noted that there is a considerable amount of overlap in these models, and that the perspectives of researchers, public health professionals and lay individuals do not necessarily fit neatly within these categories. For example, public

health professionals Puhl and Heuer (2010) argue passionately against the stigma and fear that calling obesity an “epidemic” has created and offer many of the same criticisms as medical anthropologists. These models simply provide a framework from which to explore the possible explanations for the high prevalence for obesity and to think critically about appropriate responses.

Chapter 3: Methodology

Introduction

Like other social scientists, evaluators have multitude theoretical lenses, methodological approaches and data collection techniques from which to chose when designing evaluation studies. As an applied researcher, I have chosen to take a pragmatic orientation in this study. In contrast to constructivism and postpositivism, pragmatism problem centered, pluralistic and focused on real world problems and their solutions (Creswell and Plano Clark 2007). As part of this pragmatic stance, a mixed methods approach was taken that sought to capitalize on existing program records while also expanding knowledge of participants' perspectives on and experiences with the program. To this end, three main methods were used in this study: quantitative analysis of existing program records, participant observation of three case study GIFT groups, and semi-structured follow-up interviews with participants. This chapter will describe in detail how the research was carried out, including sampling and recruitment strategies, data management and the analysis plan. Also included are the research context and overarching research questions.

Research Questions

Four main questions guided the research process, allowing me to not only provide feedback to program staff, but also to investigate theoretical anthropological issues of interest:

1. In what ways does the program meet (or fail to meet) the needs of the intended audience?

2. How does the conceptual model of weight loss employed by the program correspond to the conceptual model used by participants? What implications does this have for the program?
3. What are the roles of education and empowerment within the program?
4. What are the effects of the program?

Institutional Review Board

The Florida Department of Health (DOH) Institutional Review Board (IRB) determined that this evaluation did not constitute research as they define it in June 2010, and was thus exempted from IRB monitoring. The letter of determination is found in Appendix A. The University of South Florida IRB has an agreement to honor the decisions of the DOH IRB for cross-agency projects such as this one, and thus this study was also exempted from USF IRB monitoring. A few small changes (mostly deletions) were made to the interview guide and a third case study group was added, but as the changes did not change the intent or methodology of the research, I did not need to submit a modification or reapply for approval.

Although informed consent was not technically required, I still was open with participants about the research during my observations by introducing myself as an intern with HCHD doing an evaluation of the GIFT programs. I explained that I was there to learn more about how the program works firsthand, and so I would be taking a few notes during class, but I would not be using anyone's name or reveal the location of the group. I emphasized that my research was not on their personal progress (or lack thereof) but in how the group members interacted with each other and how well the program met their needs. Participants were given the opportunity to object to my presence, but no objections were raised.

Before each interview, I discussed the tenants of informed consent verbally. I let each participant know that I was a HCHD intern and USF student doing an research

study to understand the experiences of people who have recently been in GIFT in order to make the program better. I promised each participant that their identity would be kept confidential and that their name would not be used in my report. Additionally, I let them know that they could skip any question they felt uncomfortable with or end the interview at any time, and there would be no negative consequences for choosing not to participate. Participants verbally gave their consent to participate, but no written document was signed.

Mixed Methods

According to (Creswell and Plano Clark 2007), mixed methods research can be viewed as both a methodology with underlying philosophical assumptions and as a method for data collection. My use focuses on the latter: the collection, analysis and integration of qualitative and quantitative data within a single study (Creswell and Plano Clark 2007). The biggest benefit of taking a mixed methods approach is that each methodology helps compensate for the weaknesses of the other (Steckler, et al. 1992). For example, qualitative research is able to provide that context and nuance that quantitative research so often lacks, as well as adding participants' voices to numerical data. Conversely, quantitative data can improve the external validity of findings since sample sizes are generally larger. Together the two forms of inquiry create a more comprehensive understanding of an issue than either could by itself (Creswell and Plano Clark 2007). Mixed methods is an especially appropriate approach for evaluation work, since people naturally use both words and numbers to describe the world around them and to solve problems. Appealing to this tendency makes for a more convincing argument, an absolute necessity in evaluation since findings must first be found credible and convincing by clients in order for recommendations to be implemented (Creswell and Plano Clark 2007; Graig 2010).

Although the two methods can be combined in a variety of ways, in this case the qualitative and quantitative data were collected separately, but concurrently and were triangulated in the analysis phase (Creswell and Plano Clark 2007). Known as “concurrent triangulation design”, the goal is to collect non-overlapping, complementary data on a single topic (Creswell and Plano Clark 2007). Each of the methods used to collect complementary data will be described next.

Data Collection

Quantitative Analysis of Existing Program Records

The first method, quantitative analysis, was conducted in PASW Statistics V.18.0 (formerly SPSS). I designed templates in PASW and entered all of the data for of the program from the past year (approximately September 1, 2009 to August 31, 2010). Every piece of information that was included on existing program records was entered for all 681 participants. This included identical 10 question pre- and posttests that measured knowledge, Screening Forms where height, weight, BMI, and waist size were supposed to be recorded at Weeks 1 and 6, and an Evaluation Form that measured participant satisfaction and asked participants to retrospectively assess whether they met their goals and improved their health. Change in fruit and vegetable consumption and physical activity used to be measured on the pre- and posttests. Currently participants are asked to give their current fruit and vegetable consumption and physical activity habits on the Where am I? Form in Week 1, and then retrospectively assess changes in their diet and activity level on the Evaluation Form in Week 6. Participants also complete food diaries, but it quickly became apparent that the legibility and level of detail varied widely and any data produced on change in diet would be unreliable. Instead I recorded whether participants submitted their food diary each week. The food diary had to be at least 50% complete in order for the participant to receive credit,

meaning that at least one food had to be recorded for at least half of the meals for that week. In order to protect participant confidentiality, each participant was assigned an arbitrary unique ID; an excel spreadsheet matching the participant's name to their unique ID was kept separately from the SPSS database. Reproductions of these forms can be found in Appendices B-G.

Participant Observation

Participant observation is “a process of learning through exposure or involvement in the day-to-day or routine activities of participants in the research setting” (Schensul, et al. 1999). Among other benefits, participant observation allows the researcher to understand how people relate to each other and build relationships that are critical to more in-depth understanding (Schensul, et al. 1999). Although I had been provided with the facilitator's manual and a program description, I felt it was critical to see how the groups operated firsthand since social support was such an important piece of the program. CHAs are also given a fair amount of leeway in terms of how the classes are run, and so I was interested to see how much the groups diverged. For example, the physical activity portion each class session is not scripted in any way, and is instead left up to the discretion of the CHA.

The degree of participation during observation falls along a continuum, with complete observation at one end and complete participation on the other. Participant observation makes up the wide grey area in between (Bernard 2006). For most of my fieldwork, I was unable to fully participate as I was neither a trained program facilitator nor a seriously overweight person seeking to lose weight (Bernard 2006; Schensul, et al. 1999). However, I was able to go beyond complete observation and participate to some degree in class activities (such as group exercise) and interact with participants the vast majority of the time. This included not only my time with the three case study groups, but

other activities that I was asked to carry out as an intern. Specifically, I helped with the baseline and/or follow-up measurements at Weeks 1 and 6 for three other branches of the workplace wellness initiative. Each branch had two or three GIFT groups, and so I interacted with seven additional groups in this manner and was able to observe the entirety of the lesson each time I did measurements. Additionally, I was invited to attend one meeting of all paid CHAs that HCHD hosts semi-regularly in order to illicit feedback on the program.

Midway through fieldwork I felt I needed to expand the study to include observations of community groups. I added third case study group, this one held at a public library, but due to a scheduling conflict with the CHA I guest taught week two and then took over as facilitator of this group for Session II (Weeks 7-12). In this case I became what Bernard (2006) calls an observing participant, a person with an insider's perspective who makes and records observations. I felt some conflict of interest attempting to evaluate the program and teach it simultaneously, so in these observations I shifted my focus to the challenges of being a CHA.

In all I observed over forty hours of GIFT "in action" among the ten groups I interacted with. I attended all six weeks of the workplace wellness group, which chose to disband after only one session, and fifteen weeks of the community center group, which is still ongoing. The library group went for twelve weeks (two sessions), during which I observed four classes and taught five.

Semi-Structured Interviews.

To date, little has been done to follow up with participants to investigate their maintenance (or lack thereof) of weight loss and behavior changes achieved during the program. Nor have participants been given an opportunity give their opinions about the program, aside from the close-ended evaluation forms. For these reason I sought to do

semi-structured follow up interviews with program participants. According to Bernard (2006) semi-structured interviews are the best choice if you only have the opportunity to interview informants once; they also allow you to produce reliable data while maintaining a degree of flexibility to follow leads. Since there were certain topics that I specifically wanted to cover but others that wanted to approach in a more exploratory way, semi-structured interviews seemed the most appropriate choice.

Like many researchers, I faced difficulty in recruiting participants and had to change strategies during data collection a number of times. Most notably, I shifted from in person to telephone interviews and shortened the interview guide early in the process, and this increased participation markedly. It is also worth noting that the case study approach was never intended to produce a representative sample, so the slightly unorthodox sampling strategy employed here is only a minor setback. In the end, a total of 17 interviews were conducted between September and November 2010. Two were conducted in person, the remainder were over the telephone. Interviews ranged from 10 minutes to 45 minutes in length, but the average was approximately 25-30 minutes.

The original interview guide was reviewed by the committee. A much abridged interview guide was pilot tested in two interviews, but after it became apparent that participants had less to say for each question that I anticipated and were willing to talk for a longer period of time than expected, I added back in most questions. Both the full and abridged interview guides can be found in Appendices H and I. In both the original and revised versions topics included goals coming in the program, prior weight loss experiences, opinions on various aspects of the program (lessons, physical activity, food diary, etc), family support, and suggestions for improving the program. The goal was to have participants reflect on their time in GIFT and talk about how they have been doing since the program ended. One month was chosen to allow sufficient time to pass for

longer-term program effects to emerge, but not so long that most participants (who the program staff described as “transient”) will have moved on.

Originally I had intended to interview participants who had completed the program, but during observations and data entry it became very clear that a significant portion of participants were *not* completing the program. In order to better understand this, I sought to expand my sample to include both those who did and did not complete the program (“completers” and “noncompleters”). In both cases a purposeful sampling framework was used.

For participants who completed the program, I drew my sample from my informants: I invited those who I had met and interacted with over the course of the program to participate. This included the participants of my case study workplace wellness group, as well as the groups that met during the lunch periods before and after. As an intern, I had to collect the paperwork from all three groups, and thus had a chance to interact with these two groups on a weekly basis also (although I observed the entire class for the case study group only). I also did the final measurements during Week 6 for all three groups, and took this opportunity to invite program participants to be interviewed approximately one month. I asked for volunteers to provide me with their email address or phone number. Of the twelve potential participants, ten initially volunteered, but only six were actually interviewed.

I had planned to use the same strategy for the community center group, but unlike most groups which end after six or twelve weeks, this group is poised to go on indefinitely. The goal of the interview was to follow-up with participants, so it would have been inappropriate to interview participants while they were still attending weekly. Due to time constraints, I was unable wait for the group to end. However, one person did not continue beyond the first session. I contacted this person a month after she stopped attending and she agreed to be interviewed.

Those who did not complete the program came from both groups I interacted with and groups that I did not. In the case of the groups I interacted with, I waited four weeks past each individual's last attendance. I then called each person and invited him or her to be interviewed between 10 am and 5pm, Monday through Friday. If the potential participant answered, I explained the purpose of the study and asked them if they had the time to do the interview right then. Failing that, I asked to schedule the interview for a later time. If no one answered, I left a brief voicemail will be left explaining the purpose of the study and inviting him or her to participate along with my phone number. If the person did not return the first call, I placed a second phone call, but there was no answer, I did not leave a voicemail or make further attempts. Using this method, I contacted eleven potential participants and six participated.

I recruited from groups I had not interacted with using the database I had compiled using the existing program records. Prior to 2010, the program forms did not ask participants for their phone numbers, and even then many participants did not put down a phone number. My inclusion criteria were thus: 1) did not complete the program, and 2) have a phone number on record. I contacted all 38 eligible participants using the same method described above and completed 4 interviews.

In total using all sampling strategies, I interviewed 7 completers and 10 noncompleters. Of the seven completers, six were from workplace wellness groups and one was from a community group. Of the noncompleters, four were from workplace wellness groups and six were from community groups. It should be noted that of the 10 non-completers, only five were full interviews. Incomplete interviews exist for two reasons: 1) the two pilot interviews used a much abridged interview guide with relatively few questions, 2) three participants asked to stop the interview before all questions had been answered. The sample size for the interviews was so small that it I determined it to

be worthwhile to include the information I did gather, rather than discard the data altogether.

Supplemental Sources of Information

In addition to the data described above, two other sources of data were shared with me by informants and utilized for triangulation purposes. One was an audio recording of a focus group conducted by HCHD as part of their community health assessment effort that I was given permission to use. The focus group took place at a church that had recently had the GIFT program; much of the conversation focused on GIFT although that was not the intent or purpose for assembling the focus group. I listened to the entire audio recording and transcribed the portions pertaining to GIFT. The second source of information was weekly goal forms (called “action plans”) completed by participants, as well as the longer-term goal setting exercise done in Week 1. The forms are mostly qualitative in nature, but the checklist of medium-term goals completed in Week 1 is more quantitative in nature. In total I entered of goal sheets from 345 individuals.

Analysis Plan

Quantitative Analysis of Existing Program Records

Before analysis could begin, the issue of missing data had to be addressed. The data set is missing a substantial amount of data for three reasons: 1) not all participants enter the program at Week 1, 2) not all participants complete the program, and 3) CHAs vary in their record keeping. In order to compensate for the fact that participants enter and leave the program at different times, I used the last value carried forward (LVCF) and next value carried backward (NVCB) techniques for the beginning and ending weight variables (McKnight, et al. 2007). Essentially, the first weight recorded for a

participant (regardless of whether it was measured during Week 1) was that participant's beginning weight. Similarly, the last weight recorded was carried forward to be their ending weight. The effects of last value carried forward on significance are not predictable, so while the chance of errors are unquestionably heightened with its use, it is impossible to predict whether Type I or II errors are more likely (McKnight, et al. 2007).

Using LVCF and NVCB addressed the problem of missing data regarding weight, but missing data was a problem for nearly every variable. One solution is to delete all cases in which there are one or more missing variables, but this would have severely reduced the sample size and statistical power (McKnight, et al. 2007). Instead, I used the available case method (also known as pairwise deletion), which uses all available cases for each test (McKnight, et al. 2007). This of course results in a different sample size for each test, which can be problematic for sophisticated regression analyses, but is suitable for the type of intermediate analysis done here (McKnight, et al. 2007). With this shortcoming in mind, the sample size is reported for each statistical test. While techniques such as these can help minimized the impact, missing data is still a threat to validity. The results from the quantitative analysis section must therefore be interpreted with caution.

Originally the database included data for Sessions I and II (Weeks 1-12), but was later scaled back to include only Session I (Weeks 1-6) since so few records existed for Session II (Weeks 7-12). Seventeen participants were removed at this point because they participated in Session II but not Session I, reducing the sample size to 664. In the first phase of data analysis, the entire data set (664 participants) was used to investigate beginning waist circumference, beginning BMI, demographics and attendance. Differences between completers and noncompleters were also investigated in order to determine whether the noncompleters were different demographically from completers.

Change in knowledge (as measured by the pre and posttests) was also assessed, as well as opinions regarding CHAs and behavior changes (using the Evaluation Forms).

The way in which self-reported fruit and vegetable consumption was changed twice during the 1 year period the data was pulled from, complicating analysis considerably. It used to be that daily fruit and vegetable consumption (in cups) was measured alongside the ten knowledge questions on the pre- and posttests. This is no longer the case, nor are participants asked to think about their consumption in terms of cups. Currently, consumption is assessed on the Where Am I? Form in Week 1 and the Evaluation Form in Week 6, but in very different ways. The Where Am I? Form asks “On average, do you eat a total of five (5) fruits and/or vegetables every day?” with “yes” and “no” as answer choices. This question is not repeated on the Evaluation form and instead participants are asked to retrospectively assess whether they have increased their fruit and vegetables intake. As described in the methods section, data were combined from the older and newer versions of the Evaluation Form when possible. In some instances it could not be combined because the questions were too dissimilar, so it is simply reported as is. Change in fruit and vegetable consumption could not be assessed because: 1) consumption is measured differently in Weeks 1 and 6, and 2) data could not be matched because Evaluation Forms are anonymous.

Many of the same issues that impacted the fruit and vegetable consumption analysis were also apply to physical activity. Like fruit and vegetable consumption, the physical activity used to be measured alongside the ten knowledge questions on the pre- and posttests. Currently, physical activity is assessed on the Where Am I? Form in Week 1 and the Evaluation Form in Week 6, but in very different ways. The Where Am I? Form asks as series of three questions where participants are asked first if they engage in physical activity, then how many days per week, and finally how many minutes each session. This series of questions is no repeated on the Evaluation form and instead

participants are asked to retrospectively assess whether they have increased their physical activity.

The two versions Evaluation Form also ask participants a number of questions regarding satisfaction with the facilitator. The biggest difference between the two versions is one calls the CHA the “presenter” and the other uses the term “facilitator”, but for the most part the questions were identical and the responses from the two versions were combined. A few questions were added to the current version of the form, and are also presented. It should be noted that again, a relatively small number of participants completed these forms (121 of 664 or less than 20%) and their opinions may not be true for all participants of GIFT. In addition, the Evaluation Form is a bit confusing because the question stems and answer choices don’t match. Participants are asked to rate their level of agreement with various questions, but usually in surveys this type of rating scale is used with statements rather than questions. Further, the way the form is designed, the response choices are simply the numbers 1-4 next to each question. There is key explaining the meaning of each number at the top, but some participants may have been confused by this layout (see Appendix F). There were a couple of instances during data entry I noticed participants who gave very negative ratings throughout the Evaluation Form and then wrote something positive in the open-ended section at the bottom, suggesting that they misunderstood the ratings scale. Therefore, results were interpreted with caution.

The second phase of analysis focused on weight change during the program and its relationship to demographic factors, food diary completion, and attendance. Only those who had attended at least two times were included in this portion of the analysis since at least two measurements are necessary in order to investigate weight change. Individuals who had attended only once were removed (n=156), as well as individuals who were part of groups for which there was less than two weeks of data (n= 76) or

inconsistent data (n=12). In total, 244 cases were removed, leaving a sample size of 405. This same sample was used to investigate the relationship between change in waist circumference and change in weight. In this phase descriptive statistics, Kruskal-Wallis, Mann-Whitney U, X^2 for independence tests were used.

Participant Observation

After each observation event, I wrote copious fieldnotes, nearly always later that day. I mostly described events, but I also included some musings about methodology and some tentative conclusions. As recommended by Schensul et al (1999) I was careful separate my emotions from the events; I worked to describe events neutrally with as much detail as possible before stating my reactions, feelings, and opinions. Participants names were not included in my fieldnotes, nor were locations. Altogether I compiled approximately 100 pages of fieldnotes (more than 44,000 words). In analysis, I used a deductive framework described by LeCompte and Schensul (1999). Using the tracking changes function in Microsoft Word, I coded passages that related to either group dynamics (including instances of social support) or ways in which the program met (or failed to meet) the needs of participants. These broad codes were further refined and sub-codes were developed. Eventually a codebook was made with a definition and inclusion and exclusion criteria for each code. A separate word document was created where all quotes for each code were compiled.

Semi-structured Interviews

When possible interviews were audio recorded (11 of 17 interviews). Two were not recorded because participants objected, and the first four telephone interviews were not recorded because I worked in an open area where using speakerphone would have been inappropriate. I eventually purchased a device to enable the recording of telephone

interviews. When interviews were not recorded, I took extensive notes during and immediately after the interviews. For those that were recorded, the responses to each question (including probes) were transcribed. In both cases I also took notes during the interviews, including participants' general disposition and points which elicited strong emotional reactions.

During the analysis process I utilized deductive and inductive approaches at different times. As a goal-free evaluation that lacks hypotheses, this study could be classified as exploratory in nature. According to Bernard (2006), inductive analysis is most appropriate for exploratory research, while deductive approaches are best suited in the confirmatory research that tests hypotheses. However LeCompte and Schensul (1999) point out that the dualism between induction and deduction is something of an oversimplification because ethnographers use both induction and deduction throughout their analysis. After I reading through the interviews a few times to ground myself in the data, I decided to take a two phase approach: deduction, followed by induction.

In the first phase, I deductively coded the responses to each question on the interview guide based on the interview question and my research questions. All of the responses to each question were first compiled into a word document, and then each response was assigned a code. As the analysis was refined, codes were combined and separated and a code book was created that detailed the definition and inclusion and exclusion criteria for each code. An excel spreadsheet was used to keep track of the code or codes assigned to each person's response to each question. In the second phase, a more inductive approach was taken to allow higher level themes to emerge from the text that went beyond individual interview questions. As I read through the text and became further grounded in the data, I used the comment function in tracking changes in Microsoft Office to write memos. Through this iterative process, I was able to

clarify the themes and patterns and eventually choose exemplar quotes to illustrate each finding.

Supplemental Sources of Information

The qualitative portion of the goal forms was analyzed in much the same way as the deductive phase of the interview analysis, since the goal forms also pose a series of questions to participants. The qualitative checklist section was analyzed using simple frequency calculations, as was the data provided by the employer's satisfaction survey. The focus group was coded using the same codes that had been developed for the fieldnote analysis.

Triangulation

This study employs a mixed methods approach and pulls data from many sources, creating a rich environment for triangulation. Triangulation involves the crosschecking of quantitative and qualitative data in order to assess reliability and validity (Handwerker and Borgatti 1998; Schensul, et al. 1999). During the analysis phase, the data were combined in two ways. The first was to expand upon the quantitative findings using qualitative data (Creswell and Plano Clark 2007). Prior to this study, no one had followed up with participants after the program, so interviews provided important additional information about events after the program not captured in the existing program records. More significantly, qualitative findings were used as an aid in interpreting the quantitative data (Bernard 1988; Coombes 2000; Salazar, et al. 2006; Steckler, et al. 1992). As Coombes (2000) puts it, "Quantitative methods can best evaluate *whether* there is a relationship between an intervention and a health outcome, whereas qualitative methods are best placed to assess *why* the relationship exists" (italics original). Rather than simply speculating at the meaning of the quantitative

results, the qualitative data is used as a rich source from which to draw explanations. This is especially important in this study, since the missing data weakens the validity of the quantitative findings.

Since this study lacked a control group, planning for triangulation of data was critical. The absence of a control group makes it impossible to definitively state that observed effects are due to the program; apparent program effects could be due to a wide variety of outside factors such as environment, experience or socioeconomic status (McKenzie and Smeltzer 2001, Royse et al 2001). That being said, effects seen in the qualitative observations and interviews are consistent with the effects seen in the quantitative analysis, a stronger case can be made that these effects are indeed due to the program and not extraneous factors.

Conclusion

This study employs a mixed method design to explore the effects of the GIFT program, assess its ability to meet the needs of participants, and determine the degree of fit between the explanatory models employed by the program and its participants. To this end, three main methods were used: quantitative analysis of existing program records, participant observation and semi-structured qualitative interviews. Analysis was carried out quantitatively using intermediate statistics, while the qualitative analysis utilized inductive and deductive approaches. Triangulation of all three methods as well as other sources of data was carried out in order to improve validity.

