Nutrition for Some: A Comprehensive Study of Why Eligible Families Leave the WIC Program

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ABSTRACT

A comprehensive survey of more than 1,500 former participants in the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) along with more than 300 semi-structured interviews with former WIC participants were designed and conducted in order to identify the barriers influencing eligible program participants to leave the program prematurely. Results from the two phases of data collection were used to determine why eligible families are leaving the WIC program, to better understand the program participation barriers cited by former program participants in order to facilitate the development of a typology of program "leavers," and to identify the policy and organizational components that provide context for premature WIC program departure by participants. A narrative approach to organizational understanding and Symbolic Interactionism are utilized to provide a theoretical framework for highlighting program areas which may contribute to the participation barriers discovered in this research. Implications for public administration and policy evaluation are provided.

Dedication

To Dr. Charles Edward Walton III

Acknowledgments

This work (and indeed, all of my work) is the product of the love and support of my family and friends.

My gratitude goes to Dr. Gary Wamsley for his mentorship and gracious stewardship of this work. I am also grateful to have had my other committee members Drs. John Dickey, Joe Rees, and John Rohr to evaluate this research. I wish to thank the entire committee for their individual scholarly efforts which are both fascinating and awe inspiring as well as for their good-natured spirits. Thank you also to the students and faculty of the Center for Public Administration and Policy.

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For my colleagues, clients, and the entire staff of the Virginia Tech Center for Survey Research I thank you for affording me the career I have had and for work that I love. I am most grateful to the study participants for this research and for the funding received to collect the data. I would also like to thank the Office of the Provost at Virginia Tech and Dixon Hanna in particular for supporting my work at the Center for Survey Research for many years.

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Table of Contents

List of Figures

List of Tables

1

Introduction

Background

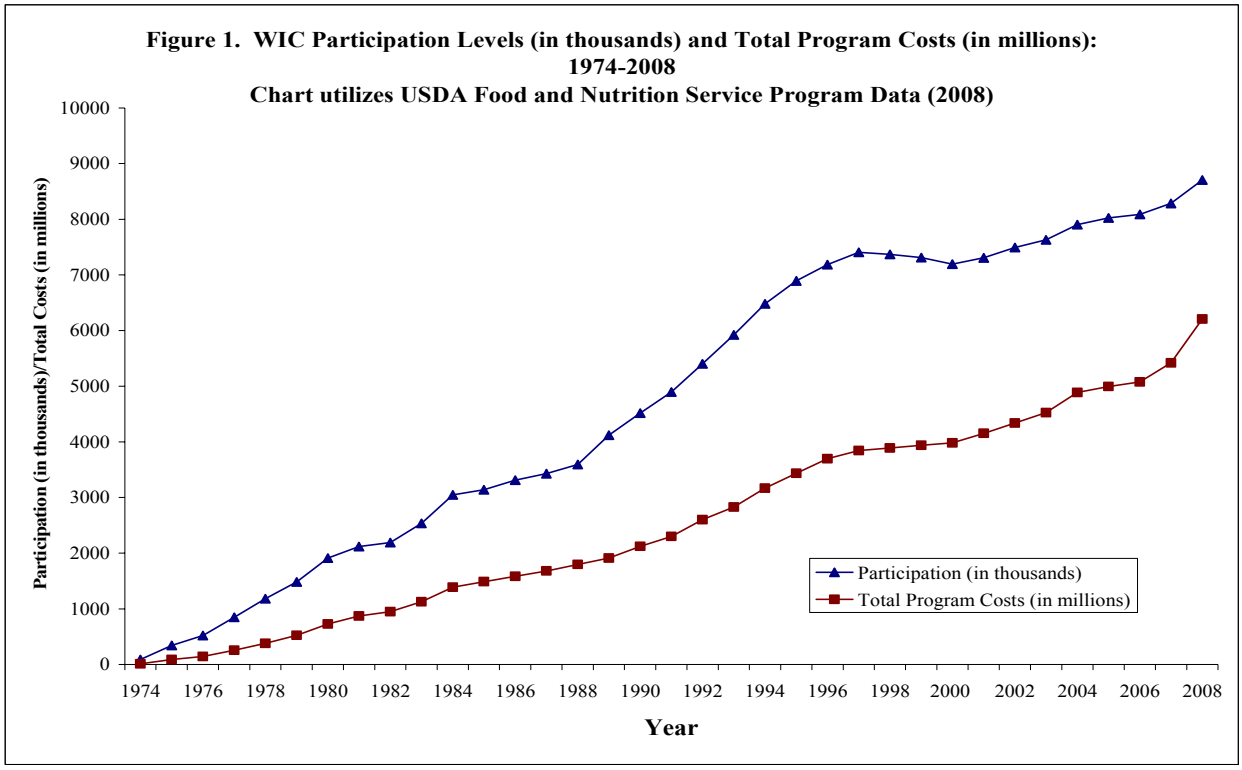
The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) provides specific approved supplemental foods, educational programs primarily focused on nutrition, and referrals for medical and other social services to low-income pregnant, breastfeeding, and postpartum women, infants, and children up to five years of age who are at nutritional risk (United States Department of Agriculture (USDA), 2008, WIC Fact Sheet). WIC operates at the federal, state, and local levels of government. The WIC program is a program of the USDA and is administered through the USDA's Food and Nutrition Service (FNS), with the program delivered to participants through 90 WIC state agencies (primarily health departments), numerous local program sites, and approximately 46,000 authorized retailers (USDA, 2008, About WIC). The WIC program is intended to be one of the nation's primary means of ensuring and improving the health of low-income women, infants, and children through the delivery of nutrition related services. WIC was established in 1972 as a two-year pilot program and in 1975 as a permanent program with Public Laws 92-443 and 94-105 (USDA, 2008, WIC Benefits and Services).

Local program administration sites for WIC may differ from locality to locality as needed because the program may be administered through a variety of different venues (e.g., a local health department, a clinic, or any of a number of community organizations providing health services) depending on the locality.

Recent studies have shown that "almost half of all infants and about one-quarter of all children 1-4 years of age in the United States now participate in the WIC program" (Oliveira, Racine, Olmsted, & Ghelfi, 2002, p. iii). In spring of the year 2008 in the state in which this research was conducted more than 150,000 individuals were participating in the program (USDA, 2008, WIC Program Data, Annual State Level Data).

WIC program participation rates and costs of the program to the government have grown rapidly since the program began. The USDA's Food and Nutrition Service participation data for

fiscal year 2009 (USDA, 2009, WIC Program Data) reveal that more than 8.9 million individuals in the United States were participating in WIC in a single month, while the first year reported by FNS (1974) shows 88,000 participants. WIC program costs to the government have grown from 10.4 million dollars in 1974 to approximately 6.2 billion dollars in 2008 (USDA, 2008, WIC Program Data). **Figure 1** utilizes 2008 USDA program data to depict the dramatic increase in WIC participation and cost levels across time.



While the WIC program has continued to expand with regard to both funding and levels of participation as highlighted in **Figure 1**, some studies suggest that many individuals eligible for the WIC program are not participating. For example, Bitler, Currie, and Scholz (2003, p. 1175) found that contrary to high levels of likely eligibility (they found an eligibility rate among infants in 1998 of approximately 58 percent), that only "73 percent of eligible infants, 67 percent of eligible pregnant and postpartum women, and 38 percent of eligible children aged one to four participate." Likewise, Wimmer (2003, p. 211) estimates that "approximately 30 percent of those who are eligible are not enrolled in WIC" and references her 1998 findings regarding percentages of eligible individuals who enrolled in WIC by state as "ranging from 40-91

percent." In addition to the eligible individuals who never enroll in the WIC program, the focus of this current dissertation research addresses the many eligible individuals who enroll in the WIC program and then leave voluntarily and prematurely.

The state Department of Health in which this research was conducted estimated an average of more than eight percent of eligible individuals departing the program prematurely and voluntarily each month in the state at the time of the initial data collection phase of this dissertation research. This estimate drove the study participant selection process for this research.

WIC is not considered to be an entitlement program which would provide funding for all individuals meeting the eligibility requirements for the program each year, rather, each year Congress authorizes a specific and capped amount of funding for the program (USDA, 2008, WIC Fact Sheet). The funding levels for WIC are based on estimates used to calculate the number of individuals who will likely be eligible for the program. If actual demand for the program exceeds the allotted federal funding in a given year, states and localities must tailor the administration and implementation of the program accordingly. However, it is clear that the funding amounts established by Congress have grown dramatically, rising to meet estimates reflecting increasing numbers of eligible individuals.

WIC is a program which serves millions of citizens at a cost of billions in federal spending. In light of the continued expansion in WIC program enrollment and spending, understanding the perceptions of eligible participants who choose to leave the WIC program voluntarily and prematurely is important in identifying areas for program improvement and cost containment. Likewise, this current research is valuable in addressing the extent to which the program is serving citizens as intended.

Given the research declaring the success of the program in terms of its beneficial health outcomes and potential cost savings to the government through offsets from decreased Medicaid expenditures, determining what factors hinder program participant retention is essential. Specifically, understanding premature program departures allows identification of the areas of the program most in need of improvement and also fosters a better understanding of the effects of the program among participants. Likewise, this research also yields information that may be used in allowing the most disadvantaged of individuals eligible for WIC program participation to be better served because analysis regarding why the most disadvantaged program participants leave prior to benefitting fully from the program is provided.

It stands to reason that a program which has long been declared a success and of great benefit to the health of its participants, and with decidedly less stringent eligibility standards than some other public health programs, would have few program "leavers" or individuals who drop out before taking full advantage of the program's benefits. Understanding why this is not the case, and which participants choose to leave the program prematurely, and why they elect to do so are primary centers of focus in this research.

This dissertation research provides a comprehensive study of the barriers to WIC program participation and an exploration of the organizational and policy contexts in which those barriers arise and are perpetuated. In this research, a statewide WIC program was examined through the development and implementation of a large-scale data collection effort utilizing surveys to identify factors influencing families who are eligible for the program (as defined by the state in which the study was conducted) to exit the program prematurely. Further, a descriptive typology of program "leavers" was developed utilizing detailed data regarding a number of different program participation barriers cited by former program participants.

Statement of the Problem and Research Question

Many eligible individuals and families are voluntarily leaving a beneficial public health program before fully taking advantage of the intended benefits of the program. Garnering a better understanding of why eligible program participants prematurely and voluntarily leave a government program with potential health benefits, a program funded at the level of more than six billion dollars, is critical in identifying potential areas for program improvement. Further, this research illustrates how a myriad of other public programs with "dropouts" or premature "leavers," or programs simply not meeting the needs of their intended participants, might also be improved. Particularly since WIC is a program that is publicized as highly beneficial to its participants in terms of health gains, has more funding, and is less strict with regard to eligibility criteria than many other public safety net programs, understanding why individuals would choose to leave such a program voluntarily without utilizing all the services of the program may reveal opportunities for improvement in a number of public programs and organizations.

Examining the mechanisms that may hinder organizational change and foster participant departures in programs such as WIC also highlights the ways in which it may be difficult for programs and policies to meet or even understand the needs of citizens. Indeed, when the

realities of program routines or outcomes are contrary to conventional wisdom strongly supporting notions of a program's overwhelming success, organizational or agency change may be seen as unnecessary or even potentially harmful to the assumed success of a program.

WIC is a program that continues to expand in scope, allowing more participants to enroll in the program through increasingly broad eligibility requirements. Questioning why program participants choose to leave WIC prior to taking full advantage of the program's benefits in light of recent program expansions in the number of families allowed to participate seems particularly salient and timely. This study is also salient in light of increasing public concerns regarding the health of children in the United States due to poor nutrition.

The primary research question undertaken with this study is: Why are eligible families leaving the WIC program voluntarily and prematurely? In providing an answer to this question, a better understanding of why individuals and families leave many other beneficial public programs prior to fully utilizing the services of the programs may also be achieved.

This study goes beyond the primary research question in analyzing the data to identify and call into question the organizational and policy assumptions and contexts that have given rise to and have allowed the perpetuation of the barriers to program participation discovered in this research. Specifically, the robust statistical data garnered in this research provides a highly detailed answer to the research question "why are eligible families leaving the WIC program (or any beneficial public program) voluntarily and prematurely?" Moreover, analysis of the data in this study suggests that in some areas, the dedication to the rules of the WIC program may have circumvented the mission or intentions of the program. For example, a review of the data reveals that some mothers participating in WIC engaged in practices that at best they did not understand, and at worst felt were unhealthy for their children because they thought doing so would help them remain qualified for program participation. However, the feelings of dissonance created by such practices eventually led these mothers to leave the program prematurely while they were still eligible to receive services (sabotaging the intent of the program to provide services that benefit the health of mothers and children).

Indeed, in this research some mothers reported that they felt persuaded (in order to remain qualified for the program) to feed their children food or formula they felt was not healthy (such as whole fat milk or particular formula brands) even while they suspected that more fruits and vegetables or different infant formula types may have been healthier. The findings of this

research suggest that program participants reported what they felt they were expected to report with regard to perceived desirable behaviors to WIC program representatives and workers. Likewise, several mothers reported in this research that the program requirement that they accept gallons of milk in lieu of smaller portions such as half gallons or quarts left them feeling "guilt" over receiving so much milk that some of it would inevitably spoil, necessitating that it be discarded. Therefore, some of the program requirements along with the real and perceived inflexibilities in those requirements served not only to hinder the benefits of the program for some participants, but also conspired to foster potential sources of unintended waste in the program itself.

Public debate is beginning to develop regarding the potentially harmful nature of some practices promoted by the WIC program (e.g., the promotion of canned tuna consumption for pregnant or breastfeeding women and the promotion of high sugar content juice consumption for children) (Dooley, 2007; Wellbery, 2007). Likewise, as noted by Ryan and Zhou (2006), WIC participants are less likely than women in the general population to engage in some healthy behaviors that are promoted by the program such as breast feeding.

The discovery of the barriers to WIC participation among eligible program participants in this research coupled with the exploration of those barriers in the context of the program design and delivery reveal that the conventional wisdom surrounding the program may sometimes hinder program goals, flexibility, and outcomes.

Two primary theoretical threads are introduced in this research in an attempt to explain the research findings regarding the barriers to program participation. Specifically, the data gathered in this research along with the organizational and policy contexts in which the WIC program exists are examined utilizing 1) symbolic interactionist theory, and 2) a narrative approach to organizational sensemaking. The concept of sensemaking utilized throughout this dissertation begins with the foundation of Weick's (1995) usage of the term "sensemaking" in the context of organizations.

Theoretical Framework and Context

Analysis of the data collected in this study reveals areas in which failed organizational metaphors and unintended or perverse policy incentives may be at play. Morgan (1986)

describes how organizational metaphors (such as the organization as machine) may be useful in introducing new ways of seeing while cautioning that the assignment or creation of a dominant metaphor may preclude alternate ways of seeing. However, in the case of the WIC program, the very acceptance of the highly positive influence of the program on the health outcomes of its participants and the acceptance of the notion that the program is efficient from a cost-benefit analysis perspective, may serve as traps that preclude real organizational change or flexibility. Specifically, such traps may stem from the "WIC Works" mantra that is reflective of the seemingly machine-like quality of the program.

Because the WIC program has expanded dramatically and is so large in scope (in terms of the number of individuals covered and the levels of funding), and because the benefits and success of the program have come to be assumed, slowing such an enormous machine to perform a maintenance check seems a daunting task indeed. However, just as the machine metaphor seems fitting, the cage of such a metaphor also seems quite real in the case of WIC. In this context, there is resistance to change in the program and the constancy of a metaphor such as "WIC Works" (a metaphor supported by research studies based on the same assumption) makes organizational sense.

An approach for understanding how the barriers to program participation and unintended consequences of some of the WIC program requirements may occur is to view the administration of the WIC program through a narrative approach to organizational sensemaking. The narrative approach to sensemaking in organizations builds upon Weick's (1995) notion of "sensemaking" in agencies and programs by examining the "stories" that have been developed and are emergent within program and policy contexts to better understand how a resistance to change may occur and may in turn, affect premature program departures.

In the case of the WIC program, the organizational story that surrounds perceptions of the program and the implementation of the program is that "WIC Works." This is a story that is certainly true to an extent, as this assumption is often boosted by reference to medical research studies on the health benefits of WIC to support this claim. However, upon closer examination, this current dissertation research reveals that this assumption or organizational story, along with the dedication to existing program routines, rules, and ways of seeing, may serve to foster inflexibility in the delivery of the program's services to participants. In this sense, the story of success assumes the surely unintended role as contributor to many of the barriers to program

participation highlighted in this research. Moreover, assumptions regarding the overwhelming success of the program may obscure the need for close examination of the level of service received by participants or reasons for participant departures, particularly since participation may be increased through expanding eligibility standards that include individuals with higher incomes.

Czarniawska (1998, p. 15), a leading theorist in the narrative approach to organizational studies, notes that "much of organizational life is spent reading stories already made and interpreting them within a set of already existing rules or routines" but notes that "sensemaking or the activity of attributing meaning to previously meaningless cues also occurs." The findings from this dissertation research indicate that the overwhelming success of the WIC program is accepted as fact and that state and local offices engage in routines that are assumed to honor or contribute to the program's story of success while participant needs may be overlooked. Thus, the organizational story of success supports specific program routines such as processes for eligibility determination, participants come to believe that these routines support the success of the program, and sensemaking occurs which leads program workers and participants to engage in behaviors that may prompt confusion or frustration. In turn, this cycle seems to influence participant departures from the program while also reinforcing existing program routines.

Further, the organizational story of success is perpetuated in that the program acts upon the story by increasing program enrollment through broader eligibility requirements due to the perceived inherent success of the program. This cycle may preclude the possibility of a focus on introducing changes to better achieve the goals of the program, on serving those participants who are most in need, or on gaining a better understanding of why many eligible participants leave the program prematurely.

Sensemaking involves the ongoing retrospective sorting out, making of sense, and rationalization of actions and events in organizations through the creation of images or ideas that seem plausible (Weick, Sutcliffe, & Obstfeld, 2005). In this research, I combine the narrative approach to organizations and the notion of sensemaking to reveal how the "stories" or narratives that surround the WIC program are created and are also used to explain, perpetuate or continue organizational actions. In the case of WIC there is a strong sense of a program that works, and that the practices employed by the program support the program's assumed success. Indeed, it seems that the research supporting the evidence of the success of the program generally goes

unquestioned with most research findings beginning with statements about how the program works well and is valuable. This process is reflective of Weick's (1995, p. 11) notion of retrospective sensemaking or fact assignment wherein "outcomes *develop* the prior definition of a situation" based on what is plausible rather than necessarily factual.

Viewing the current research findings through the narrative sensemaking lens demonstrates the process of emergent rationalization as participants and program administrators look for cues in the stories, policies, and routines surrounding the WIC program as they are confronted with experiences that contradict their beliefs regarding how the program should be. In this sense, constructing an explanation that fits with the story of the program's success and purposes, even if it contradicts an experience that does not seem to make sense to a WIC participant, worker, or administrator, allows the implementation routines of the program to move forward unhindered. Likewise, this process reinforces the legitimacy of program routines in the minds of participants and WIC providers. In this equation, an experience with the program that contradicts the story of the program's unwavering success may be seen by a participant or by program providers as an anomaly, illegitimate or incorrect, or even something that they did wrong to cause a given contradictory experience.

Thus, when a participant is faced with a practice that seems incongruent with the goals of the program, or when the program is faced with a participant who leaves the program or complains, it seems natural to think it is a rare occurrence since all organizational stories and messages convey and reflect the success of the program. Accordingly, WIC program routines are constructed, reinforced, and perpetuated as program requirements are implemented and in turn experienced by participants.

An illustrative example of how the WIC program participation barriers found in this research sometimes arise and are perpetuated may be found in Weick's (1993) description of the collapse of sensemaking in organizations with regard to the Mann Gulch disaster. The Mann Gulch fire disaster, the focus of Norman Maclean's Young Men and Fire (1992), is examined by Weick (1993) as a lesson for organizations in avoiding the traps of routine ways of thinking. Specifically, 13 out of 15 firefighters perished in a fire at the Mann Gulch disaster because they refused to drop their heavy tools and enter an intentionally set fire that made a clearing for the men to escape. Weick (1993, 1996) compares the tools retained by the firefighters to those that may weigh down organizations faced with unexpected challenges and provides the notion of

"tool dropping" as hope for resiliency in the face of organizational adversity and as a means to averting tragedy. In other words, programs must not rely on the expected or force the expected to occur by repeating routines in support of an overarching story or narrative, they must be prepared for the unexpected and constantly shifting reality of organizational life. Likewise, public programs should be prepared to use, abandon, or develop tools based on events as they occur and are experienced. The seemingly fixed character of organizational life surrounding large public programs like WIC may make it intimidating for both program administrators as well as participants to remain flexible and attempt to drop tools that may not work.

An important lesson from the retroactive sensemaking that occurred in the Mann Gulch disaster for the current research is that meaning is emergent and that trying to apply the same tools to emergent barriers and changing situations and meaning can result in program failures. The metaphor of the necessity of dropping one's tools, standard procedures, or routines to survive seems particularly salient in light of this current research. Specifically, sometimes even public programs viewed as wildly successful must be willing to drop their tools momentarily in order to truly evaluate program practices and outcomes with an open stance regarding findings that may suggest change.

It seems all the more difficult to drop organizational routines when a program becomes so large that it may be perceived as an impenetrable machine that is being administered without the local implementers of the program or the participants being able to readily affect change. However, it is at the site of the actual administration and implementation of the program and at the point of interaction with program participants that WIC program policies and routines are played out and perpetuated. It is also at this point at which program myths, stories, and messages may be reinforced and sustained.

Expanding on the use of the narrative approach to organizational sensemaking to the theory of symbolic interactionism in order to describe the data gathered in this research requires an understanding of the concept of the social construction of reality. The social construction of reality, a concept coined by Berger and Luckman (1966), describes the process by which reality and indeed, society is emergent from interaction and negotiated by perceptions (although socially constructed reality may come to be seen as fixed once created by agency personnel and other actors). The social construction of reality is useful in analyzing organizations because reality that is socially constructed still has powerful consequences for individual and collective

experience. To say something is socially constructed is not to say that it bears no consequences because if individuals "define situations as real then they are real in their consequences" (Thomas & Thomas, 1928, p. 572). Indeed, Weick (1995, p. 31) provides examples wherein organizational actors "create their own environments and then the environments constrain their actions."

Hatch (1997, p. 42) notes that "according to social construction theory, this enacted environment [the one that has been created by organizational actors] is then presumed to have caused both analysis and decisions as if [reality] were separate from them." Therefore, even when WIC program participants or providers encounter information that is contradictory to their own beliefs or information they have received elsewhere, this conflicting information is also assumed to have contributed to the success of the program. Therefore, rather than remaining flexible to deal with the situation at hand as it may exist or be perceived at the time, the routines and even existing research on the WIC program reinforce sensemaking that supports the current order and rigidity of program rules. In turn, meaning arises and is exchanged within the program that allows program routines to remain unquestioned and to be followed faithfully. Symbolic Interactionist theory is useful at this point to describe the specific processes wherein meaning is generated and exchanged to explain some of the findings of this current research.

The basic tenets of Symbolic Interactionism extended by Blumer (1969, p. 2) are that the meaning we assign to things or events shapes our actions toward them, and meaning is emergent, arising during interactions with others, and later shaped by our interpretations of the interactions. That meaning may be shaped by our interpretations following interactions with others is a concept similar to Weick's (1995) retroactive sensemaking process in organizations in which sense is derived or meaning is made to fit a plausible explanation following an event. Overall, the most salient use of the two theoretical threads used in this research is to describe the data collected in this research on program participation barriers. The two theoretical threads are also useful in describing the processes and sites of meaning exchange and sensemaking which can lead large public programs to experience, contribute to, and perpetuate areas of malfunction on the basis of questionable assumptions or an organizational "story" of inherent success. Specifically, the data gathered in this research along with the organizational and policy contexts in which the WIC program exists are examined utilizing 1) Symbolic Interactionist theory, and 2) a narrative approach to organizational sensemaking.

A conclusion of the current research is that the results of this study suggest a need for flexibility in program delivery and in the ways of viewing the fundamental assumptions that exist about the WIC program and participant needs. This need for flexibility in WIC program delivery and in the examination of assumptions about the program could be aided by the process of "tool dropping" proposed by Weick (1996) and extended in this research.

Contribution to the Literature and Significance of the Research

Considering the enormous scale of the WIC program with regard to the levels of funding and the number of citizens eligible to participate in the program, relatively little research has been focused exclusively on WIC. Moreover, as noted by Besharov (in Rossi, 1998, p. ix), although programs such as Aid to Families with Dependent Children (AFDC) and the Supplemental Security Income (SSI) program expend less public funding and serve fewer participants, they are the focus of more research and political attention than food security programs in general in the United States. Indeed, Besharov and Germanis (2000, p. 177) assert that in "1992, Congress explicitly prohibited the USDA from undertaking" a study commissioned by the agency that would have provided data on the specific effects of WIC participation on the health outcomes of children. The authors (Besharov & Germanis, 2000) suggest that the lack of support for this research was due in part to the fact that many advocates of the WIC program felt the research was unnecessary since the program had already been declared a success. It is evident that this declaration of success may stem from the messages surrounding the program that are informed by perceptions that the program is wildly successful in meeting its goals of improving the health outcomes of low income women and children.

This dissertation not only provides much needed empirical research on a federal food assistance program, it examines one for which pre-existing notions of the program's success may have precluded additional research from taking place. Indeed, this dissertation research also examines these very assumptions and the ways in which they are shaping program participation and outcomes.

Existing research regarding the WIC program in particular has been largely clinical in nature and grounded primarily in the fields of nutrition and medicine. Specifically, evaluations of the WIC program have focused principally on medical outcomes and medical cost-savings.

Much of the research conducted on the WIC program begins with the assumption that "WIC Works." Indeed, the slogan "WIC Works" often appears in promotional literature for the WIC program.

Informing the prevalent belief that WIC is a program that works is the frequently cited study conducted by Devaney, Bilheimer, and Schore (1992). This study by Devaney et al. (1992) combined and analyzed existing database information in five states and found positive effects from the WIC program on both birth outcomes and on Medicaid cost savings. Other studies have supported these findings. For example, a public health report by Avruch and Cackley (1995) and a review by Owen and Owen (1997) analyzed a number of existing studies on WIC and found positive outcomes such as a decreased incidence of low birth weights or cost savings in estimated Medicaid expenditures due to WIC participation. Likewise, research conducted by authors such as Bitler and Currie (2005); Carlson and Senauer (2003); Kowaleski-Jones and Duncan (2002); Moss and Carver (1998); and Oliveira and Gundersen (2000) also provide weight to the claims of WIC's positive effects on the health outcomes of low-income women and their children.

Despite the sizeable number of studies supporting the positive health outcomes fostered by the WIC program, some concerns regarding the validity of these studies are evident in the literature. However, there are definitely fewer studies questioning the support for WIC than there are studies citing the medical studies as unequivocal evidence of WIC's success.

The most widely cited critiques of the available research on WIC are those stemming from Besharov and Germanis (2000) who examine the methodological aspects of the existing research on WIC in detail. The primary conclusion of the authors is that the existing research on WIC may exaggerate the program's beneficial effects due to methodological flaws in the studies (for example, they cite the self-selection bias and lack of generalizability of the existing research as problematic). As is explained in the methodology section of this dissertation, this study does not suffer from the particular type of self-selection bias of concern to Besharov and Germanis (2000) and evaluates the efficacy of the program through the perceptual lens of those who perhaps know the program best: former WIC participants who left the program prematurely due to a variety of factors. Likewise, this study answers the criticism of the lack of generalizability among existing studies with its focus on eligible participants who left the program prematurely (as opposed to being forced to leave due to stricter eligibility requirements making them no

longer eligible for the program). The lack of generalizability criticism is also addressed through a focus on putting forth a theoretical basis for understanding the context and organizational cues that inform participant departure, as this theoretical model may be used for examining a wide variety of programs beyond the WIC program.

Also noted in the literature is the fact that "historically, nutrition policy has been driven at the national rather than state or local levels" (Gregson et al., 2001, p. S13). Accordingly, little data regarding the context and issues related to WIC administration and implementation at the local and state levels exists, particularly with regard to eligible program leavers. This dissertation research examined the administration of a WIC program at the state level while also providing data and findings that are representative of localities across the state in which the program was examined.

This research also addresses and provides much needed empirical data regarding a variety of specific aspects of WIC program eligibility and benefits that are debated in the literature. For example, this study directly addresses perceptions of WIC eligibility requirements along with actual income eligibility and eligibility based on participation in other public programs. Also examined is the extent to which income plays a part in dissatisfaction with the program or premature program departure. This information is an essential addition to the literature because it addresses the charge made by authors such as Besharov and Germanis (2000) that research is needed on how income shapes WIC program participation to determine if increasingly lenient eligibility requirements are allowing higher income individuals to enter the program, while the neediest WIC participants are possibly underserved. Likewise, the need for research regarding WIC program "leavers" in relation to income is also fulfilled in this study.

In order to participate in WIC, individuals must meet the following eligibility requirements: "categorical" (pregnant, postpartum, breastfeeding, infant, or child up to age five), "residential" (must reside in the state in which benefits are received), "income" (income no greater than 185 percent of poverty), current participation in other selected programs such as Medicaid, the Food Stamp Program (now known as the Supplemental Nutrition Assistance Program (SNAP), or TANF), and "nutrition risk" (USDA, 2008, WIC Eligibility Requirements). Some debate regarding the usage of nutritional risk criteria for WIC eligibility exists in the literature. Individual states are allowed discretion in selecting the criteria related to nutritional risk they will use for eligibility determination for the WIC program in the state. However, each

state is required to select the criteria for assessing nutritional risk from a list provided by the federal government. The two primary and most broad categories for the determination of nutritional risk as outlined by USDA are: "medical" risks such as pregnancy with likely complications and "diet" based risks such as the consumption of inadequate amounts of food or specific nutrients (USDA, 2008, WIC Eligibility Requirements). The testing utilized by individual WIC agencies in determining nutritional risk among WIC applicants is conducted by health care professionals which introduces another level of discretion in the determination of WIC eligibility.

The nutritional risk criteria are seen by some (e.g., Rossi, 1998, p. 98) as a mechanism for WIC workers to allow higher income individuals who would not otherwise qualify for the program to become eligible for WIC participation. This is the case in light of the necessary use of administrative discretion among WIC agency workers in the determination of nutritional risk among potential participants due to the ambiguous nature of the nutritional risk criteria for eligibility. This dissertation research provides much needed information about the concept of nutritional risk from the viewpoint of the program participant. Likewise, the ways in which definitions and perceptions of nutritional risk shape public perceptions regarding the WIC program, the experiences of program participants, and the actual success of the program are also informed by this current research.

The utility and quality of the benefits provided by the WIC program (a food and infant formula package including specific WIC-approved foods – generally obtained through the use of WIC-provided checks or vouchers, nutrition education, and referrals to health care and social services) are most frequently addressed in the literature in terms of their clinical effects on health outcomes. This current research provides a wealth of data related to WIC program benefits and a detailed assessment of each of the benefits provided by the program. Indeed, this research provides a large-scale quantitative and qualitative assessment of the specific benefits provided by the program from the viewpoint of participants who are eligible for the program but who have elected to voluntarily leave the program prematurely.

Both qualitative and quantitative methods were employed by the researcher to collect the data necessary to identify the barriers to WIC program participation as well as to garner information with which to develop the detailed composite typology of WIC program barriers influencing program "leavers" to depart the program prematurely. The term "leavers" is often

used in the arena of social welfare program evaluation studies to refer to former program participants.

An abundance of "leavers" research began to appear following welfare reform initiatives in the 1990s. In general, these new "leavers" studies examined outcomes for former program participants who were forced to leave federal safety net programs such as TANF due to stricter income cut offs for eligibility and new time limits for participation intended to move individuals from welfare to work. Therefore, the term "leavers" as commonly used refers to individuals who did not leave social welfare programs voluntarily or prematurely, but rather, as a result of no longer being able to continue on the programs due to their lack of qualification under policies which introduced stricter eligibility requirements. This dissertation research is unique in that the "leavers" examined elected to leave a beneficial public health program voluntarily while still eligible to participate in the program.

This research represents an important contribution to the literature on public program "leavers" because it offers a theoretical framework to describe and accompany the original data also collected in the research. Moreover, this study does not suffer from the methodological constraints of the many "leavers" studies performed with current participants (or those that do not provide statistical representation allowing for generalization to a population of program "leavers"). This current research provides data on former program participants who left a valuable public health program voluntarily rather than being forced off due to eligibility requirements. Indeed, this research represents an important addition to the "leavers" literature as it provides a completely new look at voluntary leavers and establishes that "leavers" also leave programs voluntarily. This is contrary to the bulk of the literature on "leavers" who have left programs due to increasingly strict eligibility requirements. Likewise, this research also demonstrates that so-called voluntary leavers may experience reasons for leaving that often make them feel as if they have no choice with regard to remaining on the program or that departure is the best choice.

This research is also unique methodologically in that it avoids the primary type of self-selection bias in its sampling design which has been a criticism leveled in the literature regarding many of the existing medical studies reporting the positive outcomes stemming from the WIC program. In addition, this research also involves the development and administration of new data collection tools that were used in the development of a detailed typology of participation

barriers utilizing specific experiences cited by former program participants. Up to this point, a comprehensive typology and detailed explanation of barriers to WIC program participation have not existed. This development of new data collection tools and findings contrasts with much of the existing research on the program that makes use of secondary analysis of existing objective statistical data such as rates of program participation compiled by the government (e.g., some studies perform secondary analyses of the 1996 panel of the Survey of Income and Program Participation (SIPP)).

As stated previously, this research also goes beyond describing the participation barriers cited by respondents in its collection and utilization of original data to identify the organizational and policy contexts and assumptions that give rise to premature program departures. It does so in utilizing a theoretical framework that may be useful in viewing data on other public program dropouts or program "leavers" which have become a target of interest in the public policy arena. Results of the study may be used not only to foster increased program participant retention rates, but also to increase the beneficial effects of this valuable public health program by providing a better understanding of the needs of program participants and the level of organizational and policy change or flexibility required to meet those needs.

Overview of the Research Study

In this dissertation research, a statewide WIC program was examined in order to identify factors that cause families who are eligible for the program (as defined by the state in which the study was conducted) to exit the program prematurely and voluntarily. Research methods including both qualitative and quantitative elements were employed to collect the data necessary to identify the barriers to program participation. These research methods were also used to garner information from which to develop a detailed composite typology of WIC program voluntary "leavers" utilizing the various program participation barriers cited by former program participants during the study. This research provides an original and previously non-existent large databank of information regarding the reasons for program departure among WIC program participants who while still eligible for the program chose to leave the program without taking full advantage of the valuable health benefits for mothers and their children, and thus negating possible medical cost savings for the local, state, and federal governments.

The more qualitative portion of the study included the development of a semi-structured survey administered utilizing a Computer Assisted Telephone Interviewing (CATI) program (302 interviews were completed as part of this first phase of data collection). This first phase of data collection was intentionally exploratory in nature in order to guide respondents with respect to potential types of barriers to program participation, while eliciting detailed responses regarding specific influences on program departure. Specifically, in this semi-structured interviewing phase of data collection, a survey instrument with a number of open-ended survey items regarding reasons for WIC program departure was developed and administered. The survey instrument developed through this process is a valuable product of this dissertation research as it may be honed for use in a wide variety of public program settings.

The second phase of data collection involved the development and administration of another more comprehensive, primarily fixed response choice survey instrument administered utilizing a CATI program. This second phase of data collection yielded a wealth of robust quantitative data with which to perform additional statistical analyses (1,504 interviews were completed as part of this second phase of data collection).

A unique aspect and primary strength of the research methods employed in the study is that they avoid self-selection bias while evaluating the WIC program from the standpoint of both the WIC participant and the non-participant. As outlined earlier, numerous medical studies have been conducted for the purpose of assessing WIC program participant outcomes. However, some scholars such as Besharov and Germanis (2000, p. 146) have suggested that mothers who take the initiative to actually enroll in the WIC program may have a higher level of interest in their own health or the health of their children and that this heightened level of interest (or some other characteristic beyond the services of the program) may be leading to the findings from some studies of improved medical outcomes for children on WIC. Therefore, these authors suggest that the plethora of medical evaluations of the program may suffer from self-selection bias in that these studies focus on comparing women enrolled in and eligible for the program against those who are not. This dissertation research avoids this potential bias in its sampling (participant selection) design because it is a study of individuals who enrolled in the WIC program, and were defined by the state as being still eligible for the program, but who chose to no longer participate. This is in contrast to an attempt to evaluate the program by comparing an

eligible population of individuals who were never enrolled in WIC against a population of WIC participants.

Another unique aspect and strength of the research methods employed for this research is the focus on rigorous data collection techniques. The data collection tools and methods employed make use of techniques and knowledge garnered in a number of allied survey projects completed by the author for public agencies over the past decade. The methods employed in this study focus on ensuring representation of the population of interest through proven data collection mechanisms and reporting standards as deemed preferable in the survey research and public opinion industries. For example, the survey pre-testing, CATI programming and debugging, call disposition monitoring, having an established minimum number of call attempts, determination of eligible sample for purposes of calculating response rates, interviewer training and protocols, and data coding and tabulation procedures are informed by knowledge regarding standards in the survey research and public opinion industries.

The CATI programming measures utilized during the study ensured that interviewers were not allowed to enter data which was outside the range of pre-specified response categories for closed-ended items during both data collection phases. The researcher trained all interviewers working on the project in general interviewing technique training sessions, CATI training sessions, and in a project specific training session for each data collection phase of the project utilizing training materials developed by the researcher. A seventy-five hour training period was required for all telephone interviewers working on the project. Real-time verification of responses was also provided as the interviews were conducted. The CATI programs developed for each phase of data collection made it possible for the survey instruments to be programmed such that invalid responses and most types of non-response were not possible.

