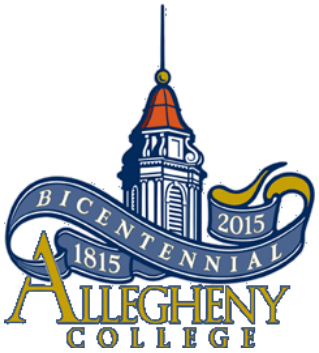
An Analysis of Eligible Non-Participation in the Women, Infants, and Children (WIC) Supplemental Nutrition Program



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May 2019

Alison Celigoi

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This work represents my own work unless otherwise cited.

This senior comprehensive project has met the minimum requirements
of the Global Health Studies
major for a Bachelors of Science degree

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ABSTRACT

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Graduation Date: May 2019

Title: **An Analysis of Eligible Non-Participation in the Women, Infants, and Children (WIC) Supplemental Nutrition Program**

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Ever since its creation, the Women, Infants, and Children (WIC) program has supplemented healthy foods and nutrition advice for low- and middle- income families. It has been shown that mothers who utilize WIC have better pregnancies, healthier lifestyles, and provide a brighter future for their offspring. However, many of the people who are eligible for the WIC program choose not to use it due to personal pride, transportation issues, inconvenience, negative stigma, and past experiences. Poverty has a negative effect on a developing child, making it ever more important that they receive healthy foods. Programs like WIC can help improve a child's future because the most important time for a child's life nutritionally is within the first 5 years of life, which is what WIC eligible persons are. I conducted a literature review as well as analyzed data specifically from the Meadville clinic to better understand why eligible non-participation is so prevalent in the WIC program and further the argument that WIC is important for rural areas such as Meadville, Pennsylvania.

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An Overview and History of the WIC Program

The Women, Infants, and Children Supplemental Nutrition Program (WIC) was established in 1975 by the United Nation's Department of Agriculture to provide healthy food and nutrition education to low- and middle-income members of the community (Odekon, 2015). Since its creation, WIC has proved successful in aiding child development throughout the first five years of life ("Choose Healthy, Choose WIC", 2019). WIC provides nutrition assistance checks, growth monitoring, breastfeeding advice, and nutrition education to eligible participants in the surrounding area ("Choose Healthy, Choose WIC", 2019). WIC provides these resources to pregnant women, postpartum women, infants, and children up to age five, which are among the most vulnerable times of one's life ("Choose Healthy, Choose WIC", 2019). The program is established in every state in the U.S., the District of Columbia, 33 Indian Tribal Organizations, Puerto Rico, the Virgin Islands, American Samoa, and Guam (Oliveria, 2015).

Pregnant women, infants, and children have special nutritional needs. For a woman to have a healthy pregnancy and a healthy offspring, the National Institute of Health suggests a diet high in Folic Acid, Vitamin D, Iron, Iodine, Calcium, and DHA (Marangoni, 2016). These vitamins and minerals can increase the chance of a pregnancy being carried to term. The Centers for Disease Control and Prevention says that the main factors in a healthy diet for infants and children are having a healthy amount of Vitamin D and Iron-two essential nutrients that the majority of children in the United States do not get enough of (CDC, 2018). Nutrition is crucial in the first few years of life and approximately 3.6 million deaths occur in infants worldwide before they reach age 28 simply due to poor nutrition (Kushkituah, 2014). Programs like WIC are especially beneficial to women with a lower income who may not have access to high-quality formula or baby food, thus providing their children with the nutrients they need. Participation in

the WIC program is also associated with lower rates of infant mortality due to their nutrition education and supplemental practices (Woods, 2016).

The WIC program began as a 2-year pilot program in 1972 by an amendment to the Child Nutrition Act of 1966. This Act was created due to the growing concern that low-income children were not receiving proper nutrition or nutrition advice (Oliveria, 2015). The pilot program was followed by the Poor Peoples' March on Washington DC which WIC became permanent in 1975, after research showed that it was a successful program that yielded higher nutritional outcomes among low-income children (Oliveria, 2015). Since it was created, the number of participants has expanded dramatically from an average of 88,000 participants per month in 1974 to an incredible average of 7.2 million participants per month in 2000 (Oliveria, 2015). With assistance from Federal, State, and local partnerships, the program has been shaped and refined in order to reevaluate needs and continue to be successful to the people who use it (Oliveria, 2015).

Over four decades, researchers have investigated the effectiveness of the WIC program and concluded that women/children who participate in WIC tend to give birth to healthier babies that are more likely to survive infancy, they tend to have more nutritious diets, breastfeed more regularly, have increased food security, have lower obesity rates, and reduced susceptibility to anemia ("WIC Works", 2017). WIC is designed to support sound nutrition and health during the most critical points of a child's development: in utero, in infancy, and during the early years of childhood. In one study, researchers found that WIC reduces the prevalence of food insecurity among children by at least 20 percent, allowing them to have a healthy start to their life and in turn, a healthy future (Kreider, 2010). Another study that took place in Ohio found that women who use the WIC program while pregnant yield a lower infant mortality rate than women not

using the program, comparing 8.0 infant deaths per 1,000 live births as opposed to 10.6 infant deaths per 1,000 live births in non-participants (Khanani, 2010).

WIC can help combat food insecurity. For low- and middle- income families, food insecurity is one of the biggest causes of malnutrition among children (Metallinos-Katsaras, 2010). Food insecurity is defined as having a lack of access to enough nutritionally adequate and safe foods for an active and healthy life. In a study conducted in 2010, the association between women's participation and duration of the WIC program and their household food security status. They found that the longer that a woman was on the WIC program, the less of a risk she was at becoming food insecure. Specifically, among pregnant women, the more trimesters that the mother was on WIC was associated with a lower likelihood of continuing to have food insecurity (Metallinos-Katsaras, 2010). WIC is effective in successfully aiding in the elimination of food insecurity and providing a healthy future for children on the program.

There are several diseases that are known to be preventable if proper nutrition is in place in utero. Diseases such as coronary heart disease can develop later in life and may be prevented or caused during the middle or late gestation periods (Barker, 1995). When a woman is pregnant, she is no longer just making nutrition decisions for herself, she is deciding future for her unborn child's health and wellbeing. Fetal undernutrition leads to disproportionate growth and can program the development of diseases later in life (Barker, 1995). Programs like WIC provide mothers with healthy and affordable food throughout their pregnancy which, in turns, allows them to have healthier pregnancies than women who are not on WIC (Jackson, 2015).

The WIC program caters to women and children living in poverty throughout the United States. In Crawford County, Pennsylvania the poverty rate is 15.3% which is high compared to the poverty rate in the state of Pennsylvania as whole which is only 12.9% ("QuickFacts", 2017).