Chapter 4: Results

Introduction

As described in the methods chapter, three methods were used to better understand the effects of GIFT and how the program is meeting (or failing to meet) the needs of participants, as well as explore issues of education, empowerment and individualism in regard to weight loss. This chapter presents the results from the analysis of the data collected for this study. The results are organized according to methodology and theme.

Quantitative Analysis

Population Reached

The sample included data for 75 GIFT groups which ranged in size from 1 person to 32 people, with an average of 8.8 total participants and a median of 6.5 total participants. However, there was evidence there were more groups than were entered into the database. For instance, there were several occasions in which an attendance sheet with names was the only available data and so was not entered.

Table 1 below shows the demographic characteristics of participants of GIFT, i.e. the population reached. Data on these three demographic characteristics exists for only 68.1 - 73.3% of the total sample (664 participants). That being said, the data available suggests that the overwhelming majority of participants were female (87.3%) and most participants were ethnic/racial minorities (75.1%). Regarding age, participation falls

along a bell curve, with the majority of participants in their forties or fifties. The typical participant was a middle-aged African-American or Hispanic woman.

Table 1. Demographic Characteristics of GIFT Participants

Characteristics	Frequency (%)
Gender	
Female	425 (87.3)
Male	62 (12.7)
Total	487 (100.0)
Ethnicity	
African-American/Black	205 (43.3)
Hispanic/Latino	118 (24.9)
Caucasian/White	127 (26.8)
Asian/Pacific Islander	5 (1.1)
Native American	2 (0.4)
Other	16 (3.4)
Total	473 (100)
Age	
18-30	40 (8.8)
31-40	65 (14.4)
41-50	108 (23.9)
51-60	121 (26.8)
61-70	81 (17.9)
71 and older	37 (8.2)
Total	452 (100)

A little over half of participants (n=362, 54.5%) reported where they heard about GIFT. Most heard about it through word of mouth (n=108, 29.8%), agency outreach (n=42, 11.6%), printed media (n=35, 9.7%), community partners (n=49, 13.5%) or “other” (n=105, 29.0%). Most who chose “other” were part of workplace wellness groups and indicated that they learned of GIFT through a co-worker or their employer.

Beginning BMI and Waist Circumference

Although beginning BMI is reported on the screening form, BMI was also calculated using reported height and beginning weight. The following chart shows both

versions of BMI broken down into the BMI categories used by the World Health Organization (World Health Organization 2011). Regardless of the method used to obtain BMI, the data shows that of participants with BMI data, approximately 28% are overweight (a BMI of 25.0-29.9), and approximately 58% are obese (a BMI over 30.0). A Wilcoxon Signed-Ranks test determined that reported and calculated BMI are significantly different ($p=0.001$, $z=3.445$, $n=406$). This suggests that reported BMIs are not as accurate as they could be.

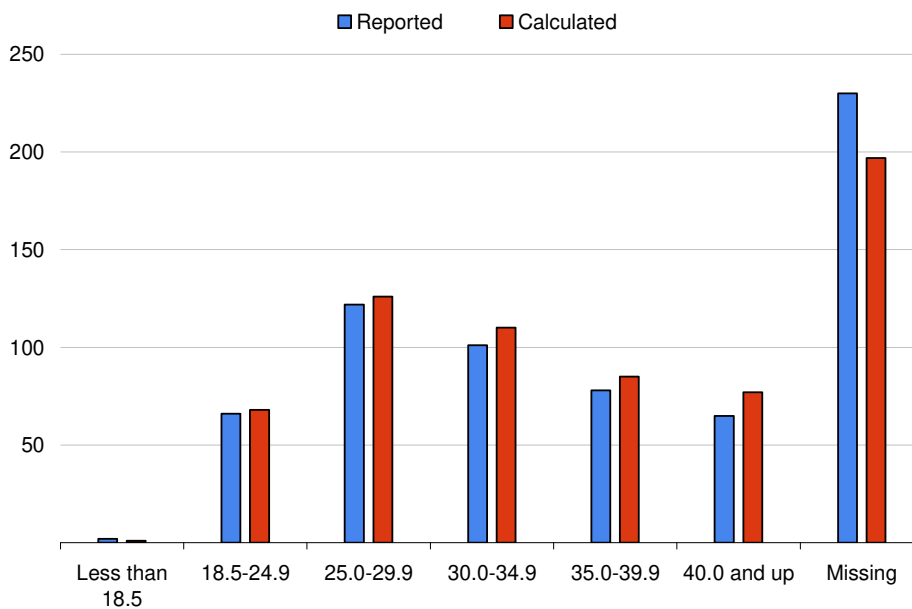


Figure 1. Beginning Body Mass Index (BMI)

Next, it was investigated whether the difference between reported and calculated BMI led to participants being improperly classified according to the BMI categories used in the program. A crosstabulation chart showed that reported BMI categorization put 18 participants (of 397) incorrectly into either a higher or lower category. A chi-square for independence could not be calculated because the data did not meet the criteria for expected frequencies, even when categories were collapsed. Still, the data shows that

for a very small number of cases the reported BMI was inaccurate enough to incorrectly classify participants.

Regarding waist circumference, only about 60% of participants had a beginning waist circumference recorded. Of the 395 who did, 76.5% did not meet current waist circumference guidelines of <35” for women and <40” for men when they entered the program (Centers for Disease Control and Prevention 2011a). Overall, a strong majority of participants did not meet guidelines for BMI or waist circumference when they entered the program.

Attendance

Attendance was tracked using weekly sign in sheets. Figure 2 shows overall attendance for each week of the program. Attendance steadily falls as the program progresses. The amount of missing data increases in Weeks 4-6, indicating that record keeping declines in the second half of the program.

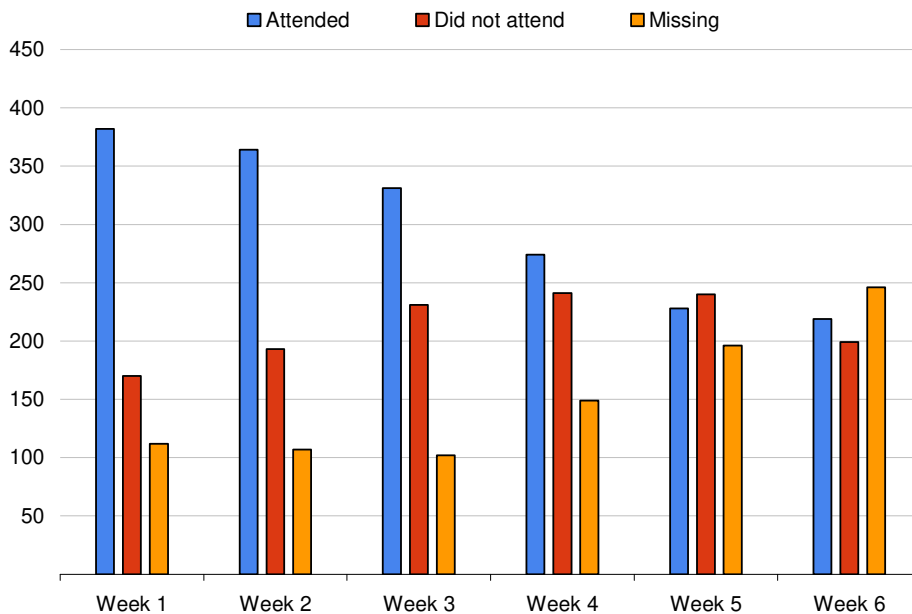


Figure 2. Attendance by Week

Figure 3 shows the breakdown of the number of classes participants attended. Of the 556 participants with attendance data, approximately a quarter (28.3%) attended only one class, and 12.2% attended all six weeks of the program. This representation is not entirely fair, however, because not all participants enter at Week 1 and therefore do not have the opportunity to attend all six classes of Session I.

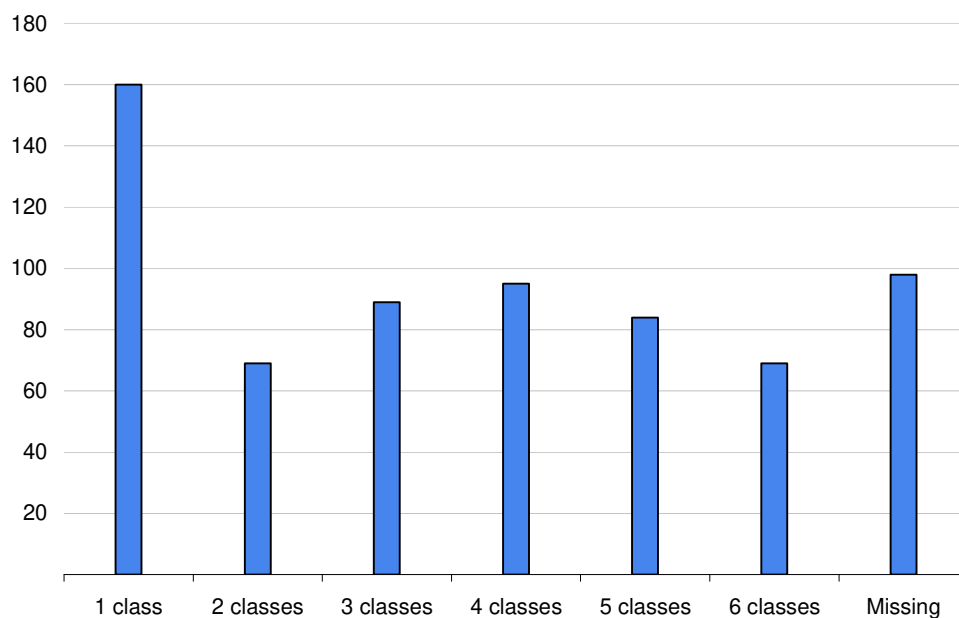


Figure 3. Number of Classes Attended

Figure 4 shows the distribution of entry points into the program. Of those with attendance data (n=558), 68.1% of participants began the program at Week 1. The goal is to avoid referring participants into a GIFT group after Week 2, but 17.2% entered the program during Weeks 3-6.

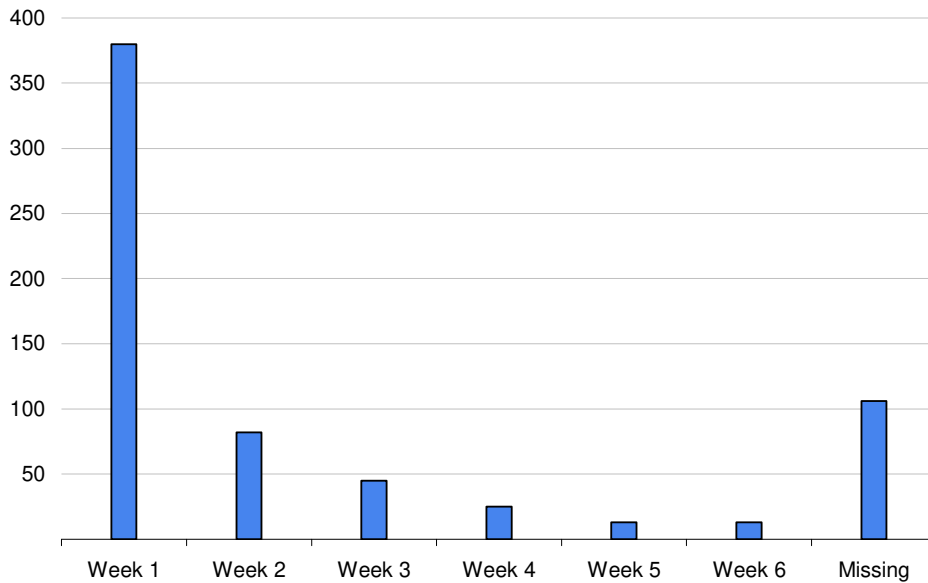


Figure 4. Entry into GIFT

In order to account for the fact that participants enter the program at all different times, a percentage score was created. Figure 5 shows the percentage of classes participants attended of the classes they had the opportunity to attend. The percentage scores are broken into quartiles. Of the 566 participants with data, 42.9% of participants attended 75-100% of classes, but another 40.8% attended less than half of the classes they could have.

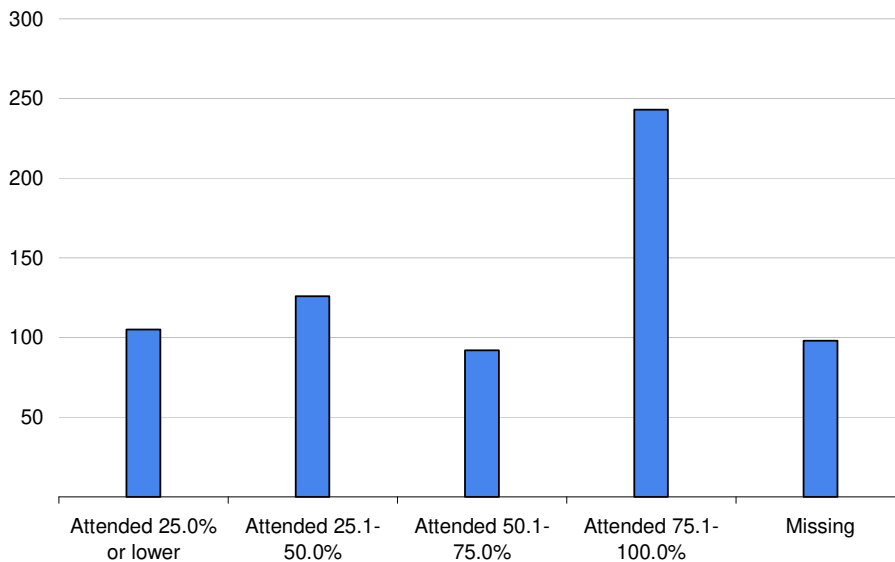


Figure 5. Percentage of Classes Attended

In fact many participants did not complete the program. For the purpose of analysis, participants were divided into three groups: “completers” who attended through Week 6, “non-completers”, who stopped attending before or at Week 4, and “undetermined” participants who attended Week 5 but not Week 6. It is unclear if these “undetermined” participants intended to quit the program or simply missed a week. Completers accounted for 28.3% of all participants (n=188), 41.6% were non-completers (n=276), 12.5% were undetermined (n=83) and 17.6% were missing this data (n=117).

Several tests were run to determine if completers differed from non-completers by demographics (gender, ethnicity and age) and beginning weight. X^2 tests for independence were used to test whether age and ethnicity were related to completion status. Gender had no bearing on completion status ($p=0.474$, $n=415$), nor did ethnicity ($p=0.073$, $n=384$). A Kruskal-Wallis test showed that weight does not vary significantly according to completion status ($p=0.712$, $n=466$), nor does BMI ($p=0.462$, $n=395$).

Age however, was related to completion status. A Kruskal-Wallis test showed that there was a difference in age among the three completion status groups ($p=0.017$, $n=403$). Mann-Whitney U tests were then run to uncover where the differences occurred, and it was found that non-completers were significantly younger than those whose dropout status is unclear ($p=0.006$, $n=184$). The mean age of non-completers was 48.3 years, versus 55.0 for undetermined participants. The differences between the other groups were not significant.

Finally, the relationship between the week participants enter the program and completion status was investigated. Figure 6 shows the distribution of completers, non-completers and undetermined participants according to the week they entered the program. The data in this form did not meet the requirements for a X^2 test for independence, so the data were re-organized to compare those who entered in the first half of the program (Weeks 1-3) with those who entered in the second half (Weeks 4-6). Those who entered in Weeks 1-3 were less likely to finish the program than those who entered later ($p=0.000$, $n=539$). Similarly, those who started in Weeks 1 and 2 were less likely to complete the program than those who started in Weeks 3-6 ($p=0.000$, $n=539$), and those who started in Week 1 were less likely to complete the program than those who started in Weeks 2-6 ($p=0.021$, $n=539$). Corroborating this finding is Figure 7 below, which shows the last week attended by non-completers. Approximately 87% of non-completers stopped attending the program in the first half (Weeks 1-3).

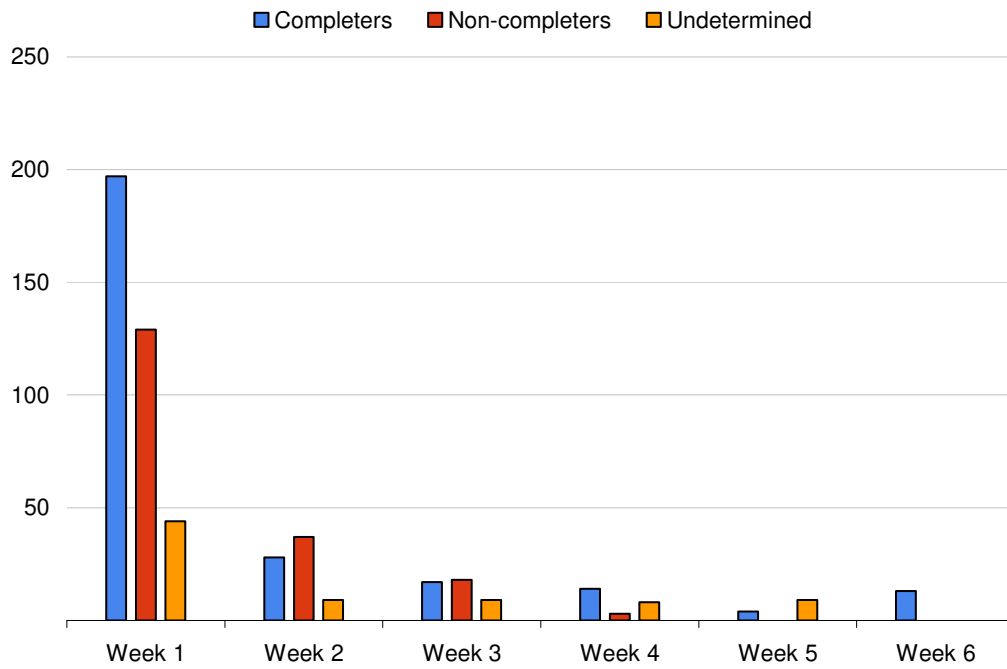


Figure 6. Entry Point of Participants by Completion Status

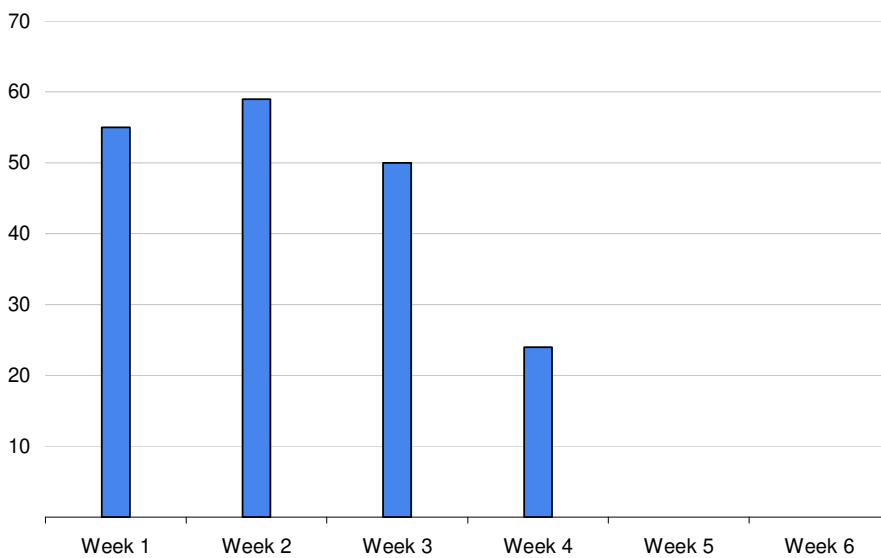


Figure 7. Last week Attended by Non-Completers

Change in Weight

As discussed in the methods section, weight change was analyzed using a smaller data set of 405 participants. Those who attended only once, had only one week of data available, or had inconsistent data were removed. Figure 8 shows the change in weight among participants. Most participants (69.9%) experienced either no change or a small change in weight (5 lbs in either direction). A little over 40% of participants lost less than 5 lbs while almost 20% gained less than less than 5 lbs.

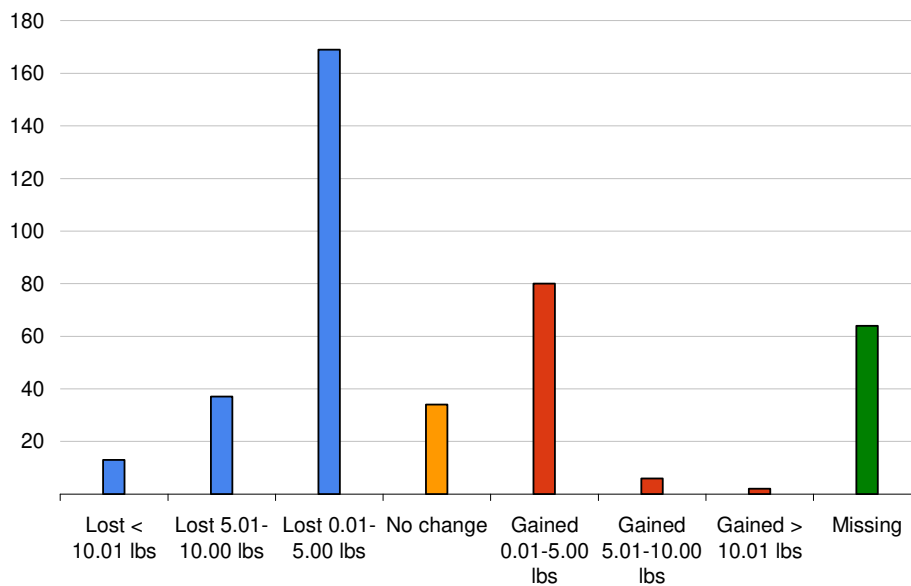


Figure 8. Change in Weight

However, looking at pounds gained or lost oversimplifies matters because it fails to take into account that people enter and leave the program at different times and thus have different amounts of time in which to lose (or gain) weight. For instance a person who attends three classes has a smaller window of time in which to lose weight than a person who attends all six. This was dealt with in two ways. One was to divide weight change by number of weeks attended for each participant to produce a new measure of

“weight change per dose” (i.e. each class is a “dose” of the program). Another was to simplify weight change into three groups: gained, maintained or lost weight. These three categories are collectively referred to hereafter as “weight change status”. Of the 341 participants with weight change data, 64.2% (n=219) lost weight, 10.0% maintained their weight (n=34), and 25.8% gained weight (n=88). Those who gained, maintained and lost weight were separated out in order to do a paired comparison (a Wilcoxon Signed Ranks Test) to determine if weight changed significantly. Those who lost weight lost a significant amount of weight ($p=0.000$, $n=219$), and those who gained weight gained a significant amount of weight ($p=0.000$, $n=88$).

Tests were run to determine the relationship between weight change and demographic characteristics (gender, ethnicity and age). First, a Mann-Whitney U test was used to determine if weight change per dose differed by gender. It was not significantly different ($p=0.431$, $n=306$). A X^2 test for independence was also calculated to test for a relationship between gender and weight change status and was also not significant ($p=.534$, $n=306$). Both tests suggest that one gender did not have greater or lesser success than the other.

