2015

Effects of participation in MIHOW program on maternal smoking and birthweight

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EFFECTS OF PARTICIPATION IN MIHOW PROGRAM ON MATERNAL SMOKING AND BIRTHWEIGHT

A thesis submitted to
the Graduate College of
Marshall University
In partial fulfillment of
the requirements for the degree of
Education Specialist
in
School Psychology
by
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Marshall University
May 2015

DEDICATIONS

I would like to dedicate my completion of this thesis and of the School Psychology program to the late Dr. Fred Jay Krieg. He was an inspiration, a legendary school psychologist, teacher, and friend. His encouragement helped to get me through and he is deeply missed.

ACKNOWLEDGEMENTS

I would like to express sincere appreciation to the members of this committee for their dedication to this project. Also, I would be lost without Dr. Charles Perdue of West Virginia State University and Dr. Edna Meisel of Marshall University. Thank you both for your generosity. Lastly, I would like to address my family. To my parents, thank you so much for a wonderful start and for your continued support. To my dear husband, Cole, thank you for pushing me and giving me the strength to get through it all. To my precious daughter, Gemma, time with you has been sacrificed but our future together will be spectacular! To my lovely new daughter, Emily, thank you for letting me finish this; life just keeps getting better! I love you all.

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ABSTRACT

This is a study of how participation in a community-based home-visitation program called Maternal Infant Health Outreach Worker (MIHOW) can have an effect on maternal smoking behavior and infant birthweight, and how the timing of enrollment can have an impact on those effects. Each participant was randomly assigned to the treatment or control group and answered survey questions during their pregnancies at the time of enrollment and after their babies reached one month of age. Results of this study indicated that the timing of enrollment did not have a significant effect on maternal smoking behavior or infant birthweight; however, the trend seemed to be that there were fewer smokers in the treatment group at the end of the study.

CHAPTER 1

REVIEW OF LITERATURE

Teratogens are substances in the environment that are known to cause birth defects. Nicotine, a teratogen found in tobacco products, is the most "predominant contributor" to impact fetal growth (Espy et al., 2011, p.153). Possibly due to cigarettes being legal and associated with less judgment, prenatal cigarette use is much more prevalent than the use of alcohol or illicit drugs during pregnancy (Espy et al., 2011). In fact, "elimination of smoking would have a much greater impact on decreasing poor birth outcomes than elimination of any other substance, due to both the magnitude of the effects of prenatal cigarette exposure…and the relative prevalence of cigarette smoking" (Bailey, McCook, Hodge, & McGrady, 2012, p. 415). West Virginia reports the highest smoking rates in the nation among pregnant women (Seybold et al., 2012). The percentage of pregnant smokers in West Virginia was approximately 28.7% in 2008 (PRAMS and Smoking, 2012).

Purpose of Research

The most preventable birth defects are those that are caused by smoking cigarettes during pregnancy. This has inspired community organizations to develop programs that can provide education and assistance to pregnant cigarette smokers in an attempt to decrease smoking. This research explored some correlates of smoking during pregnancy and examined the importance of smoking interventions for pregnant women. The purpose of this study was to determine how the timing of enrollment in a community-based home visitation program could have an effect on maternal smoking behavior and birthweight. This is important because understanding the powerful effects of these chemicals and preventing their exposure to unborn children is crucial in

reducing the number of disabilities in the overall population, including within the public school system.

Defining Low Birthweight

The most common risks associated with cigarette-smoking during pregnancy are preterm birth and low birthweight (Jaddoe et al., 2008). According to a study by Jaddoe et al. (2008), low birthweight is defined as any live-born baby, regardless of gestational age, which weighs under 2500 grams or five pounds and 8 ounces. Low birthweight is "associated with multiple …adverse outcomes, such as placenta previa, premature birth, spontaneous abortions, stillbirth, and potential increased risk of neurodevelopmental disorders" (Stotts et al., 2009, p.961). Current research shows that low birthweight correlates with academic and behavioral problems including learning disabilities (Litt, Taylor, Klein, & Hack, 2005), Attention-Deficit-Hyperactivity Disorder, and Conduct Disorder (Bernstein et al., 2005; Langley, Holmans, Van den Bree, & Thapar, 2007). Babies born with low birthweight are likely to have average, yet significantly lower IQ scores than their heavier counterparts. They also may display motor deficits (Whitaker et al., 2006). Babies born with low birthweights are five times more likely to be diagnosed with autism (Pinto-Martin et al., 2011). Low birthweight babies are more likely to require time in the Neonatal Intensive Care Unit (NICU) after delivery, which may have effects on bonding and attachment. They are also more susceptible to acquire pneumonia and to be admitted back into the hospital after being released from the NICU (Torigoe et al., 2011). These are only some of the possible complications seen in children who were born weighing less than 2500 grams. From 2002-2004, West Virginia had the highest rate in the nation of low birthweight infants born to white women (Thoenen, 2008). This demonstrates the magnitude of

the problem for this population.

Need for Intervention

Most women who stop smoking during pregnancy do it on their own when they find out that they are pregnant, without any advice or help from their obstetricians (Schneider, Huy, Schutz, & Diehl, 2010). Most pregnant smokers, however, do not quit. There are several reasons why women who find out that they are pregnant continue to smoke. Firstly, smoking is highly addictive, and the amount of cigarettes smoked each day correlates with the level of the addiction. Some women report that quitting is too difficult; many have repeatedly tried to quit and failed. Others avoid the struggle completely and report that they enjoy smoking and do not wish to quit. Some live with family members who smoke in their homes, which increases difficulty and effectiveness of quitting (Schneider et al., 2010). They struggle with motivation to quit and they lack in-home support. High stress levels can make quitting smoking more difficult, and failed attempts increase stress (Gadomski, Adams, Tallman, Krupa, & Jenkins, 2011). Many factors contribute to this extensive problem. Education, age, culture, private insurance/Medicaid, and socioeconomic status (SES) all contribute to the likelihood that a woman will continue to use tobacco while pregnant (Chertok, Luo, & Anderson, 2011; Stotts et al., 2009; Yunsheng, Goins, Pbert, & Ockene, 2005). In fact, a pregnant mother living in low SES is twice as likely to have a smoking partner than her more socioeconomically advantaged counterparts (Schneider et al., 2010). This information presents a desperate need for smoking intervention.

Attempts to quit begin with motivation to quit (Gadomski et al., 2011). The greater the dependency, however, the less likely the attempt to quit will be successful (Schneider et al., 2010). Motivation is often affected by withdrawal symptoms, cravings, and multiple former pregnancies. Many women who smoked in previous pregnancies and gave birth to children with

no apparent problems are less motivated to quit in the absence of any obvious consequences (Schneider et al., 2010). Increasing education and awareness of teratogens by providing services to help women abstain from smoking during and after pregnancy through programs in the community can help to motivate women to quit and make significant differences in maternal smoking behavior (Yunzal-Butler, Joyce, & Racine, 2010). Interventions for pregnant smokers should provide support to stop smoking and encouragement that quitting can make a difference, emphasizing the benefits which can still be made for their children.