This shows that programs like WIC are necessary in low-income areas like this because without the program, many people would not be able to get the food that they need for themselves and their children. It has also been found that infants and children who have participated in the WIC program are healthier and better transition into adulthood at healthy weights and proper hemoglobin levels. These results are from better nutrition education and careful nutrition monitoring provided by the WIC program (Bullinger, 2015).

It is well known that certain foods have been known to increase vitality and health (Schen, 2010). Nutritionists and doctors constantly push people to eat healthy foods and stress how important it is to put the right foods into our bodies. The WIC program follows these guidelines set forth by health professionals in order to provide the proper nutrition to the women, infants, and children under their care. In order for a WIC nutritionist to provide the appropriate amount of food for the check, certain factors such as the age of the person and their current nutritional status must be addressed. The food packages are broken up into four categories: children (aged one through four years), pregnant and partially breastfeeding women up to one year postpartum, non-breastfeeding woman up to six months postpartum, and fully breastfeeding women for up to one year postpartum (WIC, 2018).

Fruits and Vegetables

The common recommendation is that at least half of your plate should include low-fat fruits and leafy green vegetables (Slavin, 2012). Fruit and vegetable intake have been proven to protect against several common chronic diseases such as cancer and heart diseases (Herman, 2008 & Strome, 2016) . According to British Medical Journal, people who eat seven or more

portions of fruits and vegetables per day have the lowest risk of mortality from any cause, with a 42% decrease in risk of death (Wise, 2014). Fruits are beneficial because of their high content of vitamin C, vitamin A, and minerals. Increased consumption of fruits and vegetables, especially at a young age, can set the standard for a child's nutritional future. In the United States, the main reason for someone not eating enough fruits and vegetables is due to the shortage of fresh fruits and vegetables available, cost, and simple unwillingness. On a typical WIC check, a child will receive $8 in a cash voucher that is only redeemable towards fresh fruits and vegetables. A woman, regardless of if she is breastfeeding or not, will receive $11 towards fruits and vegetables (WIC, 2016).

Whole Grain

Whole grain is another important part of a balanced diet. A healthy amount of whole grains and fiber a day has been linked to lowering the risk of chronic diseases and digestive health (Ruxton, 2014). The United States Dietary Guidelines recommend that all Americans consume anywhere from three to eight servings per day (and young children under the age of 9 should consume anywhere from one to four servings). Whole grains contain a large amount of fiber, minerals, vitamins, and bioactive compounds which are all essential to a healthy diet. The term "whole grain" refers to the edible grain of cereals that include both an endosperm and germ that are present in the end product. Higher intakes of dietary fiber may reduce the risks for colon cancer, breast cancer, and endometrial cancer, as well as general reduced mortality (Ruxton, 2014). The main reason for not consuming enough whole grains is lack of understanding benefits and no access to healthy fibers. A typical child on WIC will receive 2 pounds of whole wheat bread and 36 oz of breakfast cereal. A woman who is fully or partially breastfeeding will receive

1 pound of whole wheat bread and all woman, regardless of breastfeeding status, receive 36 oz of cereal (WIC, 2016).

Milk

Milk as well as milk compounds can promote a healthy body composition, reduce the risk of obesity, hypertension, and certain cancers, and even prevent type two diabetes (Schaafsma, 2009). Purely on the basis of scientific evidence, it has been confirmed that milk consumption reduces blood pressure and promotes gastrointestinal health. The nutritional value of cow milk has been well-recognized for centuries and contains a large variety of nutrients such as protein, calcium, phosphorus, vitamin B2, vitamin B12, and zinc. For a developing child, milk is especially important because the amount of protein and micronutrients in milk is beneficial for a growing body and mind (Wells, 2000). Milk has also been shown to benefit young children's dental health, as the high amount of calcium promotes the production of strong teeth. A lower consumption of dairy and dairy products in early childhood can also predict excess body fat gain in the future (Schaafsma, 2009). A child will receive 16 quarts of milk on a typical check, a mostly breastfeeding woman will receive 22 quarts, a non-breastfeeding woman will receive 16 quarts, and a fully breastfeeding woman will 24 quarts of milk. WIC especially promotes the action of breastfeeding and modifies their checks accordingly to increase the number of women breastfeeding.

Breast milk has shown to have extreme benefits for a developing infant. The milk fat globule membrane (MFGM) found in breast milk contains ingredients that increase neurodevelopment and defense against infections (Hernell, 2016). WIC promotes breastfeeding for these reasons and because they uphold the US Surgeon General's recommendations for peer

counseling to support breastfeeding (Reeder, 2014). Pediatricians recommend exclusively breastfeeding for the first six months of an infant's life due to the medical, developmental, and emotional benefits. Children who breastfeed for longer than six months have better cognitive outcomes, lower risk of developing attention-deficit disorder, and a lower risk of being diagnosed with autism spectrum disorder (Bar, 2016). Since the program promotes breastfeeding, the WIC program tries to convince mothers to exclusively breastfeed by offering higher packages of food for these types of women. If the mother chooses to not breastfeed at all or partially breastfeed, they will receive formula to supplement their choice to not breastfeed exclusively, thus receiving less food for themselves. They will also only be on the program for six months after they give birth. These incentives push mothers to breastfeed if they are able to do so.

Program Eligibility

In order for a woman or family to be eligible for WIC, she/they must have a household income that does not exceed 185% of the federal poverty level (FPL), or be enrolled in another program with similar income criteria (Marchi, 2013). Once registered, pregnant women and new mothers will receive WIC checks until the children reach age five. A woman can also receive checks for herself after she delivers her baby for up to one year if she chooses to breastfeed exclusively, and up to six months if she chooses to formula feed (Marchi, 2013). In addition to being below the income level, the participant must also be deemed at "nutritional risk" by a health professional ("WIC Nutrition Risk Criteria", 2017). A nutritional risk can be a number of factors, such as history of preterm delivery, depression, young age for pregnancy, and low iron levels (Institute of Medicine, 1996). However, for children who live in a family below the federal

poverty line, they may be considered nutritionally at risk simply because they are living in poverty and not receiving proper nutrition or education- which is why they need WIC.

The WIC program successfully assists lower-income families with better nutrition during the five years of a child's life. However, even with these benefits, there are still many eligible people who choose not to take advantage of the WIC program. WIC has been known to have important potential for preventing diet-related disease in low- and middle-income children (Andreyeva, 2012). Unfortunately, and surprisingly, less than half of eligible families in the nation choose to receive WIC benefits (Smith, 2016). Even for people who are already enrolled in a WIC program, it can be difficult to persuade them to stay on until the child reaches age 5 (Jacknowitz, 2009). The factors of low income and poor health prove to be true in areas like Meadville, Pennsylvania. It is important to understand the importance of the WIC program and why areas like Meadville are ideal locations for supplemental nutrition programs like WIC in order to better understand the growing issue of eligible non-participation.