Next a Kruskal-Wallis test was used to determine if weight change by dose differed among ethnicities. In order to meet the requirements of the tests ethnicity was simplified into four groups: African-American/Black, Hispanic/Latino, Caucasian/White and Other. There was not a significant difference among ethnicities ($p=0.088$, $n=298$). A X^2 test for independence was also used to test for a relationship between ethnicity and weight change status and was also not significant ($p=0.174$, $n=298$). Taken together, the tests suggest that no ethnic group did significantly better or worse than the others.

A Kruskal-Wallis test was also used to determine if weight change by dose differed among age categories (the same categories used above in Table 1). There were no significant differences among age categories ($p=0.134$, $n=301$). A X^2 test for

independence was also used to test for a relationship between age categories and weight change status. In order to meet the requirements for this test, age categories had to be collapsed into 18-40, 41-60, and 61+. The results were not significant ($p=0.262$, $n=301$). The tests suggest that no age group did significantly better or worse than the others.

Next, the relationship between weight change and attendance was explored. First a Kruskal-Wallis test was used to determine if weight change by dose differed among participants who attended 2, 3, 4, 5 and 6 classes. The test was not significant ($p=0.088$, $n=341$), indicating that attending a certain number of weeks didn't lead to improved outcomes. However, at the suggestion of program staff, I divided the participants in two groups by attendance: those who completed up to half the program (2-3 classes) and those who completed more than half of the program (4-6 classes). A Mann-Whitney U test was conducted to compare weight change by dose between participants who attended 2-3 classes and 4-6 classes. The results were significant ($p=0.009$, $n=341$). Those who attended 4-6 classes lost an average of 0.46 lbs per class, slightly more than those who attended only one or two classes (0.31 lbs per class on average).

A X^2 test for independence was also used to test for a relationship between attendance and weight change status. The results were significant ($p=0.000$, $n=341$), and indicated that those who completed 4-6 classes were more likely to lose weight than those who attended 2-3 classes. The cross tabulation showed that half (49.1%) of participants who attended 2-3 classes lost weight, but almost three-quarters (72.0%) of those who attended 4-6 classes lost weight.

Finally, the relationship between weight change and food diary completion was also explored. In order to account for the varying attendance of participants, a percentage score was made for food diary completion by dividing the number of food

diaries each participant completed by the number of food diaries he or she had the opportunity to do. In some cases the percentage exceeds 100% because some participants missed a class but turned in two food diaries the following week. The box plot in Figure 9 shows food diary completion broken down by weight change status. It indicates that participants who were dedicated enough to do their food diary even when they missed a class all lost weight. At the same time, it also shows that most participants who gained weight did their food diary at least some of the time. It was in fact the people who experienced no change in weight that completed the fewest food diaries.

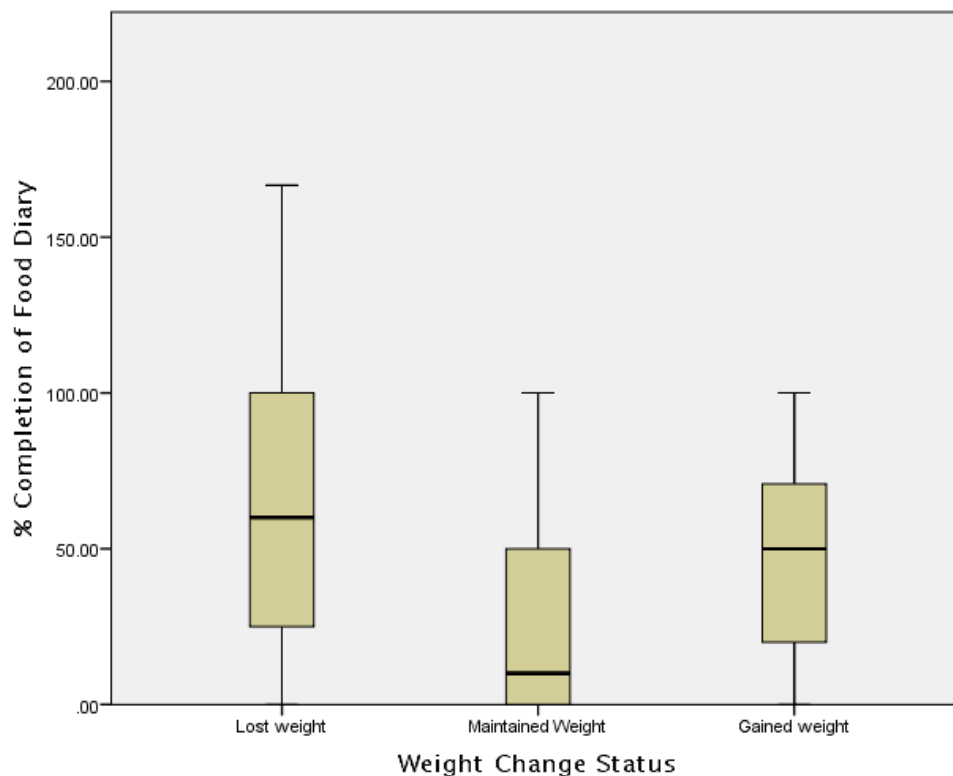


Figure 9. Food Diary Completion by Weight Change Status

Figure 10 is a slightly different way of looking at the same information.

Percentage food diary completion was broken into tertiles, meaning that the 405 participants were ranked by their percentage food diary completion and then divided into three (roughly) equally sized groups. In this case, the bottom tertile consisted of participants who completed their food diary 20% of the time or less, the middle tertile completed theirs between 20-66.66% of the time, and the upper tertile did their food diaries more than 66.66% of the time. The next chart shows the tertiles broken down by weight change status. Due to missing data regarding weight change status, the tertiles were no longer equally sized. Percentages are presented here in lieu of raw numbers to level the playing field.

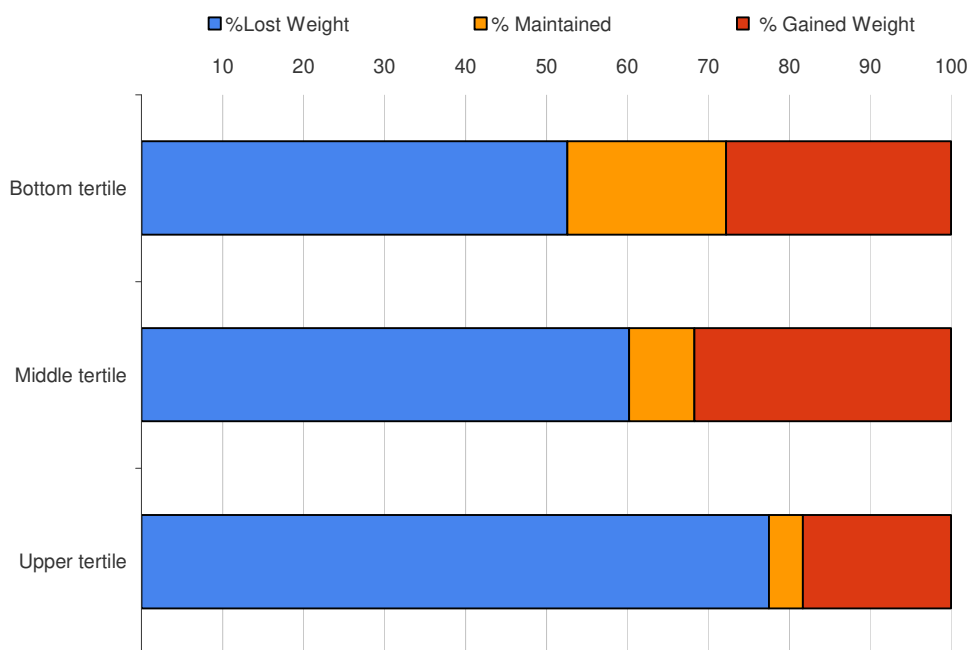


Figure 10. Food Diary Completion Tertiles and Weight Change Status

Figure 10 shows an upward trend for food diary completion and weight loss – a greater percentage of participants in the upper tertile (who did their food diaries the most often) lost weight than those in the middle tertile, and a greater percentage of the middle tertile lost weight than those in the bottom tertile. It should be noted however, that almost 20% of participants in the upper tertile gained weight. A X^2 test for independence was calculated to see if the relationship between food diary tertile and weight loss status was significant, and it was ($p=0.000$, $n=340$). Thus food diaries appear to help participants lose weight, but do not work for everyone.

Change in Waist Circumference

The same smaller sample of 405 was also used to calculate change in waist circumference. Figure 11 shows the change in waist circumference among participants. Almost three-quarters of the sample (73.6%) either did not attend Week 6 or did not have a waist circumference measure recorded at Week 6, making it impossible to calculate change in waist circumference. For the 107 individuals who did have both a beginning and ending measurement, 61.7% decreased their waist size and 29.0% decreased it by two or more inches. Another 22.4% maintained their waist circumference. Less than 10% increased their waist size while participating in the program.

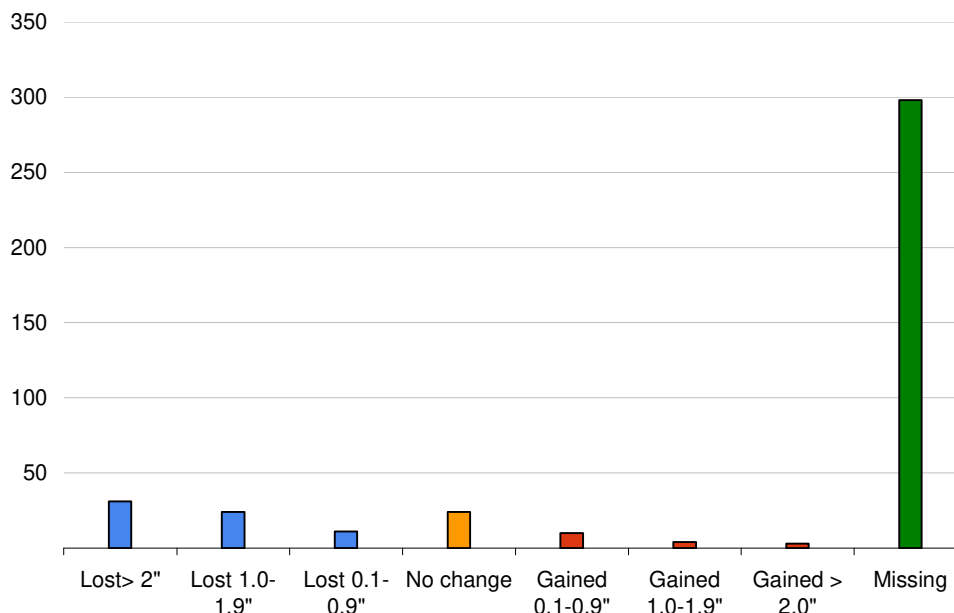


Figure 11. Change in Waist Circumference

Of the 103 participants who had a beginning and ending waist circumference measurement, 11 (10.6%) reached the waist circumference guidelines during the program (<35" for women and <40" for men) (Centers for Disease Control and Prevention 2011a). Most participants (n=64, 62.1%) did not meet the requirements by the end of the program; a little over a quarter of participants already met the guidelines when they entered the program (n=28, 27.2%). A X^2 test for independence was calculated to test if the change in frequency of meeting the guidelines from pre to post was significant, and it was ($p=0.000$, $n=103$). However, it should be noted that this accounts for only 15% of the total sample and so may not be true for all participants of GIFT. Only people who finished the program and attended Week 6 are included in these calculations, and completers may be different from not completers in important (but unknown) ways.

Finally the relationship between weight change and waist circumference change was explored. The two variables significantly correlated ($r=0.289$, $p=0.003$, $n=107$), however the low correlation coefficient suggests that weight change and waist circumference change are not strongly related. That is to say, weight loss does not necessarily go hand in hand with a decrease in waist circumference and neither does the reverse. Additionally, a X^2 test for independence was calculated to test the relationship between weight loss status (gained, maintained or lost weight) and waist circumference status (gained, maintained or lost inches). The result was significant ($p=0.29$, $n=107$) and the cross tabulation suggests that those who lose weight also tend to lose inches, but some people lost weight and gained inches. The results may be a bit unclear due to lack of consistent measurement of waist circumference. When I assisted with measurement at Week 6, some participants who appeared to gain inches despite losing weight reported having been previously measured higher than their navel.

Change in Knowledge

Figure 12 shows the number correct, incorrect and missing for each question on the knowledge pretest. It uses abbreviated question stems, but the full questionnaire can be found in Appendix B. Of the 664 participants, only 202 had pretests and the other 462 were missing. Correctness varied considerably across questions, but in general participants entered the program with a fairly high level of knowledge. For seven of the ten questions, more than 70% of participants answered them correctly. Less than 50% of participants got the remaining three questions correct. One of those questions, question 9, was problematic. The question asks participants, "People with diabetes should keep their fasting blood sugar within which range?", but the lesson covers risk for and prevention of diabetes, not how to control the disease once acquired. A chart of "Guidelines for blood sugar or glucose" from the American Diabetic Association is

provided in the lesson, but it is not clear if these are guidelines for diagnosis or management. Further, the answer choices provided do not match the fasting blood glucose ranges in the chart. On three occasions during observations, I witnessed confusion and debate over this particular question, but not for any of the other questions on the pretest. Even CHAs were sometimes unsure of the answer, since no answer key is provided in the facilitator’s guide. For these reasons, this question was not included in the analysis of overall performance on the pretest.

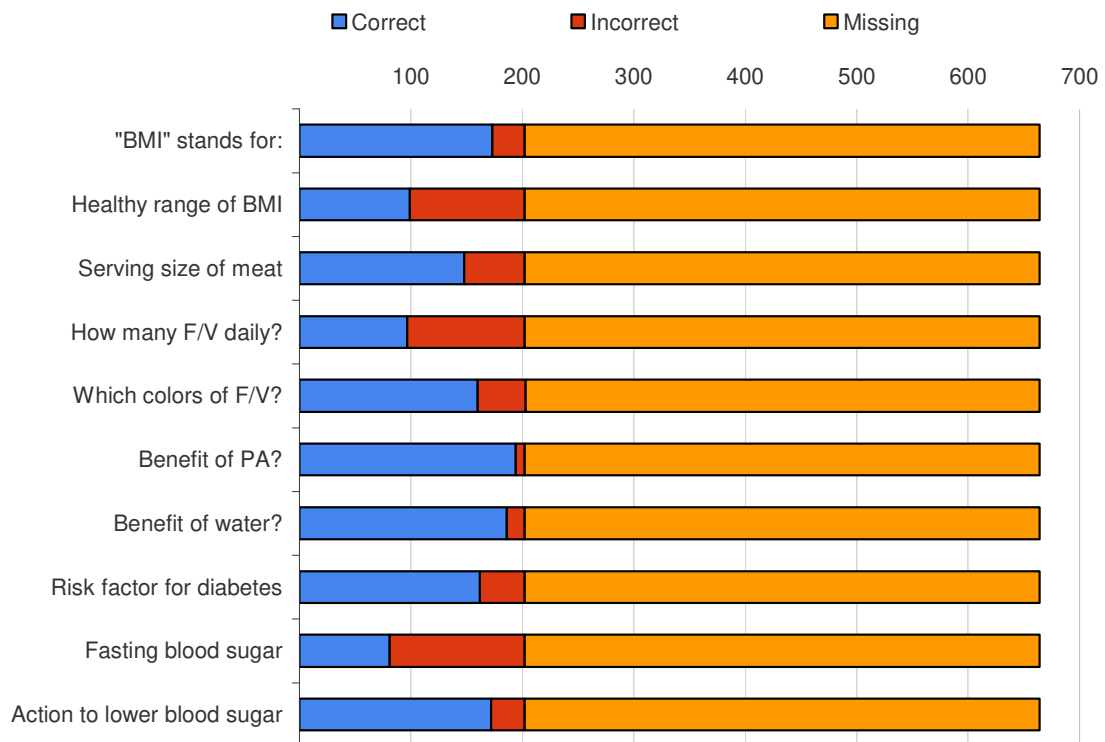


Figure 12. Knowledge Pretest Results

The nine remaining questions were added together to create a sum score for pretest knowledge. A score of 9 indicates that participants got all nine questions correct, while a score of 0 indicates they did not answer any questions correct. Figure 13 shows the distribution of scores for the 202 participants who completed the pretest. Almost two-

thirds of participants achieved a score of 7 or higher, meaning they answered at least 7 of 9 questions correctly.

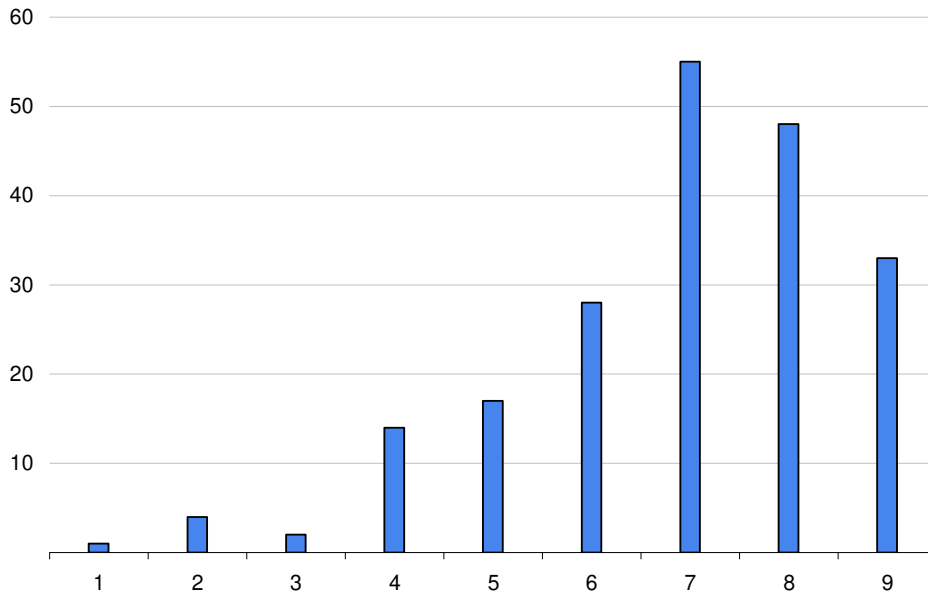


Figure 13. Distribution of Knowledge Sum Scores for Pretest

Only 35 participants completed the posttest, about 5% of the entire sample. This is in part due to the fact that less than half of participants complete the program. Only 219 participants definitively attended Week 6 (when the posttest is given), and data is missing for another 143 participants. Even if 219 is set as the expected number of posttests (a generous approach), only about 16% are accounted for. Results gathered from so few participants is not necessarily representative of all participants of GIFT, so results from the posttests and comparisons with the pretests must be interpreted with extreme caution. Generally, a 50% or greater response is needed to extrapolate from a sample to the entire population (Madrigal 1998). Sum scores were also calculated for

the posttest and are shown in Figure 14. Scores on the posttest were also high: 33 of 35 (or 94.3%) achieved a score of 7 or better.

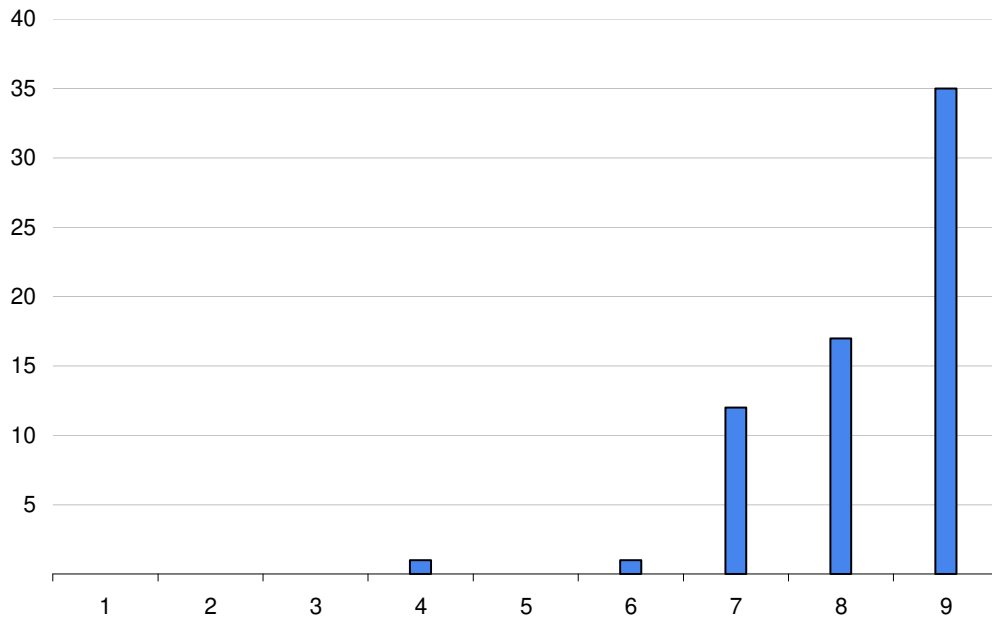


Figure 14. Distribution of Knowledge Sum Scores for Posttest

Only 22 participants completed the pretest and posttest, making it difficult to ascertain whether knowledge improved for all participants of GIFT because such a small sample is not necessarily representative. Nevertheless, a Wilcoxon Signed-Ranks test was computed in order to test whether participants improved their knowledge sum score between the pretest and posttest. The result was significant ($p=0.002$, $n=22$), indicating that overall knowledge did improve. However, this test did not reveal which questions participants demonstrated improved knowledge on. Nor did it reveal whether participants were consistent in their knowledge between the pre- and posttest (i.e. participants who answered a question correctly on the pretest should theoretically also get it correct on the posttest). Figure 15 has the item analysis for all ten questions for the 22 participants

who completed both the pretest and posttest. It is followed by Table 2 that serves as a key for the graph. Again, the data suggests that participants enter the program with a high degree of knowledge.