Results from the two phases of data collection were used to answer the research question of why eligible families are leaving the WIC program, to better understand the program participation barriers cited by the survey respondents in order to facilitate the development of a typology of program "leavers," and to identify the policy and organizational components that provide context for premature WIC program departure by program participants.

Because little information existed regarding the specific reasons WIC program participants were leaving the WIC program prematurely, an exploratory semi-structured interviewing protocol was developed by the researcher in order to yield more information about

why eligible program participants leave the program. This initial exploratory open-ended telephone interviewing protocol was developed based upon a preliminary review of the literature regarding the WIC program and was then reviewed by and eventually approved by team members at Virginia Tech's Institute for Public Policy Research and the state Department of Health. The interviewing protocol was designed to enable interviewers to guide respondents by the use of structured questions while also allowing respondents to identify any reasons that they considered to be factors in their departure from the WIC program. After each reason for program departure was identified, respondents were prompted for more specific open-ended comments regarding that particular reason.

A screening question confirmed WIC program departure (and dates for departure) prior to beginning the semi-structured interview with a potential respondent. Sample members reporting that they had received a WIC check in the past month were eliminated from the eligible sample pool for interviewing and their call records were automatically coded accordingly.

Specific probing questions related to ten aspects of WIC program participation that may have influenced the former participants to leave the program prematurely were included in this initial data collection instrument and respondents were encouraged to elaborate on any of the broad program participation aspects addressed. Other survey items addressed respondent perceptions about, and satisfaction with, specific aspects of the WIC program. A variety of demographic items, and items related to respondent participation in programs other than the WIC program, were included. This meant that the researcher would be able to calculate actual WIC program eligibility for each respondent from the responses garnered using state income and program participation formulas. This information was also used to estimate the level of need and food security for each respondent.

The initial completion of the 302 semi-structured interviews served as an elaborated pre-test for the survey instrument used in the second phase of data collection (the structured survey of 1,504 respondents). Specifically, this second phase of data collection utilized a revised version of the original semi-structured survey instrument translated into a primarily closed-ended format and incorporating the information garnered in the semi-structured interviewing phase. This utilization of the 302 semi-structured interviews as a pre-test for the final survey instrument to be used in the second, more comprehensive phase of data collection represents a substantially enhanced number of pre-test completions beyond the minimum number traditionally

recommended in survey research. For example, Fowler (1993, p. 100) notes that "the traditional pretest done by conscientious survey organizations usually consists of experienced interviewers taking 20 to 50 interviews." The enhanced number of pre-tests in this research allowed the researcher to not only improve the survey instrument for administration purposes (e.g., item sequencing, clarity, length, and reduction of context and process effects which will be described in more detail along with the discussion of the research methodologies employed in collecting the data), but also allowed for more qualitative information to be gathered which informed the development of items for the second phase of data collection.

As part of the pre-testing process utilizing the semi-structured interviewing instrument, both traditional and enhanced survey research pre-testing methods were used. Specifically, the researcher conducted a standard pre-test in which a sub-sample of interviews was completed utilizing call records that were eligible for inclusion in the actual data collection phase. The pre-test utilized the semi-structured interviewing instrument designed for use in the study. Further, the researcher also conducted an interviewer debriefing session and employed behavior coding to improve the survey instrument. Campanelli (2005) cites these pre-test techniques as improvements over the most common form of pre-testing which generally entails testing a survey only through the administration of a small number of practice surveys.

Data from this initial data collection phase of the study were used to develop the primarily closed-ended question survey instrument that was employed in the second, more expansive data collection phase of the study. Results from the initial semi-structured survey phase of the study were also used to inform the findings regarding the reasons why eligible WIC families leave the program, and the creation of a typology of WIC program "leavers" that was developed in this research using the quantitative data garnered in the survey of 1,504 former WIC participants. Specifically, after the reasons WIC participants leave the program were analyzed utilizing the survey data collected in the second phase of data collection, more qualitative data from these initial open-ended interviews were used to provide more in-depth information and individualized depictions of the reasons for program departure that are identified in this research.

After the researcher designed the final survey instrument for use in the second phase of data collection, 1,504 interviews were completed utilizing an interviewing protocol designed to allow for a large number of closed-ended scaled items that directly assessed the level of

influence specific participation barriers had on the respondents' decisions to leave the WIC program. Respondents were also asked to provide any additional barriers to participation, not already included in the scaled items that may have influenced their departure from the program.

Selected participation barriers assessed in the closed-ended survey items included:

- childcare barriers
- transportation barriers
- the level of required paperwork for certification and for the program in general
- the WIC waiting room experience -- including the length of wait
- social stigma
- treatment by staff
- frequency of required recertification
- personal/medical/family reasons that cause clients to miss appointments or be unable to come to the WIC office
- the level of convenience of appointment times
- the frequency of appointments
- the frequency of required blood draws
- the frequency of health screenings in general
- the length of time before check arrival
- perceptions of the utility of supplemental nutrition programs such as educational videos/programs
- the level of inconvenience caused by the program in relation to programmatic benefits
- perceptions of a lack of need for program benefits
- belief that family was no longer qualified due to factors such as income or age of child(ren)
- the amount of food/infant formula was too little or too much/went to waste
- too few choices in food/infant formula selection
- a variety of program aspects related to vouchers
- misunderstanding regarding WIC-approved foods
- difficulty finding a conveniently located grocery store with WIC-approved items

The rationale for the scaled items and variables related to these items is described in Chapter 3 of this dissertation. For example, the items regarding the WIC waiting room experience were derived from respondent reports in the first phase of data collection of chaotic

waiting room experiences. Respondents described experiences in which they were unable to have all of their children seen due to rigid scheduling rules and the lack of coordination of recertification, health screening, and check or voucher pick up visits (requiring numerous visits to the WIC office), and excessive waiting periods during which program participants were ignored while children were left unsupervised in the waiting rooms creating a chaotic environment, on occasion exposing participants' children to other children who were ill.

More detailed survey items included process-related program aspects such as: the convenience of clinic days and hours, along with respondent preferences for the days and hours of clinic and office operation (many respondents in the semi-structured interviews reported that it was impossible to make it to the various required appointments while working and/or caring for their children due to the office and clinic days and hours of operation). Additional items assessed the utility of aspects of the program beyond the cash and voucher benefits such as nutritional screenings, referrals and education programs. Respondents were also asked about their preferences regarding the structure of the WIC offices in relation to local departments of health. Some divisions in the state in which the research was conducted have stand alone WIC offices and some have WIC offices housed within local health departments.

All of the items also included specific prompts regarding the primary research question: "Was this a factor in why you left the WIC program?" The survey utilized in this second phase of data collection also includes an overall rating item for the WIC program to allow for analyses of the overall rating of the program against the variety of factors influencing participant departure from the program. Parallel to the methods employed in the semi-structured interviewing phase, a variety of demographic items and items related to respondent participation in programs other than the WIC program were included in order that the researcher would be able to calculate actual WIC program eligibility for each respondent from the responses garnered using state income and program participation formulas. This information was also used to estimate the level of need and food security for each respondent.

The data garnered in the second phase of data collection in which 1,504 interviews were conducted, along with the more qualitative responses gathered from the original 302 interviews, were utilized to identify and more closely examine the key reasons families eligible for the WIC program stop participating in the program prematurely and voluntarily. Specifically, data from these 1,504 cases along with the responses collected from the original 302 semi-structured

interviews were utilized to identify the barriers to WIC program participation as well as in the compilation of a detailed composite typology of WIC program "leavers." In developing the typology, descriptive statistical analyses were employed for use in the identification and grouping of barriers to program participation by selected study participant characteristics.

Chapter Overview

This dissertation is organized utilizing five chapters. In *Chapter 1* an introduction to the study is provided along with background related to the WIC program, the statement of the problem and research question, theoretical framework and context, contribution to the literature and significance of the study, and an overview of the research itself.

Chapter 2 provides a review of the literature important to understanding the context for this research and the subsequent findings. Specifically, *Chapter 2* provides a review of the literature on key aspects of the WIC program, an overview of the literature presenting alternate viewpoints regarding the success of the WIC program, an overview of "leavers" literature necessary to demonstrate the need for research on voluntary "leavers," and a review of the methodological debate in the literature regarding existing WIC studies. For example, the review illustrates the need for primary data collection such as that provided in this research in contrast to secondary analyses. Finally, *Chapter 2* includes an overview of the literature on the two primary theoretical threads utilized to explain the barriers to program participation discovered in this research. Specifically, an overview of the literature on the narrative approach to theorizing and an overview of sensemaking in organizations (both utilized to constitute the narrative approach to sensemaking in organizations extended in this research) are provided. An overview of symbolic interactionist theory is also provided in *Chapter 2*.

In *Chapter 3* an overview of the research design and methodologies employed in collecting and analyzing the data for this research is provided. A detailed description of all methodological procedures is included. The variables and constructs utilized in the identification of the barriers to WIC program participation are described in *Chapter 3*.

Chapter 4 provides the findings of the research and data collection efforts. Specifically, this chapter provides an answer to the research question (Why are eligible families leaving the WIC program voluntarily and prematurely?) through the organization of the data into the

primary barriers to program participation and the provision of detailed information regarding the participation barriers. These barriers are presented with specific organizational and policy elements surrounding the WIC program that are related to the program participation barriers. A typology of program leavers is presented in the form of characteristics that influence specific barriers to WIC program participation.

The final chapter of this dissertation (*Chapter 5*) provides an overview of the research findings with an explanation of the results utilizing the theoretical framework described above. Implications of the research findings for public program design, implementation, and evaluation as well as for public administration are also provided.

2

Literature Review

The WIC Program

Critics of the existing body of research on the WIC program suggest that a number of facets related to the quality of the few empirical research studies on the program may be hindering the level of knowledge regarding the true effects of the program. Specifically, the prevalent claims of the positive impact of the WIC program on improving the health of women, infants and children in the United States and the effects of the program in introducing cost savings through reductions in Medicaid expenditures should be examined closely. Conventional wisdom regarding the WIC program is that the program is highly effective. This conventional wisdom is based largely on studies that employ secondary analyses of data collected decades ago and as noted in recent criticisms regarding existing data on the WIC program, utilize non-experimental designs. Indeed, while almost every mention of the WIC program in the existing literature is accompanied by statements hailing the program's undisputed value and success, criticisms regarding the studies on which these claims are based have begun to emerge in the literature.

The principal critics of the existing research on the WIC program are Besharov and Germanis (1999, 2000, 2001). Their primary critique is that the effectiveness of the WIC program has been overstated. Besharov and Germanis (2000, p. 133) state that there is "little systematic evidence" to support many WIC implementation practices and that "many claims about WIC's effectiveness are simply misleading exaggerations" (2000, p. 180).

It should be noted that Besharov and Germanis (2000) are not in favor of eliminating or drastically cutting the WIC program but rather, seem to believe that the positive effects of the program have been exaggerated and that consequently, much needed evaluation research has not been conducted to the detriment of possible improvements in the delivery of the program.

It is intended that this current dissertation research provide data and analyses regarding WIC implementation practices that may be utilized in improving the program and that will

supply some of the "systematic evidence" being called for by critics of the existing body of research on the program.

There are far fewer critics of WIC with regard to the health benefits of the program and the program's cost savings than there are champions of the program purporting its overwhelming success. It should also be noted that there does seem to be less evaluation research attention overall in the literature given to food assistance programs in comparison to other public safety net programs as suggested by Besharov (in Rossi, 1998, p. ix). That "Congress explicitly prohibited the USDA from undertaking a large-scale study designed to measure WIC's impact on children's nutritional status, cognitive development, and other outcomes" (Besharov & Germanis, 2000, p. 177) also lends support to the idea that research on the WIC program may appear less urgent than research on programs that have weaker political and public support. This current dissertation research provides valuable and multi-faceted data and analyses regarding a large, well-funded food assistance program, while examining the program in the context of it having long ago been declared a success.

WIC in particular does not seem to be a focus of intensive evaluation efforts because several studies regarding the program's positive health effects and reduction in health care costs related to programs such as Medicaid are generally cited as evidence of the unequivocal success of WIC, thereby precluding the need for continued in depth evaluation in the minds of many supporters. The influential study conducted by Devaney et al. (1992) is one of the primary studies cited in the literature supporting claims that women participating in the WIC program give birth to infants with higher birth weights and that WIC program participation fosters Medicaid cost savings.

Another study supporting the evidence of the effects of WIC in reducing low birth weights and introducing program cost offsets in Medicaid expenditure savings is by Avruch and Cackley (1995). Research conducted by Bitler and Currie (2005); Carlson and Senauer (2003); Kowaleski-Jones and Duncan (2002); Moss and Carver (1998); and Oliveira and Gundersen (2000); also all support the claims of WIC's positive effects on the health outcomes of low-income women and their children. Likewise, Buescher et al. (2003) found that WIC improved the health of low-income participants compared to low-income non-participants through increased utilization of health care services. However, even supporters of the existing research on the health and cost savings outcomes of the WIC program such as Bitler and Currie (2005, p.

88) assert that improvements in the program could be made but have concerns regarding any proposals that might "undermine support for this important program serving our most vulnerable children."

The critiques of the existing body of knowledge regarding WIC by researchers such as Besharov and Germanis have prompted rebuttals in the literature from authors including Ku (1999, p. 111) who states that perhaps Besharov and Germanis "believe that WIC provides food to too many mothers and children" and that the research on WIC is more than adequate in demonstrating its health benefits. This is a difficult criticism for researchers to address since appearing to support research that might somehow reduce the food and health services going to mothers and children would be unpopular indeed. However, performing much needed research with an eye toward improving a valuable public health program or allowing more participants to take advantage of the services offered by the program seems more salient and timely than ever.

The editors of the Journal of Policy Analysis and Management (JPAM) asked two authors (Ludwig & Miller, 2005) to review competing claims regarding WIC's efficacy (whether "WIC Works" or "WIC doesn't Work") based on opposing viewpoints offered in two different JPAM papers. Specifically, the research in question in the Ludwig and Miller (2005) piece on the WIC debate includes an article by Joyce, Gibson and Colman (2005) and an article (and subsequent response to the findings of Joyce et al.) by Bitler and Currie (2005). The article by Joyce et al. (2005, p. 661) asserts that based on their research findings, "WIC has only a minimal effect on improving adverse birth outcomes in New York City." This is in stark contrast to the findings reported by Bitler and Currie (2005) that WIC helps mothers to have healthier infants even when controlling for a number of variables. In trying to sort through the debate in the journal introduced by the two studies, Ludwig and Miller (2005) decided that there were merits to both studies but came away with a more optimistic attitude regarding the program than "WIC doesn't work" (what they characterized the Joyce et al. article as suggesting). However, Ludwig and Miller (2005, p. 699) concluded that "there is great public benefit from learning more about WIC's effectiveness."

Existing arguments questioning the research studies that are cited most frequently as evidence of WIC's highly successful outcomes focus on several fundamental aspects of the program. For example, the few prominent critics of the existing research on WIC, such as Besharov and Germanis (2000, p. 133) focus on what they call the "eligibility creep" that has

allowed an increasing number of individuals with higher incomes to participate in the WIC program across time. Besharov and Germanis (2000) cite the infant formula rebate program as a possible source fueling expanding enrollment and less stringent eligibility criteria in the WIC program. Specifically, they suggest (Besharov & Germanis, 2000, p. 136) that the billions of dollars coming from rebates that formula manufacturers are mandated to pay to the states are spent on expanding participation rather than on assessing or improving services.

Indeed, with "over half of the infant formula in the United States purchased through WIC" (Oliveira & Davis, 2006, p. i), it is in the best interest of formula manufacturers to make certain that their brand of infant formula be selected by the state agency for participation in the program. Each state is required by law to competitively bid infant formula rebate contracts in which the state agrees to select one brand of infant formula for the program in exchange for the manufacturer providing a rebate on each unit of formula (USDA, WIC Fact Sheet, 2008).

Because the WIC program simultaneously encourages women to breastfeed their infants (while receiving rebates from formula manufacturers for infant formula), questions have arisen regarding why breast feeding is not prevalent among WIC participants and whether WIC participants may be even less likely than women in the general population to breast feed their infants (Rossi, 1998; Oliveira et al., 2002; Ryan & Zhou, 2006). The issues of infant formula consumption and breastfeeding education are also addressed in this current dissertation research as the use of WIC vouchers for infant formula purchase is a central aspect of the program addressed by the survey respondents in this study. Indeed, a substantial portion of the findings from this research relates to respondents' perceptions regarding the use of vouchers for infant formula purchase.

This current research also addresses the eligibility requirements of the program directly in providing data regarding individuals who were still eligible to receive WIC services but left the program prematurely prior to taking full advantage of the program's intended benefits. The issue of eligibility criteria debated in the literature is addressed in this current research in several ways: 1) confusion regarding continued eligibility is one of the reasons cited by former program participants for leaving the program prematurely (even though they were still eligible to participate according to the state agency administering the program; 2) some individuals who left the program prematurely apparently did so because of the steps they had to take in order to verify eligibility; and 3) analyses and data are provided in this original research that reveal which types

of program participants tend to leave the program prematurely (in terms of the level of financial need and the age of children in the household for example), and factors which inform the current eligibility criteria debate.

The age of children most likely to take advantage of the program, and speculation regarding whether individuals who are most in need are least likely to stay on the program or reap the most benefit from the program, are currently being debated in the literature with little evidence providing answers regarding these issues. For example, Oliveira et al. (2002, p. 26) note the lack of research regarding the extent to which "WIC benefits accrue to the most disadvantaged" and call for "more research on the distributional effects of WIC" in order to shed light on whether "society would be better served by targeting more benefits to fewer, more needy families." Besharov and Germanis (2000) question the drop-off in WIC participation among families with older children in relation to the different eligibility requirements for children of different ages, and the reduced value of the food package provided to families with older children. Oliveira et al. (2002) also note that some have even called for dropping entire categories of eligible participants by reducing the age of children eligible to participate in order to improve operations within amidst limited resource allocations.

Also related to the debate regarding the efficacy of the eligibility requirements for WIC participation in terms of their best serving the health needs of women and children, is the eligibility component of "nutritional risk." The requirement that WIC participants should be at nutritional risk in order to participate is somewhat controversial in the literature due to the amorphous definition of the concept. Because state agencies select which nutritional criteria they will use from among those provided within the recently established federal guidelines for nutritional risk, the assignment of a clear definition of nutritional risk is further complicated.

This dissertation research provides much needed information about the concept of nutritional risk from the perspective of individuals who left the program prematurely. Indeed, a finding from this research suggests that some participants perceive the testing that is sometimes required in order to determine nutritional risk to be daunting (particularly with regard to the frequency of testing requiring that blood be drawn from the mother or child). Because the assignment and interpretation of nutritional risk as it relates to WIC participants is a core component of the eligibility determination process for the program, the collection of data in this

research that would yield information regarding participant experiences of this aspect of eligibility determination was essential.

Another aspect of the WIC program that has prompted debate in the literature centers around the food packages offered through the WIC program. Although at the inception of the WIC program undernourishment due to the lack of food was of primary concern, across time obesity has become a veritable national health crisis in the United States. The WIC program provides participants with vouchers or checks to be used in purchasing specific food items (or in some cases the food items may be picked up at a site such as a warehouse or delivered to participants' homes). The food packages provided through the WIC program include such foods as: cereals, fruit juices, eggs, milk, cheese, peanut butter, beans and tuna (USDA, WIC Fact Sheet, 2008).

Some authors have called for improvements to the WIC program in order to face the challenges introduced by obesity. For example, Fox, McManus, and Schmidt (2003, p. 4) call for "improved food package content, the introduction of more creative educational strategies for reducing obesity and improving infant feeding practices, strengthening incentives and other supports for breastfeeding, and collaborating more effectively with health care providers."

Wellbery (2007, p. 1557), describing data from a 2006 study by Faith, Dennison, Edmunds, and Stratton notes that in the WIC participant population, "counseling had no impact on weight changes and suggested that the types of food distributed by WIC are greater determinants of weight gain." The problem of obesity among the WIC participant population is increasing as it expands rapidly in the general population (Institute of Medicine of the National Academies, 2005). Indeed, obesity among WIC participants may be even more common than among individuals in the general population because it is more prevalent among low income individuals (GAO-02-142, 2001, p. 11). The strong foundation and history of the WIC program in ameliorating hunger may hinder efforts to reframe the focus of the program toward the prevention and treatment of obesity and related health conditions.

A 2001 GAO study notes that the visibility of the obesity epidemic is imploring the WIC program to enhance services such as the nutritional education component "originally intended, according to USDA officials, to provide a relatively basic message about the value of good nutrition to low-income pregnant and postpartum women whose diets were inadequate" (GAO-02-142, 2001, p. 12). This GAO study also highlighted an inadequate nutrition information

delivery process that offers participants only two nutrition education sessions during each six month WIC certification period at an astoundingly brief (given the importance and amount of information to be conveyed) average length per session of only four to seventeen minutes (GAO-02-142, 2001, p. 12).

In addition to the need to address the overall message sent by WIC to participants that they should be consuming more food, questions related to the types of foods recommended by WIC have also been raised. Specifically, as concerns arise regarding the consumption of canned tuna by pregnant and postpartum women (due to potentially high mercury levels in the fish), evaluation of WIC's promotion of the consumption of tuna is needed. Questions regarding whether the WIC program should eliminate tuna from the food package have appeared in the literature (Dooley, 2007). Likewise, WIC program promotion of the consumption of fruit juices with high sugar content is coming under scrutiny as the fruit juices are linked to obesity in children (Wellbery, 2007).

Interestingly, the findings of this current dissertation research reveal that often women experience frustration when they feel the messages they perceive as being delivered by the WIC program are incongruent with the messages they have received from other sources regarding health issues. In relation to the WIC food packages, this seems to be a concern among a number of participants who left the program prematurely. Namely, participants felt encouraged to consume or have their children consume foods, or quantities of foods that they were concerned might not be the healthiest option in their specific circumstances (because they had learned elsewhere that the food or level of consumption might lead to being overweight, or they practice vegetarianism for health reasons and are counseled to eat meat or serve their child meat, for example).

The lack of attention given by the agency to the unique nutritional needs and preferences of individual families is linked in some cases to participants' frustration with and consequent premature departure from the WIC program. The one-size-fits-all messages provided through the program do not seem to address the unique needs of individual participants effectively and were cited by some participants as factors in their premature departure from the program. In the face of increased enrollment demands on the program, a downward turning economy, and increasingly prevalent participant health issues such as obesity and diabetes, more enhanced,

tailored, and flexible services for participants may be essential and yet more difficult to deliver than ever before.

Responses to the survey item "what aspect of the WIC program did you like best?" (posed during the initial exploratory phase of data collection for this dissertation research) reveal that overall, the food and infant formula package is one of the most favored benefits offered by the WIC program in the opinion of WIC program leavers. Therefore, the wealth of information provided in this research by participants who dropped out of the program prematurely regarding a wide variety of aspects of the WIC food package and voucher or check system (used to purchase the foods and infant formula approved in the package) represents a potentially important addition to the body of knowledge regarding the WIC program. To the extent that some individuals leave the program prematurely because they feel frustrated with conflicting messages regarding the WIC food and infant formula package, this is an area in which program improvements might be made, particularly since this is a service area that is favored among former WIC participants in spite of what they view as its flaws.

Changes to the WIC food and formula package have traditionally been minimal and difficult to implement in part due to strong opposition from industries benefiting most greatly from the inclusion of their products in the food and infant formula package. For example, The International Dairy Foods Association (IDFA) and the National Milk Producers' Federation (NMPF) submitted a joint letter to USDA expressing concern regarding proposed WIC food package changes that would increase fruits and vegetables while cutting dairy products (IDFA, 2006). Indeed, the dairy industry asserted that rather than increasing the budget for the food package to allow for more fruits, vegetables, and whole grains (while presumably keeping levels of dairy the same), the WIC program was trying to exercise cost savings measures by simply reducing dairy products in the food package, at a cost impact in the hundreds of millions to the dairy industry (Food and Drink Weekly, 2006). Likewise, the National Potato Council expressed opposition to the WIC food package exclusion of white potatoes (Karst, 2008).

In addition to the designated supplemental foods provided through the WIC program through its voucher system, key services of the program include an educational component, often in the form of nutritional counseling or written educational materials such as pamphlets or brochures, and participant referrals for medical and other social services. Several existing studies question the efficacy of the nutritional counseling component of WIC in improving

participant health outcomes and the capabilities of the WIC program in providing health and social service referrals to participants (GAO-02-142, 2001; Besharov and Germanis, 2000; Fox et al., 2003; Graham, 1991; and Rossi, 1998).

WIC participants are offered nutrition education at least twice during each certification period (every six months) with the brief sessions generally addressing topics such as the services offered by the WIC program, infant feeding practices, breastfeeding, and nutrition guidance related to the food pyramid system (Fox et al., 2003). This broad range of topics (just a sampling of some of the topics addressed by various WIC agencies) demonstrates the difficulty in delivering useful information in such infrequent, brief, and voluntary sessions.

Federal requirements related to how WIC agencies should spend their funding have imposed limits on the amount of funding that may be used for nutrition services and program administration (Besharov & Germanis, 2000). Such requirements have meant an even greater burden for WIC agencies in delivering useful information to participants, particularly with the expanding mandated topics and tasks that agencies must address such as obesity, drug abuse prevention education, outreach to homeless individuals, assistance in identifying potential program abuse among vendors, and even providing voter registration services (GAO-02-142, 2001, p. 32).

A number of authors have questioned the outcomes related to the nutrition education services provided by WIC. Fox, Burstein, Golay, and Price (1998) found that even after nutrition education sessions, many WIC participants engaged in unhealthy infant feeding practices such as offering infants solid food and fluids other than breast milk too early. In another study, Fox et al. (2003) noted numerous obstacles for the WIC program in providing nutrition education services including the push for enrollment of increasing numbers of participants.

Recently, the use of staff other than health care professionals to deliver educational services has heightened the need for staff training in the WIC program (GAO-02-142, 2001). Research regarding the specific effects this shift in the professional status of staff administering WIC services may have had on participants is not readily available in the literature. This current research provides some evidence that WIC participants distrust the nutritional advice given by such individuals. Whether or not this is due to the professional persuasion of those delivering the nutritional advice is unclear. Besharov and Germanis (2000) assert that the cap for the

percentage of funds to be spent on nutritional education in the WIC program is too low in order for agencies to realistically provide the services expected.

Rossi (1998, p. 64) notes that although the WIC program touts the importance of nutrition education, there is "little information about either the content of this component or its effectiveness." One GAO study (GAO-02-142, 2001, p. 13) noted that in order to combat diseases such as obesity, WIC would need to devote considerably "more resources to nutrition education" and that the services would be in competition with "social forces" potentially hindering any gains of such education for participants. Another author (Graham, 1991, p. 71) asserts that while the WIC program has been "hailed for providing the ignorant with needed nutritional education" it seems to send conflicting messages by disregarding sound dietary practices in its own choices of food for the WIC food package.

Fox et al. (2003, p. 16) note that the need for "providing an effective nutrition education component in the WIC program is compelling" because USDA data show that WIC participants are still engaging in nutrition practices that are unhealthy. They also note that a major challenge to the WIC program in providing effective nutrition education is the "absence of outcome measures to assess program effects" for the educational component of the program (Fox et al., 2003, p. 16).

This current dissertation research provides a wide variety of information from former program participants who left the program voluntarily regarding the nutrition education component of the program. Indeed, this research also directly assesses the extent to which perceptions regarding the educational component of the WIC program, and the messages received while participating in this aspect of the program, had an effect on participants' premature departure from the program. At minimum, this study yields vital information regarding the experience of nutrition education from the standpoint of the program participant. In turn, this information may inform how the expectations that WIC agencies provide an expanding array of educational services with limited resources to do so shape participants' experience of this component of the program.

Another aspect of the WIC program that has received little attention in terms of evaluative research is the health and social service referral component of the program. This component of the WIC program is intended to provide participants with needed health care services that may or may not be provided at the WIC administration site but that support the

goals of the program in promoting the health of participants. Thus, the referral component of the program also represents a key area in which WIC agencies have the potential to assist program participants in streamlining needed health services with outside agencies, providers, and programs such as Medicaid.

The issue of health care services being provided at the site of administration (often called "co-location" within the program) is an important area for examination in the program. If basic health care services are not provided at the WIC administration site such as at a health department, participants may need to go to multiple agencies to have their health needs met. This current research provides information regarding participants' assessments related to the health care referrals provided by the program and explores the effects of co-location on participants' satisfaction with the services provided by the program.

Fox et al. (2003, p. 18) suggest that there are a number of challenges for the health care and referral component of the program such as: confidentiality requirements in sharing health information with different agencies or programs, lack of resources to establish relationships with health care providers in various networks, and difficulty in navigating the managed care system.

GAO (GAO-02-142, 2001) also identified relatively recent changes in the health care system that present challenges to the WIC program with regard to administering health service coordination and referral services. Specifically, this study (GAO-02-142, 2001) cited as problematic the increased number of Medicaid recipients receiving health services from managed care or health maintenance organization type providers rather than at health departments (which are often also WIC program administration sites). Thus, logistic planning for WIC participants in terms of appointments, health provider locations, and financial coverage for health services is becoming even more cumbersome. Indeed, this is a finding of the current dissertation research: the need for better coordination of health service delivery in terms of the logistics of receiving services (such as scheduling and location coordination) as specified by former program participants.

The findings from this current research address the referral services of the WIC program directly. Indeed, it is evident from the findings of this research that difficulties in navigating the health care system due to the need for more coordination and referral services may be contributing significantly to the premature program departure of WIC participants. The findings of this research suggest that aspects of this component of the WIC program should be improved

to assist participants with program areas such as appointment scheduling and coordination because these represent substantial barriers to participation in the WIC program.

Another challenge to the health and social service referral component of the WIC program cited by GAO (GAO-02-142, 2001) is welfare reform and its heightened focus on employment. Indeed, one of the findings from this current dissertation research is that many participants who work find it extraordinarily difficult to participate in the requirements of the WIC program that involve appointments due to their work obligations. One study (Rosenberg, Alperen, & Chiasson, 2003) presented the idea that there might be a link in declining welfare rolls (due to welfare reform and changing employment requirements) and the failure of WIC recipients to pick up their benefit checks, with the primary finding being that the time demands of employment were related to the recipients' failure to retrieve their WIC checks.

Individuals may qualify for the WIC program if they participate in certain other programs (such as Temporary Assistance for Needy Families (TANF), the program generally thought of as "welfare" in the United States, or Medicaid). This current dissertation research found that a full 59.3 percent of study participants were still participating in at least one of the other programs beyond WIC addressed in the study at the time of data collection. This is an interesting finding that suggests that many WIC participants are able to maintain participation in other public safety net programs even after leaving WIC. This finding is interesting in that it contradicts some suggestions in the literature that WIC or other safety net program departures might occur in similar fashion to the pattern of declining welfare rolls fostered by welfare reform and stricter requirements in programs such as TANF after welfare reform (GAO-02-142, 2001; Zedlewski & Brauner, 1999).

Existing research on the exact relationship between welfare reform and the WIC program is virtually non-existent in comparison to "leavers" studies related to programs such as TANF and the Food Stamp Program. However, one study (Lee, Mackey-Bilaver, Goerge, 2003) found that decreases in Food Stamp participation seemed to be related to decreased TANF entry and that families may turn to the WIC program for unmet needs when not participating in the Food Stamp or TANF programs. As noted, a number of recent studies have addressed the outcomes and patterns of program re-entry for those who left due to recent welfare reforms in programs such as TANF. For example, studies by Anderson, Halter, and Gryzlak (2004); Bruce, Barbour, and Thacker (2004); Zedlewski and Brauner (1999); Ozawa and Yoon (2005); Rangarajan and

Gleason (2001); State of Wisconsin Department of Workforce Development (2001); Acs and Loprest (2007); Scott (2006); O'leary and Kline (2008); and Siegel and Abbott (2007) all address outcomes for TANF or Food Stamp Program leavers.

As indicated above, most prevalent in the literature are the recent studies regarding individuals who have left welfare for work due to welfare reform initiatives. Such studies examine whether families are secure with regard to a variety of indicators such as food, employment, housing, health care, transportation, and child care after leaving programs such as TANF. Indeed, an entire arena of literature has emerged that is related to outcomes stemming from welfare reform. This literature may be broadly characterized as "leavers" research or "leavers" studies.

The Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) of 1996 enacted welfare reforms that imposed time limits for participation for the families participating in welfare or TANF. The "leavers" literature focuses in large part on TANF specifically but also on related safety net programs such as the Food Stamp Program. The important distinction of note for the current research regarding the "leavers" literature is that the studies addressing government safety net program "leavers" tends to focus on program departures that were not voluntary in nature. Specifically, the "leavers" literature focuses largely on departures that were due to welfare reform initiatives intended to move participants off the programs or departures due to increased requirements or strengthened standards for participation.

This current dissertation research is unique in that the "leavers" examined in the study left a beneficial public health program voluntarily while still eligible to participate in the program and in that it offers a new theoretical framework for explaining these original data and findings regarding voluntary program leavers. Indeed, this research represents an important addition to the "leavers" literature as it introduces the concept of "voluntary leavers," the idea that some "leavers" also leave programs voluntarily. This is in contrast to the bulk of the literature on leavers which assumes or focuses on program departures that occurred due to increasingly stringent eligibility requirements. This current research also reveals that program leavers often have reasons for departing programs that may make them feel as if they have no choice or that departure is the best choice even when that is not the intent of the program.

This research also provides much needed exploration of participant information related to the relationships between the numerous programs in which individuals may simultaneously

participate. Specifically, this research provides this information by analyzing the relationship between participation in social safety net programs outside of WIC and premature departure from the WIC program.

With eligibility requirements that are generally viewed as more lenient than for other social safety net programs, understanding how WIC "leavers" fare after leaving the program and why they left voluntarily in the first place is important in understanding how other program leavers may piece together support if needed after leaving. This current research is also important in exploring the issue of whether WIC leavers need the services of the program but leave prematurely due to obstacles to participation. Most notably, this current research provides data along with a theoretical foundation for understanding why participants leave programs while they are still eligible to participate, lending a general understanding with regard to how individuals face barriers to program participation. With alarmingly high dropout rates in beneficial public programs of all types (for example public secondary school dropout rates), garnering such an understanding of how individuals navigate participation obstacles and why they ultimately leave programs, may have more utility beyond fostering improvements in a program such as WIC.

Methodological Critiques of Existing Research on the WIC Program

The strongest and perhaps most serious critiques of the existing research that exists related to the WIC program center on the research methodologies employed in performing the research. These critiques may be viewed as serious because they relate to the most prevalent type of research available on WIC, namely, the studies regarding the medical outcomes and cost savings achieved by the program. These are the studies on which the prevailing views regarding the success of the WIC program rely. Indeed, often such studies are cited as evidence of the WIC program's unwavering success. Kennedy (1999, p. 327) notes that the WIC program has enjoyed "strong bipartisan support" due to studies that have documented positive outcomes for WIC participants. However, closer examinations of the findings garnered in these outcomes studies regarding WIC suggest a need for research that utilizes research methodologies that will address some of the methodological critiques of WIC studies posed in the literature.

Near universal acknowledgments are made in the literature that the existing research on the WIC program may suffer from selection bias. Indeed, this charge is made even with regard to the studies cited as the strongest evidence of the WIC program's efficacy. In general, the ideal methodological approach for measuring the success or efficacy of a program like WIC in terms of medical outcomes or cost savings is the randomized experiment. There are no disputes as to the ideal of a randomized experiment in the literature regarding WIC. However, in practice, for a program like WIC, a true randomized experiment is difficult to achieve. Besharov and Germanis (2000, p. 145) state that "properly implemented, random assignment should result in comparable treatment and control groups, so that any difference in subsequent outcomes can be attributed to the program rather than to some personal characteristic or external force that is systematically different in each group." These authors (Besharov & Germanis, 2000) suggest that failure to control for selection bias overstates the favorable findings with regard to WIC's impact on birth weight, citing studies by Gordon (1993) and Brien and Swann (1997, 1999) in which controls for selection bias were attempted and most of the favorable health effects that could be attributed to WIC disappeared.

The concern regarding selection bias centers around the idea that women who do not enroll in WIC may be fundamentally different than women enrolled in the program and that comparing the two groups to determine the effects of WIC on health outcomes may be misleading. Fox et al. (2003, p. 20) agree that the charge of selection bias with regard to the existing research on WIC is a serious one because of the fact that women on WIC, "by virtue of their having sought out food and nutritional assistance, are likely to be more highly motivated and desirous of better birth outcomes," consequently perhaps inherently garnering better birth outcomes for their infants.

Avruch and Cackley (1995) conducted a meta-analysis and review of the primary available research studies regarding WIC from the 1970s and 1980s and found that WIC participation was associated with decreased levels of low birth weight in infants and a cost savings in Medicaid that more than offset the program costs associated with WIC. However, not insignificantly, they noted that most of the studies they examined were quasi-experimental in design, comparing participants to non-participants and not controlling for selection bias. Accordingly, if studies such as the one by Avruch and Cackley (1995) in which a large-scale review of data was undertaken are cited as evidence of WIC's success, it becomes all the more

urgent that more recent data are collected utilizing sound techniques that will allow for a transparent reporting of methodologies and findings and hopefully, more undisputable advancements in knowledge regarding the efficacy of the WIC program.

Because all of the primary studies cited as evidence for the great success of the WIC program utilize analyses based on comparing WIC participants with non-participants (with similar demographic characteristics), and because this practice has become the focus of the most serious critiques of the program's outcomes, research in which such comparisons utilizing participants and non-participants are avoided is also urgently needed.

However, it is interesting that the potential to suffer from selection bias is the primary critique of the existing research on WIC. It seems that this is the case because there are so few studies that are cited as unequivocal evidence of WIC's efficacy and success, yet seem to serve as deterrents for additional research on the WIC program (because the program has already been declared a success). That is to say, that when there are only a few primary studies that are continually cited, the critiques seem to have focused on what may be wrong methodologically with these carefully conducted studies rather than focusing on what additional research may be needed regarding the program. It seems the WIC research community may be entering into a time of significant paradigm shifts in which continual debate regarding the merits of the most frequently cited research studies will no longer be on the forefront of the discussion regarding WIC but rather, new discussion will emerge regarding how the program can be improved and what new questions should be asked.