Literature Review Surrounding WIC Participation and Termination

In Crawford County, Pennsylvania, many participants are terminated from the WIC program by the state every year for various reasons. In order for a person to be terminated, one of six events have to occur. If a woman fails to pick up checks for 3 consecutive months, she and her family will be removed from the program ("Choose Healthy, Choose WIC", 2019). If a woman or child fails to be recertified for the program once a year, they will stop receiving WIC checks and be removed from the program also ("Choose Healthy, Choose WIC", 2019). If a woman has been deemed non-breastfeeding for six-months postpartum or if a woman has been deemed exclusively breastfeeding for one year, after that time periods she will stop receiving checks ("Choose Healthy, Choose WIC" 2019.). Additionally, if a child reaches age five, they will stop receiving WIC benefits as well ("Choose Healthy, Choose WIC", 2019). Children living in poverty experience several different disadvantages in almost every area of health, development, and education which is why programs such as the one in Crawford County, PA will need to push harder in order to provide successful results (Lefmann, 2014).

Women, infants, and children up to age 5 who are not receiving WIC that live in a household with a reported income under 185% of the federal poverty level are known as eligible non-participants (Burnstien, 2000). The lack of participation from eligible persons has always been an issue in the WIC program. In 2014, fewer than half of WIC-income eligible families chose to receive benefits (Smith, 2016). One study concluded that the greatest group of eligible non-participation was white women who were unmarried and not receiving food stamps (Bryant, 2001). This could be due to the social pressure of maintaining white privilege, not feeling like they need a husband or any other sources of income to provide for their family, and not wanting to receive any sort of government funded food source. Over 1 in 4 infants and 6 in 10 children

that are eligible for WIC do not receive benefits because their guardian chooses not to go on the program (Bitler, 2003). Since the people who are eligible for the program are likely the ones that need it, not receiving benefits can be dangerous for their children who may be missing out on nutritional benchmarks because this is the most crucial point of a person's life nutritionally speaking (Woods, 2016). In a study conducted to analyze socioeconomic statuses of infants that had left WIC, over 35% belonged to a family with an income below the poverty line, 20% had incomes below 50% of the poverty line, and over 1/3 receive food stamps (Gundersen, 2005). Almost 19% of eligible non-participants in WIC experiencing their first pregnancy had an annual income below $5,000 when the poverty threshold for a single person was $5,770 (Swann, 2007). An annual income of $5,000 is not enough to support oneself, let alone a small family with even just one child.

Malnutrition and consumption of unhealthy foods is directly related to adverse health outcomes, especially in infants and children (Brown, 1996). To make matters worse, the addition of living in poverty can make it even more difficult for mothers to have access to healthy food that they can afford. If mothers cannot provide healthy food for their children they will very likely suffer intellectual, emotional, and physical stunting. Studies show that nutrition has a strong correlation to cognitive development and socioeconomic inequality, and living in poverty can double this problem (Jackson, 2015). In 1992, it was estimated that about 12 million American children consumed diets that contained a significantly lower amount of nutrients than the recommended amount (Brown, 1996). Programs like WIC are very helpful and even lifesaving for hungry women, infants, and children. WIC has been proven to have the ability to partially remove the harsher effects of poverty (Finch, 2003).

Poverty does not only directly affect the health of the child, it affects the pregnant mother which, in turn, will negatively impact her children. In particular, prenatal stress due to poverty and food insecurity can have a negative effect on a child's future (Lefmann, 2014). Poor children's disadvantages begin before they are even born due to the stress a mother in poverty faces every day. The consequences of prenatal stress include decreased levels of biological, psychological, and social well-being (Lefmann, 2014). When a child is in utero, he/she is completely reliant on his/her mother to receive all nutrients and materials. It has been well documented that stress experienced by mothers during pregnancy affects fetal brain development through the mother's hypothalamic-pituitary-adrenocortical axis which influences the developing system and other parts of the fetal brain (Lefmann, 2014). A mother in poverty is constantly under monetary, physical, and social stress due to her situation. Programs like WIC have shown to lessen the burden on these mothers by providing healthy foods for her and her children which, in turn, alleviates some of the stress they face. When an eligible woman chooses not to participate in WIC for whatever reason, she misses out on an opportunity to decrease the stress of her and of her children.

Many people who choose to get on the WIC program do not choose to stay on until their child is 5 years old, which is the maximum age for benefits. However, longer-term participation has shown to positively impact children's health and nutrition status much more than short-term participation (Finch, 2003). On the other hand, there are also women who choose to enter the WIC program after their child is born, even if they meet the requirements while they are pregnant. There are cognitive benefits associated with prenatal and early childhood exposure to the WIC program as well (Jackson, 2015). Participants who either enter the program late or leaving the program prematurely are less likely to truly reap the complete benefits than a child

who was in the program from conception to age 5 (Tiehen, 2008). The prevalence of prenatal participants decreases with income, age, and education (Tiehen, 2008).

Craig Gundersen, a professor at Iowa State University, conducted a study analyzing the well-being of WIC recipients and eligible non-recipients. He used the 1996 panel of the Survey of Income and Program Participation (SIPP) to properly sample all of the infants and children who were eligible for WIC (Gundersen, 2004). It was found that almost half of the infants who participated were only on WIC for 12 months or less, likely due to the more frequent recertification required once an infant turns 1 year old (Gundersen, 2004). Infants are certified for an entire year at a time, while children must be recertified every 6 months to ensure they are meeting nutritional benchmarks (WIC, 2018). In this specific study, 32% of infants participating in WIC choose to continue to receive benefits after turning 1, and 19% continued to receive benefits after turning 2 (Gundersen, 2004).

Parents need a significant income in order to properly provide for their children, but many do not have jobs that bring a large amount of money to their family. However, many people that are eligible for programs like WIC still choose to not use their benefits. The United States Department of Agriculture noted that in 2003, only 69.6% of eligible pregnant women participated in the WIC program (USDA, 2006). In the year 2014, only 43% of income-eligible families received WIC nutrition benefits (Smith, 2016). The problem is that non-eligible mothers lack of participation in the WIC program does not only impact their health but can impact the health of their future child if nutritional needs are not being met. If only 43% of eligible participants choose to use the program, there must be reasons for why the other 57% choose to not.