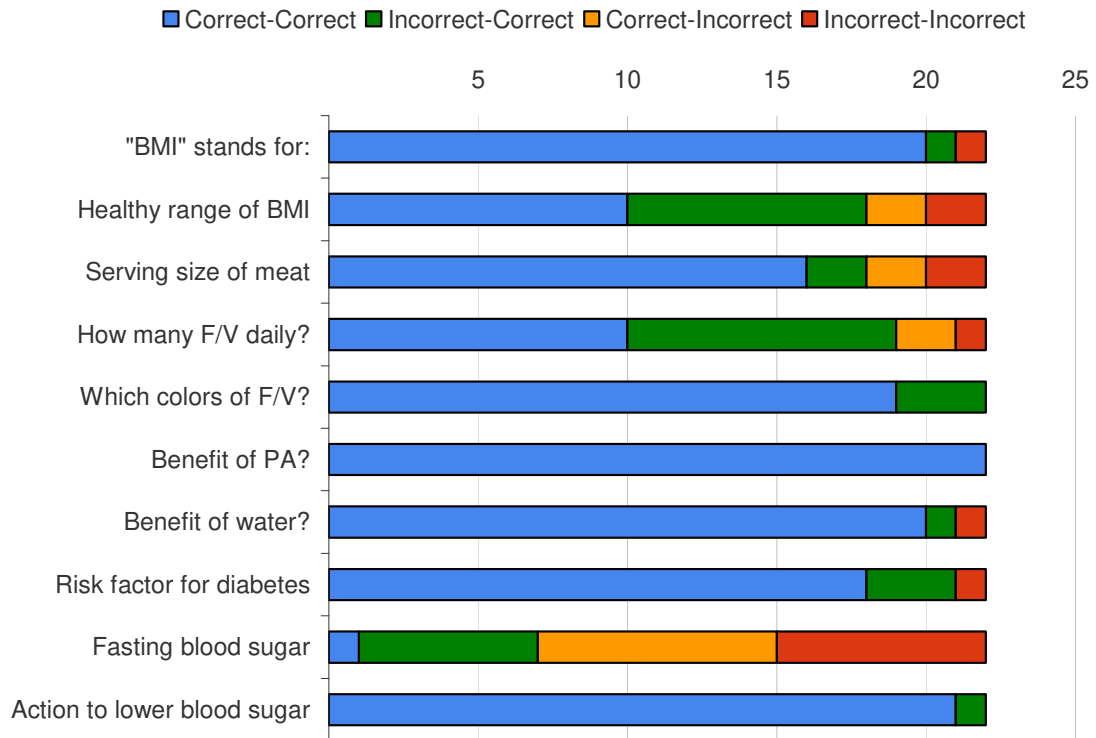


Figure 15. Item Analysis for Knowledge Questionnaire

Table 2. Key for Knowledge Item Analysis (Figure 14)

Color	Pretest	Posttest	Meaning
Blue	Correct	Correct	Entered the program with knowledge
Green	Incorrect	Correct	Knowledge increased
Orange	Correct	Incorrect	Either 1) "lucky guess" on pretest but knowledge did not actually increase, or 2) the question is flawed
Red	Incorrect	Incorrect	Knowledge did <i>not</i> increase

Using the information in Figure 15 above, Fisher’s Exact Tests were used to test for change in knowledge for each individual question. Table 3 has the results of each of the tests.

Table 3. Fisher’s Exact Tests by Question

	Abbreviated question stem	Significant	P value	Sample size (n)
1	“BMI” stands for:	No	0.091	22
2	Healthy range for BMI?	No	1.000	22
3	Serving size of meat?	No	0.135	22
4	How many F/V daily?	No	1.000	22
5	Which colors F/V?	No	1.000	22
6	Benefit of PA?	No	1.000	22
7	Benefit of drinking water?	No	0.091	22
8	Risk factor for diabetes?	No	0.182	22
9	Fasting blood sugar?	No	0.165	22
10	Action to prevent diabetes?	No	1.000	22

None of the tests were significant, meaning that the gains in knowledge seen above in Figure 15 could be due to chance. The results are probably not significant because scores were so high on the pretest there was little room to grow and gain knowledge. Table 4 below demonstrates this well: it shows the percentage of correct answers for each question on the pre- and posttest for the 22 participants who completed both. The pattern of a high percentage of correct answers on the pretest and even higher percentage for the posttest indicates that the instructional complexity was too low (Virginia Tech 2009). In other words, the lessons were too easy. Ideally, there should be about 15% correct answers on the pretest and 85% on the posttest (Virginia Tech 2009). A drop in the percentage of correct responses from pretest to posttest like

the one seen in question 9 suggests that the question is defective (Virginia Tech 2009).

This corroborates with the problems with this question discussed earlier.

Table 4. Percentage of Correct Answers on Pre- and Posttests

	Question	% Correct PREtest	% Correct POSTtest
1	“BMI” stands for:	90.0	95.4
2	Healthy range for BMI?	54.5	81.8
3	Serving size of meat?	81.8	81.8
4	How many F/V daily?	54.5	86.4
5	Which colors F/V?	86.4	100.0
6	Benefit of PA?	100.0	100.0
7	Benefit of drinking water?	90.9	95.4
8	Risk factor for diabetes?	81.8	95.4
9	Fasting blood sugar?	40.9	31.8
10	Action to prevent diabetes?	95.4	100.0

Fruit and Vegetable Consumption

The way in which self-reported fruit and vegetable consumption is measured was changed twice during the 1 year period the data was pulled from, complicating analysis considerably. It used to be that daily fruit and vegetable consumption (in cups) was measured alongside the ten knowledge questions on the pre- and posttests. Currently, consumption is assessed on the Where Am I? Form in Week 1 and the Evaluation Form in Week 6, but in very different ways. Further, the answer choices in the Evaluation Form changed as well, going from a yes/no dichotomy to a likert-scale (“strongly agree” to “strongly disagree”). Many of the question stems remained the same, but not all. As described in the methods section, data were combined from the older and newer versions of the Evaluation Form when possible. In some instances it could not combined

because the questions were not similar enough, so it is simply reported as is. Change in fruit and vegetable consumption could not be assessed because: 1) consumption is measured differently in Weeks 1 and 6, and 2) data could not be matched because Evaluation Forms are anonymous.

Starting with the older question on daily consumption from the pre- and posttest, 89 participants answered on the pretest, but only 2 on the posttest. Due to the negligible data for the posttest, only the pretest data is shown in Figure 16. Although guidelines for fruit and vegetable consumption have recently changed and are now tailored for age, sex and activity level, previous recommendations called five or more servings of fruits and vegetables daily (Centers for Disease Control and Prevention 2008; Centers for Disease Control and Prevention 2011d). It appears that at least 58% of the people who answered this question were not meeting this guideline when they started the program. The additional 39% who reported eating more than 3 cups (but presumably less than 7) may or may not have reached recommended consumption.

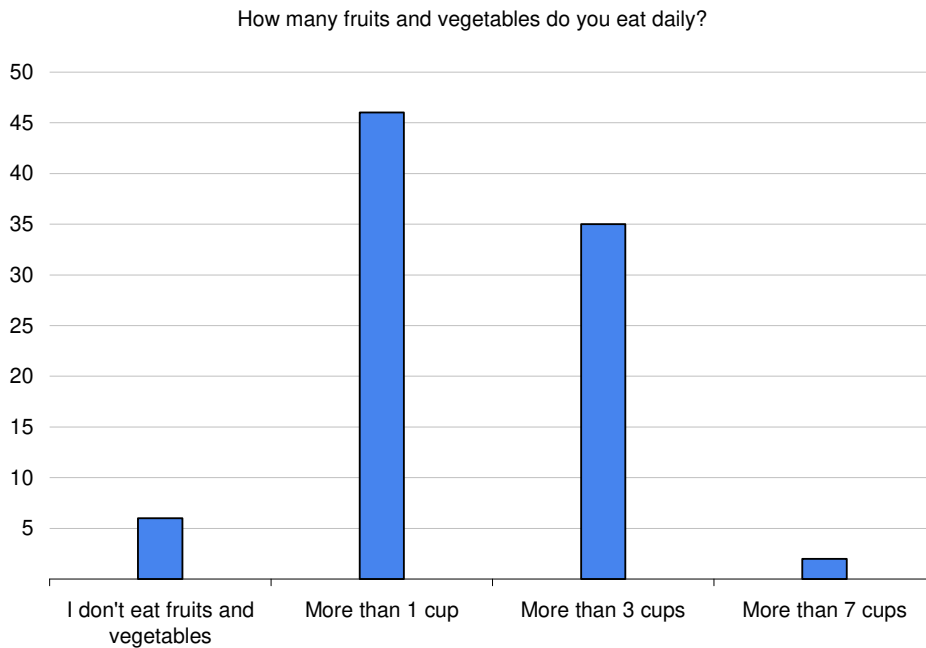


Figure 16. Beginning Fruit and Vegetable Consumption as Measured by the Pretest

Turning to the current assessment methods for fruit and vegetable consumption, the Where Am I? Form during Week 1 asks “On average, do you eat a total of five (5) fruits and vegetables each day?” “Yes” and “no” are the only response choices. Of the 201 participants who filled out this form, most (155 or 77.1%) reported they did not eat 5 servings a day. Of the remainder, 38 (18.9%) reported they did indeed eat 5 five servings of produce a day, and 8 (3.9%) chose not to answer this question.

Finally, the Evaluation Form in Week 6 asks, “Have you increased your fruit and vegetable consumption?” The answer choices provided are “yes” and “no”. Of the 187 who filled out this form, the majority (113 or 60.4%) reported that they did increase their consumption. Only 4.2% (8 participants) said that they did not, and 35.3% (66 participants) chose not to respond.

Physical Activity

Many of the same issues that impacted the fruit and vegetable consumption analysis were also apply to physical activity. Like fruit and vegetable consumption, the physical activity used to be measured alongside the ten knowledge questions on the pre- and posttests. Currently, physical activity is assessed on the Where Am I? Form in Week 1 and the Evaluation Form in Week 6, but in very different ways. The Where Am I? Form asks as series of three questions where participants are asked first if they engage in physical activity, then how many days per week, and finally how many minutes each session. This series of questions is not repeated on the Evaluation form and instead participants are asked to retrospectively assess whether they have increased their physical activity.

Beginning with the older question on weekly physical activity from the pre- and posttest, 88 participants answered on the pretest, but only 2 on the posttest. Due to the negligible data for the posttest, only the pretest data is shown in Figure 17. The

responses to this question are difficult to interpret because the answer choices do not account for all possibilities. For example, person who goes for a 30 minute walk 3 times a week may have a difficult time choosing an answer. That being said, a little over half of the participants who answered this question probably did not meet CDC's recommendations for physical activity for adults when they started the program (150 minutes of moderate exercise or 75 minutes of vigorous activity per week) (Centers for Disease Control and Prevention 2010). This question doesn't discern between vigorous and moderate physical activity, so it is difficult to tell if the participants who were active 20 to 30 minutes 4 times per week were meeting the guideline when they entered the program.

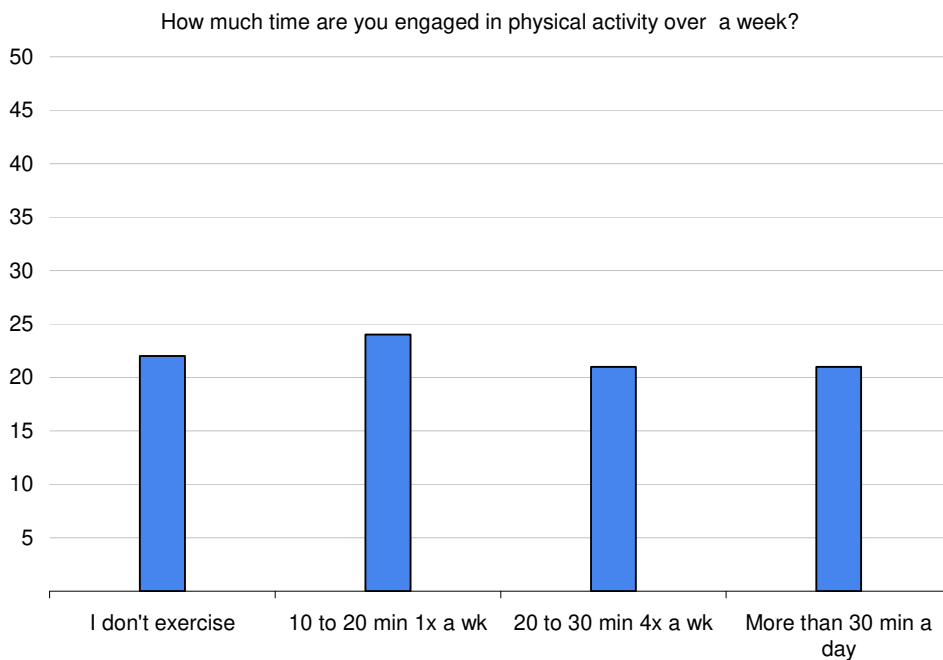


Figure 17. Beginning Physical Activity Level as Measured by Pretest

Turning to the current assessment methods, Figure 21 shows the results from the series of question on the Where Am I? Form. These results reflect only the 201 participants who filled out this form; missing responses refer only to those who filled out

the form but skipped this particular question. More than half of participants (59.7%) who filled out this form reported being physically active at the start of the program. Many in the missing category were placed there because the participant circled both yes and no. The binary nature of this question doesn't allow people to express that they exercise sporadically.

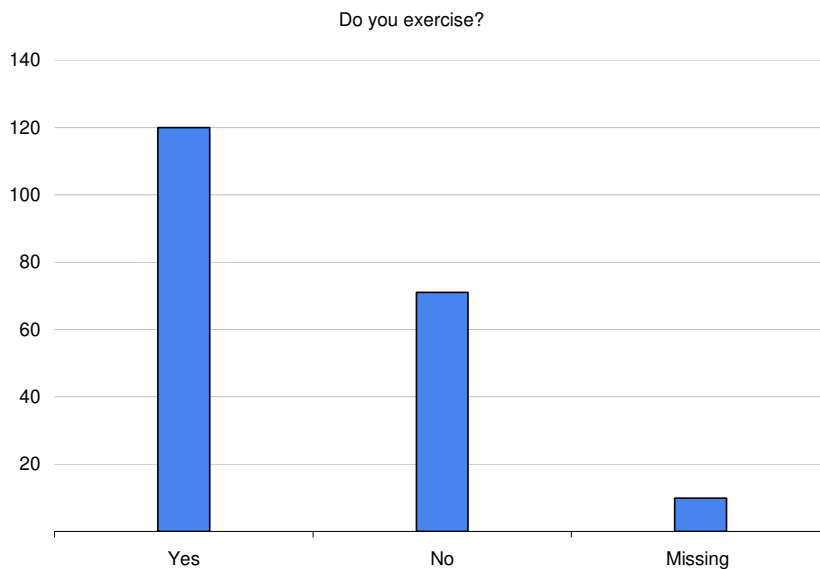


Figure 18. Physical Activity Participation as Measured by the Where Am I? Form

Those who reported exercising were asked to answer two additional questions regarding the number of days per week they were physically active, and how long they exercised each time. Figure 19 shows the results for the 120 participants who were active at the start of the program using the response choices provided to participants. Due to the ambiguity of the answer choices, it is impossible to calculate the numbers of minutes of physical activity participants were engaging in when they entered GIFT. For example, more than 30 minutes could mean anything between 31 minutes and several hours of physical activity. However, estimating from this chart, it does appear that many

of the participants who completed this form are probably not meeting the CDC's recommendations for physical activity.

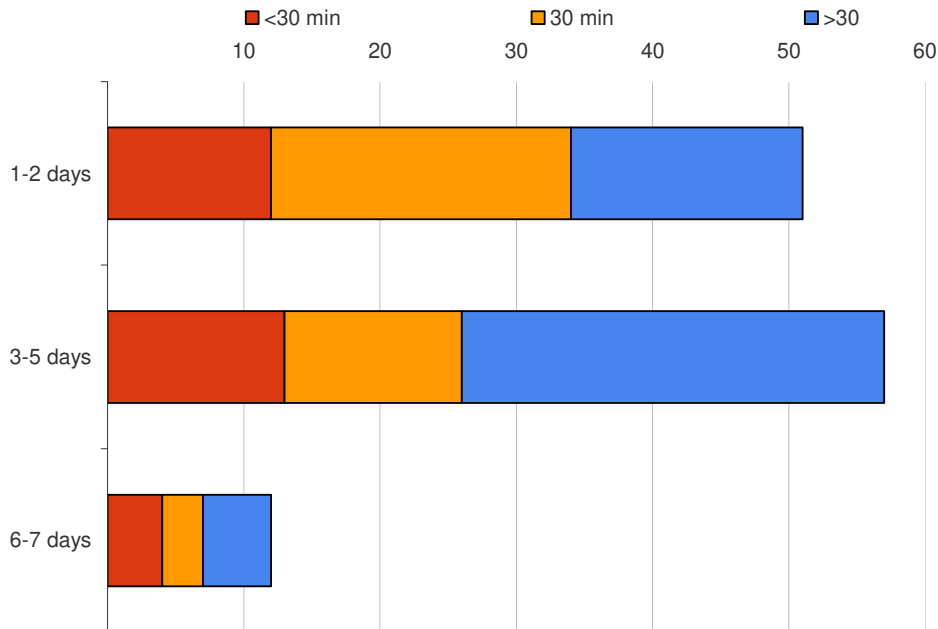


Figure 19. Beginning Physical Activity Level as Measured by the Where Am I? Form

It is difficult to make generalizations about how much physical activity participants engage in when they start the program due to both the limitations of the questions used to assess physical activity, and the relatively small amount of data. The database contains information about beginning physical activity for less than half of all participants (289 of 664 participants). As discussed previously, a response rate of 50% or greater is generally needed to make inferences about the entire group. Bearing this in mind, the data suggests that most participants are probably not meeting CDC recommendations for physical activity and some are not physically active at all when they begin the program.

Since the questions on the Where Am I? Form are not included at Week 6, the only indication of change in physical activity level during the program comes from the

Evaluation Form. Like fruit and vegetable consumption, participants are asked to retrospectively assess whether they have increased their physical activity level using the question “Have you increased your physical activity/exercise?” “Yes” and “no” are the only response choices. Almost half (101 or 46.1%) of 186 participants who filled out the evaluation form reported that they increased their physical activity, while 10.2% (19 participants) did not and 35.3% (66 participants) chose not to answer this question. However, it should be noted that only about one-third of people who participated in the program filled out this form, so these results may not be representative of everyone who participated in GIFT.

Program Satisfaction

The Evaluation Form contains several questions to assess participants' satisfaction with their Community Health Advisor (CHA), the teacher/facilitator of the program. As previously discussed, the evaluation form changed during the 1 year period selected for analysis, but most questions regarding program satisfaction remained the same. Figure 20 shows the results of these five questions for the 121 participants who completed either the older or current version of the Evaluation Form. Participants were overwhelmingly satisfied with the performance of their CHAs, with more than 85% agreeing or agreeing strongly all for questions.

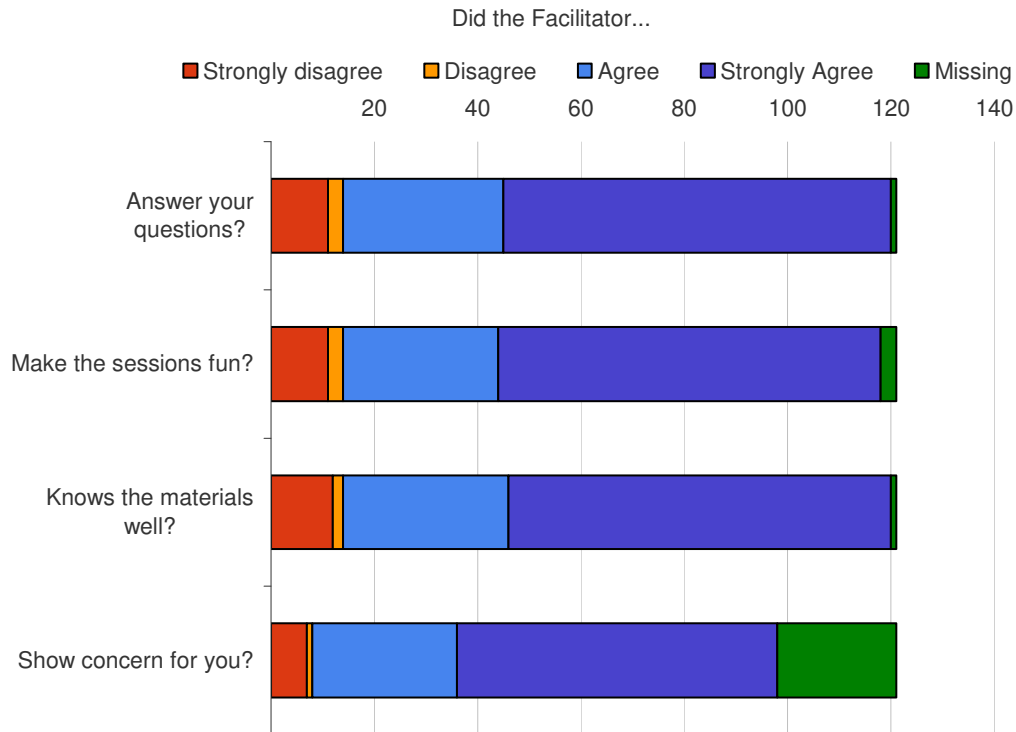


Figure 20. Satisfaction with CHAs as Measured by the Evaluation Forms

Although many of the questions on the older and newer versions of the Evaluation Form were nearly identical, the older form contained some additional questions that are no longer used. Namely, the older version of the Evaluation Form asked participants to rate each of the GIFT lessons from Week 2-6. Figure 21 shows the responses of the 71 participants who completed this exercise. This chart accounts for only about 10% of total participants in the sample, so these results are not necessarily true for the entire population of people who have participated in GIFT. Nevertheless, the results do suggest that participants were satisfied with the lessons.

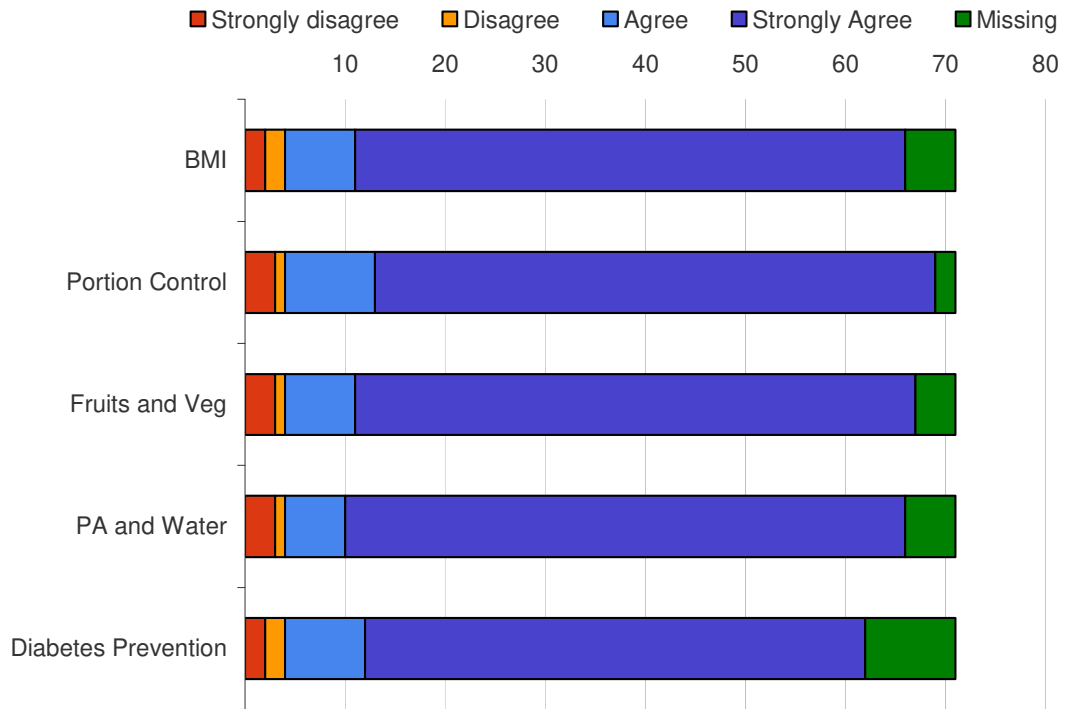


Figure 21. Ratings of GIFT Lessons

The current version of the Evaluation Form asks three additional questions to solicit feedback from participants about the program. The results are presented in Figure 22. Of the 51 participants who filled out this version of the Evaluation form, a strong majority held favorable views about the way the information was presented, the length of the class sessions, and their opportunities for participation.