Significance of Timing

Pregnancy is an optimal time for a smoking intervention because pregnant women are more likely to want to stop smoking than smokers who are not pregnant (Gadomski, et al., 2011). Theoretically, nicotine should have a lesser effect if exposure is decreased or discontinued during the pregnancy, rather than if it is present for the entire duration of the pregnancy. However, unless fewer than ten cigarettes per day are smoked, the decrease may not be significant enough to have any effect on birthweight (Langley, et al., 2007). For this reason, the primary goal should be to help pregnant women to abstain from smoking completely.

This poses an important question: During which trimester would enrollment into community programs have the greatest effect on natal status? According to Jaddoe et al. (2008), smoking before pregnancy did not have an effect on infant birthweight. Smoking during the first trimester, and then quitting before the second trimester also did not have a significant impact on infant birthweight or newborn measurements. Mothers who smoked in the second trimester had babies with shorter femurs, and mothers who smoked during the third trimester had babies with the lowest birthweights and head circumferences (Leermakers et al., 2012). "For each additional cigarette per day that a participant smoked in the third trimester, there was an estimated 27 g

reduction in birth weight" (Bernstein et al., 2005, p.989). Because timing is such an important factor, community-based smoking intervention programs target pregnant women as early as possible. Research has shown that most women who quit smoking during their pregnancies do so during their first trimesters (Stotts et al., 2009), and birthweight is more affected by tobacco exposure during late pregnancy than early pregnancy (Papoz, 2003). Therefore, birthweight can likely be affected by the timing of enrollment in some community-based smoking intervention programs.

Effective Smoking Cessation Program Strategies

Recruitment is an important part of an intervention program. In order to reach a larger population and to provide access to services to those in need, several recruitment strategies should be utilized to get more clients. Because pregnancy is a time-sensitive situation, proactive recruitment is necessary to ensure that all who are willing and who meet requirements for special programs are enrolled as early in their pregnancies as possible (Marcano Belisano, 2012). Business cards and flyers may be left in waiting rooms and lobbies, and other programs may be asked to make referrals. The program could also create an account to be shared across social media and other websites. Research demonstrates that the development of a mainstreamed program newsletter to be posted on bulletin boards and mailed to all who express interest and enroll in the program is often beneficial, especially when combined with a phone call (Marcano Belisano, 2012). Telephone calls are more personal and are more successful recruitment tools than generalized letters by mail; although, several calls should be attempted in order to make contact with potential clients. Text messages concerning program availability and the need to enroll before the program is full are also effective. Small recruitment incentives are associated with the highest recruitment rates, not including outside referrals (Marcano Belisano, 2012).

Overall, the more recruitment attempts utilized, acceptance of referrals from other sources, and the more time spent with each potential client yields the most effective recruitment and more enrolled clients.

After enrollment, studies have shown that there are several ways in which community-based smoking cessation programs can assist their clients in abstaining from smoking. Home visitors make program participation more convenient and accessible for clients, especially when transportation is an issue. When available, text messages can be helpful reminders of pre-scheduled appointments (Schneider et al., 2010). Training some staff members to be smoking cessation specialists is a beneficial strategy, rather than having all staff members share several responsibilities. Smoking cessation specialists could visit clients in their homes and do cessation counseling and track client progress.

For those clients who are more nicotine dependent, combined use of Nicotine Replacement Therapy (NRT) and counseling may be more effective for quitting (Brose, McEwen, & West, 2013), although perhaps not as beneficial as abstaining from nicotine completely (Ocken & Kranzler, 2009). Biochemical verification of smoking behavior is more reliable than client self-reports. In fact, one international study found that in 10% of women who claimed to abstain from smoking, biochemical feedback showed continued cigarette use (Tong et al., 2015). Carbon monoxide breath test monitors are portable and easy to use and provide more reliable data than client self-reports. They are also less expensive and less intrusive than saliva test strips, although the test strips are more sensitive (Windsor et al., 2014). Clients with low SES are more easily motivated by financial incentives for testing negative for carbon dioxide (Gadomski et al., 2011).

Community-Based Program Studies

There have been several studies to examine the effectiveness of community-based programs on smoking cessation of pregnant women. One study examined the relationship between the timing of enrollment in the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) and smoking behavior among WIC participants during pregnancy (Yunzal-Butler et al, 2010).

Women were surveyed about their smoking behavior, including how many cigarettes were smoked per day and how far along they were in their pregnancies. At the time of WIC enrollment, they answered questions about their current smoking behavior and about their smoking behavior three months before becoming pregnant. After the births, data was collected concerning the amount of daily cigarettes smoked at three months before delivery, as well as postpartum smoking behavior. The results found that the timing of enrollment did have a small effect on the amount of cigarettes smoked.

Smoking participants who enrolled in WIC "in the first trimester are 4.5% points more likely to quit smoking 3 months before delivery and 3.4% points more likely to quit by postpartum registration" than participants who did not enroll in WIC before their third trimester (Yunzal-Butler et al., 2010, p.318). "Numerous studies have found that prenatal WIC participation is associated with increases in mean birthweights, decreases in the number of low and very low birth weight babies, fewer preterm deliveries, and reductions in neonatal and fetal mortality rates" (Foster, Jiang, Gibson-Davis, 2010, p. 1086). "In the end, we find that prenatal participation in WIC is positively associated with fetal growth, though the association is difficult to support with substantive changes in maternal behavior and health" (Joyce, Racine, & Yunzal-Butler, 2008, p. 278). It is clear that some women who enrolled in WIC were able to decrease

smoking behavior or abstain from smoking during their pregnancies, and that the timing of enrollment appeared to have an impact. However, because this study did not use a control group, determining whether the enrollment into WIC had this strong of an influence on smoking behavior (or whether women who did not participate in WIC displayed similar behavior) is unclear. Also, birthweight was not compared between a smoking group and a nonsmoking group specifically. Therefore, other factors such as nutrition may also have been responsible for the increase in birthweight.

A study which used a treatment group and a control group to assess the effectiveness of Healthy Families New York's prenatal home visitor program in improving birth outcomes found that "a prenatal home-visitation program with focus on social support, health education, and access to services holds promise for reducing [low birthweight] deliveries among at-risk women and adolescents" as evidenced by higher birthweights in the treatment group than in the control group (Lee et al., 2009, p. 154). The timing of enrollment into the program further reduced the risk of low birthweight when exposure occurred before 24 weeks gestation (Lee et al., 2009). Healthy Families New York employed home visitors who made appointments to visit pregnant women twice per month for one hour per visit. The median average of visits received was seven, and the prevalence of low birthweight was lower among those who had received a minimum of seven visits (Lee et al., 2009). These findings demonstrate the importance of the focus, accessibility, and timing of effective community-based programs, as well as the benefits of visiting pregnant mothers consistently.