There are many women, infants, and children who are "lost to follow-up" before they complete the WIC program in its entirety (Hunter, 2016). "Loss to follow-up", or "LTFU", is a term that means that the office has attempted to follow-up with the mothers or children to have them make additional appointments, but they either expressed that they did not want to continue on the program, they were not happy with the services they were receiving, or they did not answer their phone which could mean there was an underlying reason (Hunter, 2016). Perhaps their phone number changed, or they moved addresses, but regardless, they will not receive the benefits of the program.

Methods

I will be focusing on reasons why a family would either not want to receive WIC benefits anymore or why they are not able to pick up checks for various reasons and therefore have been terminated from the program. There are many reasons why a family would choose to no longer receive checks even though they are still eligible to receive them, and there are also reasons for why a family would choose to never begin the WIC program even though they may be eligible for benefits. These reasons include pride, inconvenience, or a negative stigma of the WIC program. I used several databases to find articles that have personal accounts and studies of why people choose to not receive WIC benefits even though they are eligible, or, why people who used to receive WIC checks choose to no longer do so.

I used the Allegheny College library's database entitled Aggregator, PubMed, Google Scholar, and JSTOR in order to find my sources. In these databases, I searched for terms such as "WIC termination", "WIC lost to follow up", "leaving WIC", "inconvenience of WIC", "WIC and transportation", "WIC testimony", "WIC participant loss", "WIC eligible non-participation", "WIC stigma", and "WIC inconvenience". I placed all of the articles I found into several

different folders on my laptop to organize them by reason for leaving (pride, inconvenience, or a perceived negative stigma/ having a personal negative experience). I found few other reasons for LTFU besides the ones I mentioned, so I limited my search terms to only articles that described either personal pride, program inconvenience (including transportation), or negative stigma (including past experiences).

Results

Pride

People do not like to feel as if they need extra help in providing for their families. In America, most families want to feel as if they are in control of their financial status and do not like to receive free handouts because it could make them seem weak. In an article published on Al.com, Alabama's official news website, it talks about one family's struggle with the WIC program and how they appreciate it but wish that they did not have to use it (Claire, 2015). The article talks about a woman named Sarah- who asks her last name to not be published in the article due to the stigma associated with receiving public assistance (Claire, 2015). Sarah is a mother of 4 and her husband recently returned from a tour with the Army in Afghanistan (Claire, 2015). Her husband hates that their family needs WIC in order to put food on the table for their family of 6, but the family agrees that being on the program gives the family a sense of stability and safety (Claire, 2015).

People are also reluctant to begin or continue using the WIC program because they believe that other people need it more than they do. A lower-class family that is eligible for WIC can refuse benefits because they do not want to abuse the program. A study conducted by the Minnesota Department of Health found that people in a community may have too much personal

pride to participate in the program, even if they are eligible and have a definite need for it, because they do not want to appear as lower-class (Huynh, 2013). A former participant of the program states in a phone interview when asked why she never signed up to receive checks, “My husband started working. Less hassle to shop with vouchers. A little bit of pride in there too. I didn’t want to take advantage of the program. Other people needed it more than we do. If we could get by at all, we didn’t use it” (Huynh, 2013). In that same study, another former participant said that they live in a pretty small town with an extremely low rate of unemployment and barely any people living on the streets (Huynh, 2013). People living in this specific community believe that programs like WIC are for those who are unemployed, homeless, or otherwise disadvantaged and they do not want to succumb to that level (Huynh, 2013).

Inconvenience

Some people claim that the WIC program is an inconvenient way to get nutritious food. Inconvenience can range from having the office hours be too narrow to not having a way to drive to get their checks or to make their appointments. Sarah, the woman from Alabama whose husband was in the Army, talks about how it takes her 15 minutes to check out at the grocery store and she must undergo 5 separate transactions when purchasing food with WIC checks (Claire, 2015). People also claim that it is inconvenient that they need to personally go into the clinic to pick up their vouchers, as they would rather just have them mailed to the house (Huynh, 2013). However, the parents are not just receiving vouchers for food, they are listening to valuable nutrition advice every time they go to the clinic to pick up their checks. During a traditional visit, a nutritionist will sit down with the mother or whoever is picking up the checks and teach them lessons about nutrition and the foods that their children will be receiving. If the checks were to simply be mailed to an address, a few problems could occur. They could be sent

to a wrong or out-of-date address, they could be easily stolen, and the parents would not receive the nutrition advice or, if applicable, breastfeeding support.

If parents need to visit the WIC clinic every 3 months to pick up checks, it can be hard to find reliable childcare during those times. It can be difficult to find someone to watch children while the mother goes to pick up checks, especially if they live alone or have multiple children. In the study that took place in Minnesota, some people reported issues with inconvenient locations and hours of operation (Huynh, 2013). In Crawford County, the WIC office hours are from 8:30am-5pm Monday through Friday and the facility is located on Terrace Street in downtown Meadville (WIC, 2017). These hours may seem accessible to many, but it becomes tricky for people that work during the day to have time to pick up checks. If a woman works a 9-5 job, she would not be able to pick up her checks at any time during the week and risks needing to request off work just to feed her family for another 3 months. As mentioned before, when a child turns 1 they need to be recertified on the program once every 6 months where as an infant is only required to be recertified once a year (Gundersen, 2004). When asked how long a typical WIC appointment lasted, women said anywhere between 10 minutes to 2 hours depending on the clinic (Nestor, 2001). This is problematic because there are many people who schedule 10 or 20 minutes out of their day but end up being there for over an hour which can lead to annoyance and anxiety with the program.

A study of former WIC participants from a single clinic in New York City concluded that 23% people who chose to leave the WIC program complained of transportation problems (Rosenberg, 2003). This study, funded by a special project grant from the University Hospital Fund, sampled 188 women who had withdrawn from the program and agreed to be interviewed on the phone after they had left the program (Rosenberg, 2003). This article states that

transportation was a strong factor in why people did not pick up checks, and therefore, were eventually removed from the program (Rosenberg, 2003). It is important to note that if adequate transportation had been available to those people, the WIC program could have continued to help them (Rosenberg, 2003). Since they did not have access to reliable transportation (car, public transportation, etc.), there are children who will not receive proper nutritious foods or nutrition education. Women who enrolled but stopping using WIC but were still eligible list reasons for leaving as dissatisfaction for how they were treated and associated stigma with being on the WIC program (Rosenberg, 2003).