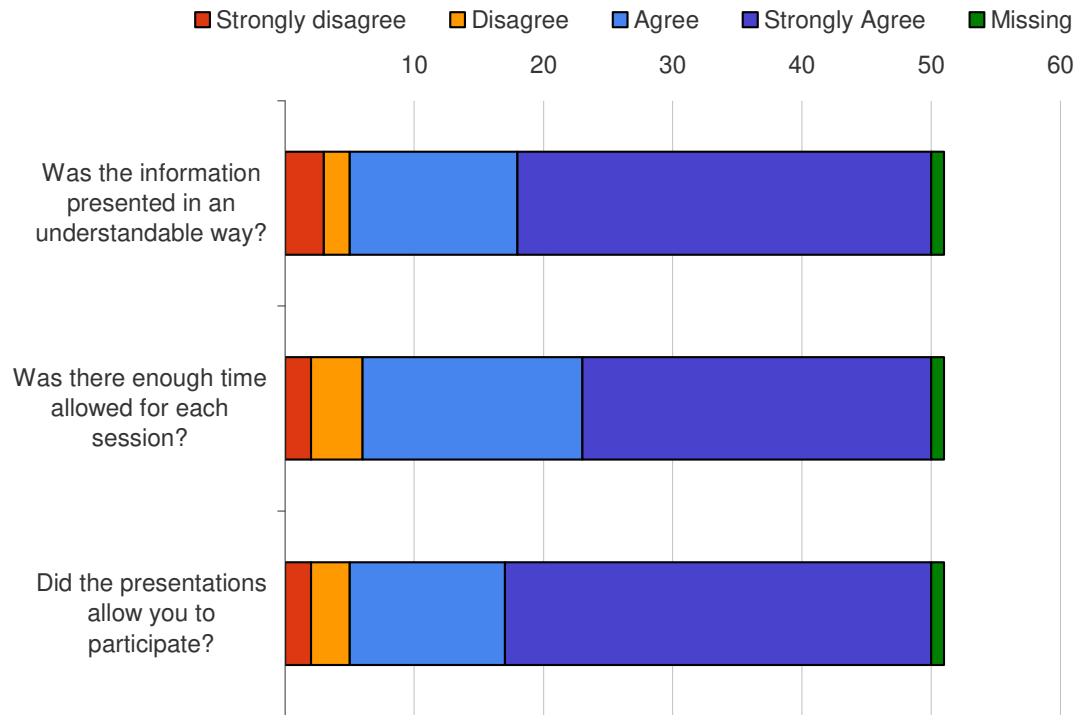


Figure 22. Feedback on Program Elements

Other Outcomes

Although goal setting is an important activity in Week 1, progress towards goals is not tracked during the program. Instead, the evaluation form asked participants to assess whether or not they met the goals they set for themselves. Of the 187 participants who completed the Evaluation Form, 38.5% (n=74) reported meeting their goals. Another 38.5% (n=72) did not answer this question, probably because the answer choices do not account for all possibilities. For example, a person who met some of their goals but not all of them, or made progress towards their large goal but did not achieve it would have difficulty answering a simple “yes” or “no”.

Finally, two questions assess whether GIFT has helped participants achieve better health in a general sense. Of the 121 participants, the 91.7% (n=111) reported feeling healthier and 94.2% (n=114) felt the information presented in GIFT useful in leading a healthier life.

Participant Observation

Out of the 40 hours of participant observation and accompanying fieldnotes, it became clear that CHAs are operating out of an individualistic, public health paradigm. They tended to dismiss the idea that policies or finances could hold people back from being healthy. “You just have to seek it out”, one CHA said as she explained why she felt that everyone already had access to affordable food. For the most part, participants agreed with this perspective. They felt that their diet and physical activity level were under control, and a lack of progress represented a personal failing. There were some pockets of resistance, such as the woman who repeatedly told the class, “I don’t know why I’m fat”. She felt she didn’t eat much and was always on the go, so she was already following the “eat less, move more” prescription. Another woman who struggled to lose even a little weight exasperatedly told the CHA one day, “It’s our age, tell the truth.” She felt that as you got older it got harder to lose weight. These were exceptions, though to the generally individualistic discussions.

The greatest source of contention was around ideal or “healthy” weight. The program uses BMI categorizations, which most seemed CHAs agree with, or at least didn’t oppose. One, however, told her group that health and weight weren’t directly related: you could be thin and not be healthy, and could be healthy without being thin. Participants tended to enter the program with an ideal weight in mind. They were sometimes surprised, or even shocked, by what was considered a healthy weight for their height, but were not convinced that this really applied to them. Many participants

talked about an ideal weight well above the “healthy weight” threshold on the BMI chart. One group even had a discussion about how they would look “sick” or “weird” if they lost too much weight. Similarly, in another group several Hispanic women felt the waist circumference guidelines were unrealistic. According to one woman in the group, in her experience no one over the age of 10 has a waist under 35” (the recommendation). She felt that this universal guideline for all women didn’t take into account bodies of all shapes and sizes and ethnicities.

Regardless of the explanatory model employed, CHAs, particularly the paid ones, were very dedicated. They checked up on participants who didn’t come, making multiple phone calls if necessary, and made themselves available outside of class if participants needed advice or support. The CHAs were ethnically diverse and often matched the background of participants, which allowed for better discussions of variations or substitutes of specific ethnic foods or dishes. For instance, one group had frequent discussions of ways to prepare soul food dishes in healthier ways.

However despite their enthusiasm, commitment and ability to relate to participants, some CHAs struggled to facilitate conversation among participants. Facilitation is a very different skill set from teaching or instructing, and without any training in facilitation, many would default to talking about themselves. While revealing personal struggles and solutions humanizes CHAs and can serve as an initial starting point for the group conversation, some CHAs repeated the same anecdotes and personal strategies week after week. Further, some struggled to deal with strong personalities and talkative participants who liked to dominate the conversation. There are multiple paths to a healthier lifestyle, and participants would probably benefit more from hearing more about all of the other participants’ experiences and sharing their own.

Regarding knowledge and the lessons, it became very clear during the observations that the vast majority of participants enter the program with a good working

knowledge of nutrition and the mechanics of weight loss. They already knew to cut back on soda, sweets and fried foods and to eat more fruits and vegetables. Most were experienced dieters, and knew all too well that losing weight requires eating less and exercising more. In fact, four different participants made the point that they knew *what* to do, they just had trouble actually *doing* it. Moreover, many participants actively sought health information outside of class. They talked about things they had learned from health-oriented shows like *The Dr. Oz Show* and *The Doctors*, as well as segments on television news programs. In each of the three case study groups, there was at least one person who was so knowledgeable that he or she could have taken over as CHA given a moment's notice. Since the knowledge level of these particular participants and CHAs was essentially equal, there were occasionally tense moments when CHAs felt they were being usurped. "Would you like to teach the class?" one CHA asked pointedly after a participant interjected additional information one too many times.

It is from this wealth of prior knowledge that participants are able to give each other informational support. Participants seemed to really enjoy sharing their tips and tricks, everything from specific foods to try, like a low-fat salad dressing that "actually tastes good!" to concrete suggestions for how to deal with challenges, like the siren call of the candy dish on a co-workers desk. Emotional support was frequently given by both participants and CHAs. Successes and progress (no matter how small) was met with praise, while encouragement was given to those who faced setbacks and disappointment. In many groups I worked with, participants were remarkably open about their weight, indicating a supportive, trusting atmosphere. However, not all groups achieved this supportive atmosphere. There was one group with whom I did not personally interact, but during the statistical analysis I noted that they mailed their food diaries in individual envelopes so that no one else could see what they had eaten or what they weighed. Groups that dwindled down to only 1 or 2 participants also lost out

on this on the support aspect of program. “We need to get more people in here”, one participant told me when she was the sole attendee one week.

The major difference between workplace wellness groups and community groups relates to the social support aspect of the program. The preexisting relationships of a workplace wellness group are both a help and a hindrance. Since they are more comfortable with each other, participants of workplace groups are able not only to cheer each other on, but also to give appraisal support (through teasing) when someone is not in line with the group’s professed goals. At the same time, the hierarchical nature of workplaces can interfere with the social support, since participants are not on an even playing field. The employer was advised not to allow managers or supervisors to be CHAs in order to avoid tying job performance to weight loss. This advice was heeded, and the feedback from their internal survey indicated that the CHAs with lower positions really enjoyed the opportunity to be a leader. In contrast, in the community groups teasing was virtually nonexistent. Instead participants stuck to positive emotional support, and never progressed to the point where they were able to use teasing to provide appraisal support.

GIFT does an excellent job of meeting participants needs in certain areas. Social support is one example; the group gives participants a support system for a challenging transition to a healthier lifestyle. Leadership at Hillsborough County Health Department also doing a good job of recruiting CHAs that understand and respect participants’ varied cultural/ethnic backgrounds. The program also provides an opportunity for physical activity, which reinforces the point that good health involves both good nutrition and physical activity.

In other ways, however, the program does not always meet participants’ needs. Although CHAs themselves are culturally competent, the program materials in Week 1 could be improved. The materials give sample menus for four different calorie levels for

the mainstream American diet, but only two levels for “Asian” and “Spanish” foods. Soul food, which was discussed extensively among the African-American participants, is not included at all. Additionally, challenges regarding the cost and availability of produce and places to be physically active are not explicitly addressed by the program but were brought up by participants during class. Similarly, participants would occasionally talk about emotional eating as a challenge, but this is not included in the program. Probably the biggest issues participants faced related to family, friends and social situations. Again and again participants talked about the difficulties attending social functions involving food and the challenges of living with others who were not willing or ready to change their eating habits. There is one lesson on strategies for social functions but it is not offered until Week 20 of the program, although some CHAs teach it in November or December as preparation for the holidays.

Additionally, the program, in many respects, fails to engage participants. Many CHAs went above and beyond their required duties and added additional components to the program to make the experience better for participants. Several CHAs of the workplace wellness groups did internet research to supplement the materials in the lessons, which were “too skimpy”, as one CHA explained to me when we were chatting one day. She went on to explain that the materials were “a good jumping off point”, but there was better and more interesting information on the internet than what was included in the lessons. Another CHA asked every participant to bring in an unusual vegetable for everyone to try, but ultimately decided she didn’t want to continue as CHA for Session II because she felt her classes were boring. She envisioned herself coming up with all kinds of fun activities for the group, but ended up just doing a lot of talking. A third CHA showed a video, did a cooking demo and suggested a contest. “We can talk all day, but you need to see things, taste them, smell them”, she explained when she announced the cooking demo. One CHA openly asked participants why they weren’t participating more

fully, and wondered aloud if she needed to get tougher on them. I watched groups dwindle in size before my very eyes, and eventually settle on a small core group that attends regularly. Interestingly, both grocery store tours (in Week 11) had unusually high attendance.

That is not to say that participants did not benefit from being in the program. Often in Week 6 participants would be in a reflective mood as we took their measurements and compared them to Week 1 and shared with use the ways in which they have improved their health. Participants described cutting back on soda, drinking more water, switching to whole grain pasta and bread, eating more regularly, walking more, becoming more aware of portion sizes, planning meals, eating more vegetables, and cutting back on condiments, among other improvements. One woman talked about having to learn to “not be so cheap” at the grocery store because produce cost more than the packaged food she used to buy.

Semi-Structured Interviews

Background and General Thoughts

The sample consisted of seven participants who completed the program and ten who did not. Of the completers, six came from workplace wellness groups and one came from a group held at a community center. Six completers were female and one was male. Of the non-completers, four came from workplace wellness groups and six came from community groups. Nine were female and one was male. By my estimation, all participants were between 30 and 70 years of age. Two of the participants (both completers) were also volunteer CHAs. Unlike paid CHAs who are seen as a clear authority, volunteer CHAs are the first among equals and participate in all aspects of the program (including weighing in, completing the food diary, setting weekly goals, etc) as well as act as instructor and facilitator.

As a general opening question, participants were asked to generally describe their thoughts about the program. A strong majority (16 of 17) held a positive opinion of GIFT. Among both completers and non-completers, the social aspect of the program was the most commonly praised element (3 completers and 4 non-completers), followed by the information (2 completers and 1 non-completer). As the completer from the community group explained, the program “gave me more information, of course some I already knew, but to hear it, to share it with other people who are trying to battle the same thing I am, which is, you know, weight and losing weight and getting healthier and eating healthier. It was great to be in that environment and see other people, people actually of different ages.” However, four participants felt the program was good but then went on to describe flaws or limitations. There was no real consensus: one wanted the program to have more structure, one already knew all of the information presented, another wanted to make it clear that the program simply reinforced her preexisting good habits, and the fourth was too exhausted from work to attend. No one, even among the non-completers, expressed an outright negative opinion. The closest was a non-completer who felt the program was only “okay” because of its short length, but went on to praise her CHA.

Reasons for participating in GIFT were varied. Those who were in workplace wellness groups tended to talk about purposefully seeking a group setting in order to increase their motivation “get back on track” or become more accountable. As one participant explained, “I need something right now just to get myself motivated again. I have been on the Weight Watchers and I’ve been on, you know, other routines for a while, for many years, and I’ve just sort of gotten off it all. I would like to, you know, get myself back on track. And the fact that you go and you’re talking about it with other people, keep you accountable in the sense that you have to weigh in and you know, you weigh yourself, and you’re conscious of that and have a goal for each week. That helps

me.” Those from community groups (both completers and non-completers) tended to enter the program because their doctor referred them. Most participants, regardless of their completion status or group location, joined in order to improve their health or lose weight, but three participants talked about wanting to help others as well, either through modeling their own good habits and encouraging others, or by sharing what they learned with friends and family. As one person explained, “[I joined] in order to really help because there are other people that I know that have questions about this but didn’t have this at their availability.”

Once participants decided to participate, they set goals for themselves during the first week of the program. Unsurprisingly, the most common goal was to lose weight (10 of the 13 participants who answered this question). Those from community groups were very upfront about their desire to lose weight. There was an almost perfect overlap between people who were referred by their doctor and their main goal being weight loss. Three of the nine (all workplace wellness participants) only listed weight loss as a goal after probing. Those three, along with the other workplace wellness participants, tended to view the program as a “jump start” or a way to get “back on track” with a healthier lifestyle. Two (a non-completer and a completer) wanted to not only lose weight, but maintain it. Explained one participant, “Losing weight was my primary goal and to do it in a way where I can maintain the loss because in the past I’ve done programs where you know you lose it fast but then it comes right back.” Healthier eating was also a popular goal (5 participants), specifically eating more fruits and vegetables. Only two participants, both completers, sought to increase their health knowledge.

All of the participants had at least some previous experience dieting, and many described themselves as habitual dieters. There were no real differences between completers and non-completers. “I’m a all year round, up and down, see-saw dieter”, explained one completer, while another said, “Name [a diet] and I’ll tell you if I’ve done it

or not. I've done Weight Watchers, I've done TOPS, I've done Atkins, I've done South Beach. Years ago I went to some diet dude, some doctor and got like B12 shots - injections and got medicines. This was like back in '80...I've pretty much run the gamut." Weight Watchers was the most common formal program participants had tried (3 participants), but others described individual efforts (6 participants). No one described any success stories; their previous diets either didn't work in the first place or they gained back some or all of the weight. As one non-completer explained, "I lost some weight back in '99. I lost 55 pounds but then I gained it all back and then some. I went on a Weight Watchers diet."

When asked to describe how participating in GIFT was different from their previous weight loss efforts, four of the five non-completers who answered this question felt that the group setting or social support offered by the program set it apart. As one non-completer put it, "This was my first time ever going to like a group session or something like that. It was basically always you know my own will power." There was very little consensus among completers: one felt it wasn't any different, another felt GIFT was inferior to Weight Watchers because it was less structured and more casual, and others talked about it being more interactive, and having a less restrictive dieting plan.

Feedback on Program Elements

Participants were also asked to voice their opinions on a variety of aspects of the program. When asked to describe the most useful thing they learned in the program, three of the seven completers interviewed responded not with information from the lessons as I had (perhaps naively) expected, but strategies that they had learned through interacting with the group, completing the weekly action plan, or filling out the food diary. As one completer explained, "I think the most useful thing that I learned was that being with the group encouraged you more and gives you more self-esteem into doing what

you should be doing when it comes to your meals. They encouraged you, they introduced different recipes also which actually, you know, you don't get bored with the same stuff that you've been doing and it helps. I think that's, that's what I've learned from this." None of the completers had anything negative to say about the lessons, although two could not recall the topics covered or what specifically had been most useful. One of those participants couldn't recall "offhand" anything from the lessons that was particularly useful, but said "I thought the educational materials were very helpful. You know, as far as taking them home and reading them, I thought there was a lot of good points that I wasn't aware of or just made me consider different aspects of what I was doing." Even one of the volunteer CHAs who supplemented the lessons with additional information gleaned from the internet had nothing but praise for the lessons. She had this to say:

"Even if it wasn't necessarily in the book that we were given, once you went into the websites and things like that you were able to find additional information in addition to what was in the manual and the book itself. And so you were able to kind of expand on what was in the lesson plan just based on the other tools and the resources that was listed. So the lesson plan, I think it went, it delved deep enough into each section, each subject to get a very good understanding of everything like the BMI. And even the diabetes portion, and you know your numbers and knowing your numbers and things like that. So I think that the lesson plan was well-written and I think it was very informative."

The responses of non-completers in many ways resembled the completers. Four of the six who answered this question talked about what they learned from the lessons. Those who attended only once talked about learning "what to eat", which is to be expected since the first lesson is essentially a crash course in nutrition. Explained one woman, "I guess what types of food you should eat and all that. You know, what food's you *shouldn't* eat – that's what it is." The other two non-completers talked of what they learned through the food diary and from the support of the other participants.

Conversely, when participants were asked what the least useful thing they learned nearly everyone, completers and non-completers alike, either couldn't think of anything or felt everything was useful. Explained one completer, "I can't think of anything that I felt was well 'Why are we bothering with that?', that type of thing." Another completer echoed that sentiment, saying "No, I don't think anything was not useful. Any time you're getting information about your health it's going to be useful, depending on how you want to use it." A non-completer felt similarly and said "Everything was useful. Not one thing was taught that wasn't useful because I felt like this: if I didn't get something out of it, somebody else probably did." Two non-completers felt that they hadn't attended enough classes to make a judgment in this regard. Only one person offered any sort of criticism of the educational component. This person took issue with the BMI lesson, calling it "destructive". Because his ideal weight still falls within the overweight category, he felt it makes you think you will never reach your goal. He went on to say that "when you look at that chart it takes away your whole sense of accomplishment" and that BMI was "unrealistic for my body type."

Although participants by and large held positive views of the lessons, every single participant reported that they knew most of the information covered prior to the program. One completer put the general feeling best, "There was very little information that I didn't already know before. I mean there were a couple of things here or there that that I was like 'Oh, I didn't know that', but most of it was, um, pretty general. But I guess if you don't know that stuff it's, you know, a lot." Among the completers, anything new they learn tended to come from additional elements their facilitator brought to the program, like internet research or exercise techniques (such as the P90X workout system). Two felt that the lesson on portions provided new information, like the completer who said, "That was really new to me, cause I've always practiced eating small quantities and throughout the day, but not really into a program where it taught you

exact portion size. And I think that was very beneficial.” One person felt that the benefit of the lessons wasn’t from the “newness” of the information, but the perspective from which it was taught. She explained, “And it made you look at it from a health standpoint more so than just about losing weight. So even if you don’t lose the weight, if you make healthier choices, you’re still becoming more healthy you know...I really hadn’t looked at it from the standpoint of incorporate this because it’s better for your health. Although I know fruits and vegetables are good for your health, but I guess I always thought if you reduce your calories, you know, that was good enough.” The non-completers also felt that little was new to them, but they also singled out the portions lesson (2 participants) and the food diary (2 participants) as new and valuable information.

Interestingly, despite the lack of new information, few participants were disappointed with the program’s offerings. When asked if there was anything they hoped to learn but didn’t, most either couldn’t think of anything (2 participants) or felt that the program met their expectations in this regard (2 participants). As one woman put it, “...I only went through the six weeks, so for what it covered in the six week period was, you know, fine...I really can’t think of anything that could have been included that wasn’t.” The other completers varied in what they were hoping to learn: one wanted more about food combinations that would promote weight loss, another wanted more on supplements and micronutrients and the third wanted a “mythbusters” week that covered fad diets and why they don’t work in the long-term. He explained, “it’s really hard to eat from the food pyramid when you see people eating bacon and hamburgers and losing weight.” The non-completers had more topics they wished to learn about, but two felt that it was not fair for them to speculate because they had not completed the program and seen all of the lessons. Of the others who answered this question, one felt “they told me everything I needed to know”, but two wanted to learn exercise techniques and one

wanted information on what to eat to help control her diabetes in addition to learning cooking skills.

When it came to the social support portion of the program, the majority of interview participants (12 of 15 who answered this question) enjoyed and benefitted from it. Most talked about being able to share their problems or the benefits of hearing others' stories and challenges. As one non-completer put it "Well just a little bit more encouragement helps me, you know helps me out, helps me get along a little better. When I see other people having kind of the same kind of issues that I have, you know, and how they're able to you know take over and do what needs to be done for them, that kind of thing." Three talked of encouraging each other and celebrating each others successes. Explained, one facilitator, "And I guess the other thing as a facilitator, it gave us a kind of opportunity to build a bond and encourage behaviors and try to keep them on track." Two (both completers) had less than positive feelings about the sharing. One "didn't feel comfortable with it" and didn't find the sharing to be very meaningful for her and the other felt ambivalent, explaining, "That didn't really, you know, concern me one way or the other." The third was a non-completer who couldn't comment because there wasn't any sharing in the one class she attended.

Unsurprisingly, all eight who participated in workplace wellness GIFT groups (both completers and non-completers) and answered this question knew at least some of the people in their group prior to the program. Five said that they were comfortable talking about their weight and their weight loss with co-workers. Explained one, "I'm kind of an open person and I find that you get more when you're able to give and share, so that's why I found it beneficial to open up to people. Because you're kind of a generator flow for other people and I've found out different things from other folks too." One did not feel comfortable with it, and preferred a program like Weight Watchers that does not include people she interacts with on a daily basis. Those from community groups

generally did not know anyone in their group, although one person came to the class at the urging of a friend.

Of completers, four no longer kept in touch with the people in their group (or at least stopped talking about weight loss or health with those people), with one citing lack of time and the other three simply moving on from GIFT. However, three completers kept in contact informally with at least some of the others in their group. One participant said they “just check in with each other, like a little accountability thing.” Another explained, “Well I can say that we don’t as much as we probably should but I do know that we still kind of you know still say every now and then ‘Are you drinking any water?’, ‘Are you eating your food?’. We still ask those questions [laughs]. You know, and we still try to encourage each other but we don’t really – as a matter of fact I think the last thing we did was share recipes and that was since the class ended, we shared some recipes with each other.” Among the non-completers, two from workplace wellness groups still kept in contact with people in their group, but the ones from community groups did not.