One study in New York evaluated the BABY & ME – Tobacco Free Program, which used CO monitors and saliva test strips to confirm smoking status. This study included a comparison group and two treatment groups. The comparison group, referred to as Model 1, was

not exposed to BABY & ME, but they did receive services at the clinic where BABY & ME was being provided to others, along with the WIC program and the Prenatal Care Assistance Program (PCAP). The difference between Model 2 and Model 3 is that in Model 2, counselors had several responsibilities in the program, while in Model 3, counselors were dedicated only to smoking cessation. Also in Model 2, cessation counseling sessions lasted for ten minutes while in Model 3, the sessions lasted for fifteen minutes. Because 60% of women who quit smoking during their pregnancies relapse by 6 months, and 80% relapse by 12 months, the BABY & ME program focuses on helping women to stop smoking and then continued to provide cessation services for one year postpartum (Gadomski et al., 2011). This is beneficial to the infants after they are born, as well as to any future pregnancies.

The BABY & ME program is a multi-pronged intervention, which utilizes prenatal and postpartum cessation counseling, CO and saliva cotinine testing, and monthly incentives for abstaining from smoking. When clients enrolled in the study, they agreed to attempt to quit smoking and to be CO tested every 3-4 weeks. During pregnancy, each participant who tested negative for cigarette use received $50 at monthly intervals. After babies were born, they received vouchers for diapers. Clients in Models 2 and 3 also agreed to attend a minimum of four counseling sessions. The first session provided informational materials about health and how to attempt to quit smoking. The second session provided information about second-hand smoke and the importance of smoke-free homes and vehicles. The third taught stress management techniques and benefits of being tobacco free. The fourth session focused on relapse prevention. During these face-to-face sessions, they received self-help materials and were referred to the NY Nicotine Quit Line. The results of this study determined that those who were unable to abstain from smoking had the highest dropout rates. Higher nicotine dependence,

number of cigarettes smoked daily, number of cigarettes smoked daily at time of registration, and participation in Medicaid also increased odds for dropout. The number of smoking cessation sessions that were attended prenatally was independently associated with abstaining from cigarette use at six months postpartum (Gadomski et al., 2011).

Right From The Start (RFTS) in West Virginia evaluated the Smoking Cessation and Reduction in Pregnancy Treatment (SCRIPT) Program for effectiveness after it was found effective in prenatal care clinic trials (Windsor et al., 2014). The SCRIPT model incorporated the following procedures: baseline and follow-up assessments, self-reports of smoking behavior, carbon monoxide (CO) confirmation of self-reports, a manual to teach clients how to quit smoking, and an 8-minute counseling video called "Commit to Quit: During and After Pregnancy." During prenatal visits, a trained service provider was responsible for delivering SCRIPT methods, including promoting the telephone quitline counseling sessions. Smoking partners were encouraged to participate. Clients were encouraged to have a no smoking policy in their homes, and partner support was also provided. Heavier smokers benefited from nicotine replacement in addition to other SCRIPT services. Because the RFTS program is a client-driven home visitation program which relies on clients to be home and prepared for prescheduled visits, a limitation of the study was that program delivery was affected by the unreliability of the clients.

This study included 2 non-randomized, matched groups of participants: a Comparison Group, or Group C, which received services from 2006 to 2007 and an Experimental Group, or Group E, which received services between 2009 and 2010 in all 55 counties of West Virginia. To create even groups, only participants whose CO levels matched with someone from the other group were used; CO readings are a strong predictor of smoking behavior (Windsor et al., 2014).

Program implementation was an issue and only 65% of participants in 2006 received full services, but dosage improved by 2010 to 76%. Some findings were as follows: CO tests were essential because, among clients who received Medicaid benefits, the non-disclosure/dishonesty rate was 25% at the first visit. Of the participants who received services, CO-confirmed smoking cessation improved from 4.6% to 13.9% from Group C to Group E. In Group C, 6.9% of pregnant smokers had significantly reduced their smoking behaviors as measured by CO levels, and in Group E, 11.2% had significantly lower CO levels.

Some implications for future research include: When recruiting new clients for a program, the first visit should occur within the week in order to prevent dropout from those who might change their minds. Also, this experimental design was useful when an untreated control group would not be possible, but historical events may have impacted the results in an immeasurable way. For example, the state of the economy changed drastically between 2006 and 2010 and the employment rate in West Virginia increased from 4.6% to 9.3% (Windsor et al., 2014). Overall, the SCRIPT Program has been proven to reduce smoking behavior in pregnancy and can be implemented through home-visitation. Promising programs that use the same approach should be assessed for effectiveness, and if they are beneficial, they should also be implemented in order to help prevent adverse birth outcomes.

Introduction of MIHOW

One such program is the Maternal Infant Home Outreach Worker (MIHOW) program, a promising home-visitor program with offices in various locations with low socioeconomic status (SES) across the South and Appalachia, including rural West Virginia which was the location of this study. Their goal is to provide education and free services to pregnant women, and these services are continued after the children are born. An outreach worker makes appointments with

the mother in each household and visits the home periodically in order to discover needs in the home that might be met through other services or programs. Then, the worker makes a referral to programs for which the family may qualify. Some of the areas of concern are: nutrition, tobacco use, domestic violence, child development education, proper discipline of children, healthcare, and community use. MIHOW also helps to build and maintain social support systems and continuous health education training, and it provides clients with transportation, childcare, and a home visitor; therefore, access to services is a priority. They make referrals to other community services, such as the Department of Health and Human Resources (DHHR) and Women Infants and Children (WIC), which can provide assistance in meeting their nutritional needs. Many programs, like WIC, are evidence-based. Studies have shown a correlation between the timing of enrollment into WIC and birthweight (Foster et al., 2010), but no published articles concerning the significance of the MIHOW program have been located.

Organizations providing smoking interventions for pregnant women should use many ways to gain clients, especially because women who smoke often seek prenatal care later than their nonsmoking counterparts (Veiga & Wilder, 2008). The MIHOW sites in rural West Virginia have had difficulty with client recruitment. Based on one data collector's report, most women at one MIHOW site who do qualify for services through MIHOW have never heard of the program (L. E. White, personal communication, March 24, 2015). However, if MIHOW becomes strongly evidence-based, clients may be more widely referred from the DHHR, the WIC office, and from their obstetricians' offices, which would be very beneficial. The purpose of this research is to determine whether participation and timing of enrollment in the MIHOW program will have an effect on maternal smoking and birthweight with the use of a treatment group and a control group.

Purpose of Study

This current study is part of a larger research project being conducted by Marshall University and Vanderbilt University, through the WV DHHR, in order to determine the effectiveness of a promising program called MIHOW, which targets expecting mothers in low SES areas. For the purpose of this research, some of the collected data will be used in order to determine how participation in MIHOW affects the smoking status of the mother, as well as the birthweight of her baby, as well as how the timing of enrollment into MIHOW has an effect on the same variables. The hypotheses are as follows: 1. Participation in MIHOW treatment group reduces smoking, 2. Timing of enrollment in the MIHOW treatment group reduces smoking, 3. Participation in MIHOW treatment group increases birthweight, 4. Timing of enrollment in the MIHOW treatment group will increase birthweight.