A separate study conducted in Maryland aimed to recruit WIC participants to attend a voluntary nutrition education program in order to raise awareness of the importance of fruits and vegetables- in addition to their regular education when they pick up checks (Damron, 1999). Women in the program received personalized invitations, letters, and telephone reminders encouraging them to attend three bi-monthly sessions on the importance of increasing consumption of fruits and vegetables (Damron, 1999). Of the 1528 women who were eligible, 54% of enrollees attended at least one session (Damron, 1999). The study determined that 20% of people did not attend a session purely due to transportation issues (Damron, 1999). Most of the women who signed up for the WIC program during the time of the study said that they intended on attending the additional nutrition sessions, but lack of transportation kept them from doing so (Damron, 1999). Of the women who attended just one or two sessions, the main reason for not attending more was due to scheduling conflicts and transportation issues (Damron, 1999).

Negative Stigma and Past Experiences

As I discovered when I read about Sarah, the woman from Alabama, people do not want to be known as “the people on WIC”. This attitude is more present among Whites versus

Hispanics and Blacks (Liu, 2016). One study aimed to examine socio demographic status, psychosocial concerns, and structural barriers associated with participation, and lack thereof, of the WIC program in New York City (Liu, 2016). This study found that Hispanics and Blacks were 4.1 and 2.4 times more likely to participate, respectively, in the program compared to Whites (Liu, 2016). This study also brought into account social factors, such as if the pregnancy was planned or not. The study found that, overall, women with unintended pregnancies and women with fewer social supports tended to participate in WIC, while women (usually White women) who had a planned pregnancy and were higher-up in society tended to not use the program (Liu, 2016). Other factors included level of education, marital status, and household income. It was found that women who were of a minority race group, lower education, unmarried, and lower household income were more common to use WIC than those who did not have those characteristics (Liu, 2016).

It is common for people to view WIC benefits as welfare participation. Welfare participation is associated with a negative stigma in middle- and upper-income citizens (Powell, 2015). Similar to the fact that people do not want to use the program because they feel as though others need it more than them, they do not want to be seen as lesser by using the benefits. Although WIC is not connected to the welfare system, some people believe that using WIC is the same as receiving “free handouts” and they are afraid that people will think they are worse off than they are (Powell, 2015). Women in rural areas also perceive a more negative stigma compared to those in urban areas and have a less willingness to participate in supplemental programs (McCormack, 2004). Women who use WIC are seen as less deserving, more dangerous, and less human than the average woman (McCormack, 2004).

On May 18, 2018, a Fox News report describes a woman, who asked to remain anonymous, that was trying to buy food using her WIC benefits at an Albertsons grocery store in Gresham, Oregon ("Cashier Shames Woman for Using WIC Benefits to Buy Food", 2018). The African-American woman was over by $12 for fruits and vegetables, and when she tried to pay the difference in cash, the cashier reportedly said that this was not allowed in a very harsh tone ("Cashier Shames Woman for Using WIC Benefits to Buy Food", 2018). The cashier went on to tell the woman's mother, who offered to pay the $12 difference, "she got her free stuff from WIC already, she doesn't need anybody else paying her way...well, that's what 'they' do, they keep on having kids and getting handouts" ("Cashier Shames Woman for Using WIC Benefits to Buy Food", 2018). The African-American woman left the store without her fruits and vegetables and this story became trending on Facebook instantly ("Cashier Shames Woman for Using WIC Benefits to Buy Food", 2018). Additionally, if a woman is on the fence about whether or not to receive WIC, she will read this article and likely choose not to participate. It is easy to see how people would be reluctant to use WIC benefits if they would undergo attacks like these whenever they tried to buy their food.

WIC may also have a more negative stigma than traditional food stamps (Bitler, 2003 & Osborne Daponte, 1999). WIC has very precise and specific foods that the receiver is allowed to purchase, ensuring that they are purchasing healthy and nutritious foods. Typically, food stamps money, or SNAP money, is preloaded onto a card that looks and feels like a normal credit card. SNAP has a set allowance that is added onto the card every month and the buyer can purchase whatever food he/she wishes and simply pays for it like a normal credit card (Bartfeld, 2015). When paying with WIC, a participant receives a check with the exact food that they can purchase. The cashier must then look at the check to reassure that everything is there and that

they are not buying more food than they are allotted. This whole process can be too much for someone who just wants to buy food to support their family and many WIC users wish that they received benefits on a debit card rather than a check (McCormack, 2004). However, the whole purpose of the WIC program is to provide a very specific outline of certain healthy foods that someone is allowed to buy, and it would be difficult to do this on a debit card.

Currie (2006) describes that there are two primary costs of participating in WIC- stigma and transaction costs. Stigma refers to the negative view that the average person may have on the program while transaction costs include the monetary and time costs of participation. Someone who is using WIC may feel embarrassed because they are receiving assistance from the government, and they may be ashamed to have others know about their receipt of assistance (Tiehen, 2008). When a mother is checking out at a grocery store, she may feel as if the cashier is judging her for using government assistance to buy food. As I saw in the Fox News report, the cashier may actually speak up and speak his/her mind on the topic.

In order to combat this stigma, WIC-only stores have begun popping up all around the country (Tiehen, 2008). These stores are designed to facilitate the redemption of WIC checks and attempts to reduce the stigma of doing so. The philosophy behind these stores is that if everyone who comes in is paying with a WIC check, then no one will feel embarrassed of using one. It also can make the process of shopping for items less stressful because the stores carry only WIC eligible foods. The presence of WIC-only stores has increased significantly in the last decade and the number continues to rise (Tiehen, 2008). However, others believe that this may only worsen the stigma surrounding WIC because there are receiving even further treatment by having their own stores (Neuberger, 2004).

I found that there were many women who chose to leave the program purely due to a personal previous experience with the WIC staff. Several women felt that the nutritionists or dietitians were rude and judgmental ("WIC Nutrition Education Study", 2016). One participant stated in an interview published in the WIC Nutrition Education Study, "they [think they] are better than you" ("WIC Nutrition Education Study", 2016). Reviews of the Rutherford County Health Department WIC located in Smyrna, Tennessee contain comments like, "the worst place I have ever seen, very rude, disrespectful" and "was not happy with the staff. The front desk lady was super rude, and the nutritionist treated us like we were dumb and was very rude as well. This office needs more training on how to treat others" (Rutherford County Health Department, 2019). If a woman is contemplating beginning WIC, she will see these comments and be more skeptical to start the program. In addition, this is only the documented reviews of past participants and does not account for the women who left because of a negative experience but did not document it.

Many women had a problem with the breastfeeding peer monitors and how they were treated throughout their time on the program (Wade, 2009). They explain that if their baby would not "latch" on right away, that the peer counselors would make it feel like it was their fault thus leading them to not wish to continue the program. Additionally, WIC seems to do everything they can to pressure women into breastfeeding because it complies with the Surgeon General's recommendation for a healthy future (Reeder, 2014). However, even though breastfeeding may be the healthiest option, they do not seem to appreciate whenever a mother chooses to formula feed her baby when she is fully capable of breastfeeding (Monica, 2011). If the WIC staff wants to debunk the stigma that some people may have of them, they should respect if some mothers want to formula feed- even though it may not be the healthiest option.