However, it is important to note that the questioning of the research methodologies employed in the research leading to declarations of the success of WIC seems to have served some important functions: 1) the initiation, at least in the research community of a debate that has at minimum introduced the possibility that the outcomes studies related to WIC should not be accepted as unquestioned evidence of WIC's success, and 2) the introduction of the idea that research methodologies matter and that while it may not always be feasible to employ ideal condition research methodologies (e.g., ethical considerations or even available budgets may preclude some techniques in some situations), they should at minimum be considered carefully, debated, and established as a goal.

As a caveat, the recurring critique of selection bias in the existing research on WIC is also interesting in that it seems to overlook what may be even more substantial obstacles to

gaining a true picture of the effects of the program. For example, the fact that the primary studies cited as evidence of the WIC program's success look at medical outcomes based on select databases (in many cases outdated) on which secondary analyses are performed, with these databases and analyses often used to the exclusion of collecting current original data directly from individuals who have utilized the program. These factors seem to warrant attention in addition to the prevalent speculations regarding the presence of selection bias.

It seems that researchers (and their critics) may be limiting themselves in the questions they are asking regarding WIC by focusing on how best to measure medical and cost savings gains. While medical and cost savings gains are clearly important, if research is limited to studies that measure medical and cost savings outcomes, and shaped by the critiques of those outcomes studies on methodological grounds, the advancement of knowledge regarding WIC has been thwarted. Specifically, this may be the case because the program has already been declared a success due to the findings from selected medical and cost savings outcomes studies, and the attacks of these studies on methodological grounds may be serving the latent function as an obstacle to the advancement of knowledge by further narrowing the focus of research on the program.

This current dissertation research focuses on the experiences of individuals who once participated in the WIC program and who chose to leave the program prematurely and voluntarily. Therefore, statistical estimations regarding the similarities or dissimilarities of participants and non-participants are not appropriate or applicable. The respondents selected for this current research are most appropriately situated to answer the primary research question: why are eligible families leaving the WIC program voluntarily and prematurely? Selection bias in configuring the sample for the study was not an issue of concern since participants were randomly selected from all eligible members of the population (individuals who had left WIC prematurely in a given timeframe). This simply represents a different approach to measuring the efficacy of the WIC program. It places trust in those who have participated in the program to estimate their own gains or losses with regard to the program and to therefore allow a better understanding of how the program could be improved by gaining knowledge regarding what worked and what did not work for participants.

Original data were collected for this research, contributing vital information regarding WIC program leavers needed in the food assistance and policy research communities. Indeed,

calls for such data have been made in the literature, with Gundersen (2005, p. 100) noting that beyond comparing characteristics of recipients and non-recipients, the needs of those who received WIC but have left the program could be examined, particularly since these program leavers may be amenable to outreach efforts.

The continual debate regarding what is wrong or right methodologically with the few research studies cited as evidence of the program's success, while extremely important, may be inhibiting a shift in focus to how we conduct research that will advance knowledge regarding the program toward best serving program participants and society.

It stands to reason why the WIC program has garnered a great deal of support in that the idea of the program and the goals of the program seem unquestionably worthy. However, some questions are beginning to emerge regarding whether a blind eye has been turned to the facts of the research findings (and research methodologies employed) related to the program. However, it should again be noted that such questions do not represent the prevalent judgment expressed in the literature regarding the efficacy and success of the WIC program, quite the contrary. Yet critics such as Besharov and Germanis (1999, p. 112) assert that: "eager to defend or expand a social program, advocates and politicians trumpet favorable research findings." As Besharov and Germanis would likely agree, this does not mean we should accept the success of the program without closely examining what should be improved and how improvements can best be made. Such inattentive assessment would not be serving the health of women and children, nor the public in general.

Even the authors of the studies generally cited as providing the most weight to the claims of WIC's success agree that research methodologies could be improved for the studies. Specifically, Devaney et al. (1992, p. 576) note that selection bias leaves researchers with the problem of interpreting findings that may be attributed to the impact of WIC in light of the measured and unmeasured differences that may have existed between participants and non-participants. Likewise, Devaney et al. (1992, p. 591) acknowledge that major changes to Medicaid and WIC have occurred since the late 1980s (the analysis period for their research) cautioning that cost savings estimations may not stand the test of time given substantial program changes. This current dissertation research provides a large databank of new data and does not suffer from this type of selection bias comparing participants to non-participants.

Another less frequently cited criticism of the existing research on WIC is that it suffers from simultaneity bias. For example, Besharov and Germanis (2000, p. 152) question the outcomes of existing research on WIC in terms of infant health outcomes since the longer a woman is pregnant, the longer she would have to enroll in the WIC program, and a longer pregnancy usually means higher birth weights which may therefore, not out of hand be attributable to WIC participation. Therefore, in that the primary studies cited by WIC as evidence of success may suffer from simultaneity bias, the need for closer examination of medical outcomes claims regarding WIC are even more pressing. Particularly since one of the primary success stories of WIC is that its proponents claim it reduces the incidence and level of low birth weight in babies.

The current dissertation research has mothers assess the program in terms of the help they received for their own infants and children. This information provides a crucial supplement to existing research on medical outcomes, particularly if critics claim the existing research may suffer from simultaneity bias. Besharov and Germanis (2000, p. 175) note that while they "believe that most WIC researchers have been sincere in their efforts to discern WIC's impacts, the plain fact is that methodological problems (such as selection and simultaneity bias) undercut their findings and make them too unreliable for policymaking."

Another methodological criticism found in the literature regarding existing research on WIC is the lack of generalizability of most of the research. Specifically, Besharov and Germanis (2000, p. 157) assert that most existing research on WIC suffers from a lack of generalizability in that it may not be nationally applicable because some studies address data from "only one state or only a few states." Although a valid criticism, since many states operate differently in terms of WIC implementation practices, many of the medical outcomes studies utilize data from national databases providing data on participants from a variety of states. It seems more problematic that in many cases the existing research may not be generalizable (due to selection bias) to the population of interest, namely, WIC participants since they are being compared solely to non-participants. Indeed, other researchers also view the problem differently, for example, Gregson et al. (2003 p. S13) note that "nutrition policy has been driven at the national rather than state or local level, so there is relatively little experience and a very small body of literature dealing with factors and strategies that influence systems and environmental and policy change at the state and local levels."

This current dissertation research provides data that may be generalized to non-participants in the program or program leavers while also providing information from the perspective of individuals who were once program participants. It provides an adequate sample size in order to statistically do so and rigorous methodologies in data collection. It also provides much needed information regarding how federal mandates and guidelines in the program are treated in the state and local environments and how discretion plays out to affect participants directly.

Certainly the methodological criticisms that have arisen in the literature regarding the existing research on WIC are enough to give rise to questions regarding the conventional wisdom that "WIC works," at least it can be questioned whether it works so well as to preclude closer examination and continued pursuit for program improvements. While some argue that studies utilizing comparison group designs consisting of participants versus non-participants are "inadmissible" as evidence of WIC's success (Burstein in Besharov & Germanis, 2001, p. 97), other authors are more cautious with regard to such criticisms. For example, Devaney (in Besharov & Germanis, 2001, p. 101) argues that there is some "validity" in much of the criticism posed by Besharov and Germanis but that "rather than dismiss the findings of all WIC program evaluations, a more productive approach would be to consider the sum of the evidence on WIC in light of the potential for selection bias" (p. 104).

While the debate regarding methodologies employed in the medical outcomes studies cited as evidence of WIC's success continues, the need for research on some specific aspects of WIC is plainly evident. For example, a GAO report (GAO-02-142, 2001, p. 29) noted that "few research studies exist on the effects of specific nutrition services," and that "the results of these (existing) studies provide few, if any, insights into the effects of specific WIC nutrition services." In addition to the same methodological problems cited by other authors, the GAO report (GAO-02-142, 2001) cites the limitations of available existing data as problematic because the prevalently used and available data sources do not include information on the types of services that individual participants receive, and the data analyzed most frequently is garnered from databases that may be too old to reflect program changes across time.

Further compounding the obstacles faced with regard to the advancement of research on the WIC program, USDA and CDC officials note that the amount of funding allocated for research on WIC by USDA is insufficient to collect primary original data and to conduct the kind

of complex research required to evaluate a program like WIC (GAO-02-142, 2001). Linked to this lack of funding for additional research is the conventional wisdom that the WIC program produces exceedingly beneficial health and economic effects that have already been demonstrated. In this context, organizational flexibility and program changes or improvements seem superfluous. Therefore, examining the organizational reality that has fostered premature departures from the program among participants, departures from a program with comparatively less stringent eligibility requirements than other government safety net programs and which is assumed to be highly beneficial for participants, seems particularly timely and valuable. This dissertation research provides a comprehensive study of the barriers to WIC program participation and an exploration of the organizational and policy contexts in which those barriers arise and are perpetuated.

This dissertation not only provides much needed empirical research on a federal food assistance program, it does so without yielding to the same types of methodological biases cited in the literature with regard to the existing research on WIC. Two primary theoretical threads are also introduced in this research in an attempt to explain the research findings regarding the barriers to program participation. Because evaluations of the WIC program have traditionally been approached from a medical and economic standpoint, alternative theoretical offerings that can provide context to research findings do not exist in the literature. This current research offers such a theoretical enhancement to understanding the research findings offered herein. Specifically, the data gathered in this research along with the organizational and policy contexts in which the WIC program exists are examined utilizing 1) a narrative approach to organizational sensemaking, and 2) symbolic interactionist theory.

Theoretical Framework and Context

The existing research on WIC has centered on analyses of medical and economic outcomes. To date, theoretical frameworks for understanding these findings regarding the program have not been provided. This study goes beyond answering the primary research question by providing and analyzing new empirical data on the program and also provides an examination of the organizational and policy assumptions and contexts that have facilitated the barriers to program participation discovered in this research.

Indeed, analysis of the data in this study suggests that in some areas, the dedication to the routines, myths, and conventional wisdom surrounding the WIC program, may have circumvented the mission, goals, or intentions of the program. For example, the findings of this research suggest that program participants sometimes behaved in ways they felt they were expected to by WIC program representatives and workers, behavior that was not always congruent with their own beliefs or needs.

Two broad theoretical threads are used in this research to describe the program participation barrier data collected by examining the processes and sites of meaning exchange and sensemaking by which large public programs may experience, contribute to, and perpetuate areas of malfunction while being consumed in an overarching organizational "story" of inherent success. Specifically, the data gathered in this research along with the organizational and policy contexts in which the WIC program exists are examined utilizing the foundation of symbolic interactionism to describe how meaning emerges and is exchanged within agencies or programs. Beyond that, examination of the organizational "texts" are analyzed in the tradition of narrative analysis, but also combined with the notion of sensemaking, to describe how sense is made within and outside the program of the "story" of WIC's success, and how this process may serve to hinder organizational change and ultimately, contribute to premature program departures among participants.

A foundation for the theoretical framework utilized in this current research is the tradition of symbolic interactionism. After originally coining the term in 1937, Blumer fully extended the basic tenets of symbolic interactionism in 1969 (p. 2) as 1) the ways in which we assign meaning to things or events shape our actions toward them; and 2) meaning is emergent, arising during interactions with others (and in turn, shaped by our interpretations after the interaction). This process is similar to what Weick (1995) would call the retroactive sensemaking process in organizations in that sense may be made or meaning may emerge or be made to fit after an event has occurred.

Symbolic interactionism is a foundational component of the theoretical framework utilized in understanding the data collected in this research because it describes the process wherein entities (such as individuals or agencies) do not necessarily react to the world, society, or each other in any objective sense. Rather, individuals (and indeed, organizations or agencies) react to the world, society, and each other based on subjective definitions or perceptions of these

things. The notion that we react to things as we have subjectively defined them is an important concept in understanding the data collected in this current research because it sheds light on the processes in which messages regarding programs may be constructed, experienced, and in a continual cycle, may in turn, fundamentally shape program outcomes and participation. Blumer's symbolic interactionism owes much to the work of George Herbert Mead (indeed, Blumer was a student of Mead's at the University of Chicago). Mead's influential work published posthumously, titled *Mind, Self and Society* (1934) provides the groundwork for much of the essential facets for symbolic interactionism. Specifically, Mead's (1934) focus on the importance of symbols and language in human interaction are integral to the tenet of symbolic interaction theory that meaning emerges from interactions and our experience and interpretations related to those interactions.

Also important in the development of symbolic interactionism was the philosophical tradition of pragmatism. In highly simplistic terms, pragmatism is generally thought of as embodying a practical approach to viewing and addressing societal and individual issues. It is the work of pragmatist philosophers such as Dewey to which some tenets of symbolic interactionism might be traced. For example, Dewey (1929, p. xiii) noted that "the need for security compels men to fasten upon the regular in order to minimize and to control the precarious and fluctuating." In this sense, Dewey's pragmatism highlights a fundamental aspect of organizational life in a public program such as WIC, namely, that when faced with contradictory or shifting information or realities, individuals and agencies search for security in that which is assumed and perceived to be fixed or known.

Also related to symbolic interactionism is the basic concept of the social construction of reality. Berger and Luckmann (1966) are most commonly associated with the idea of the social construction of reality. Essentially, the idea of the social construction of reality is that reality is not something that is factual, objective, or true and experienced universally by all individuals. Rather, Berger and Luckmann's (1966) socially constructed reality is something that is constructed or that which emerges through social interaction and is constituted and reified (assigned objective, real, or fixed status) and then filtered through perceptions and interpretations. Berger and Luckmann (1966) also addressed the process of institutionalization and the freedom from decision making it brings as routines are reinforced while the array of decisions available to individuals are narrowed into behaviors and habits that assume a taken for

granted quality. This reliance on habitual behaviors reflects the process in large public programs in which discretionary action seems inappropriate within a narrowed selection of choices for action that are based on program rules and expectations for behavior based on existing narratives.

The social construction of reality is an important theoretical construct in the examination of the findings of this current research on WIC. Specifically, because the funding for WIC has increased over the years and because the program has continued to expand in terms of enrollment, the constructed view is of course that the program is wildly successful. This is true to a degree largely, if not solely, in that more people are being served by the program. However, conducting research regarding the individuals leaving the program voluntarily and prematurely in terms of their reasons for program departure reveals questions about how the program could be improved to best suit the needs of clients, and how the unintended negative consequences of some of the operating procedures and symbols of the program could be sites for improvement.

Symbolic interactionism also owes much to the work of W. I. Thomas and D.S. Thomas (Thomas & Thomas, 1928, p. 572), whose notion that if we "define situations as real they are real in their consequences," suggests that that which is socially constructed earns objective status in the process of interaction. Indeed, it seems that the formal definition in operation related to the WIC program is that "WIC Works," with the fact that the slogan comes from the agency lending authority to the statement, making it difficult to reconcile when confronted with experiences that are contrary to this organizational definition. In utilizing this theoretical framework, one of the foundations of the idea of the social construction of reality is employed, namely, that although organizational reality may be socially constructed, the impermeability or rigidity of the boundaries of a world that is socially constructed around a public program is no less real or confining. Thus, the foundation of the social construction of reality and of symbolic interactionism that we react toward the world as we define, experience and indeed, construct it is an assumption for this framework.

Therefore, the premature and voluntary departure of participants from a program that is hailed as being highly beneficial to participants, may be viewed through the lens of how participants act related to their experience of the program and their understanding of the messages they receive regarding the program. The findings from this current research reveal that

the messages and definitions about the WIC program perceived and experienced by participants are influencing their premature departure from the program.

Rittel and Webber (1973, p. 155) introduced the notion of social policy dilemmas as "wicked problems" because they contended that science was equipped to address "tame problems" that entail objective definitions or undisputable goals. It is certainly accurate to view many social policy or program dilemmas as complex because they are inherently political and generally involve competing interests and goals. However, the view of social policy problems as unsolvable due to their complex nature seems to establish a system in which close examination of programs construed as successful is disdained. Further, how varying human experiences of a social program and the lack of a fixed objective reality surrounding a program or policy may be shaping social policy problems merits examination.

Indeed, in the case of the WIC program, the "wicked problem" of evaluating aspects of the program that may not work (and which may explain the premature departure of participants), is avoidable by clinging to the assumption that the program has been demonstrated to be successful and that there must be a mechanism in place for ensuring this. This process seems to fuel enrollment while circumventing a focus on fully investigating reasons for premature program departures among participants. Even the promotional slogans such as "WIC Works" inform the conventional wisdom that the program is successful in meeting its goals.

Likewise, related to the messages surrounding the program, it cannot be over-stated that there is an element of stigma involved in a variety of aspects of the WIC program. First, there is an element of negative social stigma involved for participants in accepting help from any kind of public safety net program. Further, there is negative stigma associated with a program that serves individuals with among the lowest levels of social capital (women and children with low levels of social connection, support, or socio-economic status). Therefore, shaping the messages regarding the WIC program at the level of implementation may be even broader societal messages related to how participants in the program are viewed in general.

Blumer's (1969) basic premise in symbolic interactionism that there is no inherent meaning, but rather that various meanings emerge depending on how they are perceived and defined or how individuals respond to them (and each other), is central to understanding the findings of this current research. For example, the daily actions involved in implementing a public program are often related to the definition of that program in the view of the administrator

of the program, the person delivering the services to a program participant, or the program participant. If a program is defined as successful (with specific studies cited as evidence of that success), a worker (or participant) may perceive specific actions as appropriate and may feel that assuming a discretionary role in altering an implementation practice is universally inappropriate. In turn, the meaning arising from these actions serves to reinforce the stories or definitions surrounding the program and shape the future behaviors and perceptions of participants, agency workers, administrators, policy makers, and the public, in a continual cycle.

Thus, as in Thomas and Thomas' (1928) theory of the impact of perceptions as they relate to situations defined as real, the messages regarding the success of a program, even though they may not be experienced or acknowledged by all involved parties in a similar manner may still have real consequences in shaping behaviors surrounding a program. This is a notion that is of fundamental importance to this current research since the message of the program's success as it is understood by many stakeholders in the WIC program, seems to be creating unintended consequences and affecting program implementation practices and outcomes, including premature participant departures.

Sandstrom, Martin, and Fine (2003, p. 10) note how Blumer, in symbolic interactionism, stressed that "although social definitions guide action… the interpretive process involves more than a reflexlike application of these definitions." This is an important insight regarding symbolic interactionism as it relates to this current research. It is in this interpretive process of applying these emergent definitions within organizations that a narrative approach may be useful, particularly when joined with Weick's (1995) concept of sensemaking in organizations. Specifically, it is in the areas in which such definitions are applied that sensemaking is needed and occurs.

A tool for understanding how the barriers to program participation and unintended consequences of some WIC program requirements may occur is extended in this research. Specifically, this tool is the narrative approach to organizational sensemaking. The foundation of the narrative approach to sensemaking in organizations begins with the notion of "sensemaking" introduced by Weick (1995). However, this approach joins this notion of sensemaking in organizations with the theoretical technique or tradition of narrative analysis by examining the organizational "stories" that are emergent within the organizational and policy

contexts associated with WIC. This form of examination is utilized to better understand how the barriers to program participation have arisen and are perpetuated for WIC participants.

The idea of master narratives or over-arching narratives that constitute and surround a public program does not mean that those who implement a program such as WIC at the local, state, and even federal level are consciously aware that a narrative surrounding the program is in play at all. Further, for a narrative (such as a program's unquestioned success) to fundamentally shape or bind a public program, it is not necessary that all program stakeholders view the narrative in the same way or even agree with it or recognize its existence. Indeed, interactions within and around the program may serve to contribute to or reinforce such a narrative (as delineated through the tenets of symbolic interactionism) even as it is experienced differently among individuals.

In the case of the WIC program, there are, as with all program and policy contexts, many narratives that inform organizational life. However, it is the narrative of the program's overwhelming success, as demonstrated by the research that is cited as evidence of the success that is most salient for this current research, as it seems to reinforce a resistance to organizational change and the level of support for research on the program. It is important to note that the narratives surrounding a program such as WIC are constantly being built or constructed. These narratives may also reinforce and allow repetition of the existing order or conventional wisdom that "WIC Works" perhaps to the exclusion of some other narratives.

As noted by Czarniawska (1998, p. 20) "organizational narratives are both inscriptions of past performances and scripts and staging instructions for future performances." Although continually being built, such narratives may have very real consequences on organizational life. In order to understand how narratives work in relation to organizations, a review of the notion of "texts" as they are related to organizations is useful.

The foundation of semiotics as a theoretical approach (and later, the traditions of structuralism, post-structuralism, and eventually postmodernism) are all important to mention in order that a more clear trajectory may be framed with regard to the theoretical foundation of organizational "texts" and the ways in which those texts are related to meaning in terms of the operations of a public program. Although the ideas related to the analysis of "texts" or "narratives" may be found in the organizational theory literature, when offered, they are often presented as common knowledge, or without explanation. Indeed, the notions of the social

construction of reality, and broader readings of "texts" and "narratives" seem to be assumed in many theoretical traditions in recent writings in fields such as sociology, literary criticism, feminist theory, art, architecture, and indeed, organizational theory. However, an exploration of the theoretical origins informing the ideas of texts and narratives within organizations seems particularly imperative since such information is noticeably lacking in the literature regarding policy evaluation and public administration, the foundations for the current study.

A major theorist in the area of semiotics or semiology is Roland Barthes. Marshall (1998, p. 592) defines semiotics and semiology jointly as "the study of signs and sign systems." Beyond semiotics however, Barthes' work may be viewed as serving as a foundation in understanding the process of how "texts" are constructed and may be "read". Smith (2001, p. 112) describes how Barthes' work contributed to the notion that "the 'reading of a text' is much more than the way individuals interpret written texts but rather, is more about the active processes through which they make sense of the symbols, myths and ideologies in the world around them." Accordingly, while language surrounding the WIC program such as "WIC Works" certainly conveys many impressions regarding the operations and outcomes of the program, the messages and narratives surrounding the program go far beyond language as is the case for example in the interactions program participants have with agency workers.

Barthes seminal work *Mythologies* (1957, trans. Lavers, 1972) allows for a "reading" of everyday popular culture in its demonstration of how meaning is embedded and assigned to texts and how this meaning is utilized in the process of making sense of the world around us. Thus, in this way, the early work of semiotics may be seen as providing a foundation for the process of organizational sensemaking as extended by Weick (1995).

Structuralism is a theoretical perspective often associated with authors such as Claude Levi-Strauss, Michel Foucault, and Jacques Lacan, as well as the work of Barthes. Structuralism posits broadly that there are "underlying and comparatively constant structures behind the shifting appearances of social reality" (Marshall, 1998, p. 646) and that the "varying relationships between them [the underlying elements of the structures] produce different languages, systems of ideas, and types of society" (Marshall, 1998, p. 647). The structuralist tradition is of note when examining a program such as WIC in that it is impossible to separate the structures (even those that are socially constructed) that surround WIC, including regulations and the political context of the program, and the messages surrounding the program, from

program operations and outcomes. Indeed, as a government program, certainly the WIC program is constituted of a number of political, social, and economic forces as well as an array of power structures that influence the social reality of the program, no matter the experience, interpretation, or perspective of that reality.

Building upon the structuralist movement but with some key differences is the work associated with the post-structuralist movement which may also serve as a foundation in understanding the theoretical trajectory of narratives and texts. The work of authors associated with this movement such as Michel Foucault (whose work is also associated with the structuralist tradition) and Jacques Derrida are important to the theoretical foundations of this current research because their work provides key contributions to the understanding of how texts may be read.

The focus in this movement on the existence of multiple truths and paths to knowledge and the discouragement of singular views and explanations is of note for the current research. Likewise, the concept of "deconstruction" most commonly associated with Derrida (1967, trans. Spivak, 1976), is important to the current research because as noted by Ritzer and Goodman (2004, p. 584), "Derrida is calling for a radical deconstruction of the traditional theater…a decentering…Derrida wants the theater to move away from its traditional 'center,' its focus on writers (the authorities) and their expectations, and to give the actors more free play." These notions of deconstruction and decentering are important as theoretical constructs related to the current research in that they not only provide acknowledgement that texts have power and that uncovering the way such narratives and texts inform public programs is important, but they also provide a methodological cue for reading texts through deconstructing their meanings.

With his *Archaeology of Knowledge*, Foucault (1969, trans. Sheridan, 1972) provides insight into the in depth analyses of texts and their relationship to the construction of knowledge. This approach indicates that in the deconstruction of texts there is hope in uncovering how knowledge is constructed in programs such as WIC.

Emerging out of poststructuralism, the significant postmodern theory movement is also important in relation to the theoretical foundations of this current research. Postmodernity is generally associated with ideas such as the disintegration of modernist symbolic orders, rejection of universals, and the denial of classes of modernity such as the state or the subject (due to their continual referencing) (Marshall, 1998, p. 512). In postmodern theory, reference to texts and

narratives in a myriad of different forms and the deconstruction of such texts and narratives are common. Indeed, the idea that human experience is one of being bombarded by such "texts" is a thread in postmodern writings. The word "postmodernism" is commonly credited to historian Arnold Toynbee (Marshall, 1998). However, Lyotard's book *The Postmodern Condition* (1979, trans. Bennington & Massumi, 1984) is known as a primary work in which the characteristics of the condition of postmodernism, the decentered nature of life are described. In addition to Lyotard and Foucault mentioned earlier, authors such as Fredric Jameson and Jean Beaudrillard are also considered to be primary contributors to the arena of postmodern theory.

Lyotard would certainly reject the use of a singular narrative such as the narrative of a program's success to succinctly explain all organizational action, indeed, he ends his primary work on the postmodern condition in part with the phrase "let us wage a war on totality" (1979, trans. Bennington & Massumi, 1984, p. 82). However, this current research is utilizing the concepts of "reading a text" and "narratives" within organizations to broadly demonstrate how knowledge is created, perceived, reinforced, and perpetuated in public programs, rather than as a universal synthesizing principle or truth. The thread or master narrative that "WIC Works" is used in this research as an example of how the process of knowledge construction and exchange plays out within organizations, and may serve to actually hinder the true success of a program. This current research assumes that there is no single interpretation or experience of such narratives or knowledge and that this is the aspect of postmodernism that Lyotard described as allowing "the toleration of the incommensurable" (Lyotard, 1979, trans. Bennington & Massumi, 1984, p. xxv). Indeed, the findings of this current research suggest that this ability to remain flexible in the midst of a bombardment of conflicting messages may be an important facet of fostering future improvements in the WIC program.

Although such a theoretical stance may out of hand be dismissed as not "falsifiable" in the tradition of scientific management, functionalism or even performance benchmarking by those who seek to evaluate policies or advance knowledge in public administration, a general overview of postmodernism may be useful as a tradition, along with semiotics, structuralism, and post-structuralism, simply as foundations for understanding notions like "reading texts" or "socially constructed reality" that are often referenced in some literature subsets as taken-for-granted. These theoretical traditions serve as foundations in describing the primary theoretical framework offered in this research (that of narrative sensemaking and symbolic interactionism).

Expanding on the foundations of postmodern theory, authors join theoretical threads from other traditions such as feminist theory to continue to reinforce the use of narratives and texts as sources for better understanding social phenomena, particularly in areas that involve inequality. For example, Denzin (in England, 1993 p. 204) describes a text as "any printed, visual, oral, or auditory production that is available for reading, viewing, or hearing" and posits that "readers create texts as they interpret and interact with them...while the meaning of a text is always indeterminate, open-ended, and interactional." Denzin's view on deconstruction in relation to cultural texts that inform inequality is that "deconstruction is the critical analysis of texts (and) a process that explores how a text is constructed and given meaning by its author or producer" (in England, 1993, p. 204).

Beyond just describing how texts may be read, authors such as Cooren (2004), Hardy, (2004), Czarniawska (1997) and Chreim (2007) are beginning to note how organizational texts serve a constitutive role. Indeed, Cooren (2004) addresses the active contribution of texts to organizational processes as textual agency. Czarniawska (1997, p. 5), referencing Lyotard's introduction of the notion of narrative knowledge, offers that "narrative knowledge comes close to the metaphor of the world-as-text; it alerts us to the ways in which the stories that rule our lives and our societies are constructed."

In the case of public programs (and one could argue particularly for those affecting the health of citizens) it is of particular value to note the ways in which perceptions of programs are generated and perpetuated since these mechanisms may shape the primary assumptions surrounding how programs are evaluated with regard to their efficacy in meeting goals and serving the needs of citizens. Czarniawska (1997, p. 24) sums up how knowledge is reinforced within organizations with the statement: "the taken for grantedness of institutionalized action sometimes leads to the mistaken conclusion that such action does not require to be justified or accounted for. Wrong. It may not invite shock or problematization, but it assumes an institutionalized account, which in fact is an inseparable part of action itself."

Hatch (1997, p. 375) identifies the emerging stream in postmodern organizational theory of addressing the "ways in which talk and text produce and reproduce organizations" and connects this to the tradition of organizational and cultural theorists examining "myths, metaphors, and stories" as they relate to organizations. Weick (1995, p. 128) also directly addresses the role of organizational "stories" in sensemaking within organizations by describing

the process in which stories help to make the unexpected acceptable or even expected within organizations, suggesting that "stories posit a history for an outcome." Likewise, Mills, Boylstein, and Lorean (2001, p. 118) note that "this mutually produced storytelling system (in organizations) creates a stage upon which story performances serve as keying mechanisms that assist in replacing individual worlds with an official, institutional reality."

Another theoretical thread in the literature that is useful in understanding the findings of the current research and the use of the narrative approach to organizational sensemaking is the technique of viewing the organization as theater. The theater metaphor for organizations may be traced to the work of Goffman (1959), in which he describes the duality of humans when we are confronted with the demands of expected behavior and must hone images that are presentable in various circumstances. Goffman viewed this process as a dramatic performance.

Goffman argued that because people generally try to present an idealized picture of themselves in "front stage" performances, they inevitably feel they must hide things that should be repressed and are reserved for the "back-stage" while also fostering a social distance which may create a sense of awe in the observer (Ritzer & Goodman, 2004). Goffman's (1959) dramaturgical analysis of interaction provides important information with regard to the type of narrative sensemaking that may be used to describe the current findings related to the WIC program in this research. Specifically, it seems that WIC participants who left the program prematurely, in many cases felt dissonance between the "front stage" behaviors in which they engaged with their WIC workers, and their perception of the behaviors they were engaging in (or thought they should engage in) outside the WIC office in terms of health practices. The meaning that arose during these interactions seems to have ultimately shaped their perceptions of the program and in turn, their premature departure from the program.

The fact that the WIC program is played out on a political stage in which certain types of performances on behalf of workers and participants have come to be expected also fundamentally shapes program procedures as well as outcomes. In the case of the WIC program, Czarniawska's (1997, p. 35) statement utilizing Goffman's stance of a theater metaphor that "politics does not simulate reality but creates it; a successful "make-believe" makes people believe" is particularly salient. Specifically, the effects of the "WIC Works" sound bite and the political forces that shape the funding for the program and program regulations (due to the stakes of competing interests in the program) may be seen in both the implementation of the program

and program outcomes. Indeed, the findings of this current research suggest that the ability of politics to shape, support, or discount messages surrounding the WIC program plays a key role in the experience of program participants and may in turn have influence with regard to premature program departures among participants.

With regard to how sense is made in relation to narratives, how meaning emerges that is continually informed by those narratives, and how the WIC program barriers discovered in this research arise and are perpetuated, a particularly illustrative example may be found in Weick's (1993) description of sensemaking in organizations with regard to the Mann Gulch disaster. The important parallel from the Mann Gulch disaster examined by Weick (1993) to the current research on the WIC program, is that the firefighters' refusal to drop their heavy tools introduced unintended and devastating consequences (the deaths of fire fighters who refused to drop their heavy tools and be saved because it was contrary to conventional wisdom and their understanding of what behavior was expected in such a situation). This example illustrates a primary point stemming from the findings garnered in the current research. Specifically, that the inability to engage in the "tool dropping" proposed by Weick (1993, 1996) in a public program may have serious consequences, such as the goals of the program not being met, citizens not receiving the potentially beneficial services they need, or premature program departures among participants. Thus, it is essential in the examination of large public programs to note that meaning is emergent and honing an openness to operating in the face of events that may not fit within the prevalent organizational narrative or story are important with regard to program improvement and success.

The metaphor of tools is an important one in the case of the WIC program. Public programs must be able to drop their version of tools (e.g., standard operating routines or mechanisms for administering a program) and to remain open to the fact that not all tools work in all cases or for all participants and that there may be more effective tools that look different than anything that is currently being utilized or even imagined for a program. Unfortunately, the reluctance to drop organizational tools may actually reinforce perceptions (within agencies and for the public) of an impenetrable boundary surrounding programs that may discourage perceived boundary breaches in the form of questioning, additional research, flexibility, or discretionary action.

This current research builds upon Weick's (1995) notion of sensemaking in organizations by combining it with the narrative approach to studying organizations. Weick (1995, p. 41) notes the common linkage between symbolic interactionism and organizational sensemaking in the elements of "self, action, interaction, interpretation, meaning, and joint action." Likewise, sensemaking within programs and organizations may involve the continuous making of sense through images that are constructed to retrospectively rationalize or explain actions and events (Weick, Sutcliffe, and Obstfeld, 2005). Narrative analysis allows for an examination of those rationalized actions and events through the messages that surround the program. For example, it may be noted how the slogan of "WIC Works" or the interpretations of the ideologies or information behind the slogan serve to inform the actions of those administering the program as well as the actions of program participants.

A clear link to the utility of narrative analyses in understanding the sensemaking process is made by Weick (1985, in Weick, 1995, p. 41) when he notes that "words induce stable connections, establish stable entities to which people can orient, bind people's time to projects, and signify important information. Agreement on a label that sticks is as constant a connection is likely to be found in organizations." Beyond words, narrative analyses are useful with regard to any myriad of symbols or forms of texts generated within or about organizations. As noted by Morgan (1986, p. 343), such images and metaphors "are not only interpretive constructs or ways of seeing; they also provide frameworks for action."

Because the theoretical context for viewing the results of this current research focuses on the binding nature of conventional wisdom and the relationships between environments and organizations, it is important to broadly mention the literature of institutionalism and new institutionalism. Fundamentally, the institutionalization and acceptance of the story of success surrounding the WIC program shapes action related to the program. Scott's (1995) three pillars of institutions may be applied to the theoretical framework of this current research to 1) describe the impact of regulation on participant experiences and WIC program routines, 2) explain the social and moral aspect of providing health services that are intended to benefit low income women and children, and 3) highlight the taken for granted nature of the rules and narratives surrounding the program.

In relation to the tradition of institutionalism Hatch (1997, p. 85) notes that "rationalized myths are part of the institutional context in which organizations operate and to which they adapt

in order to maintain their social legitimacy." The notion of rationalized myths describes the story of success in the WIC program in that the dedication among those administering the program to the institutionalized story and corresponding rules of the program appears to be in conflict with program participant needs in many cases. Indeed, the perverse incentives revealed in this research include aspects of rules of the program that when followed, invite participants and workers to engage in behaviors that create clearly unintended and negative consequences for the program and participants. It is in these instances that the need for administrative discretion based on values informed by something beyond the myths and narratives surrounding the program is essential.

Not only do policy makers and program directors have a governance role in bringing the health services of WIC to the people, the decisions of street level bureaucrats (in this case the local program administrators and workers), as well as program participants, have very real consequences for how services are delivered and indeed, on how the program is administered overall. In this sense, knowing upon what texts, messages, or understandings these decisions are based, and how meaning around such messages arises, becomes vitally important. In the case of this program, it seems organizational decisions are based on the socially constructed reality of the program and a conventional wisdom that "WIC Works." The behaviors stemming from the sorting out and sensemaking conducted by individuals when confronted with information that challenges their views on the socially constructed reality, serve to reinforce existing stories or conventional wisdom.

Scheibel (2002, p. 316) notes how organizational stories may reveal the process of enactment, selection, and retention (as described by Weick) and that the process of actually carrying a story out or dramatizing it within an organization is the product of past instances of sensemaking. The continuous reinforcement of this seemingly fixed or inevitable facet of a public program, such as the story of the success of existing routines and procedures, may further contribute to the reluctance of administrators and participants within an agency to drop existing tools and remain flexible.

Hatch (1997, p. 42) notes that "according to social construction theory, this enacted environment is then presumed to have caused both analysis and decisions as if it were separate from them." Therefore, even when something contrary to common sense occurs within a program, it is often the story or corresponding messages related to the success of the rules of the

program to which a worker or participant may be reacting. Rather than remaining flexible to deal with the situation at hand as it may be perceived at the time, the equation and story created during sensemaking support the ideas that there must be research on the program that demonstrates the success of existing program rules and that continuing to remain loyal and rigid with regard to program rules and routines must cause and perpetuate the success of the program.

As described in this chapter, a review of the existing literature regarding WIC reveals the need for the data and analyses provided in this current study. A conclusion of this study is that WIC is a beneficial program for participants (even among those who have left the program prematurely) but a need for flexibility in program delivery and in the ways of viewing the fundamental assumptions that exist about the program are needed. This need for flexibility in program delivery and in the ways of viewing assumptions about the program may be aided in honing the ability within public programs among administrators and participants to engage in the form of "tool dropping" noted by Weick (1993, 1996) and described in the framework presented in this research.

3

Research Methodology

Overview of Data Collection Methodologies Employed

In the current research, a statewide WIC program was examined in order to identify factors that cause families who are eligible for the program (as defined by the state in which the study was conducted) to exit the program prematurely and voluntarily. Research methods including both qualitative and quantitative elements were employed to collect the data necessary to identify the barriers to program participation. These research methods were also used to garner information from which a composite typology of WIC program "leavers" was developed utilizing the various program participation barriers cited by former program participants during the study.