The final portion of the program consists of some sort of physical activity. For the most part the completers spoke positively of the physical activity portion of the class, but some drawbacks were mentioned including the small space in which the classes were held, an exercise that hurt a participant’s back, and disappointment that there wasn’t organized physical activity outside of class (such as a walking group). These two volunteer CHAs described their efforts to come up with each week’s physical activity portion. One mined workout DVDs for exercises, while another expressed concerns over finding activities that would suit everyone (a struggle that I shared when acting as a CHA during my internship). As she put it, “I don’t think it was a deficiency on GIFT’s part or anything like that, but I was concerned I was doing things that everybody was interested in. But everyone seemed to appreciate the things that were brought forward.” Several of

the non-completers were unable to comment because they did not do any physical activity the day they attended, but the two that did had positive things to say.

Everyone at least attempted to fill out the food diary, although some were more consistent than others. Two described themselves as “not good at it”. As one completer put it “I’ll start the day off good, and then as you go along you get busy and you know you get involved and I’m just not as conscientious about it as I would like to be.” All five of the non-completers who answered this question talked about doing it for a short while and then stopping. There was this idea that the food diary was helpful, but not something that needed to be filled out for weeks on end. As one non-completer put it , “Cause I wrote it down a couple’a times and I just started doing it. I just started – right now I’m still eating right. I might cheat once in a while but it’s not like every day I’m eating fried chicken. You know I might eat fried chicken once a month.” Regardless of whether they completed the food diary once or all six weeks, all of the participants drew benefits from the food diary. The most common benefit was becoming more conscious of eating (7 participants) and another two participants talked of using the diary to uncover where their diet was going wrong. As one non-completer put it, “Cause you got a chance to actually see what you’re eating wrong. ‘Cause a lot of times you eat, you’re just eating and you don’t even think about it at all. And so you write out a food diary, you kinda you know see what went in and how it should be, that kind of thing.” Others talked of the food diary helping them to snack less, be more cognizant of portion sizes, and serving as a tool to keep on track.

All participants were asked if they were able to attend all sessions, as a non-judgmental way to address why participants did not complete the program. All six of the completers attended at least five of the six classes in Session I, but one person talked about having to “make an effort” to attend some weeks because of work demands. The non-completers talked of a wide variety of reasons for not finishing the program. Three

of the four non-completers from workplace wellness groups talked about work demands impeding on their ability to attend, despite the fact that the groups are generally held during lunch hour or before work. The other workplace wellness non-completer stopped attending because the class took place on “her time” rather than the company’s time and she had other personal matters to attend to. Among the community group non-completers, there was no consensus at all: two experienced health problems that reduced their mobility, one was too tired after work, one lacked money for bus fare to get to class and a third felt the time and location was too inconvenient to continue attending. Another went out of town and assumed the class was over when his CHA didn’t call to remind him about the next class. The final non-completer attended one GIFT class, became inspired by what she experience and finally took her employer up on the offer of a free gym membership. She didn’t feel it was necessary to continue GIFT.

Changes Made due to Participation

Completers and non-completers alike reported making changes because of the program. All seven completers made at least one change, as did seven of the ten non-completers who answered this question. The most common change was increased physical activity (5 completers and 3 non-completers), followed by eating more fruits and vegetables (2 completers and 3 non-completers) and drinking more water (2 completers and 3 non-completers). “I’ve been a lot more committed to physical exercise” one completer said as she explained her 5-day a week workout regimen. Another said, “I do try to make sure that I get a little more water in. That was one of my *major* problems. I’m trying to continue the program. You know I’m not as faithful with my fruits and vegetables...That was the other thing – the darker vegetables, you know, the more vivid like the orange and the green. I never really thought about that. And that was one thing that I became more aware of from the program.” Three other participants (2 completers

and 1 non-completer) discussed being more conscious of their eating habits and their health. As one woman put it, "I find that I try to think more before I grab some of those snacks...There's a little hesitancy there that helps in making some choices. I have the opportunity to make some better choices." Seven participants (3 completers and 4 non-completers) reported that they had maintained all of these changes, but several admitted to backsliding. One woman described her efforts to give up Diet Coke in favor of water: "I've been sneaking back up a little bit on it here lately, I've got to get that back down. It's truly an addiction." Said another about her attempt to eat more fruits and vegetables, "I'm sticking with it but not as thoroughly as I was when I was on the program, you know what I mean? I'm still doing the things the program taught me as far as like I said the vegetables and things."

Participants described a number of challenges that make it difficult to stick to these changes. Busy schedules were something that completers and non-completers alike faced. Said one completer, "The food part is hard for me because I feel like I'm always in a hurry and I want to be able to just grab and go, and the stuff that's grab and go is not good for you. I mean you can only grab so many apples, or grab so many bananas, you know?" Another talked about finding time to exercise, saying "When you go home you have children, you have things to do at home, you have to cook. You know, there's never time. So you're up from five in the morning trying to get breakfast and everything and lunches packed and then till ten at night. It's just hard...I go to the gym everyday on my lunch hour and then that's it. So I have a pretty tough, a tight schedule." A non-completer found it difficult to find time to grocery shop, saying "With my schedule, sometimes it's harder for me to go out and shop and find enough to have in my *home*, so I can *plan*, which is one of the biggest things really. Planning is one of the most helpful things you can to, to be able to plan ahead and have the stuff available

before you need it. So that's one of my things, and sometimes the cost factor becomes an issue, but I try to work with it."

Three participants (2 completers and 1 non-completer) talked of challenges arising from social situations and family members. One woman talked of the resistance she faced at home: "...I live in a household where there are two others who, you know, they were kinda used to eating what they want to eat. And I try to – I've done things like incorporated wheat bread. You know they'll still fight me from time to time and if we run out they'll go buy white. You know [I] try not to drink sodas, they'll go buy sodas. I've instituted wheat pasta, sometimes they'll go along with it, they'll go buy the regular... But you know you have to battle that so that makes it hard sometimes." One said, "I mean I like good food, as far as like fresh vegetables and things like that go. But *man*, they take so long to fix. My family was hungry yesterday, they want it like yesterday, not, you know, 20 minutes from now."

One participant from a workplace wellness group brought up an interesting and unique set of challenges. He felt that it has "hard if the people in your group aren't as committed." Once the program had ended, he found it discouraging to see others backslide. "Some people went back to their old habits, which makes it hard for you to stick with new ones, especially when you see them every day." Others talked about lacking motivation, traveling frequently, and keeping healthy foods on hand in order to avoid temptation both at home and at work.

When participants were asked to describe what made it easier for them to stick with the changes they were trying to make. The most common facilitator was inner motivation and determination (2 completers and 3 non-completers). Explained one completer, "My own ambition, my own inner self is what drives me to do it. You know you need to do this, you need to stay fit, you need to get the stomach down, you just need to go. And that's it. It's just me driving me to do what I want to do." A non-completer

expressed a similar sentiment: “Just me doing it and being motivated to do. Had I not been motivated I probably wouldn’t have did it. Not yet, kept putting it off and making excuses.” Three of the completers felt that the group setting helped them, liked the man who said that the class “sparked motivation” or the woman who felt that the co-workers from her group who she still kept in touch with helped her. She explained, “You try to keep each other on track. ‘Did you do your walking today?’, ‘Did you try this?’, that type of thing and ideas with recipes and so on.” In contrast, non-completers tended to talk about more concrete aids, like being able to cook or freezing meals ahead of time.

Most of the participants, completers and non-completers alike, described the changes they made in their lives having a positive impact on others. Of the eight participants who felt that their personal changes impacted others, seven said it was through purchasing healthier food and cooking differently. As one participant explained. “So yeah it has affected them but in a good way too because I have been trying to cook a little bit healthier for them and they’ve liked some of the things that we’ve tried and so, it’s affected them too.” The other person felt that just setting a good example had influenced friends positively. She explained, “...friends have seen what I’ve been eating and go “hmmm, maybe I’ll try that”. So that has been an influence for a couple of people.”

In addition to all of the lifestyle changes participants made, most also lost weight. Weight loss among the completers was modest, with four of the seven participants losing six or less pounds over the course of the six week program. One lost 10 pounds, one didn’t lose any (but did lose 6 inches in her waist), and the final completer wasn’t interested in losing weight. Only one didn’t maintain this weight loss, but attributed this to a medication whose side effects include weight gain. Interestingly, all of the eight non-completers who answered this question, seven also reported losing weight and the eighth wasn’t sure one way or the other. Again, most lost six pounds or less, but two

reported losing between 15-20 lbs. All eight maintained their weight loss. That being said, it is more difficult to know whether the weight loss of the non-completers is attributable to GIFT, since many things have happened in the participant's lives since their short participation in the program. For example, one felt that part of her six pound weight loss was due to her recent sickness, and another that estimated her weight loss at 15-20 lbs due to joining a gym after participating in one class of GIFT.

When asked if they had met their goals, both completers and non-completers were ambivalent. Four of the seven completers were satisfied with their accomplishments during the program, but the rest felt that they had met some goals but not others. As one woman explained, "I don't think I've met my goals for myself totally but for what I set out for the program, yes. So like as I set my goals during each week, I met my goals. Now, as far as where I want to be, I haven't gotten there yet. So you know, that's still ahead of me. I haven't totally reached *my* total goals." The non-completers who answered this question were similarly ambivalent. One man said he had "kind of sort of" met his goals, but he felt he needed to be better about exercising and wanted to lose more weight. Another felt that weight loss would never be truly accomplished and would always be an ongoing effort. She described her feelings like this: "cause that's always going to be a constant struggle. Just depends on what's going on in your life that you know, can trigger you do go back to your bad habits or something like that."

Friends and Family

GIFT reached beyond the participants, as many shared either the knowledge or the materials themselves with friends and family. Three of the six shared the actual lessons with family members and another told her friends about the class and tried to "be an example" However, two participants hinted that their family members were less

than receptive. One reiterated her struggle to change the foods kept in the home, and another admitted that she didn't share the materials with anyone. She went on to say, "I try to encourage my husband, but it doesn't work, so I just work with myself [laughs]." Three of the five non-completers who answered this question also shared the materials with friends or coworkers. Another didn't share the actual materials, but did talk with his friends and family members about eating more vegetables. He explained, "Like I said most of my family and friends, you know, they're all about meat, no one wants to eat vegetables. And if they do it's like – 'cause you know even when a lot of us were growing up in my family, you eat a small amount of vegetables and a big portion of meat. Nobody ever told me that vegetables should be a little bit more, you know that kind of thing."

When asked if family and friends were supportive, most participants (five of six completers and five of six non-completers) felt that they were. Among completers and non-completers, the support tended to take the form of verbal encouragement rather than tangible support like exercising together. One completer put it like this, "You know, just verbally. You know, 'Yeah, you can do it', 'That's good', you know that type of thing." Another explained that her family was very supportive, saying, "At home, we're all conscious of trying to eat healthy, and just by bringing home some of the literature and some of the ideas. Everyone was sort of interested in it. And that really helps. Again if you have, you know, people with common goals around you that is helpful to me." This encouragement from family and friends also sometimes included more pointed reminders when participants appeared to be veering off track. One non-completer put it like this, "Yes, they kept tabs on me. Yeah, you know (unintelligible) 'I thought you was supposed to be doing this.' or you know."

Suggestions for Improving GIFT

Finally, participants were asked what they would do differently if they were to teach the class. The most common change was about the time and/or location of the class (one completer and three non-completers). The completer would have rather held the class before work rather than over lunch, and the non-completers wished the class had been at a more convenient time or location. Other suggestions from the completers included: more space in to write in the food journal, more concrete suggestions for the physical activity portion each week, and scheduled physical activity outside of class. One completer would have liked a more knowledgeable facilitator. She explained, “The people who were moderating the groups I know put a lot of time into it. But again, they’re not professionals in that field, so again it was...maybe it would have been better if there was a person that was a real team leader as far as in that field... someone with more in-depth knowledge and I guess is more aware of health and diet issues.” Suggestions from non-completers included: having an accountability buddy within the class, making the class longer than six weeks, and a week devoted to “healthy swaps”. The participant explained healthy swaps further, saying, “I think I would actually like to have, on occasion, maybe once or twice, to have something on hand that would show easy and/or simple some of the transitions can be done. How you can take something that people are doing now, and say “You can do this”. You can make this and this will – you know, eat this, not that kind of thing. Whereas you can take something somebody has high in calories and do a conversion and show them how the same thing can be done, *taste as well*, but cut the calories” (emphasis hers).

Supplementary Sources of Information

Goal Forms and Weekly Action Plans

During Week 1 of GIFT, participants complete a worksheet about their medium-term goals, usually for the duration of the program, but participants can determine the end-date. They are also instructed to come up with a positive reward and a “negative reward” (i.e. a punishment). Of the 345 participants who completed these Week 1 goal sheets (about half of the sample for the statistical analysis), the most common positive rewards were clothes (82 participants), an experience such as a vacation or night out (31), a material purchase other than clothes (26) and pampering such as a haircut or pedicure (12). However, 27 participants misunderstood and put either a method of achieving their goals or the date they would achieve them by. Only 2 participants put an intrinsic reward, such as feeling good about themselves. Interestingly, responses tended to be grouped together, suggesting that participants were influenced by the suggestions given and examples used by their CHAs. As for the negative rewards, only 50 participants followed the directions and put an unpleasant task or said they would deprive themselves of something. Instead, participants tended to say that if they did not meet their goals they would continue the program (25 participants), “continue” or “try again” without specifying whether it would be through the program or individual efforts (55), try harder or work harder (22), and feel bad (9). An additional 16 participants said they would exercise more, indicating that they view exercise as an unpleasant task or a punishment.

The goals listed on the goal sheet have changed over time. Eight of the goals have remained consistent, but two different goals have been added to the current version (maintaining a weekly food tracker and weighing in weekly). Participants tend to check off several of the goals available on the checklist. When participants had eight goals to choose from, they picked 4.95 on average, and when there were 10 available

they chose an average of 6.43 goals, suggesting a positive correlation between the number of goals suggested and the number chosen. Using a percentage score to account for the varying number of goals, the average participant chose to adopt 61.8% of available goals. Figure 23 below shows the number of participant who selected each goal. With the exception of decreasing sugary drinks and “other”, each goal was selected by approximately two-thirds of participants. The “other” category had a mixed bag of responses that included reducing or avoiding specific foods (5 participants), diabetes management (4 participants), and smoking cessation (3 participants) as well as many other unique goals.

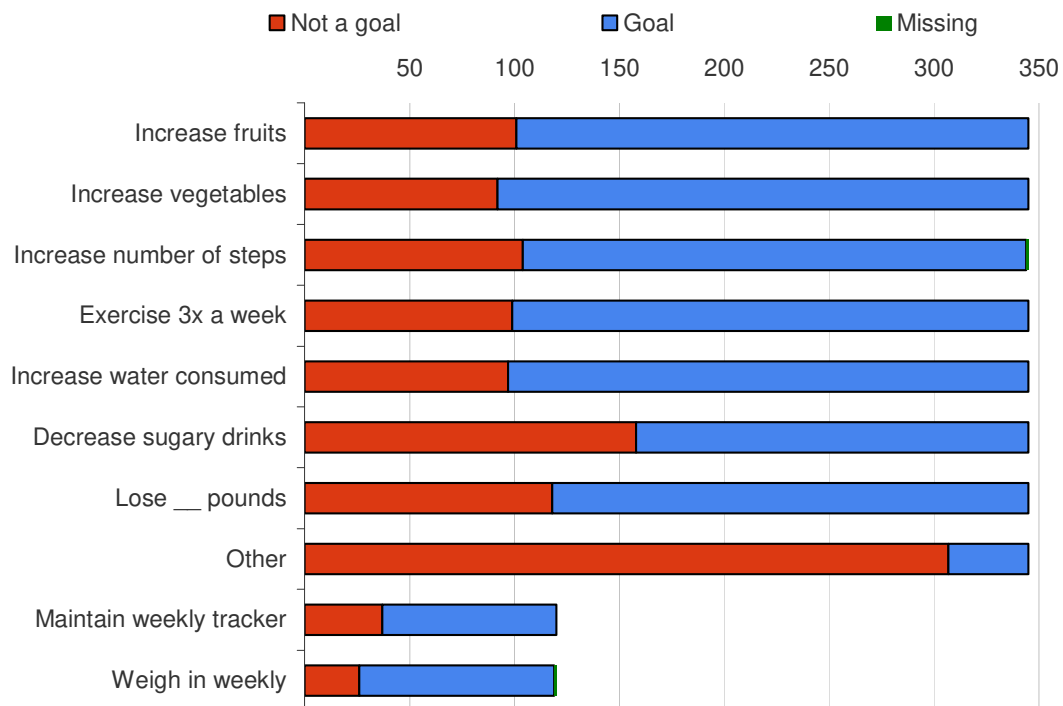


Figure 23. Goals Chosen by Participants

Almost two-thirds of participants (65.8%) set weight loss as a goal, but they varied in the amount of weight they wished to lose. More than one-third (81 or 35.7%) wanted to lose 1-2 lbs, but since the goal form specifically recommends 1-2 pounds per week, it is likely that these individuals intended to lose 1-2 lbs per week rather than 1-2 lbs over the course of six weeks. An additional 101 participants (44.5%) followed that recommendation and set their goal from 3 to 12 pounds. Of the remaining participants, 35 (15.4%) wanted to lose between 13 and 30lbs and 10 (4.4%) between 31 and 100 lbs. The goal form is intended to be for the six weeks of the lesson but is structured in such a way that participants are able choose any timeframe, making it difficult to tease out whether participants had unrealistic expectations for the class or were making long-term goals.

In addition to the 345 goal sheets from Week 1, an additional 654 weekly action plans created by 358 participants were analyzed. The most common goals were to increase physical activity (203 goal sheets, 31.0%), eat differently (177, 27.0%), lose weight (usually 1-2 lbs) (118, 18.0%), and drink more water (79, 12.1%). Those who wanted to eat differently had different strategies: eating more fruits and or/vegetables (50 goal sheets), those who had vague goals of wanting to “eat healthy”, “eat right” or “watch what I eat” (45), cutting out or reducing specific foods like sweets, snacks or fast food (30), controlling portion sizes (21), and eating at a different time of day (including avoiding late night snacking) (10). Even though the goals often differed from week to week and certainly from participant to participant, the reasons behind them were very similar. Participants tended to write that they were doing this either for their health, in order to lose weight, or that they “needed to” in order to meet a recommendation or guideline they currently did not. Rarely did participants write of looking or feeling better as a rationale. Impediments were also much the same across goals. Whether it was drinking more water or cutting back on ice cream, participants tended to write about a

lack of time (usually because of work and family commitments) and “laziness” or a lack of will power/determination as impediments. In fact some participants were so concerned about their lack of will power that a few set weekly goals relating to gaining “control” or “trying harder”. Many of the solutions to impediments of all kinds were mental rather than concrete actions. Participants wrote of working harder, trying harder and being more disciplined to overcome their obstacles. This attitude was best exemplified by the participant who wrote, “I think that when one wants something there are no obstacles.”

Despite all of the commonalities there were some differences in impediments across the different goals. For example, weather was seen as an obstacle to both losing weight and being more physically active. For the goals related to eating, participants wrote about temptations and cravings as impediments, as well as parties and social events. Eating more fruits and vegetables required more planning, and cutting out foods like sweets and snacks was made difficult by their easy access and family members who still wanted to keep them in the house. Again, a lack of will power or determination was a strong theme throughout the goals regarding diet.

Another clear theme was the vagueness of the goals. Fifty-six of the goal sheets had multiple goals, and others were completely opaque, like the participants who wrote “stay on track”, “do the program” and “make lifestyle changes” as their action plan goal. A large number relating to both physical activity and diet were not very specific. Many participants wrote simply “exercise more” or “eat more fruit” without defining what “more” meant. Similarly, the plans to overcome impediments were sometimes vague, and there were instance where participants put question marks or admitted they did not know what to do about a particular obstacle.

Community Health Focus Group

In addition to the goal forms and weekly action plans, there was another supplemental source of information: a focus group undertaken as part of a community health assessment. The church congregation that participated in this focus group had recently participated in GIFT, and while GIFT was not the intended topic of the focus group, a great deal of time was spent discussing the program. The participants apparently did not realize that the Hillsborough County Health Department was behind both the focus group and GIFT, making the discussion much more candid than it might have been otherwise. One person in particular was very articulate about the problems of educational programs like GIFT.

“I think more community outreach and more education. But, but not just education as we know it because I think the reason why it hasn’t been successful in the past is that those who are sharing that information are talking *at* people. They need to speak to them where they are. To just tell an African-American in an urban community ‘You can’t eat ribs anymore’, that’s really not going to work very well... But if you tell them, “You may not be able to eat ribs because they too fatty, but there are other cuts of pork you can still eat if you cook them this way.”

Another person felt that education was beneficial, but it really came down to personal motivation to make changes.

“I know that education is *extremely* important and I do think it’s key and what I’m about to say is something that no one from the outside can provide, and that’s motivation... Because I think until you have some major thing, you almost think that it’s not going to happen to you. You know what I mean? I haven’t been diagnosed with anything, but I know that I’m too heavy and perhaps it’s just a matter of time. And I know how to lose weight even, and I know how to basically, *basically* now, I’m not a nurse like she is, but I know basically what constitutes a healthy meal. So I do think that education is key, but even knowing that, it’s like smoking or drinking or any other excess thing. People know that. People know enough to know where they are is a bad place. But how to they become...I don’t think another person can provide that for you. It’s hard for me to stay focused.”

Suggestions for improving motivation included instructors or teachers who are passionate and knowledgeable, and accountability partners. One person felt that lack of

motivation was preventing people from taking advantage of free resources like the GIFT program. At their church, GIFT ended with less than half of the people they started with, which this person attributed to individuals losing motivation.

One of the non-completers spoke up about why she didn't complete the program, saying "And the reason why I dropped out is because, #1, and this is not any reflection on you because I know it's not your program, but I didn't find it exciting. I didn't find it – although they were saying all the right stuff, you know, all the right stuff, there was not anything there that made me want to keep coming back." Two other participants objected to this sentiment, saying they had "wonderful time".

Two different participants suggested more interactive presentations. One example was a presentation that visually shows the harmful effects of sugar on your body rather than just talking about avoiding sugar. The woman who discussed why she didn't complete the program gave a very impassioned speech about how a more interactive format would have kept her coming. In her words:

"You know, we cook in a rut, we live in a rut. We do the same things over and over again. There's nothing exciting about the same thing. If you want to try something new, if you want to get people to try something new, you have to present them new and different ["good idea"]. Cooking, you know, cooking classes. You know, things like this. Don't just say here's a recipe. Say come and taste what this tastes like. Say "you think you need a pound of bacon, but you don't" and let them taste it before you tell them there's no meat in it or let them taste it and say "*dang*, this is good" and then say, there's no pork in those greens. You know what I'm saying? I'm talking about interactive stuff. Give them something concrete. Don't give me a piece of paper and say, "Here, try this" or "Here, try this diet" or "try this recipe". You know something – create an era [sic] of excitement and about it. I mean an ongoing, not just the first day, but every time they come to that place, you got this going on. On Tuesdays they got a juice bar and on Wednesday they got cooking classes, vegetarian – you know that kind of stuff. [murmurs of approval] That's the kind of stuff that make you get out your house and go [stronger approval]. Especially if what we're creating tastes good."