Through my literature review, I found that the main reasons for why eligible patrons chose to get off the WIC program prematurely or chose to never be certified are issues related to: personal pride, inconvenience, and negative stigma. It is important to understand the reasons for eligible non-participation in the WIC program to move forward and put into place outreach strategies to increase the amount of people who receive benefits and therefore, have healthier children. A better understanding of the barriers of participation can lead to policy implications that will decrease the amount of eligible non-participants.

Meadville-Specific Data for the WIC Program

During the summer of 2017, I worked as an intern for the Crawford County WIC program. This internship involved a mixture of office work and assisting the nutrition aids in check-ins with participants. Some days I was printing out checks and some days I was administering a survey to the people waiting in the lobby and asking them to rate their experience with WIC. The entire summer, I worked on a big project that would eventually help the office increase participation which, as I have stated previously, is a growing concern for WIC agencies across the country. I was curious as to the reasons why people specifically in the Meadville area chose to leave the program.

The WIC director told me that they never threw away any of the information on the people who never completed the program and all of their information was still in a file labeled "2016 LTFU's". "LTFU", or, "Loss to follow-up" is a term that means that the office has attempted to follow-up with the new mothers to have them make additional appointments, but they either expressed that they did not want to continue on the program, they were not happy with the services they were receiving, or they did not answer their phone which could mean there was an underlying reason. It is important to understand the various reasons for loss-to-follow-ups because there are people who are WIC eligible who may not be getting the nutritious food that they need to feed their children properly.

When conducting research involving medical records, it is important to not jeopardize the trust of patients or expose their information (Watt, 2006). The families who participate in WIC come to receive nutrition education, not to become a statistic in a Global Health senior comprehensive project. However, research is an important part in healthcare and improving programs such as WIC. Due to my commitment to conduct ethical research, I obtained IRB

approval as well as the permission of the WIC program director to use information on past participants to uncover why people in the Meadville area chose to not continue the program. Records are the starting point of research, but they should not be the only consideration when attempting to make changes (Watt, 2006). It is important to understand why people chose to leave because policy implications can be made in order to increase retention, and eventually, participation.

Methods

I was assigned to enter data on WIC participation by analyzing 390 folders containing information on families registered at the Meadville WIC clinic who were terminated from the program and lost to follow-up in the year 2016. I removed all sensitive personal information and entered other pertinent data including the reason(s) why they were terminated into a Microsoft excel sheet. I also included the participants date of birth, month of termination, city that they resided in, household size, and their type (if they were a woman, infant, or child at the time of termination). This data includes all of the participants that were terminated by the state of Pennsylvania in Crawford County for failure to pick up checks for three months, failure to be recertified, as well as other reasons. I eliminated the participants names and assigned random numbers to each person and family. The final data has already been de-identified and permission has been granted by the WIC director to use this information in my senior comprehensive project. The data I found will prove as an example to show that the participation rate for WIC users in Crawford County is in fact, declining. In keeping in line with the IRB proposal, I did not analyze any information that was not approved by the Institutional Review Board and approved by the WIC director during the time of analysis.

Results

Reason for Termination

On every terminated chart, there is a code stating why they were kicked off (or chose to no longer receive) the program. The options were “failure to pick up checks for 3 months”, “failure to be recertified on WIC”, a “foster care or custody situation”, “non-breastfeeding woman 6 months postpartum”, “breastfeeding woman 1 year postpartum”, or “child has reached WIC age limits”. I grouped all of the reasons besides “failure to be pick up checks for 3 months” and “failure to be recertified on WIC” into a third category called “other”.

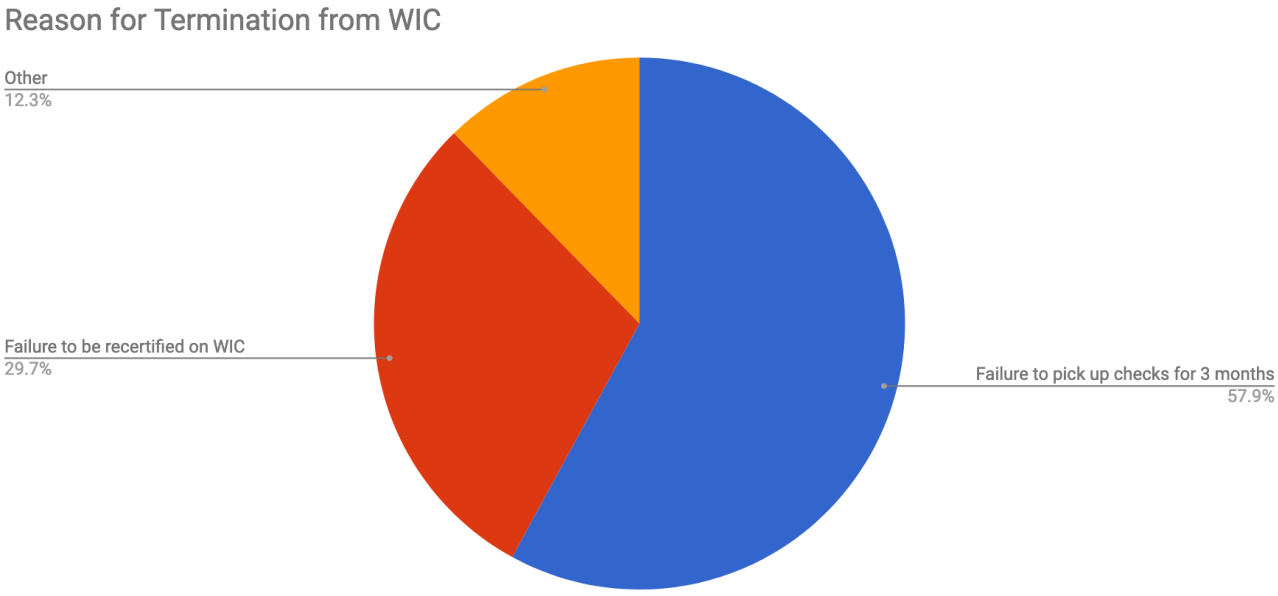

Figure 1: LTFU by Cause for Termination- Meadville and Titusville clinics

It is interesting to note that the majority of the reason why people were removed from the program because they simply did not pick up checks for 3 consecutive months, but it is not the only reason. Of the total 390 participants lost in 2016, Figure 1 shows that 57.9% were lost due to not picking up checks for three consecutive months and 29.7% were lost due to failure to be recertified. The main reasons for why people were removed from the program (who did not ask

to be removed) is that they failed to be recertified once a year and they failed to pick up checks for 3 consecutive months.