The more qualitative portion of the study included the development of a semi-structured survey for administration utilizing a Computer Assisted Telephone Interviewing (CATI) program (302 interviews were completed as part of this first phase of data collection). This first phase of data collection was intentionally somewhat exploratory in nature in order to guide respondents with respect to the type of program participation barriers of interest (possible areas of program improvement), while eliciting detailed responses regarding specific influences on program departure. Specifically, in this semi-structured interviewing phase of data collection, a survey instrument with a number of open-ended survey items regarding reasons for WIC program departure was developed and administered.

The second phase of data collection involved the development and administration of another more comprehensive, primarily fixed response choice survey instrument administered utilizing a CATI program. This second phase of data collection yielded a wealth of robust quantitative data with which to perform additional statistical analyses (1,504 interviews were completed as part of this second phase of data collection).

A unique aspect and primary strength of the research methods employed in the study is that they avoid the type of self-selection bias offered in the literature as a fundamental critique of the existing available research on WIC. This current research evaluates the WIC program from the standpoint of both the WIC participant and the non-participant in that all respondents were at one time participants but were no longer participating in the program at the time of data collection for the study. However, the important methodological difference in this current research with regard to avoiding self-selection bias is that this study does not entail a comparison of individuals who never participated in WIC against those who have chosen to participate in WIC. This distinction is made because as mentioned in the previous chapter of this document, a serious critique of the primary studies cited as evidence of the success of the WIC program is that they suffer from self-selection bias in comparing WIC recipients against those who never participated in the program.

A number of medical studies have been conducted for the purpose of assessing WIC program participant outcomes. However, some scholars such as Besharov and Germanis (2000), and Rossi (1998) have suggested that mothers enrolling in the WIC program may be different on some unknown variables than mothers not electing to participate in the program. For example, it is possible that these WIC enrollees may engage in more healthful practices and that this may contribute more to the positive health outcomes for their infants, with the WIC program possibly not being a factor or the sole factor in these outcomes. Therefore, these authors suggest that the plethora of medical evaluations of the program may suffer from self-selection bias in that these studies focus on comparing women enrolled in and eligible for the program against those who are not enrolled in nor declared eligible (although estimates of eligibility may be conducted) for the program.

The current research avoids this potential type of bias in its sampling design because it is a study of individuals who enrolled in the WIC program, who are defined by the state as being still eligible for the program, but who choose to no longer participate (as opposed to an attempt to evaluate the program by comparing an eligible population of individuals who were never enrolled in WIC against a population of WIC participants).

Another unique aspect and strength of the research methods employed in this current research is the focus on rigorous data collection techniques. Specifically, the data collection

tools and methods employed make use of techniques and knowledge garnered in a number of allied survey projects completed for public agencies over the past decade. The methods employed in this study focus on ensuring representation of the population of interest through proven data collection mechanisms. For example, the survey pre-testing, CATI programming and debugging, call disposition monitoring, minimum number of call attempts, determination of eligible sample for the purpose of calculating response rates, interviewer training and protocols, and data coding and tabulation procedures are informed by survey research practice at an academic survey unit. The data collection was performed at the Virginia Tech Center for Survey Research, directed by the researcher.

The CATI programming measures utilized during the study ensured that interviewers were not allowed to enter data which was outside the range of pre-specified response categories for closed-ended survey items during both data collection phases. The researcher trained all interviewers working on the project in general interviewing technique training sessions, CATI training sessions, and in a project specific training session for each data collection phase of the project utilizing training materials developed by the researcher. Real-time verification of responses was also provided as the interviews were conducted. The CATI programs developed for each phase of data collection allowed the survey instruments to be programmed such that most types of non-response were not possible.

Results from the two phases of data collection are used in this research to provide original data and analyses in answering the research question of why eligible families are leaving the WIC program prematurely and voluntarily. Further, these original data provide information allowing for a better understanding of the individual program participation barriers cited by the survey respondents and a better understanding of what types of participants leave for what reasons. In utilizing the responses provided by former participants in this study, these findings regarding the barriers to program participation are linked to the policy, organizational, or implementation components that may inform premature WIC program departure by program participants. The theoretical framework utilized in this research provides a lens through which to view these findings.

Sample Selection for Qualitative and Quantitative Data Collection

A set of research participant contact records utilized in the data collection phases of this research (also known in the field of survey research as a "sample" set) was developed for this study employing databases of contact information provided by a state Department of Health. Included in the sample set was contact information for individuals who were reported by the state Department of Health to be participants in the WIC program, eligible for the WIC program at the time of selection, but whom no longer participated in the program at the time of selection.

Tracking measures were undertaken by the researcher in order to locate updated contact information for sample members for whom state agency contact information was determined to be invalid. Two forms of telephone number tracking were undertaken: 1) reverse look-up of telephone numbers by Survey Sampling International using the most recent known addresses of program participants provided by the agency; and 2) telephone calls to directory assistance for the locality listed along with the most recent known address for the former program participant. Former WIC program participants who were selected for inclusion in the survey sample and who remained as non-respondents in the last month of data collection for the study were left messages with a toll free number to call the researcher in order to complete the interview.

Because many of the families leaving the WIC program prematurely may re-enroll in the program at a later date due to changing personal circumstances, and because contact information for social welfare program participants in the state in which the study is being conducted is known to be unstable across time[1], contacting program participants as soon as possible after their departure from the program was particularly important.

The Department of Health in the state in which this research was conducted worked with the researcher to select contact records for eligible program participants who had not continued their enrollment in the program at the initiation of the data collection phase of the study. Specifically, study participants were selected using the following criteria: 1) all eligible program participants within the state enrolled in the WIC program as of June 31, 2003 but no longer enrolled as of August 1, 2003 (the program has a 30 day grace period for re-enrollment); 2) all eligible program participants within the state enrolled in the WIC program as of August 31, 2003

[1] Data collected in studies conducted by the researcher at the Virginia Tech Center for Survey Research with current or former participants in a number of social welfare programs using state databases for contact information have required program participant tracking and locating measures beyond those utilized in some standard general population surveys in order to achieve the highest response rates possible.

but no longer enrolled as of October 1, 2003; and 3) all eligible program participants within the state enrolled in the WIC program as of September 30, 2003 but no longer enrolled as of November 1, 2003. All sample members included in the study were eligible to participate in the program according to their most recent WIC program certification records at the time of data collection.

All sample members for this research study left the WIC program voluntarily in 2003 during one of the three month-long periods chosen for examination. All sample members left the WIC program while, according to state agency records, they were still eligible to participate in the program. The state sent the researcher more than 15,000 cases from the three months selected for examination in this study from which to select the survey samples. This number of cases provides some indication of the magnitude of the problem of unexplained departures among eligible participants in the WIC program, lending even more significance to the findings of this research.

After contact information for the selected participants was received from the Department of Health, all records were then systematically randomized and grouped into replicates (a common term used for sets in the survey research and sampling industries) of fifty or one hundred records by the researcher. This process ensured that participant records selected for the data collection phase of the study were not arrayed by program participant type, geographic locality, or any other identifying variable associated with the case contact.

For the initial semi-structured interviews, it was important that a stratified sampling design be employed so that interviews would be completed with individuals from different localities across the state. This was important because the initial more qualitative portion of the study was intended to gather more broad and exploratory information in order to inform the development of the survey instrument to be utilized in the second phase of data collection. A stratified sampling methodology was desirable for this initial phase of data collection because the intended goal for the number of completions was much smaller than for the larger more quantitative portion of the study and it was preferable to have completions from across the state (and had an unstratified sampling methodology been employed the possibility would have existed that some areas of the state would go unrepresented in this exploratory portion of the study due to the small population size in some areas of the state).

Therefore, after randomization of the individual records was employed for the semi-structured survey portion of the study, computerized quota cells were created to ensure distribution of interview completions across all program localities. The researcher established quota cells in the CATI system during telephone survey data collection to establish priorities for the completion of records in different localities. These quota cells were established while still preserving the randomization of records. It was important to have this regional representation in the data from across the state because regional differences in responses may have been present and the data from this initial semi-structured survey phase were later utilized to shape the survey employed in the second more comprehensive phase of data collection.

Because different implementation and program delivery sites exist in different areas of the state, representation in the study for "leavers" from across the state (representing different program delivery areas) was particularly important in the initial phase of data collection because the data garnered in this phase were to be utilized in the final development of the survey instrument that was used in the second, large-scale data collection effort. Because understanding how different implementation practices across different localities might impact barriers to program participation is important, ensuring that a survey instrument was developed for the large scale data collection effort that would capture information regarding such implementation practices was essential.

A total of 1,359 cases were selected randomly within the geographic areas of interest (5 regions of the state) for inclusion in the study. For the large-scale data collection effort a total of 5,750 cases were selected randomly from across the entire state among all unique records (excluding duplicates) provided by the Department of Health.

For the initial semi-structured interviewing phase of data collection contact attempts were made for a total of 1,359 records. Interviews were fully completed with 302 individuals. The response rate for this initial semi-structured interviewing phase of the study is 41.8 percent with a cooperation rate of 78.9 percent. For the second large-scale data collection effort, contact attempts were made for a total of 5,750 records. Interviews were fully completed with 1,504 individuals. The response rate for this second data collection phase of the study is 35.0 percent with a cooperation rate of 77.1 percent.

These response and cooperation rates were calculated utilizing the American Association of Public Opinion Research (AAPOR) outcome rate calculator recommended for use by the

Association for survey research professionals (Daves, AAPOR outcome rate calculator version 2.1, 2003).

The researcher chose to utilize the most conservative (minimum, yielding lowest percentage) formulas available from the AAPOR outcome rate calculator (2003) for calculating the response and cooperation rates for both portions of the study. Specifically the AAPOR RR1 formula was selected to calculate the response rates as follows: I/(I+P) + (R+NC+O) + (UH+UO) in which I = complete interviews, P = partial interviews, R = refusal/breakoff, NC = non-contact, O = other, UH = unknown household, and UO = unknown other. The AAPOR COOP1 formula was selected to calculate the cooperation rates as follows: I/(I+P) + R + O), using the same definitions as provided above.

The final call disposition counts utilized with the formulas for the calculations provided above were as follows for the initial semi-structured interviewing phase of the study: I (complete interviews) = 302, P (partial interviews) = 11, R (refusal/breakoff) = 15, NC (non-contact) = 109, O (other) = 55, UH (unknown household) = 230, UO (unknown other) = 0. The final call disposition counts utilized with the formulas for the calculations provided above were as follows for the second large-scale phase of data collection: I (complete interviews) = 1,504, P (partial interviews) = 35, R (refusal/breakoff) = 145, NC (non-contact) = 76, O (other) = 266, UH (unknown household) = 2,271, UO (unknown other) = 0. The AAPOR outcome rate calculator excludes from rate calculations records defined as not eligible (for example, wrong numbers, non-working numbers, and non-residential numbers). For the initial semi-structured interviewing phase of the study there were 637 ineligible records. For the second large scale data collection effort there were 1,453 ineligible records.

The researcher gathered more specific call disposition information as part of the survey administration process by establishing nineteen different disposition codes for use with the computer assisted telephone interviewing system to aid in the call scheduling and tracking for this research. For example, some calls were ruled out for completion and were not re-attempted based on call dispositions such as “hard refusals” in which a household member affiliated with a sample record telephone number asked never to be called again, whereas some call disposition codes warranted a call re-attempt at a later date such as a “temporarily disconnected” code.

In addition to a wide variety of call outcome or process oriented disposition codes, several call disposition codes were related to information provided by a household member or

respondent. A particularly important disposition code that yielded some interesting information regarding WIC program records was related to a screening question that was included in the survey. Specifically, this screening question was included in order to confirm WIC program departure (and dates for departure) prior to beginning the semi-structured interview with a potential respondent. Sample members reporting that they had received a WIC check in the past month were eliminated from the eligible sample pool for interviewing and their call records were automatically assigned a call disposition code accordingly.

The state Department of Health provided all the records for the study and indicated that all records provided represented cases in which the individual was still eligible for program participation but had elected to leave the program. This is interesting in that 69 respondents contacted in the initial phase of exploratory data collection indicated that they believed they were still on WIC, with 8 respondents indicating that they believed that had never been on WIC. In the second phase of data collection, 151 respondents indicated that they believed they were still on WIC, with 24 indicating that they believed they had never been on the WIC program. These cases were not treated as completed interviews and were coded with disposition codes which led to their assignment as ineligible records.

This finding that a number of records selected by the state for inclusion in the study represent cases in which individuals either believe they are still participating in the program or that they were never officially enrolled in the program, indicates that perhaps 1) some program participants mistakenly believe that they are still on the program when they are indeed, no longer on the program according to state records, and/or that 2) state records include some errors with regard to program eligibility and continued participation, and/or 3) some participants complete the requirements to enroll in the program but never utilize services because they do not understand that they have actually enrolled or met the requirements for participation.

Because this study included a grace period for the records provided by the Department of Health in order to ensure that former participants did not re-enroll during their grace period for re-enrollment, it is likely that sample members may have been unaware that they had officially been dropped from the WIC program do to failing to meet participation requirements for re-certification. In some of the cases in which individuals reported that they were never on WIC, interviewers were told by the respondent that they had thought of enrolling but never did. In these cases, it seems that the sample members were simply unaware that they had met all the

requirements for participation and simply thought they never participated or utilized the services and had therefore, never been participants. It is also possible that these cases represent errors in telephone number tracking and are simply wrong telephone numbers for individuals with the same name and geographic location as provided in the record provided by the Department of Health for the former program participant.

In order to ensure the randomization of completed interviews within the sample records selected for the study, the researcher programmed all call scheduling in the computer assisted interviewing system. This programming was performed so that each sample member record added to the calling pool and remaining as a non-respondent at the completion of the project was attempted to be reached ten times on average at different times of day on different days of the week. This generous number of call attempts aids in improving both the representativeness of the data and survey response rates. This high frequency of attempts for telephone numbers contrasts strikingly with less scientifically-based designs in which the focus is more on meeting a certain target number of completed surveys or a non-representative quota of completed surveys, and in which after trying a telephone number without success in completing an interview, the number is abandoned. The method utilized in this research focuses on increasing the likelihood of inclusion of sample members who may be more difficult to reach by telephone, with this difficulty possibly being associated with different characteristics that may be unique to these individuals and potentially having effects on their survey responses.

Sample records were selected for the qualitative and quantitative portions of the study such that a sufficient number of records was selected for the qualitative study to 1) provide enough information to shape the survey instrument used in the quantitative portion of the study (original completed semi-structured interview goal N=300, final completed N=302), and 2) such that an adequate number of records were selected to ensure the completion of at least 1,500 surveys in the quantitative portion of the study (final completed interviews for the second phase of data collection N=1,504). Accordingly, the earlier cohort of "leavers" from July 2003 was used for the qualitative portion of the study and the "leavers" from August and September 2003 were used for the quantitative portion of the study.

Qualitative Data Collection (Phase I Data Collection)

Because little information exists regarding the specific reasons WIC program participants leave the program prematurely, an exploratory semi-structured interviewing protocol was developed by the researcher in order to yield more information about why eligible program participants leave the program. This initial exploratory open-ended telephone interviewing protocol was developed based upon a preliminary review of the literature regarding the WIC program and was then eventually approved by team members at Virginia Tech's Institute for Public Policy Research and the state Department of Health. The interviewing protocol was designed to allow respondents to be guided by the use of structured questions while allowing them to identify any reasons that they consider to be factors in why they left the WIC program. After each reason for program departure was identified, respondents were prompted for more specific open-ended comments regarding that particular reason.

Specific probing questions related to ten aspects of WIC program participation that may have influenced the former participants to leave the program prematurely were included in this initial data collection instrument and respondents were encouraged to elaborate on any of the broad program participation aspects addressed. Other survey items addressed respondent perceptions about, and satisfaction with specific aspects of the WIC program for which information regarding program participants is lacking in the literature. For example, survey items regarding the following potential barriers for participation were included: confusion regarding qualification (thought they were no longer qualified for participation), no longer wanted assistance, dissatisfaction with food choices/selection in WIC food package, location of WIC-approved store was inconvenient/too far, too much of a hassle/too much paperwork to participate, participation required too much time in the clinic, educational programs were not helpful, had problems with agency staff, transportation issues, childcare issues, and other issues.

The initial survey item regarding barriers to participation in this initial more qualitative phase of data collection simply asked "what are the reasons you stopped participating in the WIC program". After repeated prompting from interviewers to ensure that respondents had no further barriers to participation beyond those they originally mentioned, interviewers coded (numerically and automatically in CATI) the barriers into the categories above. After coding the responses into these initial categories, interviewers followed with an open-ended prompt question asking

respondents to elaborate on the barrier cited. These open-ended responses were typed by interviewers utilizing the CATI program developed by the researcher.

In addition to these more exploratory items related to barriers to program participation, respondents were asked a number of targeted questions in this initial phase of data collection in order to garner more detailed information regarding specific aspects of the program that may affect participation, such that this information could be utilized in the development of the survey instrument to be used in the larger, second phase data collection effort. Specifically, more targeted survey items addressed the ease with which respondents were able to find WIC approved stores and WIC approved foods in the stores, satisfaction with food packages, logistics of clinic attendance, utility of specific services, location of program delivery, and assessment of household food security. Many of these survey items were followed with open-ended questions in this initial phase of data collection regarding whether each of these facets of WIC contributed to the individual leaving the WIC program prematurely.

A variety of demographic items and items related to respondent participation in programs other than the WIC program were included in order that the researcher would be able to estimate actual WIC program eligibility for each respondent from the responses garnered using state income and program participation criteria. This information was also used to estimate the level of need and food security for each respondent.

Specific probing techniques were utilized in order to test survey questions (for use in the survey instrument to be utilized in the larger, second phase of data collection) and to elicit elaboration in open-ended responses. The researcher trained interviewers in probing techniques that have been demonstrated in other surveys conducted by the researcher to elicit more complete and accurate responses from respondents. For example, once a barrier to WIC program participation was cited by a respondent, interviewers continued to probe with the phrase "any other reasons?" until the respondent could no longer think of barriers to participation. This technique assists in preventing respondents from selecting the first barrier mentioned by interviewers and feeling as if they can only select a single barrier.

Interviewers were also trained to read back paraphrased open-ended responses to respondents before moving on to subsequent questions. This technique used with open-ended survey items serves two purposes: it allows respondents an opportunity to clarify or correct any misrepresentations of their response and it allows the interviewer to keep respondents engaged in

the interview, avoiding silence on the telephone that can occur as interviewers are entering the open-ended response into the computer. This technique of maintaining the exchange of dialogue during the interview serves to enhance the completion rate of interviews.

The initial completion of the 302 semi-structured interviews served as an elaborated pre-test for the survey instrument used in the second phase of data collection (the structured survey of 1,504 respondents). Specifically, this second phase of data collection utilized a revised version of the original semi-structured survey instrument translated into a primarily closed-ended format and incorporating the information garnered in the semi-structured interviewing phase. This utilization of the semi-structured interviews as a pre-test for the final survey instrument to be used in the second, more comprehensive phase of data collection represents a substantially enhanced number of pre-test completions than the minimum number traditionally recommended in survey research. For example, Fowler (1993) notes that a standard pre-test would include an N of 20-50 completed interviews for the purpose of pre-testing. The substantially enhanced number of pre-tests utilized in this current research allowed the researcher to not only improve the survey instrument for administration purposes (flow, clarity, length, amelioration of context and process effects[2]), but also allowed for more qualitative information to be gathered which informed the development of items for the second phase of data collection.

As part of the pre-testing process utilizing the semi-structured interviewing instrument, both traditional or standard as well as more advanced survey research pre-testing methods were used. Specifically, the researcher conducted a standard pre-test in which a sub-sample of interviews were completed utilizing call records that were eligible for inclusion in the actual data collection phase, and using the semi-structured interviewing instrument designed for use in the study. Further, the researcher also conducted an interviewer debriefing session and employed behavior coding to improve the survey instrument. Campanelli (2005) cites these pre-test techniques as improvements over the most common form of pre-testing which generally entails testing a survey only through the administration of a small number of practice surveys.

[2] Effects on data outcomes that may be introduced with regard to the context or placement of survey items in relation to one another are known in the field of survey research as context effects. For example, the order in which questions are presented to respondents may affect the data garnered from those survey items. Process effects are effects on data outcomes that may be introduced through survey administration process mechanisms including aspects of data collection like interviewer error such as providing unscripted information to respondents or CATI programming errors.

The pre-test of the semi-structured interviewing instrument was multi-phased in that the survey development took place in an iterative process in which the survey instrument was pre-tested and then revised accordingly, and then pre-tested again, through several iterations. Once a workable instrument was finalized by the researcher, all cases included in the final dataset for the semi-structured interviewing phase of data collection were obtained by utilizing the final data collection instrument (i.e., none of the original pre-test cases were utilized as part of the final dataset).

Data from this initial data collection phase of the study were used to develop the primarily closed-ended question survey instrument that was employed in the second, more expansive data collection phase of the study. Results from the initial semi-structured survey phase of the study were also analyzed as part of this research (in combination with the data garnered in the final second phase survey of 1,504 former WIC participants) and are used to inform the findings regarding the reasons why eligible WIC families leave the program, and the types of individuals who leave for particular reasons. Specifically, after the reasons WIC participants leave the program were analyzed utilizing the survey data collected in the second phase of data collection, more qualitative data from these initial open-ended interviews were utilized to provide more in-depth information and individualized depictions of the reasons for program departure that were identified.

All respondents participating in this initial semi-structured survey phase of data collection were offered ten dollars for completing the interview. The majority of the respondents accepted this offer. No sample members from this initial data collection phase were included in the second phase of data collection. The data collection tool or survey instrument utilized in this initial semi-structured interview portion of the study is provided as **Appendix A** in this document.

Quantitative Data Collection (Phase II Data Collection)

The 302 semi-structured interviews were conducted in September 2003. After the open-ended responses garnered in this phase of data collection were analyzed by performing a detailed review and grouping of the responses and tabulating the data garnered in this phase of data collection utilizing SPSS to yield basic descriptive statistics, the researcher developed a

primarily closed-ended survey instrument. Development of this second phase survey instrument was informed by the findings from the semi-structured interviews. Specifically, utilizing the data gathered in the initial data collection portion of the study (with 302 completed interviews), the researcher compiled a dataset, cleaned the data by identifying any collapsible categories or open-ended survey items that needed to be re-coded into pre-existed fixed choice categories provided on the survey, and performed descriptive statistical analyses in order to establish the most common barriers to program participation cited in the semi-structured surveys and moreover, to identify specific aspects of participation barriers about which additional data could be gathered. Utilizing this information, the researcher developed the survey instrument for the second data collection phase and had this instrument approved by the state Department of Health for administration.

A multi-phased pre-test of this survey instrument was conducted in a parallel fashion utilizing the same techniques employed in the initial pre-testing of the survey instrument used in the initial semi-structured interview portion of the study. Accordingly, minor wording adjustments and changes to the CATI calling program were made through several revisions prior to the development of the final survey instrument.

After the researcher designed the final survey instrument for use in the second phase of data collection and obtained final approval from the funding agency and contract client, the final revised CATI program was developed and the interviewers collecting data for the project were trained. Once the researcher finalized the survey instrument and CATI program for administering this second survey, the second data collection phase began in October 2003 and was completed in January 2004. Specifically, this survey instrument and corresponding CATI program were utilized in the administration of a telephone survey to a targeted completed interview goal of 1,500 sample members (1,504 interviews were actually completed).

All interviewers collecting data for both the semi-structured and quantitative portions of the study were trained by the researcher regarding the prompts they should use if asked a question by any respondent. Scripted interviewer notes with information to be provided to respondents on an "if asked" basis, were delineated on the CATI calling screen for interviewers in distinctly formatted boxes.

Parallel to the call attempts in the semi-structured interviewing phase of the study, each contact record added to the calling pool during the second phase of data collection was attempted

a minimum of ten times at different times of day on different days of the week until the number was eliminated from the eligible calling pool. Identical tracking procedures to those described for the first phase of data collection were also included in the second phase of interviewing.

As was the case in the first phase of data collection, all respondents participating in this second phase of data collection were offered ten dollars for completing the interview. The majority of the respondents accepted this offer.

The interviewing protocol was designed to allow for a large number of closed-ended scaled items that directly assessed the level of influence specific participation barriers had on the respondents' decisions to leave the WIC program. Respondents were also asked to provide any additional barriers to participation, not already included in the scaled items that may have influenced their departure from the program.

Selected participation barriers assessed in the closed-ended survey items include:

- childcare barriers
- transportation barriers
- the level of required paperwork for certification and for the program in general
- the WIC waiting room experience -- including the length of wait
- social stigma
- treatment by staff
- frequency of required recertification
- personal/medical/family reasons that cause clients to miss appointments or be unable to come to the WIC office
- the level of convenience of appointment times
- the frequency of appointments
- the frequency of required blood draws
- the frequency of health screenings in general
- the length of time before check arrival
- perceptions of the utility of supplemental nutrition programs such as educational videos/programs
- the level of inconvenience caused by the program in relation to programmatic benefits
- perceptions of a lack of need for program benefits
- belief that family was no longer qualified due to factors such as income or age of child(ren)
- the amount of food/infant formula was too little or too much/went to waste
- too few choices in food/infant formula selection

- a variety of program aspects related to vouchers
- misunderstanding regarding WIC-approved foods
- difficulty finding a conveniently located grocery store with WIC-approved items

The rationale for the scaled items and variables related to these items stem from the findings of the literature review in that they represent areas of program participation for which information is needed in order to advance knowledge regarding the program's success as described in the previous chapter of this document. Moreover, the items and variables included in the survey were selected based on the responses provided by respondents in the initial exploratory data collection phase in which respondents provided information regarding their barriers to program participation or responses regarding why they chose to leave the WIC program prematurely and voluntarily. For example, the items regarding the WIC waiting room experience were derived from respondent reports in the first phase of data collection of chaotic waiting room experiences. Respondents described experiences in which they were unable to have all of their children seen due to rigid scheduling rules and the lack of coordination of recertification, health screening, and check pick up visits (requiring numerous visits to the WIC office), and excessive waiting periods during which program participants were ignored while children were left unsupervised in the waiting rooms creating a chaotic environment, on occasion exposing participants' children to other children who were ill.

More detailed survey items included process-related aspects of the program such as: the convenience of clinic days and hours, along with respondent preferences for the days and hours of clinic and office operation (respondents in the semi-structured interviews reported that it was impossible to make it to the various required appointments while working and/or caring for their children due to the office and clinic days and hours of operation). Additional items assessed the utility of aspects of the program beyond the cash and voucher benefits such as nutritional screenings, referrals and education programs. As noted in the literature review, these are areas in which research is needed in order to determine the extent to which these portions of the program are successful. This current research provides detailed information regarding the perceptions of former program participants related to these specific aspects of the program and the extent to which these elements of the program affected their decisions to leave the program prematurely.

Respondents were also asked about their preferences regarding the structure of the WIC offices in relation to local departments of health. Some divisions in the state in which the research was conducted have stand alone WIC offices and some have WIC offices embedded within local health departments. As noted in the literature review, the changing health care provision climate is shaping the ways in which the WIC program can serve its clients with regard to the provision of health care referrals and services. The findings from this current research regarding the administration of the program via health departments as opposed to stand alone offices sheds some light on this area of the program and addresses the extent to which this is an area of the program that is related to program participant departures.

All of the survey items in the survey instrument also included specific prompts regarding the primary research question: "Was this a factor in why you left the WIC program?" The survey utilized in this second phase of data collection also includes an overall rating item for the WIC program to allow for analyses of the overall rating of the program against the variety of factors influencing participant departure from the program. This item also served to provide an overall assessment regarding how satisfied former participants were with the program (in order to determine if overall perceptions regarding the quality or utility of the program were shaped by specific aspects of the program that led to a participant's premature departure from the program).

Parallel to the methods employed in the semi-structured interviewing phase of the research, a variety of demographic items and items related to respondent participation in programs other than the WIC program were included in order that the researcher was able to estimate actual WIC program eligibility for each respondent from the responses garnered using state income and program participation criteria. This information was also used to estimate the level of need and food security for each respondent.

A copy of the survey instrument used in this phase of data collection is provided in **Appendix B** of this document.

Data Analyses

The data garnered in the second phase of data collection in which 1,504 interviews were conducted, along with the more qualitative responses gathered from the original 302 interviews, were utilized to identify and more closely examine the key reasons families stop participating in

the WIC program voluntarily and prematurely (prior to utilizing the full extent of services available to them) while they are still eligible to participate (according to state records). Specifically, data from the 1,504 interviews completed in the second phase of data collection along with the responses collected from the original 302 semi-structured interviews were utilized to identify the barriers to WIC program participation as well as to develop a composite typology of WIC program "leavers" based on selected respondent characteristics and the individual barriers to participation.

All survey data for the 1,504 interviews were retrieved directly into an electronic file through the CATI system. Ci3 software (for use in conjunction with computer assisted telephone interviewing) and SPSS statistical programming procedures were utilized by the researcher for data compilation, verification and tabulation. In developing the typology of program leavers, descriptive statistical analyses were employed utilizing SPSS programming procedures. For example, response frequency tabulations are provided for all barriers to WIC program participation. Likewise, chi-square tests utilizing collapsed dichotomous demographic and program related categorical variables were performed by the researcher in order to identify the relationships and differences between a wide variety of variables and specific program participation barriers included in the survey. The levels of significance in the differences identified are reported along with the findings. In viewing the statistical tabulations reported in the findings chapter of this document, the calculation and reporting of a broad margin of error may be useful for consideration of the general meaning of the findings presented.

All findings, statistical tabulations, and descriptions of the findings of this current research are provided in the findings chapter (Chapter 4) of this document. Because the quantitative portion and primary statistical tabulations related to the barriers to program participation presented in the findings chapter in this document are based on a count of 1,504 cases, the margin of error (at the 95 percent level of confidence) that may be utilized is 2.5 percent. This is to say, that one could, with a 95 percent level of confidence, assume that the "true value" of the percentage or finding should fall within 2.5 percentage points of that which is reported.

All open-ended survey responses were cleaned for grammar, spelling, clarity, and primary thematic content prior to grouping the open-ended responses into broad program participation barrier domains. Recoding of variables was conducted by the researcher on the

dataset prior to reporting descriptive statistics in order that open-ended responses that could be collapsed into closed-ended categories were combined with existing closed-ended categories. A number of variables were also constructed by the researcher by combining variables stemming from the survey data to facilitate the creation of grouping variables that could be used for comparative statistical analyses.

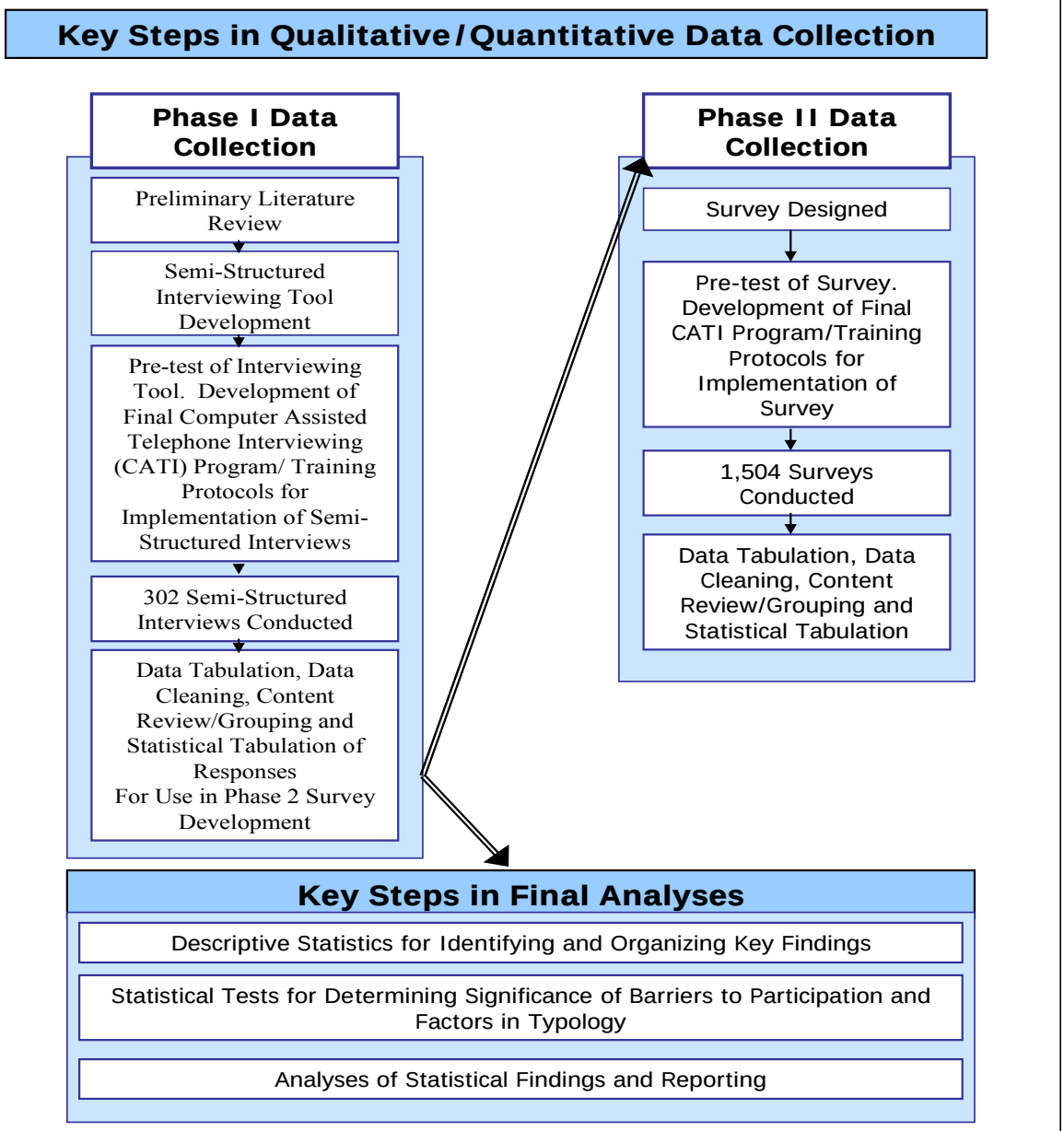
The robust statistical data gathered and analyzed in this research allows for a highly detailed answer to the research question "why are eligible families leaving the WIC program (or any beneficial public program) voluntarily and prematurely?" In providing an answer to this question, the primary goal of the dissertation was achieved. However, the study goes beyond the primary research question in providing analyses of the data in identifying the organizational and program/policy contexts that have given rise to the barriers to participation discovered in this research.

Analyses of the current research findings suggest areas in which failed organizational metaphors and unintended or perverse policy incentives may be at play. Specifically, dedication to existing rules, processes, and conventional wisdom in the WIC program seem to shape program participant experiences. For example, the data reveal that some mothers felt dissatisfied with aspects of the program they felt disregarded their own needs and beliefs in favor of routine processes. The findings suggest that the feelings of frustration among participants created by such program practices, eventually informed decisions among participants related to premature program departure or decisions to not utilize program services.

The theoretical framework provided in this research aids in describing how the socially constructed stories surrounding the WIC program have very real consequences with regard to the research utilized to evaluate the program as well as for the actual implementation practices and program outcomes for WIC (including premature program departures among participants).

Because a rather complex research design including two phases of data collection were utilized in this research, **Figure 2** is provided as a visual aid and graphic depiction of the basic steps employed in the data collection portions of the study.

Figure 2. Why Are Eligible Families Leaving The WIC Program?



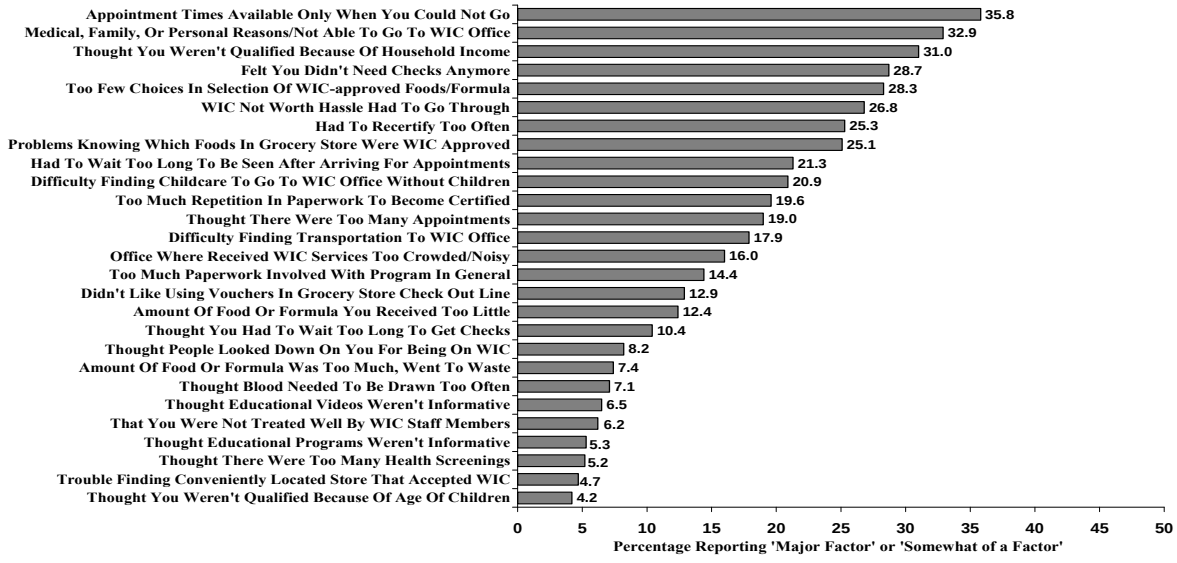
4

Research Findings

Overall Findings Regarding WIC Program Departures

This study provides answers to the question "why are eligible families leaving the WIC program voluntarily and prematurely?" and provides a variety of findings regarding issues related to the WIC program not currently addressed fully in the existing literature. **Figure 3** provides the broad findings regarding the factors influencing premature WIC program departures as discovered in this current research. The percentages in this figure combine responses of "major factor" and "somewhat of a factor" provided by survey respondents for each barrier to program participation included in one portion of the survey utilized in the primary data collection phase of this research. Responses from 1,504 respondents are included in the tabulations below.