CHAPTER 2

METHOD

Participants

This study is part of a larger study which had a goal of including 400 participants: 200 in the treatment group and 200 in the control group; however, this goal has not been met (224 total). For the purpose of this study, only participants from the original study who completed two sets of survey questions, one when they enrolled prenatally and the other when their infants reached one month of age, were included. Consequently, there were 132 participants in this current study. After participants agreed to be in the study, they were randomly assigned to one of two groups: the Control Group (58) and the Treatment Group (74). Currently, more participants in the treatment group have given birth than in the control group, explaining the difference in number between groups; however, random assignment controlled for other demographic differences so that the control and treatment groups were evenly represented in race, employment status, and education.

Of the total 132 participants from both the control and treatment groups, 94.7% were White, 4.5% were African American or Black, and 0.8% (only one) identified as Asian. Of these women, only one identified as Hispanic. Fifty percent were married while 27.3% were single, and the remaining 22.7% were living with a partner. When asked about employment status, 72.7% were unemployed while 27.3% were working at least part-time. Only 18.9% of participants reported that they were students. Of those, 9.1% were working on a High School Diploma, 1.5% were working on a GED, 3% were enrolled in a two year program in college, 3.8% were enrolled in a 4 year college program, and 0.8% (one participant) chose "Other." Two participants reported being enrolled in a job-training program. When asked to report the highest

level of education, 0.8% (one participant) had less than or equal to eighth grade, 25% reported that they had completed between 9th and 11th grade, 32.6% reported that they had completed high school, 2.3% reported having completed their GEDs, 23.5% had taken some college courses, 7.6% had obtained a 2 year degree, 4.5% reported completion of a 4 year degree program, and 3.8% reported completion of at least one year of graduate college.

Procedure

Pregnant women from several ethnic backgrounds and of childbearing age were either recruited to participate in the study or they were asked to participate in the study upon enrollment in the MIHOW program. Those who agreed to participate were referred to the data collector, who immediately informed them of confidentiality and its limits and obtained consent. Then, each participant was provided with an envelope containing instructions and notification of her random assignment into either the control group, which would receive pregnancy and infant health information by mail, or the treatment group, which would receive the MIHOW home visitation services, the outcome of which was not revealed to the data collector. The data collector also held a duplicate envelope for each participant, and returned it to the MIHOW supervisor in a file containing the enrollment forms and survey answers. Then, if the participant was placed into the treatment group, the MIHOW supervisor enrolled her into the MIHOW program. If the participant was placed into the control group, the MIHOW supervisor added her to the mailing list for the larger study.

The West Virginia Department of Health and Human Resources (DHHR), which funded the study, agreed to send mailings of relevant literature to the participants in the control group. Whether the DHHR has mailed anything to the participants is unclear at this time. All of the participants were told that they could leave the study at any time, and none of the participants

were financially paid to participate. However, upon each visit, the data collector delivered small incentive gifts, such as diapers, body lotion, and gift cards, to all participants for their participation in the study. Both surveys were scheduled and administered to all participants in their homes by the data collector, who was independent from the MIHOW program and blind to each participant's random group assignment. The first survey was administered by interview at the time of enrollment into the study. The next survey was given when the infants were approximately one month of age, as close to the date as possible. The two surveys administered produced two data points for each participant.

Instrument

The surveys used in the larger study are included in the Appendices. For this study, only the data pertaining to demographics, timing of enrollment, birthweight, and smoking from the Prenatal Printable Form in Appendix A and the Month One Printable Form seen in Appendix B were used. Questions used from the Prenatal Printable Form are as follows: All demographics; How far along in weeks is your pregnancy; Do you now smoke cigarettes every day, some days, or not at all; How many cigarettes do you now smoke on an average day. Questions used from the Month One Printable Form are as follows: All demographics; Do you now smoke cigarettes every day, some days, or not at all; How many cigarettes do you smoke on an average day now; Baby's birthweight: ___ lbs ___ oz. The validity of this instrument has not been fully established, but there is a plan in the larger study to do that by comparing birthweights and smoking reports to doctors' records.

CHAPTER 3

RESULTS

Analysis of the data in this study was limited by small sample sizes in each cell block, as seen in Table 1. Table 1 shows a summary of the frequencies of smokers and non-smokers who participated in the study according to assignment to the control and experimental groups by trimester of enrollment.

Table 1

Number of Participants in Each Group

Group	Status	Trimester Enrollment	N
Treatment	Nonsmoking	1	19
		2	18
		3	14
	Smoking	1	6
		2	11
		3	5
Control	Nonsmoking	1	17
		2	17
		3	9
	Smoking	1	1
		2	5
		3	8

Hypothesis 1. Participation in MIHOW treatment group reduces smoking. Results showed that 16 mothers in the treatment group still smoked after participation in the MIHOW program, while five of the participants stopped smoking. In the control group, 13 participants continued to smoke while one of the participants stopped smoking. As seen in Table 2, these comparisons were not significantly different. Therefore, it is concluded that the MIHOW program does not reduce smoking.

Table 2: Chi-Square Results for Hypothesis 1

Month One Smoking Status Crosstabulation of Smokers

		Do you smoke now?		
		No	Yes	Total
Group	Control	1	13	14
	Treatment	5	17	22
Total		6	30	36

Chi-square Value = 1.496	Probability Level = 0.05	Df = 1	Critical Value = 3.841

Hypothesis 2. Timing of enrollment in the MIHOW treatment group reduces smoking. This hypothesis could not be analyzed due to very small numbers in each cell, as shown in Table 3. A different analysis would have been preferential, so an attempt was made to reduce the timing variable to two cell blocks by grouping the participants by early pregnancy vs. late pregnancy, but the cell sizes remained too small. However, with this data the descriptive table appears to show that, when asked about their smoking behaviors after their babies were one month of age, 33.33% of participants who had enrolled in their first trimesters quit smoking; 30% of those who enrolled in their second trimesters quit smoking; and none of the participants who enrolled in their third trimesters quit smoking. Therefore, 100% of the participants who stopped smoking during the study quit during their first or second trimesters, which is consistent with this hypothesis. This also supports the literature, which states that women who stop smoking during pregnancy do it in early pregnancy (Stotts et al., 2009). This information holds promise for future analyses with larger samples.

Table 3: Frequency of Smokers and Non-Smokers by Trimester Enrolled

One Month Smoking Status				
		Do you smoke?		
		Still Smoking	Stopped Smoking	Total
Trimester	First Trimester	4	2	6
	Second Trimester	7	3	10
	Third Trimester	5	0	5
Total		16	5	21

Hypothesis 3. Participation in MIHOW treatment group increases birthweight. Birthweights of newborns of mothers in the control group were compared to birthweight of infants of mothers in the experimental treatment group using an independent t-test as seen in Table 4. See Table 5 for the means and standard deviations of birthweights for each of the groups. The mean birthweight for the Control group was 118.88 oz. with a standard deviation of 19.83. The mean birthweight for the Treatment group was 117.58 oz. with a standard deviation of 19.13. The results showed no significant difference (p=.704).