Demographic Location

I looked at housing location because I wondered if there was a correlation between a family living far away and failure to pick up checks. If I were to find strong evidence that people who lived farther away were more likely to be termed from the program, I still would not be able to know for sure that it was a transportation issue because I cannot know for sure that it was the reason for failure to pick up checks. One limitation of this data is that I only have the information that was on their chart when they were terminated, and I cannot assume that there were no other factors that played into their decision. Figure 2 shows that even though the majority of people that were reported lived in places like Meadville, Titusville, Conneaut Lake and Cambridge Springs, there were a few families who came all the way from Mercer, Utica, Clarks Mills, and Edinboro. The Meadville clinic is the closest one to them and some people had to drive upwards of an hour a few times a year just to feed their children. Unfortunately, I found that the majority of the people who were terminated from the program lived in Meadville or Titusville which did not confirm or rule out the fact that living far away from the clinic affected their ability to pick up checks.

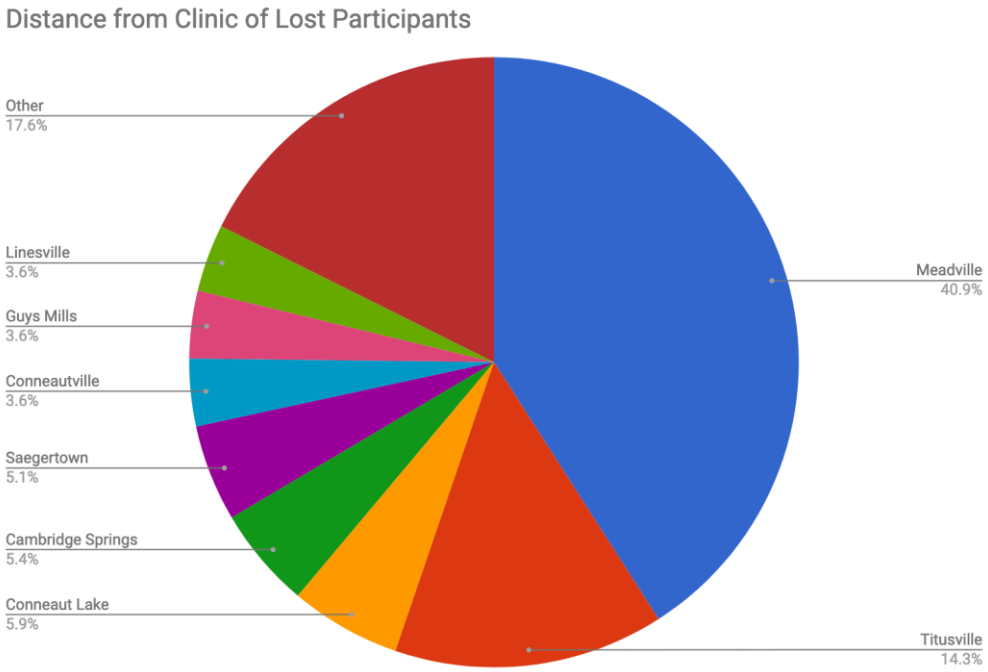

Figure 2: LTFU by Distance- Meadville and Titusville clinics

When I interned at WIC, there was a clinic in Meadville and a satellite clinic in Titusville. Whenever I compiled the data, I analyzed Meadville and Titusville separately and then proceeded to make a master sheet with both data sets. In the Titusville clinic, people could only pick up checks every three months. Participants need to go to a WIC office several times per year. They need to have a recertification once a year for eligible kids where the nutrition aide checks their hemoglobin levels, weight, height, and head circumference (for infants only). A caregiver will receive checks for three months at a time to eliminate unnecessary trips to a clinic, but they will not receive more than this at a given time.

The Titusville clinic was in the basement of a preschool and there was no place to safely prick a child's finger to test their iron levels. Because of this, children could not be recertified or certified for the first time in the Titusville clinic. Figure 3 shows that the main cause for loss-to-

follow-up in Titusville was because of "failure to be recertified on WIC", which could be because they did not have transportation or will to drive all the way to Meadville once a year to be recertified. There were 48 participants that were terminated in 2016 who had the Titusville clinic as their main WIC clinic.

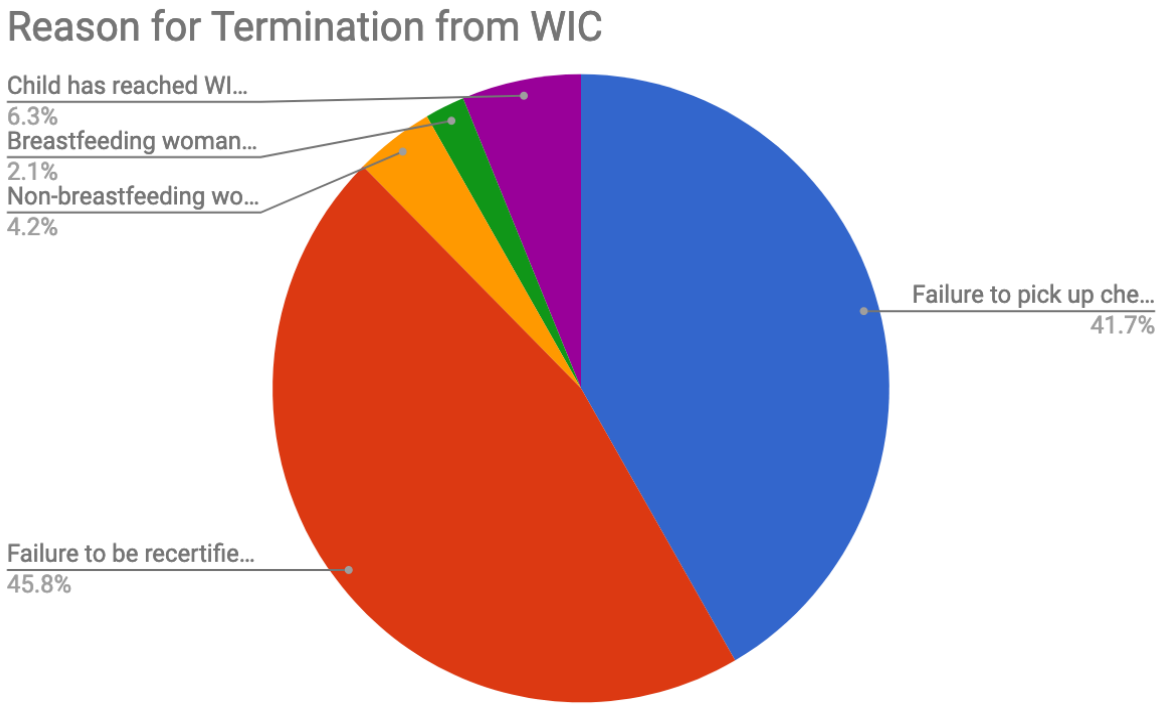

Figure 3: LTFU by Cause for Termination- Titusville clinic

Month Terminated

One interesting finding was that 57 participants were terminated in the month of September. This would mean that they have not picked up checks since June which is the month that children usually get out of school. Perhaps the parents were too busy with their children during the summer months which is why they were not able to pick up their checks. I think that it is important to recognize the month in which the majority of people were terminated because it

can shed an important light on reasons why people are unable to pick up checks. Such as, if they are busier with their kids during the summer because they are out of school.