Figure 3. Factors Influencing Premature WIC Program Departures



The barriers to program participation discovered in this research may be categorized into three broad areas: barriers related to eligibility for the WIC program and perceptions regarding eligibility; barriers related to WIC services such as the provision of the food and infant formula

package; and barriers related to the logistics of participating in the WIC program and of WIC program administration and policies. The findings regarding these three areas of factors related to premature WIC program departures are discussed in more detail throughout this chapter. The primary set of survey items related to factors influencing program departures allowed respondents to rate the level of influence each of 27 barriers had on their decision to depart the WIC program prematurely. These 27 barriers were selected based on the findings from the initial exploratory phase of data collection including 302 respondents. The response categories utilized for this set of survey items were "a major factor", "somewhat of a factor", "only a minor factor", and "not at all a factor". Interviewers were also presented with codes for "don't know" and "refuse to answer" but these categories were not read to respondents. Specific information regarding the number of respondents reporting for each item and the individual response category tabulations for each survey item are included as an appendix (**Appendix C**) at the end of this document.

Almost 8 in 10 (77.9%) survey respondents indicated that more than one of the barriers presented in this set of survey items was at least "somewhat of a factor" in their premature departure from the WIC program. Thus, the majority of survey respondents cited more than one factor in their decision to depart the program. The mean number of barriers indicated as at least "somewhat of a factor" by respondents was 4.5. Therefore, most WIC program leavers have more than one primary reason for departing the program prematurely. Among respondents citing only one reason for program departure, the most prevalently cited reason was "that you thought you weren't qualified because of your household income." However, only 34.2 percent of respondents who responded "major factor" or "somewhat of a factor" to only one of the questions in this set of survey items, selected this factor. Therefore, among those respondents who felt that there was only one primary factor in their departure from the program, 34.2 percent cited "that you thought you weren't qualified because of your household income" as this factor, with the remainder of the respondents citing one of the other 26 factors. Likewise, "that you thought you weren't qualified because of your household income" was the factor in the survey that received the most "major factor" responses from survey respondents. Specifically, 25.5 percent of respondents utilized this specific response category in response to this barrier to program participation. Throughout this chapter, the response categories "major factor" and

"somewhat of a factor" are combined in the tabulations indicating factors affecting program departure.

Findings Related to Program Eligibility Requirements

Clear information regarding the impact WIC eligibility requirements have on WIC participants in general, and their decisions related to departing the program prematurely in particular, is not available in the existing literature regarding WIC. Having conducted a number of research studies involving surveys for public agencies and finding inconsistencies in database information regarding program participants, it was important in this dissertation research to verify WIC program participation status among study participants at the beginning of the surveys. This was important even though the Department of Health provided cases deemed to meet the criteria for the study (individuals eligible for the WIC program but having departed prematurely from the program). Further, as mentioned in the literature review portion of this document, a variety of issues related to WIC program eligibility criteria have been raised in the literature but not addressed with the data necessary to answer questions regarding eligibility requirements. Therefore, gathering information from study participants related to WIC program eligibility requirements was also important in providing needed data and analyses to assist in addressing these issues.

A primary finding of this current research is that there is substantial confusion among WIC program participants regarding eligibility requirements and that this confusion has led to premature program departures among eligible program participants. Speculation exists in the literature regarding how less stringent income criteria along with poorly defined eligibility criteria (such as nutritional risk criteria) for the WIC program may be affecting the most needy program participants. However, assessment of how WIC participants view or understand eligibility criteria and how these perceptions affect premature departure from the program have not previously been available. Indeed, Oliveira et al. (2002) and Besharov and Germanis (2000) note the lack of research regarding how the most needy individuals fare on WIC (in relation to individuals with higher incomes) and how families with older children are affected by WIC (as

the food and formula package for families with older children is reduced in comparison to that provided to families with infants).

This current research addresses the eligibility requirements of the program directly in providing data regarding individuals who were still eligible to receive WIC services but left the program prematurely prior to taking full advantage of the program's intended benefits.

The verification process utilized by the researcher in confirming WIC program participation status among study participants was of value in providing additional information (beyond the survey questions addressing specific aspects of eligibility) related to respondent perceptions of WIC program eligibility requirements.

A number of individuals randomly selected for participation in the study from the database of program dropouts provided by the state Department of Health indicated that they believed they were still participating in the program. While the Department of Health indicated that all records provided represented cases in which the individual was still eligible for program participation but had elected to leave the program, a number of individuals contacted for the study reported that they believed they were still participating in the program or had left the program on a different date than that provided by the Department of Health. Indeed, 69 respondents contacted in the initial phase of exploratory qualitative data collection indicated prior to being interviewed that they believed they were still on WIC, and 8 respondents indicated prior to being interviewed that they believed that had never been on WIC. In the second phase of data collection, 151 respondents indicated prior to being interviewed that they believed they were still on WIC, with 24 indicating prior to being interviewed that they believed they had never been on the WIC program. Interviews were not completed with these individuals and in both phases of the study these cases were coded with call disposition codes which led to the designation of these records as ineligible.

In addition to the pre-screening call dispositions that allowed respondents to opt out of the interview if they believed they had never been on WIC or were still participating in WIC, respondents were asked initial screener questions at the beginning of the survey to verify their status as program leavers. After a brief introductory statement, respondents were read the following question: "our records show that you stopped participating in the WIC program in [CATI program inserted departure month and year from Department of Health database here]. Is

this correct?". If the respondent did not say yes to this item, they were asked when they stopped participating in the WIC program. It was in response to this item that 14 respondents in the initial phase of data collection and 63 respondents in the second phase of data collection reported that the date reflected on the records provided by the Department of Health was incorrect.

All 14 of the respondents in the initial phase of data collection reporting that their program departure date was incorrect still completed full interviews and the month and year of program departure were gathered. However, among the 63 respondents in the second phase of data collection who reported that their program departure date was incorrect, 25 of these respondents claimed to still be participating in the program when asked this initial survey question, with the remaining 38 indicating that they had left the program but the date of departure in their records was incorrect. Interviews were still completed with these 38 individuals and the month and year of program departure were obtained from these respondents.

This finding that a number of records selected by the state for inclusion in the study represent cases in which individuals either believe they are still participating in the program or that they were never officially enrolled in the program, indicates that 1) some program participants mistakenly believe they are still on the program when they are indeed, no longer on the program according to state records, that 2) state records may include some errors with regard to program eligibility and continued participation, and 3) some participants complete the requirements to enroll in the program but never utilize services because they do not understand that they have actually enrolled or met the requirements for participation.

These findings of confusion among former participants regarding eligibility for the WIC program and some possible errors in state records regarding WIC participation eligibility and/or enrollment for the program, suggest areas for improvement in communicating eligibility requirements to participants. This is an important finding since the participants indicating confusion regarding program eligibility requirements were deemed eligible for the WIC program by the state but left (or opted out of) the program prematurely prior to taking full advantage of the intended benefits of the program.

Because the design of this study ensured that former participants had not re-enrolled prior to the research during their grace period for re-enrollment, it is likely that some individuals selected for the study may have been unaware that they had officially been dropped from the

WIC program due to failing to meet participation requirements for re-certification. In some of the cases in which individuals reported that they were never on WIC, interviewers were told that the respondent had thought of enrolling but never did. In these cases, it seems that these individuals were unaware that they had met all the requirements for participation and simply thought they never participated or utilized the services and had consequently, never been participants.

This finding of general confusion among some former program participants regarding eligibility requirements is significant in that it also represents an area in which unintended consequences within program implementation may be present. Specifically, this finding reveals that the WIC program may be trying to keep eligible program participants on WIC while some of these same participants who choose to drop out of the program prematurely question their eligibility to participate. This finding also suggests that improvements in education and communication with participants regarding eligibility requirements may be an area that could be aided by greater flexibility in program administration and more administrative discretion in WIC program delivery.

In addition to the findings from the pre-screening and verification process that revealed confusion related to program eligibility among some former program participants, survey questions assessing the extent to which issues related to program eligibility influenced participants' decisions to leave the WIC program prematurely also reveal 1) participant confusion regarding eligibility criteria for the WIC program, and 2) premature program departures related to this confusion regarding eligibility. Indeed, almost one third of the survey respondents (31.0%) indicated that they thought they were not qualified for the WIC program due to their household income and that this belief was a factor in why they chose to leave the program prematurely. Therefore, these participants elected to leave the program voluntarily because they assumed they were no longer qualified and either felt that they should not participate under these circumstances or that they may eventually be told to leave the program due to their misperception that they were not eligible for the program.

A number of former WIC program participants who voluntarily left the program mentioned in response to an open-ended question posed in the survey that their confusion regarding their continued eligibility on the program was due to information received from WIC

program workers, or due to lack of follow up from the WIC program. Many of these comments from former program participants came in response to the survey item "other than the factors we have already discussed in the survey, are there any other reasons you decided to stop participating in the WIC program?".

Some respondents cited lack of follow up from WIC workers in relation to their own confusion about their eligibility status. For example, one respondent noted that she was "not informed that the WIC program had ended (her eligibility) and that nobody contacted her or informed her about this until a letter arrived in the mail," with another former program participant reporting that "every time she would call to make an appointment she would reach an answering machine," with yet another respondent specifically stating that a reason she left the program was "lack of follow up on the part of WIC." One program leaver said she "tried to recertify but no one on behalf of WIC got back with her." Yet another respondent "wanted to transfer from [locality name deleted] to [locality name deleted] but the WIC office wouldn't answer the phone even during times she was given to call. After a month of trying she gave up." Another former program participant who left voluntarily noted that she "couldn't make an appointment so the WIC worker cancelled her WIC service." Clearly, some respondents received mixed messages regarding their continued eligibility for participation. These messages are certainly not intended by the WIC program since the program is attempting to maintain enrollment numbers.

Other former program participants who voluntarily left the WIC program reported that they were expressly told by WIC workers that they either no longer qualified for the program or that they might not qualify in the future. For example, one respondent said she "was told by WIC that her household income was too high based on a single paycheck that included overtime pay." Another program participant said that "they (WIC) decided she couldn't participate any more, said her income was over the limit, and that they (WIC) would take her back if she quit her job," saying "she did not appreciate this, and they should never tell someone that again." Another WIC program leaver noted that "WIC gave her a notice that after her daughter was a year old, she would no longer receive WIC and that the nurse told her the same thing."

Interestingly, based on their own assumptions regarding the eligibility requirements of the program, many WIC participants who elected to depart the program prematurely while still

eligible, incorrectly believed they were no longer eligible for the program. Indeed, the current research revealed a number of assumptions among former participants regarding eligibility requirements that led them to depart the program prematurely. For example, one respondent reported that she "moved to a different area and thought that because her kids were no longer on Medicaid they were no longer eligible for WIC services." Another respondent reported that she "thought you had to be on another type of assistance to receive WIC." Many of the research participants assumed (incorrectly) that because of changes in their income status they were automatically disqualified for the program, with some former participants reporting circumstance changes and assumptions like: "got married and thought incomes would be too high," "husband said to stop because maybe someone else would need it more, due to husband's income didn't need it that much now," "felt that somebody else might need the money more," and "when husband was getting paid cash they couldn't verify income and couldn't get Medicaid after child was born because she was not qualified, and thus, assumed they were not qualified for WIC."

The significant finding of confusion among former program participants regarding eligibility is reflective of the theoretical foundation of this research regarding how meaning and "stories" are generated and re-generated within organizations and programs. In the case of the WIC program, efforts to expand enrollment are being circumvented by the very messages being conveyed to and received by participants regarding eligibility. Confusion regarding eligibility requirements is a primary barrier to program participation as demonstrated in the current research. Understanding how assumptions and knowledge surrounding programs and agencies shape program participant decisions to leave programs prematurely has been needed. The current research reveals that a primary reason individuals depart a beneficial public health program voluntarily prior to reaping the intended benefits of the program is that they incorrectly assume they are not qualified for participation. This finding represents at minimum an urgent need for focus on honing the narratives that surround the WIC program and on improving education efforts in order that participants understand eligibility processes and requirements.

Additionally, this finding of confusion among participants regarding their eligibility for the program provides important information regarding a number of factors related to WIC program eligibility currently debated in the literature. Most notably, the finding that almost one third (31.0%) of individuals who left the program prematurely cite confusion regarding their eligibility to continue participating in the program due to income suggests the need for a closer

examination of WIC program eligibility requirements related to income. If a feeling of dissonance with regard to income levels and participation in the program is present among participants, and this contributes to premature program departures, understanding what messages participants receive regarding the levels of income allowed for program participation is essential.

Further, garnering a better understanding of how program eligibility requirements related to income actually operate in the understanding among program participants of when or if they should participate or leave the program seems critical. Specifically, a finding of this research is that program participants defined by the state as eligible for the program are leaving WIC because of their belief that they no longer qualify for the program due to their income. This finding suggests that although a great deal of resources and effort are focused on the certification process for participant maintenance of eligibility for the program, some participants are receiving incorrect messages regarding their eligibility to participate, defeating the purpose of the focus on the certification and re-certification for eligibility processes.

This finding that eligible participants are prematurely departing the WIC program as a result of their confusion over eligibility due to income also suggests an unforeseen facet (a facet not addressed in the literature) of allowing higher income individuals to participate in the WIC program. The few prominent critics of the existing research on WIC, such as Besharov and Germanis (2000, p. 133) focus on what they call the "eligibility creep" that has allowed an increasing number of individuals with higher incomes to participate in the WIC program across time. A primary question related to this "eligibility creep" in the literature is whether this process for eligibility determination leaves the most needy women and children participating in the program without the services they need (due to the program utilizing resources to expand the program to serve a broader range of individuals, including those with higher incomes).

Rather than necessarily being a drain on resources intended for the most needy participants by utilizing services and thereby, spreading program resources too thin, the findings from this current research suggest that individuals with higher incomes may be utilizing scarce program resources in other ways. Specifically, with many families, including those who in many cases seem to still need the services of the WIC program, electing to leave the program prematurely prior to taking full advantage of the benefits of the program, resources are being expended with little in the way of potential positive medical or cost savings outcome returns. A

revolving door syndrome seems to be in play in which individuals with higher incomes are simultaneously encouraged and allowed to participate in the program but then leave before reaping the benefits of the program because of incorrect assumptions regarding their eligibility. Further, in some cases these higher income individuals experience feelings of dissonance, feeling "wasteful" for utilizing resources of which they feel undeserving.

Likewise, families with income circumstance changes while enrolled in the program incorrectly and automatically assume they are no longer qualified for the program in many cases when they are, in fact, still eligible to participate. Unfortunately, enrollment in the program creates some amount of administrative resource expenditure on behalf of the program even if an individual or family uses virtually no direct program services. For example, inevitably administrative resources are utilized at the initial determination of eligibility for individuals who may take advantage of none of the valuable resources of the program.

This current research reveals that a primary factor in these premature departures from the program stems from a lack of understanding regarding program eligibility requirements. Therefore, the very allowance of individuals with higher incomes to participate in WIC in order to expand program enrollment may serve the unintended purpose of additional resource expenditures with little promise of intended medical outcomes improvements or medical cost savings if many individuals opt to leave the program prematurely due to confusion over eligibility requirements related to income. The fact that these families enroll in the program, may utilize some initial services, and then leave prematurely represents a serious potential waste of resources because these families never utilize the services to fruition, potentially negating the positive health impacts of the program for this group.

Findings from this current research also suggest that participants in the program may be unaware of shifts in income eligibility requirements and may be receiving messages that they are not eligible to participate in the program at certain income levels when they are actually eligible. The finding from this current research that participants drop out of the program because they believe their incomes are too high to qualify supports the idea that the focus on getting more participation in the WIC program by allowing those with higher incomes to participate may have a number of unintended consequences.

Even among the respondents who were categorized as being impoverished due to their income levels and household sizes specified by the Department of Health (and confirmed through self-reported survey items), a full one quarter (25.7%) cited as a factor in their departure from the WIC program that they "didn't want WIC anymore because they felt they didn't need the checks anymore." Perhaps even more surprisingly, 21.5 percent of respondents designated by the Department of Health as impoverished believed they weren't qualified for the WIC program due to their household income level. It is clear that premature and voluntary program departures among WIC program participants are informed by incorrect messages regarding program eligibility requirements related to income. Interestingly, it seems that many individuals who elect to depart the program prior to reaping the full benefits of the program may need the services but may feel that they do not due to misunderstandings regarding the services offered.

The calls in the literature for more research into the ways in which WIC benefits affect the most disadvantaged participants and whether more benefits and attention should be assigned to the most needy participants or potential participants (Oliveira et al., 2002) are addressed in some measure by the findings of the current research. Likewise, the current findings yield information that may be useful in weighing the merits of the argument in the literature that participants with the lowest incomes may fare the worst on the program because focus on expanding enrollment to higher income individuals may divert focus from the neediest participants (Besharov and Germanis, 2000).

Because the current research includes program participants who were eligible for the program but who chose to leave the program prematurely and voluntarily, individuals below the poverty level and individuals above the poverty level (both defined by the Department of Health in the state in which the study was conducted and based on household sizes and household incomes gathered from study participants) were included in the study. This is the case because higher income individuals may be eligible for the program if they meet other criteria, for example, participation in other governmental safety net programs such as the Food Stamp Program or Medicaid. Comparing study participants with higher incomes with those of lower incomes (below the poverty cut off for program eligibility) provided a tool to gain greater understanding of how individuals with higher incomes fare in relation to those with lower incomes on the WIC program.

The majority of participants in the current research (73.9%) reported that their household income was less than the required poverty cut off level as defined by the Department of Health at the time of the study. However, an interesting finding of the current research is that participant perceptions regarding the quality of the WIC program are virtually identical for study participants with higher incomes compared to those with lower incomes. Specifically, 59.6 percent of former program participants eligible for the program in terms of self-reported income in the current research rate the WIC program as 'excellent.' A strikingly similar percentage (60.1%) of individuals above the poverty cut off for the program, but still eligible for the program, rate the program as 'excellent.' Likewise, 32.9 percent of the lower income individuals rate the WIC program as 'good' while 32.3 percent of the higher income individuals use the same category to rate the WIC program.

This lack of disparity in the perceptions of program participants with lower incomes in relation to those with higher incomes is interesting in light of the questions in the literature regarding how more "needy" individuals may be faring on the WIC program due to the allowance of participation of individuals with higher incomes (Besharov and Germanis, 2000). These current research findings are in contrast to suggestions in the literature that program participants with the most need may not be served as well by the program as less needy participants. The current research reveals virtually identical ratings of WIC program quality among individuals with higher incomes and among those with lower incomes (utilizing the income cut off points utilized by the Department of Health to determine eligibility for the program).

This finding of similar views regarding the quality of the WIC program among individuals of varying incomes is significant in that it provides a perceptual component for former program participants that suggests that at least with regard to perceptions of overall program quality, there is virtually no difference in the views of individuals with higher incomes and those with lower incomes. While this finding provides no information regarding medical outcomes or cost savings for participants of varying incomes, it does suggest that in terms of perceptions of overall program experience, income may not be a driving force in the formation of perceptions regarding the WIC program among participants who elect to depart the program prematurely. However, it stands to reason that program participants with lower incomes may fare worse than those with higher incomes after leaving the program prematurely and that the

focus on retention of participants may perhaps best be spent on those who stand the chance of faring the worst after leaving the program. Investigation of how an enhanced focus on retention efforts for the families with the least financial means to provide for the nutrition of their children and themselves in order to possibly improve the post-program departure outcomes of the most needy participants is needed. The current research provides some insight into how program participants of varying incomes fare after departing the program prematurely.

With regard to food security after leaving the program prematurely, 45.7 percent of respondents answered affirmatively to the question "since leaving the WIC program, was there ever a time when you did not have enough money to buy the *amount* of food you needed for yourself or your child(ren)." Within the group of study participants who responded that they were below the poverty cut off level defined by the Department of Health, 49.8 percent did not have enough money to buy the amount of food they needed after leaving WIC. Among the respondents who reported that they were at or above the poverty level specified in the study 30.4 percent did not have the money to buy the amount of food they needed after leaving the program.

In response to the question "since leaving the WIC program, was there ever a time when you did not have the money to buy the *type* of food you needed for yourself or your child(ren)," 42.4 percent of former program participants responded affirmatively. Within the group of study participants reporting that they were below the poverty level defined by the Department of Health, 46.5 percent did not have the money to buy the type of food they needed after leaving WIC. Among study participants who were at or above the poverty level defined for the study at the time of data collection 26.6 percent did not have the money to buy the type of food they needed after leaving WIC.

These findings lend weight to the significance of this study in that they demonstrate that WIC program participants who leave the program prematurely prior to reaping the full benefits of the program are not faring well at least in some areas, such as food security. The fact that these individuals are voluntarily and prematurely leaving a program that could ideally help their levels of food security is particularly surprising given that the current research reveals that almost half of WIC program "leavers" admittedly are not always able to pay for the amount or types of food they or their families need. These findings regarding food security are also

significant in that they support the notion that program participants with lower incomes may fare worse than those with higher incomes after leaving the program prematurely.

In addition to debate regarding the income criteria for determining eligibility for the WIC program, questions regarding the effects of program participation on older children enrolled in the WIC program in contrast to infants on the WIC program have been raised (Besharov & Germanis, (2000), Oliveira & Gundersen (2000), and Oliveira et. al (2002)). At least with regard to participant clarity associated with the WIC eligibility requirements related to older children, the current research findings reveal that far fewer program leavers (4.2%) departed the WIC program due to a belief that they were not qualified for the program due to the age of their child, than departed due to confusion regarding their eligibility to participate in the program with regard to income (31.0%).

This finding suggests that WIC program participants understand the eligibility requirements of the program in relation to child age more than they understand the WIC program eligibility requirements related to income.

Another prominent finding in the current research provides a perceptual component regarding WIC program benefits for older children, and perhaps most significantly for this current research, an answer to the question regarding how benefits for older children shaped participant decisions to leave the program prematurely. When asked "how useful do you think the WIC services for children aged one through five are – like the screenings, referrals and education programs" a full 90.3 percent of respondents indicated that these services for older children are useful (with 72.3% rating these services as 'very useful' and 18.0% rating these services as 'somewhat useful'). Likewise, when asked if the utility of these services for children ages one through five was a factor in their decision to leave the program, fewer than one in ten (8.7%) respondents indicated that this was a factor in their premature departure. This is an important finding in that it suggests that WIC program participants may view WIC benefits for older children more favorably than had been previously suspected in the literature.

Some researchers have noted the reduced value of the food package provided to families with older children as well as a drop-off in WIC participation among families with older children (Besharov and Germanis, 2000). In light of this, one might expect perceptions among individuals who chose to leave the WIC program voluntarily and prematurely to be negative with

regard to WIC benefits for older children. The current findings suggest however that program participants may be more content with the services designed for older children than previously suspected and that other factors are playing more powerful roles in their decisions to depart the program prior to experiencing the benefits of the program as intended. However, it is important to note that the current research also found that the food and formula package provided to participants is overwhelmingly among the most valued aspects of the program even among individuals who elected to leave the program prematurely (an open-ended question was included in the initial exploratory phase of the research directly asking respondents "what aspect of the WIC program did you like the best?").

While the findings of this research demonstrate favorable evaluations of WIC services provided for older children, it may be that because individuals with older children lose one of the benefits they value most (the provision of vouchers for infant formula because it is no longer needed once a child is no longer an infant), they are more easily influenced to depart the program prematurely by other participation barriers found in this current research.

Debate also exists in the literature regarding the efficacy of the usage of nutritional risk as a criterion in WIC program eligibility determination. The nutritional risk component in the determination of WIC program eligibility has been questioned in the literature due to the traditionally imprecise definition of the concept of nutritional risk. Authors such as Rossi (1998) view the use of the nutritional risk criteria in the determination of eligibility for the WIC program as a potential site for those who deliver the WIC program at the state and local levels to allow individuals to qualify for the program who would not otherwise qualify. State agencies are empowered to select the exact nutritional risk criteria they will use in the state from a listing of federal guidelines regarding nutritional risk. Two primary types of nutritional risk are outlined at the federal level: "medical risks such as anemia, underweight, overweight, history of pregnancy complications, or poor pregnancy outcomes; and dietary risks such as failure to meet the dietary guidelines or inappropriate nutrition practices" (USDA, 2008, WIC Fact Sheet).

Interestingly, the current research reveals that the nutritional risk assessment component of WIC program eligibility determination does not appear to be one of the primary barriers to program participation for participants who depart the program prematurely and voluntarily. However, the current findings do suggest some areas of possible improvement or flexibility in

program administration based on some concerns among program leavers related to the area of nutritional risk.

This dissertation research examines aspects of the nutritional risk assessment component of the WIC program that are not discussed in the literature such as the extent to which aspects of the nutritional risk component of eligibility are driving participant decisions to depart the WIC program. In addition to how the usage of nutritional risk as a criterion for WIC program eligibility determination may drive the demographics of who participates (a concern noted by authors such as Rossi (1998)), this current research reveals how in some ways, the nutritional risk criteria may serve to inform participants' overall perceptions of the program and help shape their decisions regarding participation in or departure from the program.

The measurement of nutritional risk (which is assessed by health professionals via mechanisms such as blood draws from children) seems to be an aspect of the program by which some program leavers were confused and in some cases, with which they were dissatisfied. While speculation exists in the literature that nutritional risk may not work as an eligibility determinant for WIC program participation due to its vague and broad definition, and the fact that states may pick which nutritional risk criteria they will use in eligibility determination, understanding how this aspect of the program may affect premature program departures had not been previously addressed.

A finding from this current research suggests that some participants find the testing that is sometimes required in order to determine nutritional risk to be somewhat daunting (for example, the frequency of testing requiring that blood be drawn from the mother and child). While only 7.1 percent of respondents cited the fact that "blood needed to be drawn too often" as a "major factor" or "somewhat of a factor" in why they left the WIC program prematurely, this aspect of the program was something cited as an inconvenience by some respondents in the open-ended survey item responses. Moreover, the current findings reveal that it is the abundance of appointment times required for program recertification for participants to maintain eligibility (including appointments required to assess nutritional risk or status) as well as the information provided in the process of nutritional risk assessment and/or counseling that present some barriers to program participation.

One quarter (25.3%) of respondents in the current research indicated that the fact that they had to recertify too often was a factor in why they chose to leave the program. Likewise,

almost 20 percent of respondents (19.6%) cited too much repetition in the paperwork they had to provide to become certified for WIC as a factor in why they left the program prematurely. The recertification process and associated health screenings related to assessing nutritional risk made maintaining participation in the WIC program difficult for some participants.

While the number of health screenings required was cited as a factor for program departure by only 5.2 percent of respondents in this current research, more than one quarter of respondents (26.8%) cited the fact that "they didn't want WIC anymore because they felt it wasn't worth the hassle they had to go through to receive the checks" as a factor in their premature program departure.

The narrative answers provided to open-ended survey items reveal additional ways in which the experience of health screenings for nutritional assessment shaped participant decisions to leave the program. For example, one respondent noted that the "finger-pricking was traumatizing for the child," with another noting that she "didn't think the blood drawing was necessary at all," and another stating that "WIC kept misdiagnosing her children." One former participant reported that the "WIC office never explained why they had to draw blood every time they recertified," and a number of respondents disagreed with the assessment of their child's or children's nutritional risk status: with one program leaver noting that she "was hassled about the weight of a thin daughter who is tall, with WIC saying she needed to be on a diet," and another responding that her child "was diagnosed with a disease and after a period when he was underweight from the disease, he finally started gaining weight again, and the WIC people decided he was overweight and tried to put him on a diet while he was still in treatment and that is the main reason she left WIC."

The areas of eligibility determination and certification to maintain eligibility are clearly aspects of the WIC program about which participants have a great deal of confusion, in many cases incorrect information or misperceptions, and some levels of dissatisfaction driving decisions to depart the program prematurely.

Findings Related to WIC Program Services

Another primary area of factors discovered in this current research associated with premature WIC program departures is the area of the food and infant formula packages provided to WIC program participants. For example, 26.8 percent of study participants cited as a factor for premature program departure that they "didn't want WIC anymore because [they] felt it wasn't worth the hassle [they] had to go through to receive the checks." This finding suggests that the value attributed by some participants to the services (including the food and formula package) provided by the program is not always great enough to override the "hassle" of program participation. However, even among study participants citing the "hassle" outweighing the worth of the checks provided by the WIC program, more than eight in ten (84.6%) rated the WIC program overall as either "excellent" or "good," with an overwhelming 92.6 percent of all study participants rating the WIC program overall as either "excellent" or "good."

Interestingly, it seems that while former participants generally feel the program is valuable and rate the quality of the program favorably, they still elect to leave the program prematurely and voluntarily. The value of the program to these program leavers in particular clearly did not outweigh the barriers to participation discovered in this current research since they elected to actually leave the WIC program voluntarily.

A primary benefit or service of the WIC program is the provision of vouchers or checks to participants to be used in purchasing specific food items or approved infant formula. Specifically related to the food and infant formula package provided by the WIC program, 12.4 percent of study participants cited as a factor for premature program departure "that the amount of food or formula [they] received was too little," with 7.4 percent citing as a factor "that the amount of food or formula was too much and went to waste."

As stated earlier in this chapter, three of the primary factors cited by participants in this current research as reasons for premature WIC program departure were: confusion about qualification regarding eligibility in relation to income (31.0%), feelings that they no longer needed WIC checks (28.7%), and the belief that WIC benefits were not worth the "hassle" of participation (26.8%). These findings, along with the finding that 7.4 percent of program leavers left WIC because the food or formula they received was "too much and going to waste" suggest that a number of study participants felt they did not deserve or need services based on the

messages they were receiving about the WIC program and their understanding of the program, and that perhaps others could use the WIC program services more than they could.

Another substantial factor in premature program departures discovered in this research is the lack of choices in the selection of WIC-approved foods or infant formula. Indeed, 28.3 percent of study participants cited as a factor in their decision to leave the program "that there were too few choices in the selection of WIC-approved foods or infant formula [they] had." Indeed, a theme of many of the responses provided by program leavers to the open-ended survey items in the current research reflect a perception of the need for more flexibility in the area of the food and formula packages provided as a benefit of the WIC program.

The responses provided to the open-ended survey items included in the current research provide additional information related to the finding that 28.3 percent of former program participants in the study left the WIC program prematurely due to the lack of choices in WIC-approved foods or formula they had. Specifically, many of these responses from study participants reflect perceptions regarding areas for possible improvement and the need for more flexibility in the food and infant formula package service provided by the WIC program. Although each state must adhere to federal regulations regarding minimum nutritional requirements for WIC food packages, state agencies are responsible for designating brands and specific food products they wish to include on the approved list of foods for the state and are not required to approve every food specified in the federal requirements (USDA, 2008, WIC Food Package).

While this level of state discretion suggests each state would have a great deal of flexibility with regard to the types of foods provided to participants, the federal requirements for WIC-approved foods and state approved food lists have traditionally included a rather limited range of foods, with the intent of providing foods known to meet specific nutritional needs such as likely vitamin deficiencies in the target population for the program. Approved foods have generally included the following: infant formula and cereal, juices, eggs, milk, cheese, peanut butter, dried beans and peas, tuna fish, and carrots. Therefore, while messages regarding the nutritional value of leafy green vegetables and the consumption of a wide range of fruits and vegetables as necessary for good health are abundant in the media, the WIC program has continued to provide a food package that seems somewhat contradictory to those messages.

The primary responsibility or burden (as viewed by some participants in this current research) for establishing a need for deviation from the WIC-approved foods has resided with program participants in that most deviations from the approved foods or infant formula selections have required documentation of need by a medical professional which must be obtained by the participant.

Some concerns regarding the food package expressed in the current research by program leavers were related to perceptions regarding the nutritional value of the food package provided or the lack of flexibility in the tailoring of food or formula choices to individual child needs. With the origins of the WIC program fueled by concerns regarding the lack of nutrients due to the potential lack of food for low income mothers and their children, the overarching narrative within the WIC arena of the provision of more food, and high calorie foods, seems to still be in operation. Indeed, many of the responses provided by study participants in the current research regarding the lack of flexibility in selections in the WIC program food package reflect this narrative.

These findings from the current research of premature program departures related to WIC-approved food and infant formula selections are particularly interesting in light of the epidemic of obesity in the United States along with increasing public focus on the value of making good nutritional choices. The current research findings suggest that premature WIC program departures are occurring in some cases due to a rejection of the food and formula selections approved by the WIC program and a lack of flexibility in the program in allowing deviation from approved food and formula selections. Indeed, many of the program leavers citing the WIC-approved food and formula selections as a factor in their departure from the program offered that they felt the selections were not in the best interest of the health of their children. This finding suggests that some program participants actually felt that leaving a beneficial public health program like WIC was in the best interest of the health of their family (certainly an unintended consequence of the program and efforts to retain participants).

The findings from the current research related to the lack of choices in WIC-approved foods or formula as a reason for premature program departures reveal disparities in the perceptions of some program participants and messages being conveyed by the WIC program related to foods and health practices. Such disparities circumvent the purpose and benefit of the program in that they seem to be influencing premature departures from the program while the

program is expending resources to retain participants. The findings of this current dissertation research reveal that often women experience frustration when they feel the messages they perceive as being delivered by the WIC program are incongruent with their own beliefs or assumptions regarding nutrition. Indeed, some program leavers felt encouraged to consume or have their children consume foods, or quantities of foods that they were concerned might not be the healthiest option in their specific circumstances.

For example, one study participant noted that "the food that was provided was not nutritionally adequate, that she is a vegetarian, and that WIC did not have alternatives like soy milk, spring water, vegetables and fruit, grain cereal such as oatmeal, grits, wheat germ and cream of wheat; that the only foods were cheese, milk, and mostly unhealthy cereal choices, and the only vegetables were carrots." Another WIC program leaver said her "child needs soy milk, and WIC said she would need a doctor's certification, and didn't let her know it was an option."

A number of study participants noted the need for approval of alternatives to milk for children who are lactose intolerant or cannot consume milk or dairy foods for other reasons. Other study participants questioned the nutritional value of the foods provided by WIC, with one study participant reporting that "they should add produce to WIC. Fruits and vegetables are better for children than cheeses." Indeed, some study participants mentioned that there was too much cheese and too much milk provided by the program. The current findings reveal that in some cases program leavers questioned the advice in food choices they received from the WIC program as it was incongruent with their own assumptions, beliefs, or knowledge about nutrition.

One participant reported that "her pediatrician wanted her son to be off baby food because he was growing too fast, but WIC kept insisting they knew best." Another study participant noted that she has "very little use for most of the food and would like to see more vegetarian and vegan foods." Yet another study participant reported that "some foods were in violation of religious observances" while another program leaver relayed that her "autistic child has a limited diet, can only eat mild foods; fresh fruits and canned fruits were not offered by WIC but were very necessary."

One study participant said she "wants to see a better variety of healthier foods and feels WIC does not offer all the foods in the food pyramid." This comment was interesting in that the food pyramid is a tool promoted by the USDA to help Americans make optimal food selections

for health. Indeed, a slogan related to the food pyramid is "one size does not fit all" (USDA, 2008, MyPyramid.gov). Clearly some participants feel uncomfortable when the messages they receive from the program are incongruent with those received elsewhere, including the messages offered by the very agencies responsible for providing information and support regarding the health of citizens. It seems that in some cases, premature program departures from the WIC program are shaped by participants' perceptions of receiving one-size-fits-all messages from the program regarding food and health practices.

The finding from this current research that 28.3 percent of former WIC program participants in the study left the WIC program prematurely due to the lack of choices in WIC-approved foods or formula they had is particularly salient for the direction of program implementation in the near future. Likewise, the specific concerns cited by participants are particularly notable given recent developments in the direction of WIC program food packages.

In December 2007 a federal interim rule altering WIC food packages was established, the first comprehensive revisions to the food packages an update that had not been undertaken since 1980 (USDA, 2008, Revisions in the WIC Food Packages - Interim Rule, Federal Register, 7 CFR Part 246). The interim rule will become final after analyses of public comments that are allowed until February 1, 2010. The cut off for implementation by states is October 1, 2009. Based on recommendations and comprehensive research provided by the Institute of Medicine (IOM) the interim rule attempts to update a variety of aspects of the WIC food packages to reflect dietary guidelines established in 2005 by the American Academy of Pediatrics while containing program administration costs (USDA, 2008, Revisions in WIC Food Packages – Interim Rule). This interim rule provides for the addition of new categories of foods such as fruits and vegetables, soy-based beverages and tofu as milk alternatives, whole grains, and the allowance of substitutions and reductions in some foods, all on a cost neutral basis (USDA, 2008, Revisions in the WIC Food Packages – Interim Rule).

Because this current research reveals that WIC participants are departing the program due to their dissatisfaction with WIC program food choices and with messages received from the program which they feel are incongruent with other information they have received or believe about health practices, determining in future years what impact these recent changes to the WIC program food package may or may not have on premature program departures will be necessary. The Food and Nutrition Service of the USDA indicates that the interim rule will allow for more

flexibility and discretion at the state level to "serve participants with certain qualifying conditions under one food package to facilitate efficient management of medically fragile participants" (USDA, 2008, Background Revisions to the WIC Food Package).

In that this current research reveals that premature program departures are often caused by a perceived lack of flexibility with WIC food package selections and among WIC program workers, providing states with even more flexibility in making decisions regarding medically needy patients (while attempting to do so on a cost neutral basis) may introduce new state-level issues. For example, an increased need for specialized training of workers or re-structured or longer nutritional education sessions with participants may be required in the future. Learning what impact (if any) this enhanced level of state discretion may have on the experience of WIC participants should be a future research priority.