Table 4: t-Test Results for Hypothesis 3

Independent Samples Test		
T	Df	t-Sig. (2-tailed)
.381	130	.704

Table 5: Mean & Standard Deviation for Control & Experimental Groups after Treatment

Group Statistics				
	Condition	N	Mean	Std. Deviation
Weight	Control Group	58	118.8793	19.82739
	MIHOW Treatment Group	74	117.5811	19.12755

Hypothesis 4. Timing of enrollment in the MIHOW treatment group increases birthweight. Birthweight of newborns of mothers in the experimental treatment group was examined with trimester enrolled as the independent variable using the ANOVA statistical test, as demonstrated in Table 6. Means and standard deviations of birthweights among trimesters are compared in Table 7. Although the results showed no statistically significant difference, it is interesting that the mean birthweight for first-trimester enrollees is the largest. Therefore, it appears that earlier enrollment is beneficial and may be significant if a larger sample size was utilized. Also, due to differences in the amount of services that may have been received by each participant, dosage would have been more beneficial to consider than trimester enrolled.

Table 6: ANOVA-Test Results for Hypothesis 4

Tests of Between-Subjects Effects

Dependent Variable: Birthweight

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	875.713	2	437.857	1.164	.315
Intercept	1788581.91	1	1788581.91	4755.723	.000
Trimester	875.713	2	437.857	1.164	.315
Error	47763.487	127	376.090		
Total	1871052.00	130			
Corrected Total	48639.200	129			

a. R Squared = .018 (Adjusted R Squared = .003)

Table 7: Mean and Standard Deviation of Birthweights by Trimester Enrolled in Treatment

		Dependent Variable: Birthweight	
Trimester	n	Mean	Standard Deviation
1	43	122.0233	18.98181
2	51	116.0980	20.01225
3	36	117.3333	18.97818
Total	130	118.4000	19.41773

CHAPTER 4

DISCUSSION

The results of this study indicated that there were no significant differences found between the control and treatment groups. However, the MIHOW program makes efforts to improve the community in many ways – not just by increasing birthweight and reducing smoking behavior. Research has shown that home visitors benefit clients by linking them to primary care providers and by providing them with access to community services (Lee et al., 2009). Those are two strengths of the MIHOW program. Therefore, it is very likely that MIHOW has a strong impact on the community indirectly, and MIHOW has the potential to deliver direct influences as well. This chapter will restate the hypotheses and the outcomes of the study, as well as to list implications for the future.

Hypothesis 1. Participation in MIHOW treatment group reduces smoking. The overall sample size for the study was too small to yield strong statistically significant differences between groups. There was a larger number of participants in the treatment group than in the control group, so percentages were compared. When examining the proportion of participants who smoked in the MIHOW treatment group, originally, 28% were smokers during their pregnancies and only 21% identified as smokers at one month postpartum. In the control group, 24% were initially smokers and 22% were smokers one month after delivery. This indicates a 7% reduction in smokers in the MIHOW treatment group and only a 2% reduction in smokers in the control group. This indicates that the trend is in the right direction and supports the literature, which suggests that interventions during pregnancy are effective for reducing smoking behavior (Windsor et al., 2014). Therefore, this information holds promise for significant results in future studies, especially with a larger sample.

Hypothesis 2. Timing of enrollment in the MIHOW treatment group reduces smoking. The cell sizes were too small to analyze the data properly. However, the frequencies of participants in each trimester of enrollment who quit smoking supported the research that participants who stopped smoking seemed to do so in early pregnancy rather than late pregnancy (Stotts et al., 2009). This suggests that if the sample were larger, the differences demonstrated in the data might eventually be significant.

Hypothesis 3. Participation in MIHOW treatment group increases birthweight. The mean birthweights and standard deviations for both the treatment and control groups were almost exactly the same. Therefore, there is no evidence to support the hypothesis that MIHOW affects birthweight. However, the literature suggests that participation in home visitor programs should significantly increase birthweight (Lee et al., 2009).

Hypothesis 4. Timing of enrollment in the MIHOW treatment group increases birthweight. This hypothesis examined the same variables as those in Hypothesis 3, but also included the variable of trimester enrollment using an ANOVA. There were no significant differences between mean birthweights of the babies from each trimester of enrollment in the control or treatment groups.

Contrary to the results of this study, current literature suggests that home visitor programs should have an effect on maternal smoking status and infant birthweight (Lee et al., 2009). The results of this study indicated a failure to reject each null hypothesis. The data collected came from participants self-reporting, which the research suggests is inaccurate for pregnant smoking behavior (Windsor et al., 204). However, the proportion of identified smokers in this study, 26.5%, was similar to the general population in the state, 28.7% (PRAMS and Smoking, 2012). During the prenatal visit, several mothers reported that they were non-smokers; however, after

their babies were born, they reported that they were smokers. This could be due to inaccuracies of self-reporting; however, research shows that many women who quit smoking during pregnancy quit upon finding out that they are pregnant before seeking prenatal help (Schneider et al., 2010). Because this study did not analyze smoking data prior to pregnancy, the participants who began smoking after their babies' births were likely resuming their previous smoking behavior. This supports the research that quitting is often short-term and that postpartum intervention is also necessary (Gadomski et al., 2011). A greater understanding of these events would be achieved if the answers to these survey questions could be compared across settings, such as in doctors' offices and with the use of CO monitoring.

The current study's results may have been impacted by the inconsistent dosage of MIHOW services for each participant. Some participants reported that they had been visited several times by their MIHOW workers, while others in the treatment group reported confusion due to never receiving telephone contacts or visits from their MIHOW workers. The inconsistency may be due to several factors, including lack of telephone service in some homes, participants postponing visits, workers being unfamiliar with the location of homes which are sometimes without physical addresses, etc. Program implementation issues are common among home-visitation interventions, which is why initial visits should be made within one week of enrollment (Windsor et. al., 2014). Visits should be scheduled regularly thereafter, and clients should agree to be available for a minimum number of visits within a given time frame (Gadomski et al., 2011).

Post Hoc

A subsequent analysis was conducted after Hypothesis 1. Adjusting for the number of cigarettes smoked instead of "yes/no" by using them as a covariate did not change the results

significantly; F (1,20) = 1.105, p =.351. Therefore, services from the MIHOW program did not make a significant difference on maternal cigarette smoking habits before babies turned one month old. Adjusting for the number of weeks pregnant instead of trimester at time of entry into the study by using it as a covariate did not change the results significantly; F (1,27) = 0.185, p = .668.