There was also some further discussion about the taste and appeal of food being as important as its nutritional content. As one person put it:

“We’re very *taste oriented* people because we season our food well, and you know, we want food that *tastes good*. If it doesn’t taste good then you not going to eat it. You may eat it once, but you not going to keep eatin it. So we need to address healthy eating where we are. Don’t just say you can’t eat that anymore because you can’t take stuff away from people without replacing it, and for African-American people and Third World people, you can’t just replace it, but you got to replace it with something that tastes good or we not going to eat it.

Conclusion

This chapter presented the results of the statistical analysis of program records from 664 participants, observation of nine GIFT groups, and interviews with seventeen participants, with goal forms and a focus group as supplements. The results were discussed by methodology and topic, but the next chapter will synthesize findings and delve into broader themes. Recommendations for the improving GIFT and conclusions regarding weight loss and its ideological underpinnings will also be discussed in the next chapter.

Chapter 5: Discussion

Introduction

This chapter gives an overview of the major findings of this study, organized by research question. A summary of the effects of the GIFT program is given, followed by a discussion of the way in which the program meets and fails to meet participants' needs. Next, the explanatory model used by participants is detailed, as well as the role of empowerment within the program. Finally, there is a discussion of the implications of this study for both anthropology and public health, as well as recommendations for GIFT and weight loss programs in general.

Effects of GIFT

Although this study did not have a control group, and therefore cannot be certain that the effects seen in analysis are due entirely to the program, there was a great deal of convergence in the results from the quantitative analysis, observations, semi-structured interviews and supplementary sources of information. This suggests findings are both internally valid and probably due to GIFT.

Weight Change

The findings suggest that a fair number of participants lose weight (64.2%), and weight loss tends to be modest (less than 5 lbs). Although participants were sometimes disappointed with their progress during Session I of GIFT, this modest weight loss shows that participants are not crash dieting and are instead making the kind of small, incremental progress associated with long-term weight maintenance (Centers for

Disease Control and Prevention 2011e). Interviews suggested that most participants were able to sustain this weight loss, but only one was able to lose any additional weight. It should be noted that this type of question is susceptible to socially desirable answers, but with no alternate source of information these self-reports must be taken at its face value.

The quantitative portion of analysis regarding weight change showed that weight change did not differ significantly by gender, age, or ethnicity, suggesting that the program does not have greater success with one sub-population over others. Weight change was related to attendance, however. Participants who attended 4-6 classes were significantly more likely to lose weight ($p=0.000$, $n=341$) and lost more weight per class attended ($p=0.009$, $n=341$) than those who attended only 1-3 classes. The greater success of participants with greater exposure to the program suggests that the current policy of not referring participants beyond Week 2 is a good one and should be implemented more consistently.

Food Diaries

The qualitative analysis also revealed an upward trend between food diary completion tertile and weight loss status, meaning that those who did more food diaries were more likely to lose weight. A chi-square test for independence confirmed this relationship ($p=0.000$, $n=340$). However, almost 20% of participants in the top tertile (meaning they completed the most food diaries) gained weight. From this analysis, it appears that food diaries do help people lose weight, but do not work for everyone. It should be noted, however, that food diary completion was investigated using a simple completed/not-completed metric, with "completion" defined as having at least 50% of the form filled out. During data entry and participant observation I noted a wide variety in completeness and witnessed numerous instances of participants filling out their food

diary in class just prior to turning it in. It could be that success with food diaries is tied to the level of detail recorded or the time it is filled out (immediately after eating vs. the end of the day or week). This was seen in the literature, although there was a great deal of conflicting evidence (Baker and Kirschenbaum 1993; Goris, et al. 2000; Helsel, et al. 2007; Shay, et al. 2009).

The motivation behind food diary completion may also have a part to play in the relationship between food diary completion and weight loss. One of the complaints raised by the CHAs was the difficulty in getting participants to fill out their food diaries each week. Participants for their part, tended to view the food diary as a useful tool for self-reflection, but not necessarily something that needed to be completed for weeks on end. This raises the question of whether participants completed their food diaries because they saw the value in it or whether it was simply to comply with the program, which presents the food diary as mandatory (although there are no repercussions for not doing it).

Other Changes

The quantitative analysis, observations and interviews indicated that participants made a number of other changes beyond weight loss. The quantitative analysis revealed that most participants are not meeting CDC recommendations for fruit and vegetable consumption, physical activity, water consumption, or waist circumference (Andersen, et al. 2003; Centers for Disease Control and Prevention 2008; Centers for Disease Control and Prevention 2010; Centers for Disease Control and Prevention 2011d). While the data regarding fruit and vegetable consumption, physical activity and waist circumference was far from ideal, what exists suggests that most participants move closer achieving these guidelines through the program. For instance, the majority reported that they had increased their fruit and vegetable consumption and physical

activity at the end of the program on the Evaluation Form. The waist circumference data similarly suggests that a small number of participants (11) achieved the guideline for their gender, but more than 60% decreased their waist size. The analysis also showed that weight loss and waist circumference do not necessarily go hand in hand (a phenomenon I also witnessed during observations), which underscores the value of using both measurements in order to avoid reliance on one particular measure as the indicator of increased risk for chronic diseases. Water consumption was not measured at any point, but the weekly action sheets suggest it was a common target for improvement, and water was a frequent topic of discussion during the classes I observed. Although there is no hard data, it is likely that many participants improved their water consumption. Finally, in observations and interviews participants described a number of other positive changes, including cutting back on soda, switching to whole grain pasta and bread, eating more regularly, becoming more aware of portion sizes, planning meals, and cutting back on condiments, among other improvements.

Ripple Effects

GIFT had a positive impact not only on participants but on the families, friends and co-workers of participants. Several of the interview participants shared either the materials or the information within the materials with family, friends and co-workers. Almost all of the interview participants said that their participation in GIFT had positive effects on others. Most reported keeping healthier foods in the house and cooking differently, which changed the way the entire family eats. Two participants talked of consciously serving as a positive role model for friends and family.

Satisfaction

Overall, participants had a positive attitude towards GIFT. In the interviews, completers generally described having a positive experience within the program and even the non-completers had very few (if any) negative remarks. The results from the Evaluation Form were overwhelmingly positive. It should be noted the Evaluation Form is administered in Week 6, and so only reflects the perspective of participants who complete the program. Still, those who completed the form had very high opinions of their CHA and the program in general. Although data on the individual lessons was limited (and is no longer collected), what exists was also very positive. Taken together, the data from multiple sources suggests that participants are satisfied with their experiences in GIFT.

Meeting (and Failing to Meet) Participants' Needs

Meeting Needs

GIFT does an excellent job of meeting participants needs in a number of key areas. The CHAs are dedicated and passionate, and often make themselves available to participants outside of class. The weekly classes also provide a much-needed support system. Although nearly all participants interviewed had a history of dieting, many had only made individual efforts and appreciated the solidarity that the group setting provided. Further, it was clear through the interviews, observations and weekly action plans that not all participants had supportive friends, family and co-workers outside of class. Including social support as a distinctive portion of the class ensures that all participants have at least their group as a support system. Similarly, including physical activity as a distinct portion of the class helps time-strapped participants “build in” activity into their schedules without any additional effort and exposed participants to new types of exercises or workout systems. It also reinforces the idea that physical activity is

equally as important as diet for good health. Unfortunately, the exercise portion of the classes was implemented unevenly, but its inclusion is to GIFT's credit. A final dimension was the food diary, which participants universally saw as a helpful tool for self-reflection. While some participants didn't feel a need to complete one for weeks on end, the participants interviewed felt the food diary benefitted them.

Failure to Meet Needs

However, the program fails to meet participants' needs in other important ways. The lessons don't give enough attention or space to dietary habits outside of mainstream American culture, despite the fact that most participants are minorities. The best example of this comes from the Week 1 lesson, which includes sample daily menus at four calorie levels for the mainstream American diet, but only two calorie levels for "Asian" and "Spanish" foods. Soul food, which was discussed extensively among African-American participants, is not included. The program also doesn't directly address many of the issues that participants see as impediments. Some problems, like those related to family members, social situations, emotional eating, and lack of time, are discussed during the social support portion of the class. Participants try very hard to brainstorm solutions for others in their group, but the lessons themselves very rarely delve into the social or emotional aspects of weight loss. Parties and other social events are explicitly covered in a lesson called Party Time but it is not officially taught until Week 20, although some CHAs taught it in November or December in preparation for the holiday season. Very little credence is given to structural barriers such as the cost and availability of both produce and places to be physical active in either the lessons or class discussions.

In addition to not addressing many of the impediments participants faced, the lessons also cover a great deal of material that participants already knew prior to

entering GIFT. The quantitative analysis, observations and interviews all indicated that the instructional complexity of the lessons was too low. While participants valued education tremendously, every interview participant indicated that very little of the information presented was new. Similar things were seen in the observations, as participants demonstrated that they sought health information outside of GIFT and were quite knowledgeable about the basics of nutrition and the mechanics of weight loss. Additionally, the item analysis of the pre and posttests revealed that knowledge does not significantly improve because participants scored so highly on the pretest there was little room for improvement.

Probably the biggest way in which the program does not meet participants' needs is the way in which it fails to fully engage them. Many of the CHAs, both paid and volunteer, went above and beyond expectations to add components to their classes to better engage participants. Several added additional information from the internet, as well as activities like a cooking demonstration and bringing in food samples for all to try. One CHA directly asked participants why they were not more enthusiastic and involved. Some classes were lively and involved, but others were rather subdued, with participants simply sitting back and listening rather than actively engaging in discussions.

Non-Completion

It is these shortcomings in meeting participants' needs that I believe contribute to the high number of non-completers. Only about one-third definitively complete Session I of the program by attending Week 6. The data suggests that finishing the program is unrelated to age, gender or ethnicity, which effectively eliminates the possibility that GIFT appeals to some groups or populations better than others. However, it is clear from the quantitative analysis that participants who enter GIFT during Weeks 1-3 are less likely to complete the program ($p=0.000$, $n=539$). I originally hypothesized that people

who entered the program later might struggle to fit into an established group and have a higher non-completion rate, but the evidence from both the quantitative analysis does not support this. Instead, most participants start in Week 1 and slowly dwindle in membership as the weeks pass. New members occasionally join but the group and generally stay on until the program ends. Interviews with ten non-completers revealed that participants decide not to continue the program for a number of reasons, most notably the inconvenience of the time and/or location of the class, the interference of other obligations and responsibilities and injuries/illness.

Coupled with findings on the lessons and engagement, one explanation is that participants come to the program and find nothing new or interesting that keeps them coming. This was most directly expressed by the participant in the community health focus group who did not realize HCHD was behind GIFT, and was therefore unusually candid about her disappointment with the program's lack of excitement and originality. It is also worth noting that both grocery store tours I was a part of had unusually high attendance – it was something new and exciting that participants did not want to miss. Attending a class like GIFT requires effort since participants must carve out time in their busy schedules; participants who do not complete the program simply may not see any reason to continue making that effort. As Davison and Pennebaker (2000: 246) point out, when it comes to support groups, members “vote with their feet”.

Another possible explanation is that non-completers are not ready to make lifestyle changes, and so decide to stop attending. However, I would argue that a person who is not ready to make changes would not come even once. While it is probably unrealistic to expect a 100% completion rate, the high number of non-completers can be seen as a missed opportunity to really engage people who have demonstrated an interest (by coming to at least one class of GIFT) in making a shift towards a healthier lifestyle.

Explanatory Models

For the most part, the program, CHAs and participants all operate out of the dominant individualistic paradigm. The major goal of the program is weight loss through increased knowledge and the adoption of healthy behaviors (namely fruit and vegetable consumption, physical activity and water consumption), in line with CDC recommendations (Centers for Disease Control and Prevention 2011c; Centers for Disease Control and Prevention 2011e). This is borne out in the lessons and in the variables chosen for measurement and reporting. Participants largely agree with this, although a small minority of participants sought education or improved health rather than weight loss. This agreement with the program's stated goals is most clearly seen in the weekly action plans. The most common weekly goals were regarding losing weight, eating differently, exercising more and drinking more water. Similarly, the goals described by participants in interviews were also very much in alignment with the program's goals.

Most importantly, weight loss and better health are achieved through individual effort. Any failures are the person's own, and blame is not assigned to the program. For example, on the goal forms in Week 1, most participants did not set a punishment ("negative reward") for themselves if they did not reach their goals, but instead said that they would "continue the program" or "try again" if they failed. What is interesting about this is that participants, before they really even started the program, assumed that if they did not reach their goals it was because they failed themselves, not because the program failed them. It is as if participants had not even considered the possibility that the program might be deficient or unhelpful. Further, in the interviews, the participant who came closest to having a negative attitude towards GIFT framed her disappointment in terms of a "bad fit" between herself and GIFT. It was not that the program did not meet her needs, but rather she did not fit the program and needed to look elsewhere. This is

very much in line with the public health paradigm's view that diets fail because individuals are not committed to them (Saguy and Riley 2005; Stinson 2001).

Blame is also not assigned to attenuating circumstances within GIFT. In group discussions, participants were given little room to make excuses or assign blame to their physical environment or financial circumstances. The prevailing attitude was that more effort, a different strategy or more planning could solve all problems. This was also borne out in the weekly action plans, where participants often wrote of "laziness" and lack of willpower as impediments to a variety of goals. Reading the goal forms, it is as if participants see themselves as their own worst enemy. Again, this echoes the dominant public health model's assertion that individuals are fully responsible for weight gain and must use discipline and hard work to overcome their affliction (Honeycutt 1999; McKinley 1999; Ritenbaugh 1982; Sobal 1999; Stinson 2001).

As other social scientists have pointed out, in many ways weight loss in the dominant paradigm is as much about gaining control over an out-of-control body as it is becoming healthier and more attractive (Gilman 2008; Stinson 2001). This was also true for the participants of GIFT. Although power and control were not discussed directly, it obliquely came out in discussions when participants didn't understand how they had gotten so large or why they were not losing weight. In their minds, they were doing everything they were supposed to, so why wasn't their body cooperating? Other participants struggled to gain control over their relationship with food, which had an incredible strong hold on some participants. One woman told the class that she had to learn to drive in the center lane on the highway so that she would be less tempted to pull over for fast food. Indeed, in the weekly action plans, resisting temptation was seen as an impediment to goals relating to diet/eating, and some participants were so concerned about their lack of will power that their goals for the week were related to gaining "control" and "trying harder."

There were some pockets of resistance to this individualistic paradigm however, that mostly related to ideal body size. GIFT currently puts a lot of emphasis on BMI, calculating BMI at Weeks 1 and 6, and devoting all of Week 2 to BMI, waist circumference and body fat percentage. However, observations and interviews revealed that participants enter the program with an ideal weight in mind based on their cultural or individual preferences. Many do not feel that they can reach what the BMI chart defines as a healthy weight for their height, and some do not feel that BMI applies to their body type. Some invoked a biomedical model explanation when they asserted that their ethnic heritage made their body naturally larger than the CDC recommendations and expressed conviction that biological processes, such as aging, were partly to blame for their current size. Significantly, some participants become discouraged when they find that the weight required for healthy BMI is significantly lower than the ideal weight they had in mind. Most CHAs appeared to agree with, or at least didn't oppose, BMI categorizations. One however, told her group that weight and health weren't directly related and that you could be thin and not healthy or healthy and not thin. Resistance to BMI classification has been documented in other studies, suggesting that this is one of the more common forces of resistance (Monaghan 2007; Parker, et al. 1995).

The individualistic paradigm was so dominant and pervasive within GIFT classes that it may help explain some of the paradoxes seen in the data. For example, participants dropped out of the program in large numbers, yet had little criticism of the program and many of the interview participants had difficulty thinking of suggestions for improvement. Similarly, in the interviews participants reported that they knew nearly all of the information presented, yet most did not find anything unhelpful and few could think of topics they had wanted to learn about but weren't covered. It is as if participants are so embroiled in the individualist paradigm that they didn't (or couldn't) think outside of those parameters. Participants (completers and non-completers alike) seemed to only

expect information and “tips and tricks” on diet, physical activity and weight loss from the program, and the rest was up to them through individual effort. Since GIFT offered exactly these things, participants were highly satisfied. In the interviews, no one even considered the possibility of a program that focused on the social, emotional and structural issues related to weight loss, even though these issues were recurring topics of discussion during the social support portions of the classes.

Empowerment

While the program materials themselves focus almost entirely on education, sometimes CHAs strove to empower their classes, with mixed success. During participant observation, it became clear that there is a fine line between empowerment and victim blaming, between having high expectations and unreasonable expectations. For example, one CHA adopted “make a better choice” as her mantra, which in one way instilled in participants the idea that each day contained multiple opportunities to make better, healthier choices and each of them had the power to do so. At the same time, this attitude assumes total volitional control, and no one has full control over their life’s circumstances. To be certain, there are macro-level forces, such as policies on food subsidies and zoning laws, that participants did not create or control.

In Stinson’s (2001) feminist ethnography of a commercial weight loss group, she also explored themes of empowerment. She noted that in group discussions about stress and eating, the conversation tended to focus on individual coping strategies (such as not keeping sweets in the house) rather than critiquing gender roles or gender-based discrimination that are the source of stress for many women. However she points out that some coping strategies can be empowering, such as prioritizing, delegating, and redefining boundaries with others. While coping strategies do little instigate change at the institutional or societal level, they do produce what Stinson calls a “budding feminist

consciousness” (Stinson 2001: 182). Indeed, Stinson sees weight loss support groups as a possible location for empowerment and greater feminism, since feminist themes (albeit watered-down versions) can already be seen in conversations about “taking care of yourself, self-acceptance, and gender roles and interpersonal relationships. These same kinds of conversations also occurred in GIFT classes, indicating that weight loss groups may be a promising location for empowering individuals.

Further Connections to the Literature

As noted in Chapter 2, Stinson (2001) spent two years as a participant observer in a commercial weight loss group that bears striking resemblance to GIFT. The findings of this study support many of Stinson’s findings. Stinson also found, for instance, that her weight loss program experienced extremely high turnover but a few core participants attended regularly and developed relationships. Stinson, however, is not particularly troubled by the high turnover, except to note that it negatively impacts the program’s function as a support group, and even suggests that quitting may be one way of expressing resistance to the dominant paradigm. Other parallels between our studies include using religious terminology like sacrifice and temptation, being surprised by what is considered by nutritionists and dieticians as a “serving size” or “portion”, and the problems associated with using leaders who are only slightly more knowledgeable than participants.

More importantly, Stinson makes several observations and critiques that are highly applicable to GIFT and other similar programs. The first is that despite constant reminding that “no food is off limits”; this idea was lost among participants in her weight loss group. Participants of GIFT also had difficulty grasping this concept, like the woman who confessed to the group shamefacedly that she had a slice of cake on her birthday. This suggests that even when a program explicitly promotes “lifestyle changes” or

“healthy eating”, individuals still tend to view “eating right” as a diet in which foods are forbidden. The second is that participants struggled greatly with social situations, and tended to view them as something to be endured rather than enjoyed. Stinson pointed out that no one in her program questioned giving up enjoyable social outings in order to continue lose weight. A small number of participants in GIFT employed this strategy, but CHAs generally encouraged their participants *not* to use this tactic. Still, like Stinson’s group, the solution for tricky social situations was iron will and careful planning; enjoyment was never seen as a priority. Finally, Stinson (2001: 161) critiques her weight loss program for failing to deal with the emotional components of eating and weight loss, saying weight loss is “stripped of its emotional components, rationalized and reduced to the relatively simple solutions of education and discipline.” This is a critique I also share, as I saw firsthand how the emotional component of weight loss is often repressed but cannot be eliminated.

Implications for Public Health and Anthropology

The exploration of five explanatory models has shown that obesity is a complex social, cultural, and medical phenomenon. There is a tension between public health and anthropology, between the individual and the social that is not easily resolved. Public health too often proposes individual solutions that amount to unintentional victim-blaming, while anthropology sometimes emphasizes structural constraints to the point of inadvertently discounting the role of personal agency. In this work, much like Moffat (2010), I have tried to find a middle path. I believe this middle ground lies in the idea of empowerment, in honest conversations of structural constrains so that individuals can then make the best choice possible within limited options. Education is critical for empowerment, but not in the way that public health usually utilizes teaching and knowledge. In this study I have found that individuals already know the basics of

nutrition and the mechanics of weight loss, but what they do not know is how our food system works or that increased health risks for minorities have more to do with poverty and discrimination than they do biology. It is this powerful knowledge that can inspire individuals to work towards personal and social change in a way that information on 6 oz grain equivalents cannot.

I am also in agreement with Moffat (2010) that medical and biocultural anthropologists are uniquely suited to bridging the gap between biology and the social sciences. Moffat suggests that anthropologists begin by developing a new metaphor to describe obesity to replace “epidemic”, a suggestion that I wholly embrace. This study has shown clearly that the way in which an issue is framed or explained has enormous implications for the types of solutions implemented. I have also shown that individuals accept, combine and resist the five mental models of obesity to create their own interpretations and explanations for their present weight. A fuller understanding of the emic perspectives of overweight and obese individuals can help both anthropologists and public health professionals craft programs and health messages that better resonate with the lived experiences of the intended recipients. I have tried to do that in this study by highlighting how this particular program meets and fails to meet participants’ needs. Many of the unmet needs related to social and emotional dimensions of weight loss that are very much a part of participants’ lived experiences but far outside the rationalized view of a caloric imbalance that must be righted. I believe a more effective approach to reducing the health risks associated with obesity would address its social, emotional, structural, and economic aspects.

Finally, this study has made contributions to evaluation anthropology, an emerging subfield within applied anthropology (Butler 2005; Copeland-Carson 2005). This study has employed traditional anthropological methods such as participant observation and case studies (Butler 2005). As Patton (2005: 33) points out, “...only

open, inductive fieldwork can turn up unanticipated program outcomes and the side effects of intended interventions.” By making participant observation a critical component of this evaluation, I was able to show both positive unintended effects (positive influences on friends and family) and negative (discouragement because of BMI). I have also worked to build rapport to better understand the perspectives and underlying values of diverse stakeholders within a single cultural system (i.e. the program) (Butler 2005).

Limitations

There were several major limitations of this study. First, this evaluation lacked a control group, so the effects seen cannot be ascribed to the program with any certainty. However, this study employed multiple sources of information and utilized several different methods for gathering and analyzing data. Second, the data for the quantitative analysis was limited due to uneven record keeping and the fact that participants enter and exit the program at different times. Missing data was so prevalent that many of the results were really from subsets of the wider data set, and may not be generalizable to all participants of GIFT. Similarly, the interviews and observations both had small, non-representative samples and so the experiences recorded may not be true for all participants of GIFT. Finally, this study did not include Spanish-speaking groups in the observations or interviews because of my inability to speak Spanish. Spanish-speaking groups were included in the quantitative analysis, however. Despite these limitations, there was a great deal of convergence when these multiple sources and methods were triangulated, providing more confidence in the validity of the findings than would be otherwise possible.