This current research provides new insight in that it supports existing research from authors such as Fox et al. (1998) that suggests that the food package provided by WIC is one of the aspects of the WIC program that is most favored by participants, and as discovered in this current research, this facet of the program is also favored even among individuals who elected to depart the program prematurely. Indeed, when asked during the initial exploratory phase of data collection what aspect of the WIC program they liked the best, the most prevalently cited responses from study participants in the current research were aspects of the WIC program food and formula package. However, the current research provides new information about how specific aspects of the food package favored by so many WIC participants (such as the lack of flexibility in food choices) may also be influencing participants to depart the program voluntarily and prematurely.

The findings of this current dissertation research reveal that often women experience frustration when they feel the messages they perceive as being delivered by the WIC program via the food selections offered, are incongruent with the messages they have received from other sources regarding health issues. While some participants question the health value of WIC-approved food package selections, an array of competing stakeholders shape the messages related to nutrition and health practices conveyed to participants. The changes to the program to be undertaken this year as part of the new interim rule are to be made without increasing program costs. This means that while improvements might be made to the food package, cuts to some areas of the food and formula package are likely in order to accommodate any new costs

associated with food and formula package improvements. The farming and food industries are key stakeholders with regard to the WIC food and formula package and have a great interest in ensuring that specific products continue to be included at existing levels in the package since the WIC program constitutes a substantial portion of the business of some industries such as the dairy industry.

Also related to the more than one quarter of study participants (28.3%) citing the lack of choices in the selection of WIC-approved foods or infant formula, were a variety of specific issues related to infant formula as revealed in the open-ended survey item responses garnered in this study. For example, many respondents either could not use the type of infant formula approved by the WIC program or stated that a factor contributing to their premature program departure was the fact that their child was no longer on infant formula and that the program was no longer of value to them due to that fact. For example, one study participant noted that she "had a difficult time convincing WIC that formula makes her child sick, while skim milk doesn't make the child sick. WIC disagreed and insisted on giving her vouchers for formula which she cannot use." Another respondent noted that she "initially needed formula, but once formula was no longer needed felt they should no longer accept help," and another program leaver reported that WIC "stopped offering the formula her daughter needed so there was no real point in staying on the program," still another former program participant noted that "after her baby was off formula, she felt WIC wasn't needed."

These findings suggest that some barriers to participation may be temporarily ameliorated by the value of the infant formula received through the WIC program for infants. Specifically, barriers to participation discovered in this research (such as the dissatisfaction among program leavers regarding the variety of food package choices available in the WIC program) may be kept temporarily at bay because the value of the infant formula may be keeping dissatisfied program participants on the program longer than they would potentially otherwise participate.

The current research also reveals that although some program leavers had physician directions indicating that their infant needed formula other than that which was approved by the program, they were not allowed to purchase the formula through the program, with some study participants noting that the approved formula made their child sick. For example, one study participant noted that the "formula required for her child (she had a doctor's note) was not

approved by WIC" and another stating that "when WIC changed formula brands, the child was unable to drink the approved formula and there were no exceptions even with a doctor's note (WIC did not allow a soy alternative)."

Other study participants were allowed to purchase the formula specially prescribed for their infants but were dissatisfied with the number of appointments it required to become recertified, or experienced other logistical problems in receiving the formula. For example, one respondent relayed that "in order to get the formula she had to use for her son (Pediasure), she had to be recertified every 3 weeks, just too many appointments." Another study participant noted that her "daughter is on special formula and it must be sent in and the formula that was sent was always the wrong type."

While the WIC program is intended to promote breastfeeding as the primary means of feeding infants (rather than infant formula), this current research supports the notion that the provision of infant formula clearly remains as one of the most favored aspects of the program among participants, with many participants leaving the program voluntarily when the infant formula needed by their child is not approved or when infant formula is no longer needed. Oliveira (2003, p. 1) notes that "breastfeeding rates among women on WIC continue to be significantly lower than the Healthy People 2010 target established by the U.S. Department of Health and Human Services."

As mentioned earlier, Besharov and Germanis (2000) cite the infant formula rebate program as a possible source fueling expanding enrollment and less stringent eligibility criteria in the WIC program. With "over half of the infant formula in the United States purchased through the WIC program" (Oliveira & Davis, 2006) and the low rates of breastfeeding among WIC participants, the area of breastfeeding seems to be a WIC program area in which future improvements could be made. The current research findings suggest that the provision of the types of infant formula preferred by and needed by participants is an important aspect of the program which seems to be driving participant retention rates. Better understanding of how the program might in the future influence participant decisions regarding breastfeeding, while still precluding premature program departures, will be a future challenge for the WIC program.

This current research reveals that premature WIC program departures are occurring in part due to dissatisfaction with WIC-approved foods and infant formula and when infant formula

is no longer provided by the program due to child age. Understanding how promotion of breastfeeding might be improved in the WIC program or introduced prior to individuals electing to leave the program prematurely is necessary. Enhanced promotion of breastfeeding might serve to improve the health of mothers and infants in general, and may also prevent the unintended consequences of women electing to leave the program prematurely due to issues related to infant formula. While breastfeeding is promoted by the program as the healthy alternative to infant formula for the feeding of infants, a contradictory message is being sent to participants due to the focus on infant formula in the program.

Closely linked with issues related to the WIC program food package is the large network of grocery stores providing WIC-approved foods. The current research includes a number of findings related specifically to the grocery store experiences of WIC program leavers. While only 4.7 percent of the research participants in the current research cited "trouble finding a conveniently located grocery store that accepted WIC" as a factor in their premature departure from the program, other issues related to utilizing WIC vouchers in grocery stores were cited more prevalently as reasons for program departure.

Specifically, 12.9 percent of study participants cited as a reason for leaving the program "that [they] didn't like using the vouchers in the grocery store check out line." This particular finding is perhaps also related to the stigma often assigned to participants in safety net programs such as WIC. Indeed, 8.2 percent of study participants cited as a factor in their premature departure from the program that they "thought people looked down on [them] for being on WIC." Some program leavers also reported in the current research that they received poor customer service in grocery stores because they were WIC participants. For example, one study participant noted that "people at stores were rude because it was a hassle for them. I got into an argument with a store manager over the way I was treated at check out."

Slightly more than one quarter of study participants (25.1%) cited having "problems in knowing which foods in the grocery store were WIC approved" as a factor in their premature departure from the WIC program. Indeed, a number of responses to an open-ended survey item requesting any additional reasons for premature WIC program departure were related to the availability of specific WIC-approved food or infant formula items in grocery stores or problems with the identification or classification of WIC-approved food items within grocery stores.

For example, one study participant noted that her "local store had things scanned wrong, and it was a major hassle." Another program leaver noted that she "had a hard time finding grocery stores that had not run out of WIC-approved food." Another study participant reported that the "stores where she shops would change the items that were WIC approved in the stores often and occasionally decided that the products that were approved were not approved." Another study participant noted that the "stores are disorganized, and the computer systems didn't show that things were WIC approved." Some study participants disliked the voucher system utilized by the WIC program and mentioned the need for a debit card system similar to that used in the Food Stamp Program. For example, one survey respondent noted that "it was also a hassle learning how to use vouchers at the store, need a card or different forms of payment."

In the open-ended survey item regarding additional factors related to their premature departure from the WIC program a number of study participants also mentioned that the expiration of WIC vouchers or checks was a frustrating element of the program leading to their eventual departure. For example, one study participant noted that her "child's formula was no longer carried in the store, that she always had to go to WIC to get it, it was a hassle, and if it took too long, checks would expire," with another program leaver noting that "checks are set up for the month and are for 30 days so won't work on the 31st, checks also don't become active on the day they arrive, and has been in check out line with vouchers that weren't active." Another study participant also expressed dissatisfaction with the dates on the checks stating that the "dates on the checks are very frustrating because if she did not use up the weeks rations, she could not use the check that week" also adding that a "debit card system would be better." The theme of the desire to avoid wastefulness was also revealed in some of the open-ended comments related to the use of WIC at grocery stores. For example, one study participant "didn't like the fact that you had to buy everything on the check or else everything would go to waste, and would rather not use all the money on the checks and be able to use half instead of having extra food/formula going to waste."

The findings from the current research suggesting that barriers related to the usage of WIC in grocery stores are present among program participants and are leading to premature program departures are also significant in that discussion in the literature is emerging regarding the potential for grocery stores to take advantage of WIC participants. The findings from the

current research demonstrate frustration and confusion among WIC program leavers regarding several facets of the usage of WIC at grocery stores. These findings suggest that WIC program participants may be particularly likely to visit grocery stores that engage in price hiking and cater specifically to WIC participants since these stores may provide a more comfortable shopping experience for participants as they are WIC-only stores providing services only to WIC participant shoppers.

Neuberger and Greenstein (2004, p. 1) note that "WIC-only stores stock only WIC food items and serve only WIC customers" and "as a result, virtually all of their sales revenue comes from the Federal Treasury, through the WIC program." Because WIC-only stores are not competing with other stores for customers they have no incentive to offer competitive pricing. With more WIC-only stores cropping up next to WIC program administration sites, offering incentives for WIC participants such as free transportation to the store, and locating in neighborhoods with high concentrations of WIC participants, federal and state officials are beginning to express concern (Pear, 2004).

In light of the current research findings that WIC program participants are experiencing barriers to participation related to the use of WIC vouchers at grocery stores along with the fact that WIC-only stores seem to be offering services that would be attractive to such individuals, examination of mechanisms for controlling expanding costs stemming from WIC-only stores while ensuring convenience for WIC participants at grocery stores will be essential.

Another program area discovered in this current research that is related to premature WIC program departures is the area of nutrition education. Some study participants cited issues related to nutrition education directly as factors in their decision to depart the WIC program prematurely. Interestingly, the nutrition education services that are intended by the WIC program to be beneficial services to its participants in some cases are influencing participants to leave the program prematurely. Indeed, 6.5 percent of study participants cited the fact that they "thought the educational videos weren't informative" as a factor in their premature WIC program departure, while 5.3 percent of study participants cited the fact that they "thought the educational programs weren't informative" as a factor in their program departure. Likewise, comments in the open-ended survey question requesting any additional factors that may have influenced participant decisions to depart the WIC program prematurely reflect some areas of dissatisfaction with the nutrition education component of the program. For example, one study participant

noted that the "nutritionist made her feel like she was doing a horrible job with her children and said all foods had to be measured for each child the same."

As noted earlier, some program participants perceive the benefits and information they receive from the program to be incongruent with their own beliefs about health. These perceptions discovered in this current research among individuals who chose to leave the WIC program prematurely highlight the importance of reaching participants with information that is salient and beneficial to them while they are still on the program or at the onset of their participation. Fox et al. (2003, p. 16) note that the need for "providing an effective nutrition education component in the WIC program is compelling" because USDA data show that WIC participants are still engaging in nutrition practices that are unhealthy. If participants are departing the program early due to the variety of reasons discovered in this research and are also engaging in unhealthy practices, discovering ways of ameliorating the barriers to participation discovered in this research is particularly important.

The area of nutrition education is a primary component of WIC program services. With limits on the amount of funding that may be used for nutrition education and an expanding array of topics that need to be addressed with participants (such as obesity and breastfeeding), the burden for WIC agencies in delivering meaningful nutrition education and materials in brief periods of time within budget constraints is particularly daunting. Besharov and Germanis (2000) assert that the funding cap for the percentage of funds to be spent on nutritional education in the WIC program is too low in order for agencies to realistically provide the services expected.

Because the current research reveals that nutrition education has a role to play in the premature departure of program participants, and could also be a site at which information could be provided that might improve program participant retention, understanding how nutrition education services might be improved in the future in light of budget constraints will be critical. The findings from the current research suggest that the provision of tailored nutrition education that addresses the specific needs of individual families and avoids one-size-fits-all messages may assist in the prevention of premature WIC program departures.

Findings Related to WIC Program Administration Logistics

Another primary area of factors linked to premature WIC program departures is the area of logistical factors related to program administration. Specifically, the current research findings suggest an array of areas in which program participants find aspects of WIC program administration inconvenient or burdensome. Additionally, the current research findings reveal areas in which it is difficult for participants to continue WIC program participation, or logistical barriers to program participation. For example, 20.9 percent of former program participants reported that they "had a hard time finding childcare when [they] needed to go to the WIC office without [their] child(ren)" and that this was a factor in their premature departure from the WIC program. Likewise, 17.9 percent of study participants cited the fact that they "had a difficult time finding transportation to the WIC office" as a factor in their decision to leave the WIC program.

As mentioned earlier, the cumbersome nature of the certification and recertification process as perceived by many former program participants is a factor in premature program departures. Likewise, almost twenty percent (19.6%) of study participants said that a factor in their decision to leave the program was that "there was too much repetition in the paperwork [they] had to provide to WIC to become certified." Another 14.4 percent of study participants cited as a factor in their WIC program departure that "there was too much paperwork involved with the program in general."

Overall, there seems to be negative sentiment among former program participants that stems from an overarching feeling that aspects of the WIC program are a "hassle" and that there is an element of chaos involved in participation. Specifically, a number of "stories" emerged in the responses of study participants that revealed experiences in program participation in which they were faced with routines that were unpleasant and chaotic, and routines that had objectives that were not clear to participants. A number of study participants (16.0%) said that "the office waiting room where [they] received WIC services was too crowded or noisy" and that this was a factor in their premature departure from the program. Additionally 6.2 percent of study participants reported that a factor in their departure from the WIC program was that they "were not treated well by WIC staff members."

The appointments required for WIC participation were a barrier to participation for many former program participants. Indeed, 21.3 percent of study participants cited as a factor in their premature program departure that they "had to wait too long to be seen after arriving for [their] appointments." Many program leavers (35.8%) reported that "the appointment times were available only at times when [they] could not go." Indeed, this was the barrier to program participation cited by the greatest number of survey respondents. Some study participants (32.9%) cited as a factor for premature program departure that they had "medical, family, or personal reasons that arose that kept [them] from being able to go to the WIC office." This inability to keep WIC appointments or go to the WIC office due to medical, family, or personal reasons was the barrier to program participation cited by the second highest number of study participants.

Also, many program leavers (19.0%) elected to leave the program prematurely simply because they thought "there were too many appointments." Some program leavers (10.4%) also noted as a factor in their premature departure from the WIC program that they "thought [they] had to wait too long to get [their] checks." Again, a full 26.8 percent of recipients said that a factor in their departure from the WIC program was "that they didn't want WIC anymore because [they] felt it wasn't worth the hassle [they] had to go through to receive the checks."

A variety of specific questions related to appointment times were included in the survey instrument for the data collection phase of the current research. These questions were included based on the findings from the initial exploratory data collection phase that revealed logistical problems among former program participants in making and meeting scheduled appointment times required for WIC participation. Although the current research reveals that 45.8 percent of program leavers felt the days the clinic where they received WIC services was open were "very convenient," almost half of study participants (47.2%) cited this as a factor in their leaving the WIC program. Likewise, an even greater percentage of study participants (48.9%) rated the hours the clinic where they received WIC services as "very convenient," still, more than half of study participants (53.0%) said that this was a factor in why they left the WIC program. Similar to the findings related to other areas of the program, it seems that program leavers feel that aspects of the program were valid for some individuals, but that they simply did not meet program requirements and therefore, should no longer participate.

More than half of program leavers cite the level of convenience of WIC office hours as a reason for premature program departure and almost half of program leavers cite the level of convenience of the days of operation of the WIC office as a reason for premature program departure. Clearly, the program leavers seem to have a somewhat pessimistic view with regard to the potential of flexibility in changing such logistical aspects of the program. This seems to be the case since similar percentages of study participants also rate the days and hours of operation of the WIC office as "very convenient." This suggests that former program participants feel that the days and hours are convenient and that they in some way do not fit the model for program participation since the days and hours of operation were not convenient for them personally.

These findings regarding WIC program operation times are parallel with those related to eligibility requirements found in this current research. Specifically, that a large number of WIC program leavers felt that they were not qualified to participate in the program, and as revealed in the findings related to WIC office operation hours and days, that they did not meet program requirements such as being able to come to the WIC office for appointments. When asked what hours and days would be more convenient for coming to the WIC office or clinic, 30.4 percent of study participants indicated "weekends" would be more convenient and 52.7 percent of study participants reported that "evenings" would be more convenient. Almost one quarter of study participants (24.0%) felt the office should be open more days in during the week.

The WIC program provides referrals for a wide variety of health services as a benefit to participants. In many WIC administration sites health care services are provided at the site of program administration (often called "co-location" within the program). When specific health services are not provided at a WIC administration site such as a health department, WIC agencies refer participants to other local health resources and providers in the community. The current research suggests that some aspects of co-location enhance the experience of WIC participants while other aspects of co-location are viewed as more problematic by participants. For example, chaotic waiting room experiences and exposure to sick individuals were cited by some participants as problematic in the context of WIC administration sites located within local health department settings. Conversely, some participants expressed frustration with the requirement that they go to multiple locations for health services related to WIC (such as physician authorizations) rather than going to a single location that provided all the services they needed.

The majority of participants in this current research (66.5%) reported that while on WIC they received services at a health department, with 16.6 percent receiving services at a stand-alone WIC office while on the program, 11.9 percent receiving WIC services at a Social Services office while on WIC, and 5 percent receiving WIC services through another venue (such as a military base) while on the program. More than 8 in 10 (81.2%) study participants who received WIC services at a local health department responded in the current research that this is where they preferred to receive WIC services (as opposed to a social services office, stand alone WIC office, or other clinic or office). However, 19.4 percent of respondents who received WIC services at another health clinic while on WIC indicated they would prefer to have received services at the local health department in their community. Likewise, 12.8 percent of study participants who received services at a stand alone WIC office, and 10.1 percent of study participants who received WIC services at a social services office indicated they would have preferred to receive services at a local health department.

These current research findings suggest that the issue of co-location is not in itself a primary factor in the premature departure of individuals from the WIC program. However, as noted earlier, specific aspects of co-location may inform participant dissatisfaction and departures.

However, a number of issues related to the provision of health services and the waiting room setting of the WIC administration sites (including the health department) were deemed problematic by program leavers. Indeed, as noted earlier, 16 percent of study participants cited as a factor in their premature WIC program departure that "the office waiting room where [they] received WIC services was too crowded or noisy." Likewise, 21.3 percent of study participants cited as a factor in their premature program departure that they "had to wait too long to be seen after arriving for [their] appointments." Thus, these logistical issues related to experiences at WIC program administration sites were actual factors cited by former program participants for premature departure from the WIC program.

A number of open-ended responses citing additional reasons for program departure also reflect a disorganized or chaotic experience at the WIC administration sites. Specifically, in the initial exploratory phase of data collection during which more qualitative data were gathered, study participants told a number of "stories" of waiting room experiences that reflected

unintended consequences of program rules and inflexibility in some aspects of program administration. For example, a number of study participants expressed frustration with having to take their children into a waiting room with sick individuals. For example, one program leaver explained "I thought there were too many things going on in the Health Center, and the waiting room was too hectic. Also, I did not like waiting with children around a lot of sick people."

In the primary data collection effort, a number of study participants also revealed problems with the logistics of program administration. For example, one study participant indicated that a factor in her departure from the WIC program was that her local "WIC office was not sanitary at all and a biohazard bin was not covered." As a result, her child "accidentally picked up a used bloody swab." Other study participants also cited factors related to the WIC waiting room and appointment experience as influencing their decision to leave the program. For example, one participant noted that "it took so long to wait in the waiting room when you had to bring in your children to recertify." Another study participant said simply that a factor in her premature WIC program departure was that "appointments when children had to be brought were very difficult" for her.

Other study participants cited difficulties related to employment or school for their children as factors influencing their decision to leave the WIC program prematurely (certainly unintended consequences of WIC program administration logistics). For example, one study participant noted that a factor in her departure from the program was that "it was a hassle to get her children out of school when they needed to go to some WIC appointments," with another study participant citing as a factor in her program departure that "she could not get off work to go to the appointments." Likewise, as noted earlier, some participants found the fact that they needed physician approval (at different sites in some cases) for deviation from approved infant formula to be a cumbersome experience. These current research findings reflect a desire among program leavers for better coordination with regard to the logistics of service delivery (such as the streamlining of appointments, services and referrals).

The current research findings suggest that the WIC participant burden stemming from difficulties in navigating program requirements is contributing to premature program departures among participants. The findings of this research suggest that logistical aspects of program delivery such as appointment scheduling and implementation of program rules related to

appointments, initial eligibility determination, and re-certification are areas in which barriers to program participation could be readily ameliorated for participants. Indeed, the current research suggests that dedication to the rules in these logistical areas of WIC program administration may foster inflexibility leading to premature program departures (since a large number of participants left the program due to factors such as the inability to get an appointment time that allowed them to meet their other obligations).

Factors Influencing Program Departure by Leaver Characteristics

There were a number of statistically significant differences in the survey responses of different types of WIC program leavers regarding the factors that influenced their premature departure from the program as well as their overall perceptions of the program. Where statistically significant differences are reported, all differences are statistically significant at the ($p \leq .05$) level. In order to identify any differences in survey responses by selected respondent characteristics, collapsed dichotomous variables were created by the researcher and chi-square tests were performed. Prior to running all chi-square tests, all responses of "don't know" or "refuse" on scaled items were removed from the eligible responses and were treated as missing in all calculations.

A dichotomous food security variable was constructed for this study for use in analyses of possible statistically significant differences in survey responses by selected study participant characteristics. This food security variable was constructed by utilizing the responses of the study participants to the following two survey items: "since leaving the WIC program, was there ever a time when you did not have enough money to buy the amount of food you needed for yourself or your child(ren)?" and "since leaving the WIC program, was there ever a time when you did not have the money to buy the type of food you needed for yourself or your child(ren)?". Utilizing the responses to these two survey items, there are 769 study participants who were experiencing food insecurity at the time of the study, 730 respondents who were not experiencing this type of food insecurity as defined, and 5 cases that were not included in the tabulations for this variable since these 5 study participants responded with "don't know" to both of the food security survey items.

Table 1 depicts the statistically significant ($p \leq .05$) differences found in the factors related to premature WIC program departures in respondents who experienced food insecurity after leaving the WIC program compared with those who did not. Only factors for which a statistically significant difference is present are depicted.

Table 1. Factors Related to WIC Program Departure with Statistically Significant ($p \leq .05$) Differences by Respondent Food Security Status

Factor Related to WIC Program Departure	% Respondents Citing Factor as Reason for Departure		
	Overall	Food Security No	Food Security Yes
Appointment Times Available Only When You Could Not Go	35.8	42.7	28.9
Medical, Family, Or Personal Reasons/Not Able To Go To WIC Office	32.9	41.0	24.6
Thought You Weren't Qualified Because Of Household Income	31.0	27.6	35.0
Felt You Didn't Need Checks Anymore	28.7	16.7	41.4
Too Few Choices In Selection Of WIC-approved Foods/Formula	28.3	35.0	21.4
WIC Not Worth Hassle Had To Go Through	26.8	30.1	23.4
Had To Recertify Too Often	25.3	31.8	18.7
Problems Knowing Which Foods In Grocery Store Were WIC Approved	25.1	30.7	19.2
Had To Wait Too Long To Be Seen After Arriving For Appointments	21.3	26.0	16.5
Difficulty Finding Childcare To Go To WIC Office Without Children	20.9	26.7	15.0
Too Much Repetition In Paperwork To Become Certified	19.6	23.7	15.2
Thought There Were Too Many Appointments	19.0	24.4	13.5
Difficulty Finding Transportation To WIC Office	17.9	24.4	11.3
Office Where Received WIC Services Too Crowded/Noisy	16.0	19.2	12.7
Too Much Paperwork Involved With Program In General	14.4	18.0	10.5
Didn't Like Using Vouchers In Grocery Store Check Out Line	12.9	15.8	10.0
Amount Of Food Or Formula You Received Too Little	12.4	16.4	8.3
Thought You Had To Wait Too Long To Get Checks	10.4	15.0	5.6
Thought Blood Needed To Be Drawn Too Often	7.1	9.1	5.0
Thought Educational Videos Weren't Informative	6.5	8.9	4.8

Factor Related to WIC Program Departure	Overall	Food Security No	Food Security Yes
That You Were Not Treated Well By WIC Staff Members	6.2	7.6	4.8
Thought Educational Programs Weren't Informative	5.3	7.1	3.7
Trouble Finding Conveniently Located Store That Accepted WIC	4.7	6.8	2.4

As depicted in **Table 1**, the majority of factors (all but four included in this set of survey items) related to premature WIC program departure included in the survey had statistically significant differences in terms of the percentages of respondents selecting each factor when viewed by respondent food security status. These findings support the notion that program leavers who fare worse upon leaving the WIC program may be leaving the program for different reasons than their more affluent or secure counterparts. Specifically, as presented in **Table 1**, study participants who lacked food security at the time of the study were more likely to cite almost every barrier to participation than study participants who were not experiencing a lack of food security (as indicated by the statistically significant higher percentages on all but two of the barriers presented in **Table 1**).

Notably, respondents who lacked food security upon leaving the WIC program were significantly less likely to cite two of the barriers to participation than participants who did not lack food security. These two factors are "thought you weren't qualified because of household income" and "felt you didn't need checks anymore". These findings related to food security are important in that they demonstrate that the most vulnerable of program participants are significantly more likely to depart the program voluntarily for reasons that are related to program logistics in administration and dissatisfaction with services (as opposed to confusion regarding eligibility requirements or feeling that they do not need WIC services).

Interestingly, many WIC leavers who were experiencing food insecurity after leaving the program were participating in the Food Stamp Program (a program designed to assist by providing individuals in need with food). Indeed, in the current research, 30.4 percent of respondents who responded affirmatively to the question "since leaving the WIC program, was there ever a time when you did not have the amount of food you needed for yourself or your child(ren)?" also indicated in the current research that they were participating in the Food Stamp Program at the time of data collection. Likewise, in the current research, 32.0 percent of

respondents who responded affirmatively to the question "since leaving the WIC program was there ever a time when you did not have the type of food you needed for yourself or your child(ren)?" also indicated in the current research that they were participating in the Food Stamp Program at the time of data collection.

Also related to the most vulnerable program leavers as measured by economic status are the statistically significant differences present in the factors related to premature program departures when viewed by self-reported poverty status (respondents at or below the poverty level specified by the state department of health compared with those who were not at or below the specified poverty level at the time of data collection).

A dichotomous poverty level variable was constructed from responses to the survey item "Will your total household income be less than [CATI inserts amount calculated from self reported household size and state-provided poverty levels for geographic regions and household sizes (variable assigned to each sample record prior to survey administration)] this year before taxes?". There were 1,111 survey respondents who responded "yes" to this survey item and 263 respondents who responded "no" to this item. There were 127 respondents who answered "don't know" to this item and 3 respondents who refused to answer this survey question. All "yes" and "no" responses to this survey item were included in the dichotomous poverty level variable, with "don't know" and "refuse" responses to this survey item removed for the purposes of the constructed poverty variable.

Table 2 depicts the statistically significant ($p \leq .05$) differences found in the factors related to premature WIC program departures in respondents who were classified as being in poverty for the purposes of the study (as defined by the state department of health in which the study was conducted) compared with those who were not in poverty as defined in this manner at the time of the study. Only factors for which a statistically significant difference is present are depicted in the table below.

Table 2. Factors Related to WIC Program Departure with Statistically Significant ($p \leq .05$) Differences by Respondent Poverty Status

Factor Related to WIC Program Departure	% Respondents Citing Factor as Reason for Departure		
	Overall	In Poverty Yes	In Poverty No
Appointment Times Available Only When You Could Not Go	35.8	40.9	19.8
Medical, Family, Or Personal Reasons/Not Able To Go To WIC Office	32.9	37.2	17.1
Thought You Weren't Qualified Because Of Household Income	31.0	21.5	66.1
Felt You Didn't Need Checks Anymore	28.7	25.7	43.0
WIC Not Worth Hassle Had To Go Through	26.8	29.3	20.5
Had To Recertify Too Often	25.3	28.8	16.0
Problems Knowing Which Foods In Grocery Store Were WIC Approved	25.1	27.2	19.8
Had To Wait Too Long To Be Seen After Arriving For Appointments	21.3	23.6	16.4
Difficulty Finding Childcare To Go To WIC Office Without Children	20.9	24.7	10.6
Too Much Repetition In Paperwork To Become Certified	19.6	22.0	11.7
Thought There Were Too Many Appointments	19.0	21.9	10.6
Difficulty Finding Transportation To WIC Office	17.9	21.1	4.5
Too Much Paperwork Involved With Program In General	14.4	16.4	8.0
Thought You Had To Wait Too Long To Get Checks	10.4	11.8	6.8

As depicted in **Table 2**, there are a number of statistically significant differences in the percentages of respondents selecting factors related to WIC program departure when viewed by respondent poverty status. The direction of these findings is similar to those found when the factors related to WIC program departure were analyzed by respondent food security status. Specifically, respondents who are experiencing poverty are significantly more likely than their more affluent counterparts to leave the WIC program for reasons that are related to program logistics and administration, as well as for reasons related to program services in general. Conversely, study participants experiencing poverty were less likely than their more affluent counterparts to leave the WIC program due to the following two factors: "thought you weren't qualified because of household income" and "felt you didn't need checks anymore". These

findings related to poverty status are particularly notable in that they suggest that the most vulnerable populations are leaving the WIC program voluntarily due to barriers to participation that are presented in the program itself, barriers that could perhaps be ameliorated through more program flexibility.

There were a number of statistically significant differences in the survey responses of program leavers regarding the factors influencing WIC program departures when viewed by participation status in other governmental safety net programs. Specifically, the survey instrument utilized in the current research included a survey item which assessed respondent (and the child(ren) of respondents) participation in other safety net programs including the free or reduced price lunch program, TANF, Medicaid, FAMIS, and the Food Stamp Program. Because individuals may qualify for WIC automatically due to their participation in other programs, this question was important to assess the extent to which study participants enrolled in or continued participation in other programs after leaving WIC.

A dichotomous variable was created by the researcher to identify respondents who participated in any of the governmental safety net programs included in the survey instrument. This program participation variable was constructed by including all respondents who responded that they were participating in at least one of the programs included in the study. Respondents who indicated that they were not participating in any of the programs included in the study were treated as "no" responses to the dichotomous program participation variable. Respondents who answered "don't know" or "refuse" to the individual choose all that apply program participation survey item were excluded from the dichotomous program participation variable. At the time of the study, there were 892 respondents who were participating in at least one of the safety net programs included in the study and 611 who were not participating in any of the programs included in the study. With regard to the specific levels of participation in each of the programs included in the study, there were 411 WIC program leavers who were participating in the free or reduced price lunch program at the time of the study, 151 who were participating in TANF, 678 who were participating in Medicaid, 123 who were participating in FAMIS, and 397 who were participating in the Food Stamp Program.

Table 3 depicts the statistically significant ($p \leq .05$) differences found in the factors related to premature WIC program departures in respondents who were participating in at least one governmentally funded safety net program included in the study compared with those study

participants who were not participating in any of the programs asked about in the study. Only factors for which a statistically significant difference is present are depicted.

The statistically significant differences present when viewing the current findings by safety net program participation status are parallel to those found when analyzing the tabulated data by respondent food security and poverty status. Specifically, statistically significant differences in responses are present in the same direction on similar factors when comparing WIC program leavers who were participating in other social safety net programs at the time of data collection with those who were not.

Table 3. Factors Related to WIC Program Departure with Statistically Significant ($p \leq .05$) Differences by Respondent Participation in Government Funded Safety Net Programs Other Than WIC

Factor Related to WIC Program Departure	% Respondents Citing Factor as Reason for Departure		
	Overall	Other Program Yes	Other Program No
Appointment Times Available Only When You Could Not Go	35.8	39.2	30.9
Medical, Family, Or Personal Reasons/Not Able To Go To WIC Office	32.9	38.2	25.3
Thought You Weren't Qualified Because Of Household Income	31.0	17.2	51.0
Felt You Didn't Need Checks Anymore	28.7	22.8	37.4
Had To Recertify Too Often	25.3	28.5	21.0
Difficulty Finding Childcare To Go To WIC Office Without Children	20.9	24.0	16.6
Too Much Repetition In Paperwork To Become Certified	19.6	21.8	16.5
Thought There Were Too Many Appointments	19.0	22.1	14.6
Difficulty Finding Transportation To WIC Office	17.9	24.8	7.8
Thought Educational Videos Weren't Informative	6.5	7.9	5.6

As depicted in **Table 3**, respondents who were participating in the other government funded safety net programs were significantly more likely to cite reasons for departing the WIC program that were related to logistical barriers in program administration and delivery or dissatisfaction with aspects of WIC services than were respondents who were not participating in any of the other safety net programs addressed in the study. Whereas, respondents who were not

participating in the governmental safety net programs included on the survey were significantly more likely to cite factors related to their confusion regarding eligibility requirements (thinking they no longer qualified due to their income) or that they felt they no longer needed the WIC checks.

These statistically significant differences in the current findings related to former WIC program participant participation in other governmental programs are interesting in that they suggest that the individuals who qualify for other governmental safety net programs beyond WIC are choosing to stay on those programs even after leaving WIC but that the patterns in the factors that influenced them to leave the WIC program are parallel to those found among the most vulnerable of WIC leavers. This is particularly interesting in light of the fact that program participants who are able to maintain participation on other governmental safety net programs beyond WIC are experienced in meeting the obligations of program participation for those programs such as documentation of income and paperwork, and should therefore, be more equipped to navigate the requirements of WIC participation. However, the fact that these individuals were significantly more likely to have left WIC due to factors related to aspects of the WIC program that are logistical in nature and related to specific aspects of WIC services (such as problems with appointment times and feeling as if there are too many appointments involved to receive WIC) suggests that this may not be the case. These findings suggest that the program requirements for WIC are proving to be particularly challenging for participants, even those who are willing and able to meet the program requirements of other governmentally funded safety net programs.

Interestingly, there are no statistically significant differences in the overall program ratings for WIC provided by study participants when viewed by a variety of participant characteristics. Specifically, for the survey item "overall, would you rate the WIC program as excellent, good, fair, or poor?", the differences in the percentages of respondent ratings of the program are not statistically significant for the following variables: food security, poverty, government funded safety net program participation beyond WIC, location of WIC program participation (health department or other), or pregnancy/currently breastfeeding or infant in home status.

Overall, as mentioned earlier, WIC program leavers rate the program favorably with 59.6 percent rating the program as "excellent" and 33.0 percent rating the program as "good". Therefore, the fact that these individuals chose to leave a program they rate favorably voluntarily and prematurely, a program that is designed to be relatively broad for its target audience in terms of eligibility for participation, is significant. The fact that these individuals chose to leave a program they rate favorably while they were still eligible to participate suggests that should the factors influencing premature program departures discovered in this research be resolved or improved, participants think highly enough of the program to maintain participation.

Indeed, in the current research, WIC program leavers who were qualified for re-enrollment in the program were asked if they plan on re-enrolling in the WIC program in the next year. In response to this question, 60.7 percent of WIC program leavers responded affirmatively. This finding is particularly important to note in that it suggests that a large number of WIC program leavers are merely "stopping out" of the program because they are faced with challenges to program participation. This potential revolving door pattern in program participation may prove to be particularly daunting for WIC agencies as they attempt to control program costs, improve the program, estimate enrollment, retain program participants, and better understand premature program departures. The findings from the current research provide information on the factors that influence WIC participants to leave the program and potential sites for preventing premature and voluntary program departures among program participants.

A dichotomous variable was created by the researcher to identify study participants who indicated on the survey that they would re-enroll in the WIC program within the next year from the time of the interview. Respondents who answered "don't know" or "refuse" to the survey item regarding re-enrollment were excluded from the constructed dichotomous variable (N=148). There were 253 cases that were also removed from this variable because the respondents reported circumstance changes (e.g., no longer pregnant, child age, dropped out of other qualifying programs, etc.) that would potentially make them no longer eligible for participation in the WIC program in the year following the interview. There were 759 respondents who indicated that they would re-enroll in the WIC program and 344 who indicated that they would not. Analyses comparing the factors related to program departures reveal some statistically significant differences in the departure reasons across the two groups. These findings are of note in that they reveal reasons for premature program departure that are associated with individuals

who would not come back to the WIC program and those associated with those who would re-enroll. Thus, potentially revealing areas in which the most fruitful program changes could be made in order to prevent temporary stopping-out in the program and to perhaps retain the WIC participants who are the most difficult to retain or entice back to the program.

Table 4 depicts the items and tabulations for which statistically significant ($p \leq .05$) differences were found when comparing respondents who indicated an interest in re-enrollment in WIC compared with those respondents who were not interested in re-enrollment. Only factors for which a statistically significant difference is present are depicted.

Table 4. Factors Related to WIC Program Departure with Statistically Significant ($p \leq .05$) Differences by Respondent Plans for WIC Re-enrollment

Factor Related to WIC Program Departure	% Respondents Citing Factor as Reason for Departure		
	Overall	Would Re-enroll Yes	Would Re-enroll No
Appointment Times Available Only When You Could Not Go	35.8	44.0	30.3
Medical, Family, Or Personal Reasons/Not Able To Go To WIC Office	32.9	42.9	24.7
Thought You Weren't Qualified Because Of Household Income	31.0	16.1	36.1
Felt You Didn't Need Checks Anymore	28.7	12.7	51.2
Too Few Choices In Selection Of WIC-approved Foods/Formula	28.3	28.2	30.0
WIC Not Worth Hassle Had To Go Through	26.8	22.1	35.5
Had To Recertify Too Often	25.3	29.3	22.4
Difficulty Finding Childcare To Go To WIC Office Without Children	20.9	25.5	18.7
Difficulty Finding Transportation To WIC Office	17.9	27.0	10.2
Office Where Received WIC Services Too Crowded/Noisy	16.0	13.6	22.1
Didn't Like Using Vouchers In Grocery Store Check Out Line	12.9	11.1	17.5
Amount Of Food Or Formula You Received Too Little	12.4	12.1	13.6
Thought People Looked Down On You For Being On WIC	8.2	5.7	13.4
Amount of Food Or Formula Was Too Much, Went To Waste	7.4	5.2	12.5

Issues related to confusion regarding program eligibility requirements are significantly more likely to be cited by individuals who would not re-enroll in WIC. Specifically, study participants who indicated that they would not re-enroll in WIC were significantly more likely than study participants who would re-enroll in WIC to report that they left the WIC program because they thought they were no longer qualified due to income or that they felt they didn't need the checks anymore.