Limitations

Limitations to the study included the small sample size, the issues with program implementation and dosage, and inconsistencies in program delivery among groups. The instrument used for collecting data needs further development, and relying on self-reported data from participants limited the analysis.

Implications for Further Research

To obtain larger samples, further studies should employ recruitment strategies such as: advertising with flyers, business cards, newsletters, and social media. Meeting with potential participants and spending time answering questions, and scheduling first appointments within a week of recruitment would also be beneficial (Schneider et al., 2010). Generally, MIHOW works with families far beyond the first month of the new babies' lives, and many families continue to receive services from the program for their subsequent pregnancies. Many of the participants reported that they were in their first pregnancies with MIHOW, therefore, it is possible that including subsequent pregnancies with a longitudinal study and a larger sample size would yield significant results.

Perhaps if the instrument had been better developed, it may have yielded a more accurate measurement and shown significant results. In order to confirm self-reported answers, participant smoking data should be examined across settings. If possible, perhaps doctor's

offices, the WIC office, Right FromThe Start, or other programs supported by the WV DHHR could cooperate with comparing participant data. Carbon monoxide monitors or saliva cotinine test strips could also be used to confirm participant answers about smoking. There is no data in this study to determine the amount of home visits or dosage that each participant received, but dosage could be a better predictor of birthweight and smoking behavior than trimester enrolled. Theoretically, early enrollment would yield more home visits than late enrollment; however, some clients are less available for visits than others, so specific dosage information should be compared rather than timing alone. It is speculated that fidelity of program implementation could have affected the results of this study and should be examined in future studies. Further research should focus especially on consistency of services delivered to participants within each group. Those in the control group should have received their mailings, and a MIHOW worker, in order for the groups to be effectively compared, should have visited all those in the treatment group.

Implications for Practice

The MIHOW program aims to reduce maternal smoking and to increase newborn birthweights. This study was unable to find statistical evidence that the MIHOW program is meeting those goals at this time. However, based on the literature included in this study, the following implications are suggested in order to improve home visitation services for pregnant smokers and their infants. First, recruitment is key to sustaining a successful program, and program awareness should be increased. The program should be widely advertised in all of the geographical areas in which services can be provided, and the lobbies of other program offices may be good locations to leave business cards and newsletters. Home visitation workers should attempt to visit clients every 2-4 weeks. Workers should receive smoking cessation specialist

training so that they are capable of providing cessation counseling and stress management during visits. If possible, a smoking cessation specialist should have no other program responsibilities.

Pregnant smokers should be given self-help materials and referred to local nicotine quit lines. Utilizing portable carbon monoxide detectors can confirm client smoking and cessation. Clients should be assessed for dependency and those whose carbon monoxide levels are very high should be encouraged to discuss nicotine replacement therapy with their doctors. Incentives to enroll in the program, to quit smoking, and to continue to abstain from smoking after quitting should be provided. If clients have partners who also smoke, they should be included in as much of the intervention as possible. If they have other children, they should be given information about how second-hand smoke is affecting their children. Clients should be encouraged to establish strict no-smoking rules in their homes and vehicles. Continuing smoking cessation counseling and CO monitoring/incentives for the first year postpartum would be beneficial. Of course, all clients should be strongly urged to keep all obstetrician appointments and to keep their doctors updated about their progress. These implications are worth investigating to assist future studies with a more accurate data representation of program influence, as well as to determine which features are most beneficial to improving the program for its clients.

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Appendix A

Prenatal Printable Form

Case No. _____ Date of Visit: _____

Home Visitor #: _____ Type of Visit: ____Home ____Phone ____Office-Individual

DEMOGRAPHICS

A-7. Participant's date of birth: _____(mm-dd-yyyy)

A-9. Are you of Hispanic, Latina, or Spanish origin? Yes No

A-9a. What is your race?

____African American or Black

____Native Hawaiian/ Other Pacific Islander

____American Indian or Alaska Native

____White

____Asian

____Other_____

A-10. What is your marital status?

____Single/No Partner

____Married (living with partner/husband)

____Live-in Partner

A-11. Are you an immigrant? Yes No

A-11a. What is your country of origin? _____

A-12. Which of the following best describes your employment status?

____Unemployed and looking for work

____Employed part-time (less than 32 hrs per week)

____Unemployed and not looking for work

____Employed full-time (32 hours per week)

A-12a. Which of the following best describes why you are unemployed? Check all that apply:

____I am a stay-at-home mom

____I am undocumented

____I don't have transportation

____There are no jobs

____I don't have childcare

____I'm disabled

____I'm a full time student

____Other (list below)

____I'm too young

_____

A-13. Are you currently a student? Yes No

A-13a. What type of degree are you working on?

____High School

____Graduate

____GED

____Other

____College - 2 Yr

____N/A

____College - 4 Yr

A-14. Are you enrolled in a job training program? Yes No

A-15. What is the highest level of education you have completed? (choose one)

____8th grade or less

____Some college

____9-11 years

____2 year college degree

____High School diploma

____4 year college degree

____GED

____Graduate school, 1 or more years

A-16. Does the father, or a father-figure, reside in the home? Yes No

(Mark Yes if a male partner or father figure currently lives with the mother most or all of the time)

A-17. How many children currently live in the home? _____

A-17a. Is there someone who helps you care for the children? Check all that apply:

____No
____Yes, childcare is provided by friends or
neighbors or members of the community

____Yes, my mother

____Yes, I use center-based childcare

____Yes, my partner/husband

____Other

____Yes, childcare is provided by family

(Check all that apply)

A-24b. In the past 12 months, did you or anyone in the family
have to quit a job, not take a job, or change your job
because of problems with childcare? Yes No

FINANCIAL OR HOUSING

B-1. How many people, including yourself, live in the household
on either a permanent or temporary basis? _____

HEALTH CARE

B-2. Do you currently have health insurance?

(Mark No if insurance covers children or family members, but NOT participant. Medicaid includes gov. plans such as CHIP and TennCare.)

____No, Uninsured

____Yes, Private Insurance

____Yes, Medicaid

____Don't know / Not sure

B-3. For how many months have you been on your current health insurance plan?

(This refers to both private and public insurance, such as Medicaid, CHIP & TennCare)

_____

B-4. Do you have one person you think of as your personal doctor or health care provider?

____Yes, only one

____Don't know / Not sure

____More than one

____Refused

____No

B-4a. [If No, ask:] Is there more than one, or is there no person who you think of as your personal doctor or health care provider?

HOUSING / UTILITIES

B-5. Would you describe your housing as stable or temporary? ____Temporary ____Stable

Stable is defined as: No immediate concern for eviction. Temporary is defined as: Living temporarily with family,
friends, or in shelter, or in imminent danger of losing housing.

B-6. Do you have a telephone? Check all that apply

____No, there is no phone (landline) in the home

____No, I don't have a cell phone

____Yes, there is a phone (landline) in the home

____Yes, I have a cell phone AND there is a landline in the home

____Yes, I have a cell phone

B-6a. Do you have easy access to the internet? Yes No

B-7. Do you have access to transportation? Yes No

MONTHLY HOUSEHOLD INCOME

B-8. Which of the following best describes the household's monthly income?