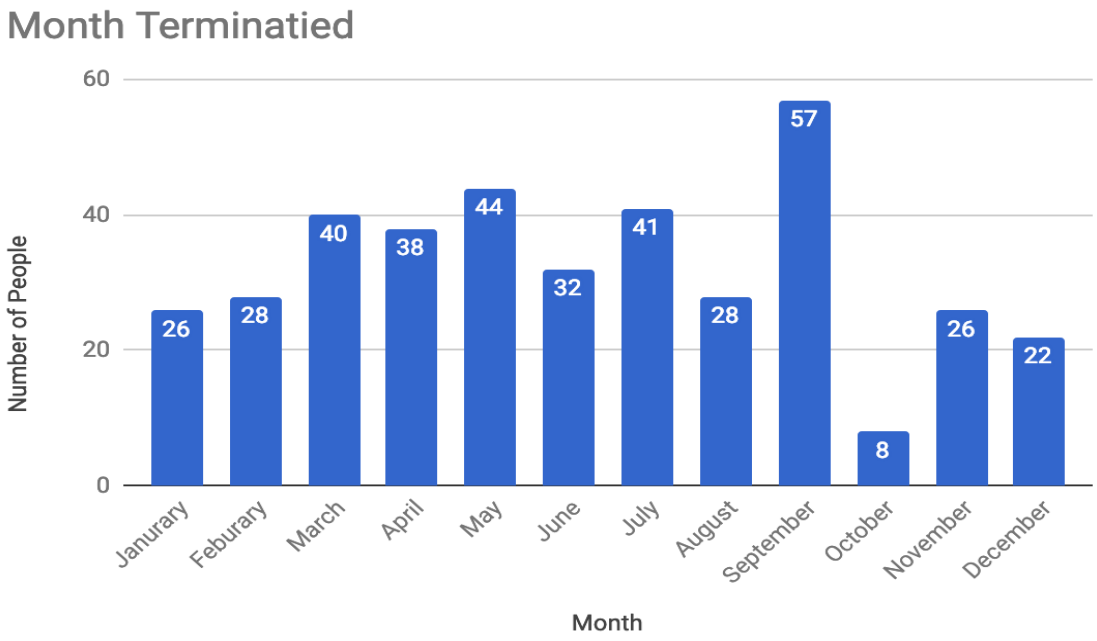

Figure 4: LTFU by Month of Termination

Figure 4 shows that overall, they lost the most of their participants in the months of May and September- the end and the beginning of the school year. Since WIC provides food for children up to age five, it makes sense that the parents are too busy with the beginnings and ends of the school year that they often do not pick up checks or get their child recertified. When I went back to the literature, I found several articles that explained how low- and middle-income mothers were generally busier during the summer with their kids, but I could not find any WIC specific articles that supported my data.

Conclusions

Through my literature review as well as my personal work with the Meadville WIC office, I have concluded that the majority of women who are eligible for the WIC program, choose to not use it. The reasons behind this can be due to personal pride, transportation issues, program inconvenience, negative stigma, and past experiences. Moving forward, the WIC offices nationally and locally should make a conscious effort to eliminate these issues in order to allow more women, infants, and children to receive the care and food that they need to grow and thrive in a low- and middle-income environment.

Policy Implications

In order to fully develop policy implications for my data, would need to take classes in policy development as well as political science and community and justice studies in order to fully understand how to propose a policy implication. However, my data suggests that there is a pattern in why most eligible women choose to never begin the program or choose to end prematurely. The main reasons were personal pride, inconvenience, a negative social stigma, and negative past experiences. Even though I cannot deliver a policy implication for what should be done, I can look at my data and suggest certain actions that could be taken that may or may not increase participation.

In order to convince people that WIC is not just a program for "very poor people", I believe it would be beneficial for eligible persons to receive more statistics on the people who actually use WIC. For example, if a woman is eligible but feels as though she is better off monetarily than most people who use the program, a chart of current participants' incomes could persuade her to see that people in her income level do in fact use WIC and have no shame in it. People often refuse to go on WIC due to personal pride and that they do not want to receive help for providing for their family. However, if a nutritionist could explain how it is not just

about one's personal pride but the health of their family, I believe that this could change their mind. Everyday people use WIC, not just those who are homeless or severely disadvantaged. A common misconception is that WIC is seen as receiving free handouts from the government and I believe that if more people could see that people in their income level use WIC, they would be more inclined to do so.

WIC office hours should be more accessible and at more convenient locations. There was a large number of people who stated that transportation and other preventable factors were the reason for why they did not pick up their checks. I believe that WIC nutritionists should make house calls to women who work long hours, are not able to find childcare to watch their children while they go to WIC appointments, or do not have reliable transportation to get to the WIC office. If WIC nutritionists were to pick one day a week where they simply drive to the house of the participant to provide nutrition advice, give checks, and perform nutrition checkups, this could potentially decrease the amount of people who are termed from the program due to not being able to certify their children or physically pick up checks.

A common misconception is that people see WIC as being for those who cannot provide for their family and therefore are failures as parents. WIC has a negative stigma as being for one particular type of person and people do not want to be seen as lesser. If the WIC program could show eligible persons that the people who use WIC are still great parents and just need a little bit of help, I believe that participation could increase. I would recommend past WIC participants coming back to sit in on initial appointments with clients who are considering WIC and give their testimony on how WIC has helped them through their pregnancy and through their children's early years of life. If past participants were willing to participate in outreach events and be an advocate for WIC, I believe that this could debunk the negative stigma of the program.

The Women, Infants, and Children Supplemental Nutrition Program can be lifesaving for some. It is up to the WIC staff and policymakers to debunk the stigma, swallow their pride, and lighten up in order to bring forth the next generation of healthy children.

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