Interestingly, study participants who reported that they would not re-enroll in the WIC program were significantly more likely than study participants who would re-enroll in the WIC program to cite reasons for premature program departure that are related to negative stigma or feelings of guilt in participating in the program. For example, the study participants who would not re-enroll in WIC were significantly more likely to report that they left the WIC program because the amount of food or formula provided by the program was too much and went to waste, that they didn't like using WIC vouchers in the grocery store check out line, and that they thought people looked down on them for being on WIC.

As depicted in **Table 4**, it seems that issues related to the WIC program food and formula package may be serious barriers to participation in that individuals who reported that they would not re-enroll in the program were significantly more likely to cite several reasons for program departure related to the food and formula package than were study participants who indicated that they would re-enroll in the WIC program. Specifically, study participants who reported that they would not re-enroll in the WIC program were significantly more likely than individuals who would re-enroll in WIC to cite inadequate selections or choices offered in the WIC food and formula package as a factor in their departure from the WIC program. This group of study participants was also significantly more likely to indicate that the WIC program provided too little food or infant formula (possibly related to their preferred selections not being offered) than the study participants who reported that they would re-enroll in the WIC program.

The issue of chaotic waiting room experiences in WIC administration sites is also a prominent barrier to participation for WIC program leavers who would not re-enroll in the program, with those individuals being significantly more likely to cite this as a reason for program departure than study participants who would re-enroll in the WIC program. Indeed, WIC program leavers who would not re-enroll in the program were also significantly more likely

to indicate that WIC was not worth the "hassle" they had to go through to receive checks and that this was a factor in their premature departure from the program than were the individuals who would potentially re-enroll in the WIC program.

Study participants who would re-enroll in the WIC program were significantly more likely than study participants who would not re-enroll in the WIC program to cite reasons for WIC program departure that were related to appointment times, the appointment process for the WIC program, or logistical problems preventing the program leavers from being able to go to the WIC office. Specifically, study participants who would re-enroll in the WIC program were significantly more likely to cite as a reason for program departure that the WIC appointment times were available only at times they could not go, that they had medical, family, or personal reasons that prevented them from being able to go to the WIC office, that they had childcare and transportation difficulties affecting their ability to go to the WIC office, and that they had to recertify too often.

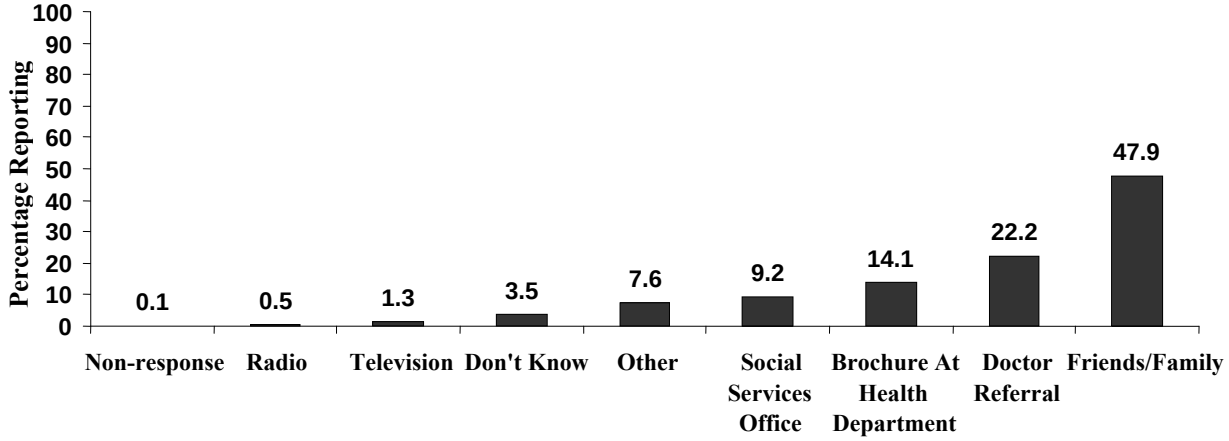
These findings provide information regarding potential program improvement areas that may yield the most substantial rewards in terms of program re-enrollment or retention. For example, streamlining the appointment process, reducing the number of required appointments, or providing logistical support such as appointment-related childcare or transportation to appointments, may provide substantial gains in terms of participant re-enrollment and retention in that individuals who are most likely to re-enroll in the WIC program were significantly more likely to have left the program due to these reasons.

Information Sources for WIC Participants Prior to Enrollment

With official slogans utilized by the WIC program such as "WIC Works," WIC program participants who are confronted with experiences that are contrary to this organizational definition of the program may be reluctant to continue their participation on WIC because they feel they are not a good fit for the program. Indeed, as discussed earlier, the current research findings reveal many reasons for premature departures in the program that are based on incorrect assumptions among participants.

The current research identified the sources from which WIC program leavers heard about the WIC program prior to enrollment. Specifically, a survey item addressing this issue yielded findings that are notable in that they suggest that WIC program participants most frequently learn about the program initially through friends and family. Because the findings from the current research reveal that individuals who choose to leave the WIC program prematurely and voluntarily often do so due to confusion regarding eligibility requirements or messages or information received from the program which they feel is incongruent with information they have received elsewhere, understanding how program participants initially heard about the WIC program is of utility. **Figure 4** depicts the sources for hearing about the WIC program prior to enrollment among the WIC program leavers included in the current research.

Figure 4. How WIC Program Leavers Initially Heard About The WIC Program



The current research finding that the most prevalent source of information regarding the WIC program prior to enrollment are the friends and family members of the eventual program enrollees, makes it clear that more intensive public education efforts regarding aspects of the program such as eligibility requirements, may be warranted and may indeed, help to prevent premature program departures. Interestingly, even though there are abundant radio and television announcements regarding the WIC program, these were among the least utilized resources for learning about the program among WIC program leavers. However, the current research findings suggest that there are a number of potential sites for shaping the information

and messages received by WIC program audiences that may be particularly promising. For example, physicians, brochures at health departments, and social services offices are all sources for information that were more heavily utilized by WIC program leavers. Thus, these are areas in which the honing of information targeted to prevent premature program departures by clarifying topics such as eligibility requirements may be fruitful.

5

Conclusion

Conclusions Regarding the Research Question

This research study provides detailed answers to the question of why eligible families are leaving the WIC program voluntarily and prematurely. The research findings reveal a number of barriers to WIC program participation that may be categorized generally into three groups: barriers related to program eligibility requirements, barriers related to the services or benefits provided by the WIC program, and barriers related to the logistics of WIC program administration and policies. These barriers to participation discovered in this research reveal why eligible families are electing to voluntarily and prematurely leave a public program that is intended as one of the nation's primary mechanisms for ensuring the health of infants and mothers, a program that in theory should be easier to stay on than many governmental support programs with stricter eligibility and participation requirements.

This research provides evidence that individuals who chose to prematurely drop out of the WIC program are able to maintain participation in other government funded safety net programs after leaving WIC. A discovery of this research is that individuals who were participating in other government safety net programs after leaving WIC were significantly more likely to cite reasons for departing the WIC program that were related to logistical barriers in program administration and delivery or dissatisfaction with aspects of WIC services than were WIC leavers who were not participating in any of the other safety net programs addressed in the study. This finding is significant in that it suggests that the program requirements for WIC are proving to be particularly challenging for participants, even those who are willing and able to meet the program requirements of other governmentally funded safety net programs. Thus, while WIC is believed to be a program with less stringent eligibility requirements for its participants than other programs, the current research suggests that participants may find it easier to stay on other public safety net programs with stricter requirements for participation.

The current research provides insight with regard to why many WIC program participants would voluntarily choose to turn their backs on a public program that has traditionally been viewed as highly beneficial and successful. Notably, the findings of this research study reveal that many WIC program leavers agree with the prevalent views on the program, that it is a program that provides services that are of some value to women and children. Indeed, the majority of WIC program leavers rated the program overall quite favorably in this research. However, in examining why eligible families are leaving the WIC program, prominent sites of miscommunication, incorrect assumptions among both program participants and program workers, and unintended consequences of routines embedded in the delivery of the program were revealed. Also evident in the findings of this current research are some policies surrounding the WIC program that seem to directly hinder the ability of participants to stay on the program.

A primary area of factors influencing premature WIC program departures discovered in this research is related to the eligibility requirements of the WIC program including the certification and re-certification processes required by the program. Interestingly, one of the primary reasons for families leaving WIC prematurely is that they incorrectly assume their household income is too high to participate in the program. This finding of program participants incorrectly self identifying as ineligible for the program is particularly interesting since it is certainly not an intended consequence of the program or of efforts of the WIC program to enroll and retain more participants. This finding also suggests a negative consequence of allowing higher income individuals to participate in the program that has not yet surfaced in the existing research on the WIC program.

Attempts by states to maintain WIC program enrollment levels while best serving participants are circumvented by program leavers who leave prior to reaping the benefits (potential medical and cost savings benefits for example) of the program but after utilizing valuable program resources that are expended prior to the departures taking place. It is particularly unfortunate that so many participants are leaving the WIC program prematurely simply due to confusion surrounding WIC program eligibility requirements. These misperceptions may stem in part from the cumbersome (as revealed by program leavers in this study) certification and re-certification process and paperwork required for the program in that program participants may reasonably assume they are being put through these steps because their eligibility is in question.

The process of maintaining WIC enrollment and demonstrating eligibility, and the rules and routines surrounding these processes are closely linked to a variety of barriers to program participation discovered in this research. For example, a variety of the factors influencing premature departures from the WIC program among participants are associated with logistical barriers such as appointment scheduling that are required in order to certify or re-certify for the program. Although a great deal of resources and effort in the WIC program are focused on the certification process for participant maintenance of eligibility for the program, some participants are receiving incorrect messages regarding their eligibility to participate, defeating the purpose of the intensive focus on the certification and re-certification for eligibility processes.

The finding from this research study that many WIC participants are leaving the program prematurely due to the belief that they no longer qualify for the program because of their income provides important information regarding a number of factors related to WIC program eligibility currently debated in the literature. For example, these findings may shed a different light on concerns among some authors such as Besharov and Germanis (2000, p. 133) about the "eligibility creep" discussed earlier in this work in which the income criteria for inclusion in the WIC program is becoming less stringent and the possibility that the neediest participants might not be served as a result. Specifically, rather than necessarily being a drain on resources intended for the most needy participants by utilizing services and thereby, spreading program resources too thin, the findings from this current research suggest that individuals with higher incomes may be utilizing scarce program resources in other ways.

The findings of this research study highlight a revolving door syndrome in which individuals with higher incomes are simultaneously encouraged and allowed to participate in the program but then leave WIC before reaping the benefits of the program because they incorrectly assume that they are not qualified for participation. In some cases participants seem to experience feelings of dissonance because they feel "wasteful" for utilizing resources of which they feel undeserving. Therefore, the very allowance of individuals with higher incomes to participate in WIC in order to expand enrollment in the program may have the unintended consequence of introducing additional resource expenditures with little promise of intended medical outcomes improvements or medical cost savings since program departures are occurring due to confusion over eligibility requirements related to income. Further, confusion regarding the eligibility requirements related to income may be fueling perceptions among some

participants that due to their income (even though they are eligible to participate in the program), they are wasting program resources, leading to premature program departures among these program participants.

Indeed, the finding from the current research that many WIC program leavers plan to re-enroll in the program and begin the cycle of participation and possible departure prior to reaping the benefits of the program again suggests an urgent need for examination of both the eligibility requirements for participation in the program and the messages that program participants are receiving related to eligibility. Moreover, it is important to note that the current research findings also demonstrate that many program participants doubt their level of need for WIC program services and that these feelings among participants lead in some cases to premature program departure, even though the vast majority of these program leavers are at or below the poverty levels designated by the state after leaving the WIC program.

A wide array of findings related to how aspects of WIC program services may inform premature departures among program participants are provided in the current research. The findings reveal that many program leavers value the food and formula package provided as a benefit of the WIC program but may depart the WIC program prematurely because they believe the "hassle" they must go through to receive these services is not worth the benefit garnered as a result of the services.

The current research also reveals that many WIC program participants leave the program due to specific aspects of program services that seem to allow for little flexibility with regard to individual program participant needs. For example, the current research findings demonstrate that many WIC program participants leave the program due to the lack of choices available in food and infant formula selection options and that in many cases program leavers did not feel WIC was allowing them to make the best nutritional decisions for their children. Overall, a lack of flexibility in program regulations related to the types of food and infant formula provided seems to be hindering the ability of some participants to remain on the WIC program. Likewise, the findings of this study reveal that the perceived one-size-fits-all nature of some of the information conveyed in the nutritional counseling services provided by the WIC program may be leading some WIC participants to question whether they are a good fit for the program as participants.

The theme of participants feeling as if they do not need or deserve the services of the WIC program is also evident in the findings from the current research related to WIC program services such as the food and infant formula package provided to participants. Many program leavers not only left the program because they felt they didn't truly "need" the services of the program, with some former participants indicating that other individuals might need the services of WIC more than they did, some program leavers also left WIC because of areas of the program that they felt were wasteful. Specifically, as revealed in the current research, some program leavers left the WIC program because they felt the amount of food and infant formula they received or the container sizes approved in grocery stores by the program were too much or too large and went to waste prior to their being able to use the items.

Certainly providing participants with services that create feelings of guilt or concern about wastefulness and that in turn lead to their premature departure from the program is an unintended consequence of the design or implementation of the program. Indeed, the findings from this current study suggest that in some areas, the dedication to the rules and routines of the WIC program have sabotaged the mission or intentions of the program (to provide for the optimal nutrition of women and infants). Therefore, some of the program requirements along with the real and perceived inflexibilities in those requirements served not only to hinder the benefits of the program for some participants, but also conspired to foster potential sources of unintended waste in the program itself.

Many of the findings from this study also suggest the need for improvement in specific areas with regard to the logistics of administering the WIC program. For example, the primary reason for families departing the WIC program prematurely as discovered in this research is that the appointment times that are required for maintaining WIC participation are scheduled at times many participants are not able to attend. Indeed, a wide variety of findings from this research regarding appointment times reveal that the appointment scheduling process for the WIC program is an aspect of the program that is steering some program participants off the program prematurely. A clearly unintended consequence of the appointment scheduling process is that some participants find themselves unable to attend appointments (leading to premature WIC program departure) because they do not want their children to be absent from school or they do not want to be absent from work. Certainly the WIC program does not intend to interfere with the employment or education of its participants but the appointment scheduling process and

related program routines seem to lead some participants to believe this or infer that they are simply not a good fit for the program (leading in some cases to their premature departure from the program).

In addition to the wide array of findings from the current research related to why eligible families are voluntarily and prematurely leaving the WIC program, some alarming findings related to how these families are faring after their departure from the program are also provided. Specifically, almost half of the voluntary WIC program leavers included in this study reported experiencing food insecurity (defined as not being able to afford the amounts and types of food needed) after leaving the WIC program. Further, the most needy program leavers, those at or below the poverty level as defined by the Department of Health in the state in which the study was conducted, fared the worst in terms of food security compared with their more economically able counterparts.

The lack of food security among voluntary WIC program leavers signifies that need for the WIC program still exists among program leavers but that the barriers to program participation discovered in this current research are too insurmountable to counter the need experienced by program dropouts. These findings lend more urgency for the WIC program to ameliorate the barriers identified in this current research by implementing policies and practices that will reduce confusion and provide education regarding eligibility requirements, provide for flexibility in the provision of services, and eliminate some of the logistical obstacles to program participation as identified by program leavers such as: cumbersome appointment scheduling requirements and processes; difficulty in contacting or reaching WIC office workers; inconsistent grocery store practices with regard to WIC approved foods; and chaotic waiting room experiences.

Overall, the current findings reveal many sites at which the WIC program might allow for more flexibility or room for administrative discretion at the local and even individual employee levels. For example, the current research reveals that in many instances WIC program leavers felt disillusioned when information they received from the program was incongruent with that which was received elsewhere (nutritional information for example). This seemed to lead to unintended consequences such as messages being sent to program participants that the program did not want what was best for the health of the women and children participating (which is

certainly not the intent of the program). Likewise, these feelings of dissonance often led to premature program departures (also certainly not an intended consequence of program rules).

In addition to the specific factors influencing premature program departures in the WIC program highlighted in this research, the current research findings reveal a nuanced and overarching theme of the shape of unintended consequences, of failed metaphors, and of the engineered expectations of the citizenry met with the realities of organizational life. Moreover, the current research findings reveal that not all public program leavers may be categorized in the same light, that many program leavers are indeed reluctant ones, and that voluntary leavers may reveal more about our public programs in some ways than individuals forced to leave programs due to stricter eligibility requirements or regulations. Indeed, this current research provides a new view of program leavers as seen in the literature on post-welfare-reform program dropouts in that it introduces the notion of "voluntary leavers" who depart a public program prematurely while still eligible to participate. Likewise, this current research on voluntary leavers suggests that these former program participants may not fare well in at least some areas, such as food security, after departing a public program prematurely.

Theoretical Implications of Study Findings

The existing research on WIC has centered on medical and economic outcomes analyses. Theoretical frameworks for understanding these outcomes findings or why premature and voluntary WIC program departures are occurring among participants had not been introduced prior to this current research. This study goes beyond providing answers regarding the factors that are influencing WIC program participants to leave the program voluntarily and prematurely to provide an examination of the organizational and policy assumptions and contexts that have facilitated the barriers to program participation discovered in this research. Indeed, the findings from this research study indicate that in some areas, the dedication to the routines, myths, narratives, and conventional wisdom surrounding the WIC program, may have circumvented the mission or intentions of the program. Moreover, it seems that beliefs surrounding the overwhelming success of the WIC program may in some ways be hindering research efforts

aimed at potential sites for program improvement and also fostering routine practices and mindsets that in part contribute to the premature and voluntary departure of program participants.

In the case of the WIC program, the task of evaluating aspects of the program that may not work (and which may inform the premature departure of participants), is avoidable by escaping into the notion of the assumed success of the program. This process seems to fuel enrollment while circumventing a focus on fully investigating reasons for premature program departures among participants. Even the promotional slogans surrounding the program such as "WIC Works" inform the conventional wisdom that the program is successful in meeting its goals.

The very acceptance of the highly positive influence of the WIC program on the health outcomes of its participants and the acceptance of the notion that the program is efficient from a cost-benefit analysis perspective may serve as traps that preclude real organizational change or flexibility, and indeed may frame the potential for research on this and similar programs. This may be so particularly since the "WIC Works" slogan is reflective of the seemingly machine-like quality of the program. With rapid program expansions (in funding and number of individuals enrolled) and benefits and success that have come to be assumed, the WIC machine assumes the illusion of impenetrability with regard to flexibility and organizational change, and ultimately the routines that are believed to promote the programs goals influence premature and voluntary departures among participants.

Viewing the findings from the current research (particularly the incorrect assumptions and misinformation among some program participants regarding eligibility, the logistical barriers to participation that are evident in some WIC program routines, and the seemingly fixed quality to some of the services provided by the program) with a narrative approach to organizational sensemaking is useful. The introduction of the narrative approach to sensemaking in organizations in this research builds upon Weick's (1995) notion of "sensemaking" in organizations. Weick (1995, p. 128) suggests specifically that "stories posit a history for an outcome." Combining Weick's sensemaking with the tradition of narrative analyses (called the narrative approach to organizational sensemaking in this research) allows an examination of the organizational "stories" or "texts" that have been developed and are emergent within

organizational and policy contexts to better understand how events and action within programs may occur.

Utilizing the tradition of symbolic interactionist theory with the narrative approach to sensemaking extended in this research is useful in describing the program participation barrier data collected in this research by facilitating the examination of the processes and sites of meaning exchange and sensemaking within the WIC program as well as in other public programs. Specifically, this theoretical lens allows examination of the mechanisms through which large public programs may actually foster areas of program failure through routines and practices that are assumed to work due to the overarching organizational story of inherent success.

The foundation of symbolic interactionism is useful in describing how meaning emerges and is exchanged within agencies or programs, and indeed, conveyed to and informed by program participants. Beyond that, exploring the organizational "texts" associated with the WIC program in the tradition of narrative analysis, but also combined with the notion of sensemaking, is useful in describing how sense is made of the "story" of the program's success within the organization and to the public, and how this process may serve to hinder organizational change and ultimately, affect program participation.

As noted throughout this work, the work of Blumer (1969) and the tradition of symbolic interactionism are foundational components of the theoretical framework utilized in understanding the data collected in this research because they describe the process wherein entities (such as individuals or agencies) do not necessarily react to the world, society, or each other in any objective sense. Rather, as extended by Blumer (1969), individuals (and indeed, organizations or agencies) react to the world, society, and each other based on the definition or perception of these things. The notion that we react to things as we have defined them is an important concept in understanding the data collected in this current research because it sheds light on the processes in which messages regarding programs may be constructed, experienced, and in a continual cycle, may in turn, fundamentally shape program outcomes and participation.

The concept of the social construction of reality as described earlier in this work is also fundamental in illustrating how the reality of the WIC program depends on how the program is privately experienced by individual stakeholders but also how the reality of the program is an emergent construct that may be subject to social engineering. For example, because the funding

for WIC has increased over the years and has continued to expand in terms of enrollment, the constructed view is that the program is wildly successful. This is true to a degree in that more people are being served by the program. However, this current research with participants who left the program prematurely and voluntarily reveals questions about how the program could be improved to best suit the needs of clients, and how the unintended negative consequences of some of the operating procedures and messages sent by the program could serve as sites for improvement.

Thomas and Thomas' (1928, p. 572) concept of the definition of the situation (if we "define situations as real then they are real in their consequences") suggests that socially constructed messages earn objective status in the process of interaction. Indeed, it seems that the formal and authoritative definition of the situation for the WIC program is that "WIC Works," making it difficult with regard to implementation as well as participation when confronted with experiences that are contrary to this organizational definition. Thus, the premature and voluntary departure of participants from a program that is hailed as being highly beneficial to participants, may be viewed through the lens of how participants act upon their experience of the program and their understanding of the messages they receive regarding the program. For example, a primary finding of this study is that WIC program participants are leaving a valuable public health program prematurely due to incorrect assumptions regarding their eligibility status, highlighting the importance of understanding what messages and information WIC participants receive regarding eligibility. Further, it is important that WIC agencies have an understanding that such messages are delivered and received within the context of a reality surrounding the program that is socially constructed, in which the process of symbolic interaction shapes the information and messages to be read or utilized in making sense of program actions and policy directions.

In the case of the WIC program, the organizational story that surrounds perceptions of the program and the implementation of the program is that "WIC Works." This is a story that is certainly true as demonstrated by numerous medical research studies on the health benefits of WIC. However, upon closer examination, the current research reveals that this assumption or organizational story (or the dedication to existing tools and rules) may serve to foster inflexibility in the delivery of the program's services to participants, leading to many of the barriers to program participation highlighted in this research.

Implications for Public Administration and Future Research

Traditionally, research and techniques examining client stories or focusing on client voices are not as prevalent in public administration as in other disciplines such as social work for which this practice is more common. However, the "reading" of narratives surrounding a public program may be a highly useful process that lends such voice to public program clients, particularly when research findings reveal that messages surrounding a program or received or internalized by program participants may be leading these participants to drop out of valuable public programs prematurely. Authors such as Chapin (1995, p. 511) focus on what is known as the strengths perspective in the human services fields and note that human or social services "clients' stories of how they have coped with barriers to getting their needs met are key to effective policy design."

The WIC program has traditionally been examined solely through medical and cost savings outcomes studies but research lending weight to client voices, and particularly the voices of perhaps the most disenchanted WIC participants (those who left the program prematurely and voluntarily) have not been viewed as a primary resource for understanding how the program works or could possibly be improved. In providing assessment of client or citizen satisfaction (key to ensuring accountability in public programs) the current research provides a tool for introducing sites for change or improvement in a valuable public health program. However, in utilizing the narrative sensemaking approach (and highlighting the process through which socially constructed realities are negotiated around the program) to provide context for the current research findings, client voices are allowed to assume a prominent role in the evaluation of a public program. The practice of combining traditionally positivistic and data driven approaches such as large scale surveys with more qualitative analyses lenses allows for the utilization of program narratives. The utilization of such narratives surrounding public programs reveals how public organizations may not always be in a position to escape their own conventional wisdoms, realities, or the unintended consequences of their policies in order to move forward with organizational change or action.

Researchers may serve as agents for change in public programs in a variety of ways; in how they select programs for evaluation, elect to frame research questions, but also in the specific methodological processes used to collect and analyze data. Questioning a program for

which conventional wisdom suggests that medical and cost savings outcomes are highly favorable, a program intended to protect women and children, may seem counterintuitive. However, neglecting such research may foster the silencing of perhaps the most important voices in the arena of the WIC program, those of program participants or of those participants who leave the program prematurely due to the unintended consequences of some WIC policies or practices. The stakes for the success of a program like WIC are high not only because the health and well-being of great numbers of some of the most needy citizens (children and mothers among the lowest economic statuses) are potentially affected, but also because the program is entrusted with billions of taxpayer dollars.

Because most local, state, and federal agencies contract out to research organizations the studies designed to evaluate their programs and policies, the public administration community should be made more aware of how such studies are fundamentally shaping public policies and the direction of public organizations. Indeed, studies regarding public programs are used to assess the quality of programs and policies and often in turn, the funding and attention afforded those programs and policies. During the research process, numerous decisions are made that may have real effects on not only setting the agenda for research on a given program in general, but also may in many ways shape the outcomes and findings of a study (thereby, shaping the information that policy makers and public administrators use to guide their decision making). Most public agencies contracting out research studies of their policies and programs are often seemingly unaware of the detailed decisions made during the research process or may view such decisions as inconsequential.

A wide variety of researcher choices have the potential to shape research outcomes. Such choices include specific methodological protocols such as sampling design, coding decisions in the data collection process, how variables are defined, which statistical tests are chosen, how data are presented, the level of attention to details required for rigorous methodologies to be employed, but also the lens through which the entire research design is framed. Therefore, the messages surrounding public programs are not being generated only from within the programs themselves, but rather, such messages are shaped by program participant experiences related to the messages as discussed in this study, of course within the context of the political arena, and also increasingly by the research community and research contractors performing evaluations of public programs. For this reason, it is essential that researchers performing what some may view

as “routine” policy or program evaluations, have an understanding of their role in the process of governing, and that in turn, public administrators understand that a wide variety of decisions go into the research that is shaping our public programs, decisions in many cases made by individual researchers. In this sense, those performing public program and policy evaluations or doing research may certainly be seen as “doing public administration” or engaged in public administration practice.

Therefore, it is essential that researchers evaluating public programs and policies be endowed with the same sense of responsibility to the citizenry and to sound governance that all public administrators should have. Indeed, as welfare reform has fostered more responsibility for states and local governments in the administration of public health and welfare programs, the use of administrative discretion in programs such as WIC is perhaps more important than ever. Overall, the current research findings reveal many sites at which the WIC program might allow for more flexibility or room for the responsible use of administrative discretion at the local and even individual employee level.

While the few primary studies frequently cited as evidence of the WIC program’s success have been subject to some recent questions regarding the validity of the methodologies employed, this current dissertation research addresses these methodological criticisms directly and also provides original data and findings regarding many areas related to the program in which calls have been made in the literature for more information. However, as noted earlier in this work, it is important that the dialogue surrounding research on public programs like WIC move beyond criticisms of the few primary existing studies on methodological grounds toward a focus on developing research agendas, methodologies, and questions that will provide the comprehensive evaluative information needed to ensure the success of public programs in meeting the needs of the citizenry.

The current research reveals that in many instances WIC program leavers felt disillusioned when information they received from the program was incongruent with that which they received outside the program. This seemed to lead to premature program departures among program participants due to unintended program consequences such as confusing and incorrect messages being sent to participants. Also as noted earlier, the findings from this study reveal that many WIC leavers are not faring well after leaving the program but choose to leave anyway. Thus, it is perhaps more important than ever that public administrators in settings such as the

WIC program be open to best providing for the varied needs of program participants while honoring the intentions and missions of the programs they operate and implement. As a guide for such action in complex program environments, amidst messages that are often ambiguous or may seem to be in conflict with the individual needs of program participants, a sense of appropriate compromise is essential, as is action that is as coined by Rohr (1989) "constitutionally appropriate," or reflective of our regime values as a nation.

The WIC program and indeed, all public organizations often appear to engage in forms of "retroactive sensemaking" as described by Weick (1995) in which organizational problems are retroactively solved or examined utilizing a model or idea that made not have been apparent before the problem arose. Indeed, as noted by Weick (2004, p. 658) "people tend to see those problems and opportunities that their repertoire can handle, but they are reluctant to see those it can't." Thus, stakeholders in an organization may not even be aware of a problem that they are not equipped to see.

This is not to say that programs such as WIC are destined to focus on the replication of solutions to problems that may be seen or explored most easily utilizing tools that are already at hand. Rather, puzzles such as premature departures of participants may be seen as opportunities for public programs to remain open to the possibilities that the outcomes they encounter might not be as they could have imagined or planned. It is in these instances that Weick's (1993, 1996) notion of "tool dropping" and perspective shifting may be far more important than having tools or a perspective that matches agreed upon definitions regarding the program.

It is important to note that in choosing to frame the theoretical foundations for understanding the current research findings in the arena of cultural, critical, and interpretive theories, a number of theoretical perspectives that may be useful in examining or explaining the findings of the current research were neglected. For example, future research could utilize theories related to political economy or functionalism in order to provide lenses with which to more deeply explore the competing interests surrounding the WIC program and how these competing interests may shape premature departures among participants from the program.

Likewise, this study examines primarily the experience of WIC program leavers and provides data related to a wide variety of program and organizational aspects from the perspective of former program participants as well as the existing regulations governing the

program. Therefore, an important piece of missing information for possible exploration in future research is examination of the experiences of those individuals who deliver the WIC program to participants as well as the experiences of WIC program administrators and political figures who make decisions related to program regulations and funding allotments. Data garnered from these additional program stakeholders could provide a more comprehensive view of factors affecting premature WIC program departures among eligible families.

With regard to the WIC program, there is no question that the program provides valuable services to citizens. The current research findings provide detailed information regarding why WIC program participants would voluntarily and prematurely leave this valuable public health program. Moreover, the current research findings suggest that large and complex public programs such as WIC, programs that may be viewed as highly successful, should remain open to change, flexible, and aware of the messages and narratives that continually shape program operations and indeed, outcomes. Likewise, it is essential that attention is directed to discovering the emergent needs of citizens as they relate to the services provided by the WIC program and that continuous evaluation of areas for potential program improvement takes place in conjunction with efforts to better understand program successes.

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Appendix A

Instrument Utilized in Semi-Structured Interview Pre-Test Phase I

The [STATE NAME DELETED] Women, Infants & Children (WIC) Program Former Client Semi-Structured Interview Instrument Phase I

CALL RECORD

Record Number	**Priority**	**Callback Date/Time**
Phone Number	**Interviewer ID**	**Interviewer Message**
FIPS/location code	**Number of Attempts**	**Current Begin Date/Time**
Respondent Number	**Last Contact**	**Current End Date/Time**
Status	**Last Disposition**	

Final Call Disposition

Answering Machine	Disconnected	Language Barrier	Soft Refusal
Automated Refusal Service	Fax Tone	New Primary Number	Temporarily Disconnected
Busy Signal	Hard Refusal	Never Participated in WIC	Untraceable
Callback	Hearing Barrier	No Answer	
Complete	Incomplete	Non-Residential Number	

A. Hello, may I speak with [CATI INSERTS RECORD NAME]? My name is _____ _____ and I'm calling on behalf of the [SPONSOR INFORMATION DELETED]. We are conducting a study of people who used to participate in the WIC program in order to help improve the services offered by the program. We would like to send ten dollars to everyone who qualifies for and participates in our study.

INTERVIEWER INFORMATION: WIC stands for the Women, Infants and Children Program. The program provides nutritional care and food to lower-income women who are pregnant, lactating, or postpartum and to children up to age five.

CONTINUE 1
[GO TO END1] 2

Q1. Our records show that you stopped participating in the WIC program in [CATI INSERTS MM/YY]. Is this correct?

YES [GO TO Q3] 1
NO 2
DK 3
RF 4

Q2. When did you stop participating in the WIC program?

STILL PARTICIPATING IN THE WIC PROGRAM [GO TO END1] 1
MM/YY [GO TO Q3] 2
DK/RF [GO TO Q3] 3

End1: At this time we only need to speak with people who used to participate in [STATE NAME DELETED] Women, Infants & Children Program, also known as WIC, but who are no longer participants. Thank you for your time. Have a good [CATI INSERTS DAY/EVENING].

Q3. What is the primary reason you stopped participating in the WIC program?

CHOOSE ALL THAT APPLY

RESPONDENT THOUGHT THEY WERE NOT QUALIFIED (specify why: _____) 1
NO LONGER WANTED ASSISTANCE (specify why: _____) 2
DISSATISFIED WITH FOOD CHOICES/SELECTION (specify why: _____) 3
LOCATION OF WIC-APPROVED STORE INCONVENIENT/TOO FAR (explain: _____) 4
TOO MUCH OF A HASSLE/PAPERWORK (explain: _____) 5
REQUIRED TOO MUCH TIME IN THE CLINIC (explain: _____) 6
EDUCATIONAL PROGRAMS WERE NOT HELPFUL (explain: _____) 7
HAD PROBLEMS WITH AGENCY STAFF (explain: _____) 8
TRANSPORTATION ISSUES (explain: _____) 9
CHILDCARE ISSUES (explain: _____) 10
OTHER (specify and explain: _____) 11
DK 12
RF 13

Q4. When you were a WIC participant, would you say it was very easy, somewhat easy, somewhat difficult or very difficult for you to find stores that participated in the WIC program?

VERY EASY [GO TO Q6] 1
SOMEWHAT EASY 2
SOMEWHAT DIFFICULT 3
VERY DIFFICULT 4
DK 5
RF 6

Q5. Was this a factor in why you left the WIC program?

YES 1
NO 2
DK 3
RF 4

Q6. How easy was it for you to figure out which foods were WIC-approved?

VERY EASY [GO TO Q8] 1
SOMEWHAT EASY 2
SOMEWHAT DIFFICULT 3
VERY DIFFICULT 4
DK 5
RF 6

Q7. Was this a factor in why you left the WIC program?

YES 1
NO 2
DK 3
RF 4

Q8. How satisfied were you with the selection of WIC-approved foods or infant formula you had? Would you say very satisfied, somewhat satisfied, somewhat dissatisfied, or very dissatisfied?

VERY SATISFIED [GO TO Q10] 1
SOMEWHAT SATISFIED 2
SOMEWHAT DISSATISFIED 3
VERY DISSATISFIED 4
DK 5
RF 6

Q9. Was this a factor in why you left the WIC program?

YES 1
NO 2
DK 3
RF 4

Q10. Would you say that the <u>days</u> the clinic where you received WIC services was open were very convenient, somewhat convenient, somewhat inconvenient, or not at all convenient for you?

VERY CONVENIENT [GO TO Q13] 1
SOMEWHAT CONVENIENT 2
SOMEWHAT INCONVENIENT 3
NOT AT ALL CONVENIENT 4
DK 5
RF 6

Q11. Was this a factor in why you left the WIC program?

YES 1
NO 2
DK 3
RF 4

Q12. What days would be more convenient for you?

_____

Q13. Would you say that the <u>hours</u> the clinic where you received WIC services was open were very convenient, somewhat convenient, somewhat inconvenient, or not at all convenient for you?

VERY CONVENIENT [GO TO Q16] 1
SOMEWHAT CONVENIENT 2
SOMEWHAT INCONVENIENT 3
NOT AT ALL CONVENIENT 4
DK 5
RF 6

Q14. Was this a factor in why you left the WIC program?

YES 1
NO 2
DK 3
RF 4

Q15. What hours would be more convenient for you?

_____

Q16. How useful do you think the WIC services like screenings, referrals and education programs for children aged one through five are? Would you say they are very useful, somewhat useful, not very useful, or not at all useful?

VERY USEFUL [GO TO Q18] 1
SOMEWHAT USEFUL 2
NOT VERY USEFUL (specify why: _____) 3
NOT AT ALL USEFUL (specify why: _____) 4
DK/NO EXPERIENCE WITH THESE SERVICES [GO TO Q18] 5
RF [GO TO Q18] 6

Q17. Was this a factor in why you left the WIC program?

YES 1
NO 2
DK 3
RF 4

Q18. Would you prefer to receive WIC services at a location where you receive other health services, for example, at the health department or would you prefer to receive WIC services at a separate location?

AT HEALTH DEPARTMENT (specify why: _____) 1
SEPARATE LOCATION (specify why: _____) 2
DK 3
RF 4

Q19. What aspect of the WIC program did you like the best?

_____

_____

Q20. What aspect of the WIC program did you like the least?

_____

_____

Q21. Since leaving the WIC program, was there ever a time when you did not have enough money to buy the <u>amount</u> of food you needed for yourself or your child(ren)?

YES 1
NO 2
DK 3
RF 4

Q22. Since leaving the WIC program, was there ever a time when you did not have the money to buy the <u>type</u> of food you needed for yourself or your child(ren)?

YES 1
NO 2
DK 3
RF 4

Q23. Including you, how many adults live in your household currently?

____
DK/RF 99

Q24. How many infants under the age of one live with you currently?

____
DK/RF 99

Q25. How many children aged one to four live with you currently?

____
DK/RF 99

Q26. How many children aged five to seventeen live with you currently?

____
DK/RF 99

Q27. Are you pregnant or breastfeeding currently?