(Include income from all family members residing in the home. Include paychecks, child support, TANF, Disability, etc. Do NOT include non-cash income such as Food Stamps or housing subsidies.)

____$500 or Less

____$1501-2000

____$501-1000

____$2001-4000

____$1001-1500

____$4001 or more

____Refused

FINANCIAL ASSISTANCE RECEIVED BY PARTICIPANT

B-9. Do you currently receive TANF? Yes No
(Mark "Yes" ONLY if TANF is received in participant's name.)

B-9a. For how many months have you continuously received TANF? _____
(Refers to the current cycle ONLY. Do Not calculate lifetime assistance.)

B-10. Do you receive Food Stamps? Yes No
(Mark "Yes" ONLY if Food Stamps are received in participant's name.)

B-10a. For how many months have you continuously received Food Stamps? _____
(Refers to the current cycle ONLY. Do not calculate lifetime assistance.)

B-11. Do you currently receive Disability benefits? Yes No
(Mark "Yes" ONLY if assistance is received in participant's name.)

B-11a. For how many months have you continuously received Disability benefits? _____
(Refers to the current cycle ONLY. Do Not calculate lifetime assistance.)

B-12. Do you receive Unemployment Insurance? Yes No
(Mark "Yes" ONLY if assistance is received in participant's name.)

B-12a. For how many months have you continuously received
Unemployment Insurance? _____
(Refers to the current cycle ONLY. Do Not calculate lifetime assistance.)

B-13. Do you receive Worker's Compensation? Yes No
(Mark "Yes" ONLY if assistance is received in participant's name.)

B-13a. For how many months have you continuously received Workers Comp? _____
(Refers to the current cycle ONLY. Do Not calculate lifetime assistance.)

B-14. Do you currently receive child support? Yes No
(Mark "Yes" ONLY if child support is received in participant's name.)

B-14a. For how many months have you continuously received child support? _____
(Refers to the current cycle ONLY. Do Not calculate lifetime assistance.)

NUTRITION

FOLIC ACID AWARENESS

C-1. Have you ever heard or read that taking the vitamin, folic acid, can help prevent some birth

defects? (Foods that contain folic acid include: orange juice, citrus fruits, broccoli, green leafy vegetables, and fortified cereal.)

Yes No

VITAMINS

C-2. Did you take folic acid vitamins during the 3 months before your pregnancy?
(Most U.S. multivitamins contain 400 mcg folic acid. Or you can take a pill that only contains folic acid.)

____No, I did not take folic acid vitamins at all

____Yes, I took them 4 to 6 times a week

____Yes, I took them 1 to 3 times a week

____Yes, I took folic acid vitamins every day of the week

C-3. Are you currently taking multivitamins, prenatal vitamins or folic acid vitamins?

____No, I do not take a multivitamin,
prenatal vitamin or folic acid vitamin at all

____Yes, I take them 4 to 6 times a week

____Yes, I take them 1 to 3 times a week

____Yes, I take them every day of the week

C-3a. In which month of this pregnancy did you begin taking multivitamins, prenatal vitamins or folic acid vitamins?

Enter a number 1 through 9 _____

C-3b What kind of vitamins are you taking?

____Prescription prenatal vitamins

____Children's multivitamins

____Over-the-counter prenatal vitamins

____Other (list below)

____Adult multivitamins

_____

WIC

C-4. Are you currently signed up for a WIC Prenatal Program? Yes No

(WIC is a nutrition program for Women, Infants, and Children.)

C-4a. In which month of this pregnancy did you begin receiving WIC?

Enter a number 1 through 9 _____

BREASTFEEDING INTENTION

C-5. What do you think about breastfeeding your baby?

____I know I will breastfeed

____I know I will not breastfeed

____I think I might breastfeed

____I don't know what to do about breastfeeding

FOOD SECURITY

C-6. Are there times when you do not have enough food for your family?

____No

____Yes, most of the time

____Hardly ever

____Yes, all of the time

____Yes, some of the time

REFERRALS - NUTRITION

C-7. [Interviewer: Indicate any referrals that you made to assist expectant mother in obtaining adequate food. Check all that apply.]

____Food Stamps

____WIC

____Food Bank

____Other _____

PRENATAL HEALTH ASSESSMENT

HEALTH

D-1. Would you say that, in general, your health is excellent, very good, good, fair, or poor?

____Excellent

____Very good

____Good

____Fair

____Poor

____Don't know

____Refused

D-2. Would you say that, in general, your mental and emotional health is excellent, very good, good, fair, or poor?

____Excellent

____Very good

____Good

____Fair

____Poor

____Don't know

____Refused

D-3. Are you limited in any way in any activities because of physical, mental, or emotional problems?

____Yes

____Don’t know / Not sure

____No

____Refused

PREGNANCY

D-4. How far along (in weeks) is your pregnancy? _____
(number of weeks she has been pregnant)

D4a. What was the first day of your last menstrual period? _____(mm-dd-yyyy)

D-4b. What is your expected delivery date? _____(mm-dd-yyyy)

D-5. How many pregnancies resulting in live births have you had?

If this is first pregnancy, skip to D-6

Enter the number or “0” if this is her first pregnancy _____

D-5a. How was your last baby delivered? ____Vaginally ____Cesarean (c-section)

If vaginally, skip to D-5d; If Cesarean, answer 5b then skip to D-5g

D-5b. What was the reason that your last baby was born by cesarean (c-section)?

(select one)

____I had a previous cesarean delivery

____My health care provider tried to induce my labor, but it didn't work

____My baby was in the wrong position

____Labor was taking too long

____I was past my due date

____The fetal monitor showed that my baby was having problems during labor

____My health care provider worried that my baby was too big

____I wanted to schedule my delivery

____I had a medical condition that made labor dangerous for me

____I didn’t want to have my baby vaginally

____Other _____

D-5d. Was labor induced? Yes No

D-5e. Why was labor induced?

____Baby's health at risk

____Complications in labor or delivery

____Mother's health at risk

____Convenience

____Pregnancy prolonged beyond 42 weeks

____Other _____

D-5g. What was the date of your last live birth? _____(mm-dd-yyyy)

PRETERM BIRTH

D-5h. Have you ever had a preterm birth? Yes No

(Preterm birth refers to the birth of a baby of less than 37 weeks of gestational age.)

D-5i. How far along in weeks was your pregnancy at the time of your preterm birth?
_____

PRENATAL CARE

D-6. Are you receiving prenatal care? Yes No

(Prenatal care includes visits to a doctor, nurse, or other health care worker before your baby is born to get checkups and advice about pregnancy.)