Recommendations

Recommendations for GIFT

In addition to acknowledging the many accomplishments and strengths of GIFT, I made several recommendations to Hillsborough County Health Department in order to improve the program. Many of these revolved around improving data collection, management and analysis in order to improve quality monitoring in the future. First, I recommended that they use existing, validated instruments to measure changes in physical activity and fruit and vegetable consumption rather than the patchwork, retrospective approach currently in use and provided suggestions for appropriate scales. A second recommendation was to cease recording weight on the food diaries, since many participants do not feel it is necessary to complete a food diary for six weeks and much valuable data is being lost with this arrangement. I designed a weekly form (found in Appendix J) they could use to track weight, fruit and vegetable consumption, physical activity, and progress towards goals, eliminating many of the issues that were contributing to missing data. A revised version of the Evaluation Form was provided, using a less-confusing format and shifting questions that require identification to other forms to make the Evaluation Form completely anonymous. The revised forms I created can be found in Appendices J-L. I also advised Hillsborough County Health Department to consider building their capacity for data management and analysis, including additional training for staff and/or seeking candidates with strong research skills in future hiring decisions.

Several recommendations regarding the training of CHAs were also made. I suggested they include facilitation skills as part of CHA training, so CHAs can better lead group discussions and more effectively deal with strong personalities within their groups. SMART objectives are another area that CHAs could benefit from learning about during their training, so they can in turn teach their groups how to write specific, measurable

and achievable goals in their weekly action plans. Currently, many of the goals are vague and therefore difficult to achieve (Shilts, et al. 2004). CHAs also need more guidance regarding the physical activity portion of the class, particularly the volunteer CHAs. Flexible exercise plans would probably go a long way in making physical activity a more consistently implemented component of the classes.

Finally, I made two additional recommendations that were more broadly based. One is to shift emphasis away from BMI, and instead meet participants where they are and allow them to set their own goals regarding ideal weight. As an alternative, I recommended encouraging participants to focus on losing 5-10% of their body weight. This better fits the short time frame of GIFT, and reflects current research regarding weight loss (Blackburn 1995; Goldstein 1992a; Oster, et al. 1999; Vidal 2002a). Further, setting a goal of 5-10% would not conflict with participants' existing weight loss goals. It would also reduce the possibility of participants becoming discouraged right as they are getting started on the path towards a healthier lifestyle.

The second broad recommendation was to re-think the lessons in order to help participants address the social and emotional aspects of weight loss, as well as structural barriers (such as access and cost of healthy food, etc). I have included in Appendix L an example of an activity that participants could complete to help them determine what their biggest barriers are. I also recommended including more hands-on activities that allow participants to interact with each other and really engage in the learning process and provided a couple of ideas as examples. Finally, I recommended eliminating the lesson on BMI, waist circumference and body fat % in Week 2. The lesson is very short and covers material that is already discussed during Week 1 when participants have their measurements taken. I suggested moving some of the materials from the very content-heavy Week 1 to Week 2, leaving Week 1 for doing measurements, setting goals, and helping participants get to know each other. If

participants feel engaged and connected to the group by the end of Week 1, they may be more likely to return week after week.

Broader Recommendations

As discussed above, I recommend that medical and biocultural anthropologists work to bridge the gap between competing explanatory models and work to find a more effective metaphor for obesity than an “epidemic”. I also recommend that future programs and policies be grounded in the lived experiences of overweight and obese individuals and better address the social, emotional, and structural aspects of weight loss. In addition, I believe we need to fundamentally rethink our approach to nutrition and fitness behavior change programs on two fronts. First, we need to transition from a deficit-based approach to a strength-based approach, and second, we need to take a health-centered approach rather than a weight-centered approach.

The feelings of loss of control and negativity seen in this study may be due to a deficit-based approach that weight loss programs tend to take. GIFT, perhaps unconsciously or inadvertently takes a deficit-based approach, but is far from alone in this respect among weight loss programs. The underlying assumption behind weight loss programs and diets of all stripes is that there is a “right” way to eat that must be adhered to in order for individuals to be successful. In the interviews, several respondents talked of wanting or trying to “eat right” and were somewhat taken aback when I asked them to define “eating right”, as if the meaning was patently obvious. In classes, the paid CHAs would often try to help participants “diagnose” what they were doing wrong and suggest changes to improve their eating habits. For example, one woman didn’t understand why she couldn’t lose weight because she did not eat any processed foods, refined flour or sugar. Her diet consisted of mostly brown rice, fruits

and vegetables, and after talking for a few minutes the CHA determined she was eating too much rice and not enough vegetables.

In contrast, a strengths-based approach takes what a person is doing right and builds upon in. In the previous example, the woman wasn't given any credit for avoiding processed foods (and the accompanying sodium), sugar and refined flour, and appeared crestfallen after her "diagnosis" by the CHA. In my work in systems of care for children's mental health I have seen the powerful way in which simply acknowledging a person's strengths and positive behaviors can turn around a difficult situation and empower families to deal with their problems in a more productive way. Although weight loss is in many ways dissimilar from children's mental health, strengths-based is the kind of fundamental philosophy that can be applied to a number of health issues.

Along this same line of thinking, recent studies out of the field of psychology about self-compassion that indicate that those who are kinder or more compassionate to themselves are less likely to overeat (Adams and Leary 2007; Parker-Pope 2011). One psychotherapy and self-compassion advocate put it this way, "Self-compassion is the missing ingredient in every diet and weight-loss plan. Most plans revolve around self-discipline, deprivation and neglect" (Parker-Pope 2011: para 15). Rather than falling into a vicious cycle of self-criticism and negativity, those with self-compassion forgive themselves (but still accept responsibility for their actions) and move on (Parker-Pope 2011).

I also echo early calls by Cogan (1999) and Stinson (2001) to take a health-centered, rather than weight-centered, approach. We need to do a better job of promoting good nutrition and fitness for their own sake rather than as means to an end. Perhaps once the intense pressure to lose weight has been removed, we can reclaim a healthier relationship with food and our bodies and reduce the considerable stigma levied against the obese.

Conclusion

This chapter provided a summary of the major findings of this study, organized by research question. First the effects of the GIFT program were articulated, then the way in which the program meets and fails to meet participants' needs was discussed. Following that, the explanatory model used by participants was covered, as well as the role of empowerment within the program. This chapter concluded with a discussion of the implications of this study for both anthropology and public health, as well as recommendations for GIFT and weight loss programs in general.

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Appendices

Appendix A: Florida Department of Health IRB Determination

INSTITUTIONAL REVIEW BOARD NON-RESEARCH DETERMINATION

June 15, 2010

To: Emily Koby

Protocol Title: Exploring the Effects of the Get Into Fitness Today (GIFT) Program
DOH IRB Number: H10102

Funding Agency:

Submission Type: Protocol H10102

Review Type:

IRB Decision: Activity does NOT involve research

Based on the information provided, the Department of Health Institutional Review Board, or representative, determined your activity does not involve research, as defined in DOH policy and federal regulation, to mean “systematic investigation...designed to develop or contribute to generalizable knowledge” (§ 45 CFR 46.102(d))

The determination means the project does not meet one or more criteria DOH uses to determine whether an activity falls under the regulatory definition of research. This project is not (at least one of the following is not present):

- An investigation (inquiry, examination, or search for facts, usually involving the formulation or testing of a hypothesis) conducted according to a plan, organized method, or procedure for testing or formulating a question or hypothesis and interpreting results); or
- Systematic (conducted according to a plan, organized method, or procedure for testing or formulating a question or hypothesis and interpreting results); or
- Designed (planned, purposed, or conducted to apply to phenomena outside the observed data) to contribute to generalizable knowledge (observations, findings, information, or results that have been demonstrated with enough confidence and significance to confirm or alter the consensus within the professional norms of a community or discipline) or develop such knowledge

If the design of the project changes, so that it might become systematic, or generalizable, then it is the responsibility of the researcher to submit the project for review by the DOH IRB. If you have questions about whether your activity may

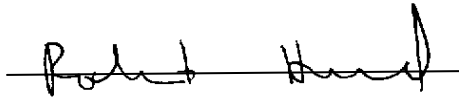
Appendix A: Florida Department of Health IRB Determination (Continued)

require IRB approval, please contact the human research protection program office so we may determine whether the additional activities come under the category of research.

If you have questions, want to offer suggestions, or talk with someone about this or other projects, please contact the Department of Health IRB at (850) 245-4585 or toll-free in Florida (866)-433-2775. You may also visit our website at: <http://flpublichealthethics.net/>

Thank you for your cooperation with the IRB.

Sincerely,

A handwritten signature in black ink, appearing to read "Robert Hood", written over a horizontal line.

Robert Hood, Ph.D.
State Public Health Ethicist
Ethics and Human Research Protection Program

Federal Wide Assurance#: 00004682



Appendix B: Knowledge Pre-Test



Get Into Fitness Today^{©2007}

Pre-Test

Try to answer all the questions. If you can't answer or get them wrong, it's ok!
You'll be learning about all of these in the upcoming classes.

1. "BMI" stands for:
a. Basal Metabolic Intake b. Body Mass Index
c. Basal Measure Intake d. Body Measure Intake
2. Which is healthy range for BMI for adults?
a. under 15% to 18.5% b. 18.5% to 24.9%
c. 25% to 29.9% d. over 29.9%
3. Which represents the correct serving size of meat?
a. postage stamp b. deck of cards
c. compact disk d. 5" x 7" note pad
4. How many servings of fruits and vegetables adults should eat daily?
a. 2 servings b. 4 servings
c. 3 servings d. 5 or more servings
5. Which colors of fruits or vegetables should adults choose daily?
a. white only b. white and yellow only
c. bright orange and green d. bright green only
6. Which is a benefit of physical activity?
a. makes you cranky b. stress relief
c. raises cholesterol d. makes you taller
7. Which is a benefit of drinking water?
a. makes you hungry b. fills you up and reduces hunger
c. raises glucose d. reduces pocket change
8. Which is a risk factor for diabetes?
a. eating too much sugar b. being overweight
c. being female d. exercising too much
9. People with diabetes should keep their fasting blood sugar within which range?
a. under 100 b. 100 to 140
c. over 140 d. none
10. What is something you can do to lower your blood sugar and risk of diabetes?
a. avoid all sugars b. exercise regularly
c. eat more salt d. avoid family members with diabetes

GIVE THIS COPY TO YOUR FACILITATOR

Appendix C: Where Am I? Form



Get Into Fitness Today^{©2007}

Where Am I?

Name:	Date: (MM/DD/YY)		
Your group facilitator:			
Do you know your personal BMI level?	YES	NO	
A) If Yes, what number is it?	%		
B) Into what category does it put you?	NORMAL	OVERWEIGHT	OBESE
On Average, Do You Eat A Total Of Five (5) Fruits And/or Vegetables Every Day?	YES	NO	
Do you exercise?	YES	NO	
A) If Yes, how many days a week?	1-2	3-5	6-7
B). How long do you exercise each time? (minutes)	< 30	30	> 30
Do you smoke cigarettes, cigars, pipes or chew tobacco products?	YES	NO	
A). If Yes, Would You Be Interested In Learning How To Quit The Use Of Tobacco Products?	YES	NO	

GIVE THIS COPY TO YOUR FACILITATOR

Appendix D: Commitment and Contract to Change (Current Version)



Get Into Fitness Today[©] 2007

Commitment and Contract to Change

I, _____ Your name _____ believe in health and fitness for a lifetime and want to make a contract with myself. By _____ date _____ I will reward myself for completing this program and making healthy changes by _____. If I do not make the changes I set out to do I will _____.

Check 1 or more goals for yourself to meet before the end of your GIFT support group:

- I will increase the number of FRUITS I eat.
- I will increase the number of VEGETABLES I eat.
- I will increase the NUMBER OF STEPS I walk.
- I will EXERCISE at least 3 times a week.
- I will increase the amount of WATER I drink.
- I will decrease the amount of SUGARY DRINKS I drink.
- I will maintain a WEEKLY TRACKER of food and water intake and activity.
- I will WEIGH-IN each week and record my weight.
- I will lose _____ pounds. (no more than 2 pounds per week)
- Other _____

Each week, you will set 1 goal for yourself to discuss with the group. Keep this goal realistic and be ready to report during your next support group.

This week my goal is:	
Why do you have this goal?	
How are you going to achieve this goal?	
When will you schedule your goal? (ex. day, time)	
Possible barriers?	
How will you overcome these barriers?	
GIVE THIS COPY TO YOUR FACILITATOR	

Appendix E: Client Screening Form



Get Into Fitness Today^{© 2007}

Client Screening Form

Provider Stamp or Information	Client/Patient Information			
	Name			
	First	MI	Last	
	Date of Birth			
	Month	Day	Year	
Class Start Date: (MM/DD/YY)		Class End Date: (MM/DD/YY)		
Class Location:		Class Leader:		
Beginning Blood Pressure: Goal 120/80		Ending Blood Pressure: Goal 120/80		
Beginning Weight: (Lbs)	Height	Ending Weight: (Lbs)	Δ +/-	
Beginning BMI:		Ending BMI:		
Beginning Waist: Inch	Beginning Body Fat: %	Ending Waist: Inch	Ending Body Fat: %	
Weekly Client/Patient Weight-in (Lbs)				
Wk 2	Wk 3	Wk 4	Wk 5	
Tobacco? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, # per day _____			Tobacco? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, # per day _____	
Comments:				

My signature gives permission for the _____ (program sponsor) to release the information on this form to my provider during and after participation in the GIFT[®] program.

Patient /Client Signature

Date

NOTICE: This transmission may contain material that is CONFIDENTIAL under federal & Florida statutes and is intended to be delivered to only the addressee. Unauthorized use of this information may be a violation of criminal statutes. If this information is received by anyone other than the named addressee, the recipient shall immediately notify the sender at the address or telephone number above and obtain instruction as to the disposal thereof. Under no circumstances shall this material be shared, retained, or copied by anyone other than the named addressee.

GIVE THIS COPY TO YOUR FACILITATOR

Appendix F: Evaluation Form (Current Version)



Get Into Fitness Today^{© 2007}

Program and Facilitator Evaluation

Your Facilitator: _____

1 = Strongly Disagree, 2 = Disagree, 3 = Agree, 4 = Strongly Agree				
Was the information useful in helping you lead a healthier life?	1	2	3	4
Was the information presented in an understandable way?	1	2	3	4
Was there enough time allowed for each session?	1	2	3	4
Did the presentations allow you to participate?	1	2	3	4
Do you feel healthier?	1	2	3	4
Have you increased your fruit and vegetable intake?	1	2	3	4
Have you increased your physical activity/exercise?	1	2	3	4
Did you reach the goals you set?	1	2	3	4
Did the facilitator answer your questions?	1	2	3	4
Did your facilitator make the session fun?	1	2	3	4
Did the facilitator know the materials well?	1	2	3	4
Did the facilitator show concern for you?	1	2	3	4
Have you lost weight since you joined GIFT?	Yes		No	
If so, how many pounds?	_____ Lbs.			
Are you interested in being a facilitator for this or other groups if you receive training?	Yes		No	
If so, please share your name and contact information (name, day time phone number, mailing address):				
Please tell us about other health related topics you'd like to hear about:				
Do you have suggestions to improve the program or help you achieve your goals?				
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Appendix G: Food Diary and Weekly Action Plan

Weekly Tracking Log for week of: _____				Your Name: _____		
Circle Amount Achieved	Fruits and Vegetables	Glasses of Water	15 Minutes = 1 shoe	Breakfast	Lunch	Dinner
Monday						
Tuesday						
Wednesday						
Thursday						
Friday						
Saturday						
Sunday						
Your facilitator					Your Weight	

ACTION PLAN

Each week, you will set 1 goal for yourself to discuss with the group. Keep this goal realistic and be ready to report during your next support group.



This week my goal is:	
Why do you have this goal?	
How are you going to achieve this goal?	
When will you schedule your goal? (ex. day, time)	
Possible barriers you see.	
How will you overcome these barriers?	

Get Into Fitness TodaySM

Appendix H: Full Interview Guide

Introduction: Explanation of GIFT evaluation and my role, promise of confidentiality, informed consent

Background

1. What did you think of the program?
2. Why did you decide to be in the program?
3. What were your goals going into the program?
4. Have you tried to lose weight before? How did that go?
5. Was your time in GIFT different from previous weight loss efforts? In what ways?

Specific Aspects of the Program

6. Looking back, what was the most useful thing you learned?
7. What was the least useful thing you learned?
8. What was something you would have liked to learn about, but didn't?
9. How much of the information was new to you?
10. Did you enjoy talking about your goals with the other people in GIFT?
11. Did you know anyone in your group before you started?
12. Have you kept in touch with any of the other people in your group?
13. Did you do the food diary/tracker?
 - a. If yes, did you find it helpful? Why or why not?
 - b. If no, why not?
14. Did you enjoy the physical activity portion of the class? Why or why not?
15. Were you able to attend all of the classes? Why or why not?

Changes

16. What changes have you made since you were in the program?
17. What has made it difficult to stick with the changes?
18. What has made it easier to stick with the changes?
19. Have the changes you've made affected others? In what way?
20. Were you able to lose weight?
 - a. If so, how much?
 - b. Have you been able to keep it off?

Appendix H: Full Interview Guide (Continued)

21. Do you feel like you met your goals for the program? Why or why not?

Friends and Family

22. Have you shared the information you learned with friends and family?

- a. If yes, which topics? With whom? What did they think of the information?
- b. If no, why not?

23. Did family members and friends support you when you were in GIFT? Why or why not?

Wrap-up

24. What would you do differently if you were to teach the class or run the program?

25. Is there anything that we didn't cover that you'd like to talk about?

Appendix I: Abridged Interview Guide

Introduction: Explanation of GIFT evaluation and my role, promise of confidentiality, informed consent

Questions:

1. What did you think of the program?
2. Did you make any changes because of the program?
 - a. If yes, what were they?
 - b. Have you stuck with them?
3. What has made it hard for you to make changes?
4. What has made it easier for you to make changes?
5. What were your goals when you started the program?
 - a. Do you feel that you met your goals? Why or why not?
6. Did you lose weight?
7. Were you able to keep off the weight you lost?
8. Did you know anyone in the group before you started?
 - a. If yes, did knowing someone help?
9. Have you kept in touch with anyone?
10. Did family members and friends support you when you were in GIFT? Why or why not?
11. Did you share the information you learned with anyone else?
 - a. If yes, what information? What did they think of it?
12. Were you able to attend all of the sessions? Why or why not?

Appendix J: Suggested Weekly Progress Form



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Weekly Progress

Name:	Date:
Group Location:	Facilitator:
Weight:	

Questions about eating:

1. In a typical day, how many servings of fruit do you eat?

A serving is equal to:

1 medium piece of fresh fruit

$\frac{1}{2}$ cup of fruit salad

$\frac{1}{4}$ cup of raisins, apricots or other dried fruit

6 oz. of 100% orange, apple, or grapefruit juice

(Do not count fruit punch, lemonade, Gatorade, Sunny Delight or fruit drink)

None
0

1

2

3

4 or more

2. In a typical day, how many servings of vegetables do you eat?

A serving is equal to:

1 medium carrot or other fresh vegetable

1 small bowl of green salad

$\frac{1}{2}$ cup fresh or cooked vegetables

$\frac{3}{4}$ cup of vegetable soup

(Do not count French fries, onion rings, potato chips, or fried okra)

None
0

1

2

3

4 or more

CONTINUE 

Appendix J: Suggested Weekly Progress Form (Continued)

Questions about physical activity:

3. In the past week, how many times have you WALKED for recreation or exercise and/or to get to and from places for at least 10 minutes continuously? *Please estimate the total time you spent walking in the past week.*

_____ minutes

4. In the past week, how many times did you do VIGOROUS exercise or other physical activity (around the house or at work) which made you breathe harder or puff and pant? (e.g., Jogging or running, heavy gardening, netball, chopping wood, vigorous swimming, heavy laboring). *Please estimate the total time spent doing vigorous exercise or physical activity in the past week.*

_____ minutes

5. In the past week, how many times did you do MODERATE exercise or other physical activity (around the house or at work) which DID NOT make you breathe harder or puff and pant? (e.g., digging in the garden, moderate cycling, raking leaves, dancing). *Please estimate the total time spent doing moderate exercise or physical activity in the past week.*

_____ minutes

Questions about goals:

6. Which of the following best describes your progress this week towards your action plan goal?
- I met this goal.
 - I made progress towards this goal.
 - I did *not* make any progress.
7. Which of the following best describes your progress towards your overall goal?
- I met this goal.
 - I made progress towards this goal.
 - I did *not* make any progress.

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Appendix K: Suggested Revised Evaluation Form



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Program and Facilitator Evaluation

Facilitator: _____ Location: _____

Directions: Circle the answer that best matches your opinion or experiences. In order to make the program even better for future participants, please be honest in your answers. Do NOT put your name anywhere on this form.

Program Questions:

- | | | | | |
|--|----------------|-------|----------|-------------------|
| 1. The information was useful in helping me lead a healthier life. | Strongly Agree | Agree | Disagree | Strongly Disagree |
| 2. The information was presented in an understandable way. | Strongly Agree | Agree | Disagree | Strongly Disagree |
| 3. There was enough time for each session. | Strongly Agree | Agree | Disagree | Strongly Disagree |
| 4. I was able to participate in the presentations. | Strongly Agree | Agree | Disagree | Strongly Disagree |
| 5. I feel healthier now than I did before the program. | Strongly Agree | Agree | Disagree | Strongly Disagree |

Facilitator Questions:

- | | | | | |
|---|----------------|-------|----------|-------------------|
| 6. The facilitator answered my questions | Strongly Agree | Agree | Disagree | Strongly Disagree |
| 7. The facilitator made the sessions fun. | Strongly Agree | Agree | Disagree | Strongly Disagree |
| 8. The facilitator knew the materials well. | Strongly Agree | Agree | Disagree | Strongly Disagree |
| 9. The facilitator showed concern for me. | Strongly Agree | Agree | Disagree | Strongly Disagree |

CONTINUE

Appendix K: Suggested Revised Evaluation Form (Continued)

Group Atmosphere questions:

10. I felt comfortable sharing with the group.

Strongly Agree	Agree	Disagree	Strongly Disagree
----------------	-------	----------	-------------------

11. I felt respected by others in the group.

Strongly Agree	Agree	Disagree	Strongly Disagree
----------------	-------	----------	-------------------

12. I received support from others in the group.

Strongly Agree	Agree	Disagree	Strongly Disagree
----------------	-------	----------	-------------------

13. I was able to give support to others in the group.

Strongly Agree	Agree	Disagree	Strongly Disagree
----------------	-------	----------	-------------------

Other Questions

14. What are some other health-related topics you'd like to hear about?

15. Do you have suggestions to improve the program and help you reach your goals?

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Appendix L: Suggested Replacement for Week 1 Goal Form

Behaviors associated with overweight/obesity

Please circle the behaviors you are doing or are not doing that you think are associated with your weight

Not engaging in regular physical activity		Eating fast food often
	Drinking alcohol	
Portion sizes		Taking medications
	Sedentary lifestyle	

Goal	Strategies	Target
Lose Weight	<ol style="list-style-type: none"> 1. Eat less fatty food 2. Start eating new food 3. Get more physical activity 	<ol style="list-style-type: none"> 1. Eat fried potatoes 1 time a week 2. Eat red meat 2 times per week 1. Eat a fruit 1 time per day 1. Use stairs at work instead of elevator--daily 2. Take dog for walk at least 3 times a week