PREGNANT 1
BREASTFEEDING 2
NEITHER PREGNANT OR BREASTFEEDING (FEMALE RESPONDENT) 3
MALE RESPONDENT (INTERVIEWER CODES WITHOUT ASKING QUESTION) 4
DK 5
RF 6

Q28. Do you or your children participate in or receive…

CHOOSE ALL THAT APPLY

the free or reduced price lunch program? 1
TANF? 2
Medicaid? 3
FAMIS? 4
or food stamps? 5
DOES NOT PARTICIPATE IN ANY OF THE PROGRAMS MENTIONED 6
DK 7
RF 8

Q29. [CATI SUM Q23-Q26, FOR VARIABLE HOUSEHOLD SIZE, IF Q23=99, Q24=99, Q25=99, OR Q26=99, HOUSEHOLD SIZE =10] Will your total household income be <u>less</u> <u>than</u> [CATI INSERTS INCOME PER HOUSEHOLD SIZE FOR WIC ELIGIBILITY] this year before taxes? Please don't include the income of any household members who do not contribute to the income for your immediate family.

YES 1
NO 2
DK 3
RF 4

Q30. [DO IF Q28>5 [IF Q29>1, GO TO Q32, | IF Q27>2 & Q24=0 & Q25=0, GO TO Q32 | IF Q27>2 & Q24=99 & Q25=99, GO TO Q32]] Do you plan to enroll in the WIC program again?

YES [GO TO Q32] 1
NO 2
DK 3
RF 4

Q31. What could the WIC program do better to make you want to enroll in the program again?

_____

_____

Q32. Finally, may I please have your current address so we can send your ten dollar check for completing the survey?

STREET _____ 1
CITY _____ 2
STATE ___ 3
ZIP CODE _____ DK/RF 99999 4

Q33. GENDER

INTERVIEWER IF NECESSARY: "Our study requires that I ask if you are male or female."

MALE 1
FEMALE 2

Thank you for your help with our study. Have a nice [CATI INSERTS DAY/EVENING]!

INTERVIEWER IF ASKED: "This study is being conducted so the [SPONSOR INFORMATION DELETED] can improve their services for mothers and children in [STATE NAME DELETED]. If you have specific questions about the validity of the study, please call Susan Willis-Walton at [TOLL FREE NUMBER DELETED]."

Appendix B

Survey Instrument Utilized for Primary Data Collection Phase II

The [STATE NAME DELETED] Women, Infants & Children (WIC) Program Former Client Survey Phase II

CALL RECORD

Record Number	**Priority**	**Callback Date/Time**
Phone Number	**Interviewer ID**	**Interviewer Message**
FIPS/location code	**Number of Attempts**	**Current Begin Date/Time**
Respondent Number	**Last Contact**	**Current End Date/Time**
Status	**Last Disposition**	

Final Call Disposition

Answering Machine	Disconnected	Language Barrier	Soft Refusal
Automated Refusal Service	Fax Tone	New Primary Number	Temporarily Disconnected
Busy Signal	Hard Refusal	Never Participated in WIC	Untraceable
Callback	Hearing Barrier	No Answer	
Complete	Incomplete	Non-Residential Number	

A. Hello, may I speak with [CATI INSERTS RECORD NAME]? My name is _____ _____ and I'm calling on behalf of the [SPONSOR INFORMATION DELETED]. We are conducting a study of people who used to participate in the WIC program in order to help improve the services offered by the program. We would like to send ten dollars to everyone who qualifies for and participates in our study.

INTERVIEWER INFORMATION: WIC stands for the Women, Infants and Children Program. The program provides nutritional care and food to lower-income women who are pregnant, lactating, or postpartum and to children up to age five.

CONTINUE 1
[GO TO END1] 2

Q1. Our records show that you stopped participating in the WIC program in [CATI INSERTS MM/YY]. Is this correct?

YES [GO TO Q4] 1
NO 2
DK 3
RF 4

Q2. When did you stop participating in the WIC program?

STILL PARTICIPATING IN THE WIC PROGRAM 1
MM/YY [GO TO Q4] 2
DK [GO TO Q4] 3
RF [GO TO Q4] 4

Q3. Have you received a check from the WIC program within the last month?

YES 1
NO [GO TO Q4] 2
DK [GO TO Q4] 3
RF [GO TO Q4] 4

IF RESPONDENT HAS NOT RECEIVED A CHECK IN THE PAST MONTH: "We are completing the survey with people who have not received a check in the past month, so you are eligible to participate in our study."

End1: At this time we only need to speak with people who used to participate in [STATE NAME DELETED] Women, Infants & Children Program, also known as WIC, but who are no longer participants. Thank you for your time. Have a good [CATI INSERTS DAY/EVENING].

Q4. Overall, would you rate the WIC program as excellent, good, fair, or poor?

EXCELLENT 1
GOOD 2
FAIR 3
POOR 4
DK 5
RF 6

Q5. I'm going to mention some reasons some people may have for no longer participating in the WIC program. Please tell me how much of a factor each reason was in your decision to leave WIC.

a.	First, that you had a hard time finding childcare when you needed to go to the WIC office without your child(ren)? Would you say this was…	a major factor,	somewhat of a factor,	only a minor factor,	or not at all a factor in why you left WIC?	DK RF
b.	you had a difficult time finding transportation to the WIC office?	MAJOR FACTOR	SOMEWHAT OF A FACTOR	MINOR FACTOR	NOT A FACTOR	DK RF
c.	there was too much repetition in the paperwork you had to provide to WIC to become certified?	MAJOR FACTOR	SOMEWHAT OF A FACTOR	MINOR FACTOR	NOT A FACTOR	DK RF
d.	there was too much paperwork involved with the program in general?	MAJOR FACTOR	SOMEWHAT OF A FACTOR	MINOR FACTOR	NOT A FACTOR	DK RF
e.	the office waiting room where you received WIC services was too crowded or noisy?	MAJOR FACTOR	SOMEWHAT OF A FACTOR	MINOR FACTOR	NOT A FACTOR	DK RF
f.	you thought people looked down on you for being on WIC?	MAJOR FACTOR	SOMEWHAT OF A FACTOR	MINOR FACTOR	NOT A FACTOR	DK RF
g.	that you were not treated well by WIC staff members?	MAJOR FACTOR	SOMEWHAT OF A FACTOR	MINOR FACTOR	NOT A FACTOR	DK RF

h.	you had to wait too long to be seen after arriving for your appointments?	MAJOR FACTOR	SOMEWHAT OF A FACTOR	MINOR FACTOR	NOT A FACTOR	DK	RF
i.	you had to recertify too often?	MAJOR FACTOR	SOMEWHAT OF A FACTOR	MINOR FACTOR	NOT A FACTOR	DK	RF
j.	medical, family, or personal reasons arose that kept you from being able to go to the WIC office?	MAJOR FACTOR	SOMEWHAT OF A FACTOR	MINOR FACTOR	NOT A FACTOR	DK	RF
k.	the appointment times were available only at times when you could not go?	MAJOR FACTOR	SOMEWHAT OF A FACTOR	MINOR FACTOR	NOT A FACTOR	DK	RF
l.	you thought there were too many appointments?	MAJOR FACTOR	SOMEWHAT OF A FACTOR	MINOR FACTOR	NOT A FACTOR	DK	RF
m.	you thought that blood needed to be drawn too often?	MAJOR FACTOR	SOMEWHAT OF A FACTOR	MINOR FACTOR	NOT A FACTOR	DK	RF
n.	you thought there were too many health screenings?	MAJOR FACTOR	SOMEWHAT OF A FACTOR	MINOR FACTOR	NOT A FACTOR	DK	RF
o.	you thought you had to wait too long to get your checks?	MAJOR FACTOR	SOMEWHAT OF A FACTOR	MINOR FACTOR	NOT A FACTOR	DK	RF
p.	that you thought the educational videos weren't informative?	MAJOR FACTOR	SOMEWHAT OF A FACTOR	MINOR FACTOR	NOT A FACTOR	DK	RF
q.	that you thought the educational programs weren't informative?	MAJOR FACTOR	SOMEWHAT OF A FACTOR	MINOR FACTOR	NOT A FACTOR	DK	RF
r.	that you didn't want WIC anymore because you felt it wasn't worth the hassle you had to go through to receive the checks?	MAJOR FACTOR	SOMEWHAT OF A FACTOR	MINOR FACTOR	NOT A FACTOR	DK	RF
s.	that you didn't want WIC anymore because you felt you didn't need the checks anymore?	MAJOR FACTOR	SOMEWHAT OF A FACTOR	MINOR FACTOR	NOT A FACTOR	DK	RF
t.	that you thought you weren't qualified because of your household income?	MAJOR FACTOR	SOMEWHAT OF A FACTOR	MINOR FACTOR	NOT A FACTOR	DK	RF
u.	that you thought you weren't qualified because of the age of your child(ren)?	MAJOR FACTOR	SOMEWHAT O F A FACTOR	MINOR FACTOR	NOT A FACTOR	DK	RF
v.	that the amount of food or formula you received was too little?	MAJOR FACTOR	SOMEWHAT OF A FACTOR	MINOR FACTOR	NOT A FACTOR	DK	RF
w.	that the amount of food or formula was too much and went to waste?	MAJOR FACTOR	SOMEWHAT OF A FACTOR	MINOR FACTOR	NOT A FACTOR	DK	RF

x.	there were too few choices in the selection of WIC-approved foods or infant formula you had?	MAJOR FACTOR	SOMEWHAT OF A FACTOR	MINOR FACTOR	NOT A FACTOR	DK	RF
y.	you didn't like using the vouchers in the grocery store check out line?	MAJOR FACTOR	SOMEWHAT OF A FACTOR	MINOR FACTOR	NOT A FACTOR	DK	RF
z.	you had problems in knowing which foods in the grocery store were WIC approved?	MAJOR FACTOR	SOMEWHAT OF A FACTOR	MINOR FACTOR	NOT A FACTOR	DK	RF
aa.	you had trouble finding a conveniently located grocery store that accepted WIC?	MAJOR FACTOR	SOMEWHAT OF A FACTOR	MINOR FACTOR	NOT A FACTOR	DK	RF

Q6. Would you say that the <u>days</u> the clinic where you received WIC services was open were very convenient, somewhat convenient, somewhat inconvenient, or not at all convenient for you?

VERY CONVENIENT [GO TO Q8] 1
SOMEWHAT CONVENIENT 2
SOMEWHAT INCONVENIENT 3
NOT AT ALL CONVENIENT 4
DK 5
RF 6

Q7. Was this a factor in why you left the WIC program?

YES 1
NO 2
DK 3
RF 4

Q8. Would you say that the <u>hours</u> the clinic where you received WIC services was open were very convenient, somewhat convenient, somewhat inconvenient, or not at all convenient for you?

VERY CONVENIENT [GO TO Q10] 1
SOMEWHAT CONVENIENT 2
SOMEWHAT INCONVENIENT 3
NOT AT ALL CONVENIENT 4
DK 5
RF 6

Q9. Was this a factor in why you left the WIC program?

YES 1
NO 2
DK 3
RF 4

Q10. [IF Q6=1 AND Q8=1, GO TO Q11] What days and hours would be more convenient for you?

CHOOSE ALL THAT APPLY

WEEKENDS 1
EVENINGS (AFTER 5:00 ANY DAY) 2
DURING LUNCH TIME (12:00-1:00 ANY DAY) 3
EARLY MORNINGS (BEFORE 9:00AM ANY DAY) 4
NEED TO BE OPEN MORE DAYS DURING WEEK 5
OTHER (Please specify: _____) 6
DK 7
RF 8

Q11. Other than the factors we have already discussed in the survey, are there any other reasons you decided to stop participating in the WIC program?

_____

_____

_____

Q12. How useful do you think the WIC services for children aged one through five are -- like the screenings, referrals and education programs? Would you say they are very useful, somewhat useful, not very useful, or not at all useful?

VERY USEFUL [GO TO Q14] 1
SOMEWHAT USEFUL 2
NOT VERY USEFUL 3
NOT AT ALL USEFUL 4
DK/NO EXPERIENCE WITH THESE SERVICES 5
NO EXPERIENCE WITH THESE SERVICES NO CHILD AGED ONE OR OVER [GO TO Q14] 6
RF 7

Q13. Was this a factor in why you left the WIC program?

YES 1
NO 2
DK 3
RF 4

Q14. When you were on WIC, did you receive WIC services at the health department, at your local department of social services, at a stand-alone WIC office, or at some other location?

HEALTH DEPARTMENT 1
SOCIAL SERVICES 2
STAND-ALONE WIC OFFICE 3
OTHER (Please specify: _____) 4
DK 5
RF 6

Q15. Would you prefer to receive WIC services at a location where you receive other health services, for example, at the health department or would you prefer to receive WIC services at your local department of social services, at a stand-alone WIC office, or at some other location?

HEALTH DEPARTMENT 1
OTHER CLINIC WHERE HEALTH SERVICES ARE RECEIVED (Please specify: _____) 2
SOCIAL SERVICES 3
STAND-ALONE WIC OFFICE 4
OTHER (Please specify: _____) 5
DK 6
RF 7

Q16. Since leaving the WIC program, was there ever a time when you did not have enough money to buy the <u>amount</u> of food you needed for yourself or your child(ren)?

YES 1
NO 2
DK 3
RF 4

Q17. Since leaving the WIC program, was there ever a time when you did not have the money to buy the <u>type</u> of food you needed for yourself or your child(ren)?

YES 1
NO 2
DK 3
RF 4

Q18. Including you, how many adults live in your household currently?

____
DK/RF 99

Q19. How many infants under the age of one live with you currently?

____
DK/RF 99

Q20. How many children aged one to four live with you currently?

____
DK/RF 99

Q21. How many children aged five to seventeen live with you currently?

____
DK/RF 99

Q22. Are you pregnant or breastfeeding currently?

PREGNANT 1
BREASTFEEDING 2
NEITHER PREGNANT NOR BREASTFEEDING (FEMALE RESPONDENT) 3
MALE RESPONDENT (INTERVIEWER CODES WITHOUT ASKING QUESTION) 4
DK 5
RF 6

Q23. Do you or your children participate in or receive…

CHOOSE ALL THAT APPLY
the free or reduced price lunch program? 1
TANF? 2
Medicaid? 3
FAMIS? 4
or food stamps? 5
DOES NOT PARTICIPATE IN ANY OF THE PROGRAMS MENTIONED 6
DK 7
RF 8

Q24. [CATI SUM Q18-Q21, FOR VARIABLE HOUSEHOLD SIZE, IF Q18=99, Q19=99, Q20=99, OR Q21=99, HOUSEHOLD SIZE =10] Will your total household income be <u>less</u> <u>than</u> [CATI INSERTS INCOME PER HOUSEHOLD SIZE FOR WIC ELIGIBILITY] this year before taxes? Please don't include the income of any household members who do not contribute to the income for your immediate family.

YES 1
NO 2
DK 3
RF 4

Q25. [DO IF Q23>5 [IF Q24>1, GO TO Q26, | IF Q22>2 & Q19=0 & Q20=0, GO TO Q26 | IF Q22>2 & Q19=99 & Q20=99, GO TO Q26]] Do you plan to re-enroll in the WIC program in the next year?

YES 1
NO 2
DK 3
RF 4

Q26. Prior to enrolling in WIC, how did you hear about the program?

CHOOSE ALL THAT APPLY
BROCHURE AT HEALTH DEPARTMENT 1
DOCTOR REFERRAL 2
RADIO 3
TELEVISION 4
AT SOCIAL SERVICES OFFICE 5
FRIENDS/FAMILY 6
OTHER (Please specify: _____) 7
DK 8
RF 9

Q27. Finally, may I please have your current address and telephone number so we can send your ten dollar check for completing the survey?

STREET _____ 1
CITY _____ 2
STATE ___ 3
ZIP CODE _____ DK/RF 99999 4
PHONE _____ DK/RF 999-999-9999 5

Q28. GENDER

INTERVIEWER IF NECESSARY: "Our study requires that I ask if you are male or female."

MALE 1
FEMALE 2

Thank you for your help with our study. Have a nice [CATI INSERTS DAY/EVENING]!

INTERVIEWER IF ASKED: "This study is being conducted so the [SPONSOR INFORMATION DELETED] can improve their services for mothers and children in [STATE NAME DELETED]. If you have specific questions about the validity of the study, please call Susan Willis-Walton at [TOLL FREE NUMBER DELETED]."

Appendix C

Overall Response Frequency Tabulations for Close-ended Survey Items

Our records show that you stopped participating in the WIC program in [DATE]. Is this correct?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	1441	95.8	95.8	95.8
	No	59	3.9	3.9	99.7
	DK	4	.3	.3	100.0
	Total	1504	100.0	100.0	

When did you stop participating in the WIC program?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STILL PARTICIPATING IN THE WIC PROGRAM	25	1.7	39.7	39.7
	MM/YYYY	32	2.1	50.8	90.5
	DK	6	.4	9.5	100.0
	Total	63	4.2	100.0	
Missing	System	1441	95.8		
Total		1504	100.0		

When did you stop: Month

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	3	.2	9.4	9.4
	3	3	.2	9.4	18.8
	4	3	.2	9.4	28.1
	5	7	.5	21.9	50.0
	6	2	.1	6.2	56.2
	7	3	.2	9.4	65.6
	8	3	.2	9.4	75.0
	9	1	.1	3.1	78.1
	10	1	.1	3.1	81.2
	11	2	.1	6.2	87.5
	12	3	.2	9.4	96.9
	DK/RF	1	.1	3.1	100.0
	Total	32	2.1	100.0	
Missing	System	1472	97.9		
Total		1504	100.0		

When did you stop: Year

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2000	1	.1	3.1	3.1
	2001	1	.1	3.1	6.2
	2002	8	.5	25.0	31.2
	2003	22	1.5	68.8	100.0
	Total	32	2.1	100.0	
Missing	System	1472	97.9		
Total		1504	100.0		

Have you received a check from the WIC program within the last month?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	25	1.7	100.0	100.0
Missing	System	1479	98.3		
Total		1504	100.0		

Overall, would you rate the WIC program as excellent, good, fair, or poor?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Excellent	897	59.6	59.6	59.6
	Good	496	33.0	33.0	92.6
	Fair	95	6.3	6.3	98.9
	Poor	16	1.1	1.1	100.0
	Total	1504	100.0	100.0	

Factor: you had a difficult time finding transportation to the WIC office?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A major factor	194	12.9	12.9	12.9
	Somewhat of a factor	75	5.0	5.0	17.9
	Only a minor factor	66	4.4	4.4	22.3
	Not at all a factor	1168	77.7	77.7	100.0
	Total	1503	99.9	100.0	
Missing	DK	1	.1		
Total		1504	100.0		

Factor: there was too much repetition in the paperwork you had to provide to WIC to become certified?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A major factor	130	8.6	8.6	8.6
	Somewhat of a factor	165	11.0	11.0	19.6
	Only a minor factor	114	7.6	7.6	27.2
	Not at all a factor	1094	72.7	72.8	100.0
	Total	1503	99.9	100.0	
Missing	DK	1	.1		
Total		1504	100.0		

Factor: there was too much paperwork involved with the program in general?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A major factor	74	4.9	4.9	4.9
	Somewhat of a factor	142	9.4	9.4	14.4
	Only a minor factor	116	7.7	7.7	22.1
	Not at all a factor	1171	77.9	77.9	100.0
	Total	1503	99.9	100.0	
Missing	DK	1	.1		
Total		1504	100.0		

Factor: the office waiting room where you received WIC services was too crowded or noisy?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A major factor	118	7.8	7.8	7.8
	Somewhat of a factor	122	8.1	8.1	16.0
	Only a minor factor	96	6.4	6.4	22.3
	Not at all a factor	1168	77.7	77.7	100.0
	Total	1504	100.0	100.0	

Factor: you thought people looked down on you for being on WIC?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A major factor	60	4.0	4.0	4.0
	Somewhat of a factor	63	4.2	4.2	8.2
	Only a minor factor	72	4.8	4.8	13.0
	Not at all a factor	1308	87.0	87.0	100.0
	Total	1503	99.9	100.0	
Missing	DK	1	.1		
Total		1504	100.0		

Factor: that you were not treated well by WIC staff members?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A major factor	37	2.5	2.5	2.5
	Somewhat of a factor	56	3.7	3.7	6.2
	Only a minor factor	57	3.8	3.8	10.0
	Not at all a factor	1354	90.0	90.0	100.0
	Total	1504	100.0	100.0	

Factor: you had to wait too long to be seen after arriving for your appointments?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A major factor	144	9.6	9.6	9.6
	Somewhat of a factor	177	11.8	11.8	21.4
	Only a minor factor	128	8.5	8.5	29.9
	Not at all a factor	1054	70.1	70.1	100.0
	Total	1503	99.9	100.0	
Missing	DK	1	.1		
Total		1504	100.0		

Factor: you had to recertify too often?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A major factor	189	12.6	12.6	12.6
	Somewhat of a factor	192	12.8	12.8	25.4
	Only a minor factor	101	6.7	6.7	32.1
	Not at all a factor	1018	67.7	67.9	100.0
	Total	1500	99.7	100.0	
Missing	DK	4	.3		
Total		1504	100.0		

Factor: medical, family, or personal reasons arose that kept you from being able to go to the WIC office?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A major factor	306	20.3	20.4	20.4
	Somewhat of a factor	189	12.6	12.6	32.9
	Only a minor factor	93	6.2	6.2	39.1
	Not at all a factor	915	60.8	60.9	100.0
	Total	1503	99.9	100.0	
Missing	DK	1	.1		
Total		1504	100.0		

Factor: the appointment times were available only at times when you could not go?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A major factor	296	19.7	19.7	19.7
	Somewhat of a factor	242	16.1	16.1	35.8
	Only a minor factor	99	6.6	6.6	42.4
	Not at all a factor	864	57.4	57.6	100.0
	Total	1501	99.8	100.0	
Missing	DK	3	.2		
Total		1504	100.0		

Factor: you thought there were too many appointments?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A major factor	147	9.8	9.8	9.8
	Somewhat of a factor	139	9.2	9.2	19.0
	Only a minor factor	97	6.4	6.5	25.5
	Not at all a factor	1120	74.5	74.5	100.0
	Total	1503	99.9	100.0	
Missing	DK	1	.1		
Total		1504	100.0		

Factor: you thought that blood needed to be drawn too often?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A major factor	58	3.9	3.9	3.9
	Somewhat of a factor	49	3.3	3.3	7.1
	Only a minor factor	57	3.8	3.8	10.9
	Not at all a factor	1338	89.0	89.1	100.0
	Total	1502	99.9	100.0	
Missing	DK	2	.1		
Total		1504	100.0		

Factor: you thought there were too many health screenings?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A major factor	31	2.1	2.1	2.1
	Somewhat of a factor	47	3.1	3.1	5.2
	Only a minor factor	50	3.3	3.3	8.5
	Not at all a factor	1373	91.3	91.5	100.0
	Total	1501	99.8	100.0	
Missing	DK	3	.2		
Total		1504	100.0		

Factor: you thought you had to wait too long to get your checks?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A major factor	75	5.0	5.0	5.0
	Somewhat of a factor	81	5.4	5.4	10.4
	Only a minor factor	55	3.7	3.7	14.0
	Not at all a factor	1293	86.0	86.0	100.0
	Total	1504	100.0	100.0	

Factor: that you thought the educational videos weren't informative?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A major factor	36	2.4	2.5	2.5
	Somewhat of a factor	62	4.1	4.4	6.9
	Only a minor factor	58	3.9	4.1	11.0
	Not at all a factor	1265	84.1	89.0	100.0
	Total	1421	94.5	100.0	
Missing	DK	82	5.5		
	RF	1	.1		
	Total	83	5.5		
Total		1504	100.0		

Factor: that you thought the educational programs weren't informative?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A major factor	26	1.7	1.8	1.8
	Somewhat of a factor	53	3.5	3.7	5.5
	Only a minor factor	55	3.7	3.8	9.3
	Not at all a factor	1312	87.2	90.7	100.0
	Total	1446	96.1	100.0	
Missing	DK	57	3.8		
	RF	1	.1		
	Total	58	3.9		
Total		1504	100.0		

Factor: that you didn't want WIC anymore because you felt it wasn't worth the hassle you had to go through to receive the checks?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A major factor	225	15.0	15.0	15.0
	Somewhat of a factor	178	11.8	11.8	26.8
	Only a minor factor	95	6.3	6.3	33.1
	Not at all a factor	1005	66.8	66.9	100.0
	Total	1503	99.9	100.0	
Missing	DK	1	.1		
Total		1504	100.0		

Factor: that you didn't want WIC anymore because you felt you didn't need the checks anymore?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A major factor	260	17.3	17.3	17.3
	Somewhat of a factor	172	11.4	11.5	28.8
	Only a minor factor	97	6.4	6.5	35.2
	Not at all a factor	972	64.6	64.8	100.0
	Total	1501	99.8	100.0	
Missing	DK	3	.2		
Total		1504	100.0		

Factor: that you thought you weren't qualified because of your household income?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A major factor	384	25.5	25.6	25.6
	Somewhat of a factor	82	5.5	5.5	31.0
	Only a minor factor	47	3.1	3.1	34.2
	Not at all a factor	988	65.7	65.8	100.0
	Total	1501	99.8	100.0	
Missing	DK	3	.2		
Total		1504	100.0		

Factor: that you thought you weren't qualified because of the age of your child(ren)?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A major factor	39	2.6	2.6	2.6
	Somewhat of a factor	24	1.6	1.6	4.2
	Only a minor factor	38	2.5	2.5	6.7
	Not at all a factor	1400	93.1	93.3	100.0
	Total	1501	99.8	100.0	
Missing	DK	3	.2		
Total		1504	100.0		

Factor: that the amount of food or formula you received was too little?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A major factor	86	5.7	5.7	5.7
	Somewhat of a factor	100	6.6	6.7	12.4
	Only a minor factor	73	4.9	4.9	17.2
	Not at all a factor	1244	82.7	82.8	100.0
	Total	1503	99.9	100.0	
Missing	DK	1	.1		
Total		1504	100.0		

Factor: that the amount of food or formula was too much and went to waste?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A major factor	26	1.7	1.7	1.7
	Somewhat of a factor	86	5.7	5.7	7.5
	Only a minor factor	84	5.6	5.6	13.1
	Not at all a factor	1305	86.8	86.9	100.0
	Total	1501	99.8	100.0	
Missing	DK	3	.2		
Total		1504	100.0		

Factor: there were too few choices in the selection of WIC-approved foods or infant formula you had?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A major factor	219	14.6	14.6	14.6
	Somewhat of a factor	206	13.7	13.7	28.3
	Only a minor factor	103	6.8	6.9	35.2
	Not at all a factor	973	64.7	64.8	100.0
	Total	1501	99.8	100.0	
Missing	DK	3	.2		
Total		1504	100.0		

Factor: you didn't like using the vouchers in the grocery store checkout line?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A major factor	97	6.4	6.5	6.5
	Somewhat of a factor	97	6.4	6.5	12.9
	Only a minor factor	81	5.4	5.4	18.3
	Not at all a factor	1227	81.6	81.7	100.0
	Total	1502	99.9	100.0	
Missing	DK	2	.1		
Total		1504	100.0		

Factor: you had problems in knowing which foods in the grocery store were WIC approved?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A major factor	149	9.9	9.9	9.9
	Somewhat of a factor	229	15.2	15.2	25.2
	Only a minor factor	123	8.2	8.2	33.4
	Not at all a factor	1001	66.6	66.6	100.0
	Total	1502	99.9	100.0	
Missing	DK	2	.1		
Total		1504	100.0		

Factor: you had trouble finding a conveniently located grocery store that accepted WIC?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A major factor	35	2.3	2.3	2.3
	Somewhat of a factor	35	2.3	2.3	4.7
	Only a minor factor	48	3.2	3.2	7.9
	Not at all a factor	1384	92.0	92.1	100.0
	Total	1502	99.9	100.0	
Missing	DK	2	.1		
Total		1504	100.0		

Would you say that the days the clinic where you received WIC services was open were very convenient, somewhat convenient, somewhat inconvenient, or not at all convenient for you?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very convenient	689	45.8	45.8	45.8
	Somewhat convenient	509	33.8	33.8	79.7
	Somewhat inconvenient	177	11.8	11.8	91.4
	Not at all convenient	122	8.1	8.1	99.5
	DK	7	.5	.5	100.0
	Total	1504	100.0	100.0	

Was this a factor in why you left the WIC program?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	385	25.6	47.2	47.2
	No	417	27.7	51.2	98.4
	DK	2	.1	.2	98.7
	RF	11	.7	1.3	100.0
	Total	815	54.2	100.0	
Missing	System	689	45.8		
Total		1504	100.0		

Would you say that the hours the clinic where you received WIC services was open were very convenient, somewhat convenient, somewhat inconvenient, or not at all convenient for you?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very convenient	736	48.9	48.9	48.9
	Somewhat convenient	430	28.6	28.6	77.5
	Somewhat inconvenient	202	13.4	13.4	91.0
	Not at all convenient	132	8.8	8.8	99.7
	DK	4	.3	.3	100.0
	Total	1504	100.0	100.0	

Was this a factor in why you left the WIC program?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	407	27.1	53.0	53.0
	No	355	23.6	46.2	99.2
	DK	2	.1	.3	99.5
	RF	4	.3	.5	100.0
	Total	768	51.1	100.0	
Missing	System	736	48.9		
Total		1504	100.0		

What days and hours would be more convenient for you: Weekends

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not chosen	649	43.2	69.6	69.6
	Chosen	283	18.8	30.4	100.0
	Total	932	62.0	100.0	
Missing	System	572	38.0		
Total		1504	100.0		

What days and hours would be more convenient for you: Evenings

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not chosen	441	29.3	47.3	47.3
	Chosen	491	32.6	52.7	100.0
	Total	932	62.0	100.0	
Missing	System	572	38.0		
Total		1504	100.0		

What days and hours would be more convenient for you: During lunch time

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not chosen	851	56.6	91.3	91.3
	Chosen	81	5.4	8.7	100.0
	Total	932	62.0	100.0	
Missing	System	572	38.0		
Total		1504	100.0		

What days and hours would be more convenient for you: Early mornings

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not chosen	784	52.1	84.1	84.1
	Chosen	148	9.8	15.9	100.0
	Total	932	62.0	100.0	
Missing	System	572	38.0		
Total		1504	100.0		

What days and hours would be more convenient for you: Need to be open more days during week

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not chosen	708	47.1	76.0	76.0
	Chosen	224	14.9	24.0	100.0
	Total	932	62.0	100.0	
Missing	System	572	38.0		
Total		1504	100.0		

What days and hours would be more convenient for you: Other

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not chosen	851	56.6	91.3	91.3
	Chosen	81	5.4	8.7	100.0
	Total	932	62.0	100.0	
Missing	System	572	38.0		
Total		1504	100.0		

What days and hours would be more convenient for you: DK

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not chosen	861	57.2	92.4	92.4
	Chosen	71	4.7	7.6	100.0
	Total	932	62.0	100.0	
Missing	System	572	38.0		
Total		1504	100.0		

What days and hours would be more convenient for you: RF

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not chosen	925	61.5	99.2	99.2
	Chosen	7	.5	.8	100.0
	Total	932	62.0	100.0	
Missing	System	572	38.0		
Total		1504	100.0		

Was this a factor in why you left the WIC program?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	34	2.3	8.7	8.7
	No	349	23.2	89.5	98.2
	DK	7	.5	1.8	100.0
	Total	390	25.9	100.0	
Missing	System	1114	74.1		
Total		1504	100.0		

When you were on WIC, where did you receive WIC services?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Health department	1000	66.5	66.5	66.5
	Social services	179	11.9	11.9	78.4
	Stand-alone WIC office	250	16.6	16.6	95.0
	Other	67	4.5	4.5	99.5
	DK	8	.5	.5	100.0
	Total	1504	100.0	100.0	

Where would you prefer to receive WIC services?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Health department	875	58.2	58.2	58.2
	Other clinic where health services are received	16	1.1	1.1	59.2
	Social services	164	10.9	10.9	70.1
	Stand-alone WIC office	339	22.5	22.5	92.7
	Other	40	2.7	2.7	95.3
	DK	69	4.6	4.6	99.9
	RF	1	.1	.1	100.0
	Total	1504	100.0	100.0	

Since leaving the WIC program, was there ever a time when you did not have enough money to buy the amount of food you needed for yourself or your child(ren)?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	687	45.7	45.7	45.7
	No	813	54.1	54.1	99.7
	DK	3	.2	.2	99.9
	RF	1	.1	.1	100.0
	Total	1504	100.0	100.0	

Since leaving the WIC program, was there ever a time when you did not have the money to buy the type of food you needed for yourself or your child(ren)?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	637	42.4	42.4	42.4
	No	860	57.2	57.2	99.5
	DK	5	.3	.3	99.9
	RF	2	.1	.1	100.0
	Total	1504	100.0	100.0	

Including you, how many adults live in your household currently?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	462	30.7	30.7	30.7
	2	793	52.7	52.7	83.4
	3	152	10.1	10.1	93.6
	4	67	4.5	4.5	98.0
	5	23	1.5	1.5	99.5
	6	5	.3	.3	99.9
	7	1	.1	.1	99.9
	DK/RF	1	.1	.1	100.0
	Total	1504	100.0	100.0	

How many infants under the age of one live with you currently?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	1185	78.8	78.8	78.8
	1	299	19.9	19.9	98.7
	2	20	1.3	1.3	100.0
	Total	1504	100.0	100.0	

How many children aged one to four live with you currently?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	98	6.5	6.5	6.5
	1	966	64.2	64.2	70.7
	2	384	25.5	25.5	96.3
	3	49	3.3	3.3	99.5
	4	6	.4	.4	99.9
	23	1	.1	.1	100.0
	Total	1504	100.0	100.0	

How many children aged five to seventeen live with you currently?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	812	54.0	54.0	54.0
	1	401	26.7	26.7	80.7
	2	200	13.3	13.3	93.9
	3	58	3.9	3.9	97.8
	4	23	1.5	1.5	99.3
	5	6	.4	.4	99.7
	6	2	.1	.1	99.9
	10	1	.1	.1	99.9
	11	1	.1	.1	100.0
	Total	1504	100.0	100.0	

Are you pregnant or breastfeeding currently?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Pregnant	91	6.1	6.1	6.1
	Breastfeeding	62	4.1	4.1	10.2
	Neither pregnant nor breastfeeding (female respondent)	1338	89.0	89.0	99.1
	Male respondent	11	.7	.7	99.9
	DK	1	.1	.1	99.9
	RF	1	.1	.1	100.0
	Total	1504	100.0	100.0	

Do you or your children participate in or receive: the free or reduced price lunch program?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not chosen	1093	72.7	72.7	72.7
	Chosen	411	27.3	27.3	100.0
	Total	1504	100.0	100.0	

Do you or your children participate in or receive: TANF?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not chosen	1353	90.0	90.0	90.0
	Chosen	151	10.0	10.0	100.0
	Total	1504	100.0	100.0	

Do you or your children participate in or receive: Medicaid?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not chosen	826	54.9	54.9	54.9
	Chosen	678	45.1	45.1	100.0
	Total	1504	100.0	100.0	

Do you or your children participate in or receive: FAMIS?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not chosen	1381	91.8	91.8	91.8
	Chosen	123	8.2	8.2	100.0
	Total	1504	100.0	100.0	

Do you or your children participate in or receive: or Food Stamps?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not chosen	1107	73.6	73.6	73.6
	Chosen	397	26.4	26.4	100.0
	Total	1504	100.0	100.0	

Do you or your children participate in or receive: DOES NOT PARTICIPATE IN ANY OF THE PROGRAMS MENTIONED

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not chosen	901	59.9	59.9	59.9
	Chosen	603	40.1	40.1	100.0
	Total	1504	100.0	100.0	

Do you or your children participate in or receive: DK

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not chosen	1504	100.0	100.0	100.0

Do you or your children participate in or receive: RF

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not chosen	1503	99.9	99.9	99.9
	Chosen	1	.1	.1	100.0
	Total	1504	100.0	100.0	

Will your total household income be less than $[INCOME] this year before taxes?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	1111	73.9	73.9	73.9
	No	263	17.5	17.5	91.4
	DK	127	8.4	8.4	99.8
	RF	3	.2	.2	100.0
	Total	1504	100.0	100.0	

Do you plan to re-enroll in the WIC program in the next year?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	759	50.5	60.7	60.7
	No	344	22.9	27.5	88.2
	DK	148	9.8	11.8	100.0
	Total	1251	83.2	100.0	
Missing	System	253	16.8		
Total		1504	100.0		

Prior to enrolling in WIC, how did you hear about the program: brochure at the health department

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not chosen	1292	85.9	85.9	85.9
	Chosen	212	14.1	14.1	100.0
	Total	1504	100.0	100.0	

Prior to enrolling in WIC, how did you hear about the program: doctor referral

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not chosen	1170	77.8	77.8	77.8
	Chosen	334	22.2	22.2	100.0
	Total	1504	100.0	100.0	

Prior to enrolling in WIC, how did you hear about the program: radio

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not chosen	1497	99.5	99.5	99.5
	Chosen	7	.5	.5	100.0
	Total	1504	100.0	100.0	

Prior to enrolling in WIC, how did you hear about the program: television

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not chosen	1484	98.7	98.7	98.7
	Chosen	20	1.3	1.3	100.0
	Total	1504	100.0	100.0	

Prior to enrolling in WIC, how did you hear about the program: at social services office

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not chosen	1365	90.8	90.8	90.8
	Chosen	139	9.2	9.2	100.0
	Total	1504	100.0	100.0	

Prior to enrolling in WIC, how did you hear about the program: friends/family

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not chosen	783	52.1	52.1	52.1
	Chosen	721	47.9	47.9	100.0
	Total	1504	100.0	100.0	

Prior to enrolling in WIC, how did you hear about the program: other

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not chosen	1390	92.4	92.4	92.4
	Chosen	114	7.6	7.6	100.0
	Total	1504	100.0	100.0	

Prior to enrolling in WIC, how did you hear about the program: DK

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not chosen	1452	96.5	96.5	96.5
	Chosen	52	3.5	3.5	100.0
	Total	1504	100.0	100.0	

Prior to enrolling in WIC, how did you hear about the program: RF

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not chosen	1503	99.9	99.9	99.9
	Chosen	1	.1	.1	100.0
	Total	1504	100.0	100.0	