If yes, skip to D-6b; If no, answer D-6a then skip to D-7

D-6a. Which of the following best describes why you are not receiving prenatal care?
Check all that apply

____Don’t have money or health insurance

____Don't have anyone to take care of my children

____Don’t know where to go

____Can't take time off from work or school

____Don’t need it

____Don’t know the city

____Don’t speak English

____I am undocumented

____Don’t have transportation

____Other

D-6b. How far along was your pregnancy when prenatal care began?
(Do not count a visit that was only for a pregnancy test or only for WIC.)

Enter month 1 through 9: _____ or ____Don’t know / Not sure

D-6c. How many prenatal care visits have you had during this pregnancy? _____
(Do not count a visit that was only for a pregnancy test or only for WIC.)

TOBACCO USE

D-7. Have you smoked at least 100 cigarettes in your entire life?
(Note: 5 packs = 100 cigarettes)

____Yes

____Don’t know / Not sure

____No

____Refused

D-7a. Do you now smoke cigarettes every day, some days, or not at all?

____Every day

____Don’t know / Not sure

____Some days

____Refused

____Not at all

D-7b. How many cigarettes do you now smoke on an average day? (If she is uncertain, ask for her best estimate.)

_____

SECOND-HAND SMOKE

D-8. Does anyone living in your household use cigarettes, cigars, or pipe tobacco?

____Yes

____Don’t know / Not sure

____No

____Refused

D-8a. Does anyone smoke inside your home?

____Yes

____Don’t know / Not sure

____No

____Refused

D-8b. Which of the following statements best describes the rules about smoking inside your home now?

____No one is allowed to smoke anywhere inside my home

____Smoking is allowed in some rooms or at some times

____Smoking is permitted anywhere inside my home

PREVIOUS MIHOW PARTICIPANTS

D-9. Were you enrolled in MIHOW in the past? Yes No

D-9a. For how many months were you enrolled in MIHOW during your last pregnancy?

(Enter 0 if this is her first time on MIHOW) _____

D-9b. For how many months have you been on MIHOW in your lifetime? _____

D-9c. [Enter participant's previous MIHOW case number] _____
D-10. Do you participate in any other programs that help you find services or resources? Yes No
(For example: Healthy Families America, Parents as Teachers, Right from the Start, etc.)

D-10a. Name of program(s): _____

REFERRALS

D-11. [Interviewer: Indicate any referrals you made to assist participant]
Check all that apply:

____Childbirth Preparation

____Employment or Job Skills

____Family Planning

____Other Referrals

If you selected "Other", list the other referrals here:

_____

Appendix B

Month One Prenatal Form

Case No. _____ Date of Visit: _____

Home Visitor #: _____ Type of Visit: ____Home ____Phone ____Office-Individual

DEMOGRAPHICS

A-7. Participant's date of birth: _____ (mm-dd-yyyy)

A-8. Are you of Hispanic, Latina, or Spanish origin? Yes No

A-9. What is your race?

____African American or Black

____Native Hawaiian/ Other Pacific Islander

____American Indian or Alaska Native

____White

____Asian

____Other_____

A-10. What is your marital status?

____Single/No Partner

____Married (living with partner/husband)

____Live-in Partner

A-11. Are you an immigrant? Yes No

A-11a. What is your country of origin? _____

A-12. Which of the following best describes your employment status?

____Unemployed and looking for work

____Employed part-time (less than 32 hrs per week)

____Unemployed and not looking for work

____Employed full-time (32 hours per week)

A-12a. Which of the following best describes why you are unemployed?

____I am a stay-at-home mom

____I am undocumented

____I don't have transportation

____There are no jobs

____I don't have childcare

____Other

____I'm a full time student

____I'm disabled

____I'm too young

A-13. Are you currently a student? Yes No

A-13a. What type of degree are you working on?

____High School

____College - 2 Yr

____Graduate

____GED

____College - 4 Yr

____Other

____N/A

A-14. Are you enrolled in a job training program? Yes No

A-15. What is the highest level of education you have completed? (Choose one.)

____8th grade or less

____Some college

____9-11 years

____2 year college degree

____High School diploma

____4 year college degree

____GED

____Graduate school, 1 or more years

A-16. Does the father, or a father-figure, reside in the home? Yes No
(Mark Yes if a male partner or father-figure currently lives with the mother most or all of the time.)

CHILDCARE

A-17. How many children currently live in the home? _____

A-17a. Is there someone who helps you care for the children? Check all that apply:
(If you work outside the home, go to school, look for a job or just go shopping, who takes care of the children?)

____No

____Yes, my mother

____Yes, my partner/husband

____Yes, I use center-based childcare

____Yes, childcare is provided by family members

____Yes, childcare is provided by friends or neighbors or members of the community

____Other

A-17b. In the past 12 months, did you or anyone in the family have to quit a job, not take a job, or change your job because of problems with childcare?

Yes No

FINANCIAL OR HOUSING

B-1. How many people, including you, live in the household on either a permanent or temporary basis? _____

HEALTHCARE

B-2. Do you have any kind of health care coverage, including private health insurance, or government plans such as Medicaid?
(Mark No if insurance covers children or family members, but NOT participant. (Medicaid includes gov. plans such as CHIP and TennCare.)

____No, Uninsured

____Yes, Private Insurance

____Yes, Medicaid

____Don't know / Not sure

B-3. For how many months have you been on your current health insurance plan?
(This refers to both private and public insurance, such as Medicaid, CHIP & TennCare.)

_____

B-4. Do you have one person you think of as your personal doctor or health care provider?

____Yes, only one

____Don't know / Not sure

____More than one

____Refused

____No

B-4a. [If she answers No] Is there more than one, or is there no person who you think of as your personal doctor or health care provider?

_____

HOUSING/UTILITIES

B-5. Would you describe your housing as stable or temporary? ____Temporary ____Stable

(Stable is defined as: No immediate concern for eviction. Temporary is defined as: Living temporarily with family, friends, or in shelter, or in imminent danger of losing housing.)

B-6. Do you have a telephone? Check all that apply

____No, there is no phone (landline) in the home

____No, I don't have a cell phone

____Yes, there is a phone (landline) in the home

____Yes, I have a cell phone AND there is a landline in the home

____Yes, I have a cell phone

B-6a. Do you have easy access to the internet? Yes No

B-7. Do you have access to transportation? Yes No

MONTHLY HOUSEHOLD INCOME

B-8. Which of the following best describes the household's monthly income?

(Include income from all family members residing in the home. Include paychecks, child support, TANF,

Disability, etc. Do NOT include non-cash income such as Food Stamps or housing subsidies.)

____$500 or Less

____$1501-2000

____$501-1000

____$2001-4000

____$1001-1500

____$4001 or more

____Refused

FINANCIAL ASSISTANCE RECEIVED BY PARTICIPANT

B-9. Do you currently receive TANF? Yes No
(Mark Yes ONLY if TANF is received in participant's name.)

B-9a. For how many months have you continuously received TANF? _____
(Refers to the current cycle ONLY. Do not calculate lifetime assistance.)

B-10. Do you receive Food Stamps? Yes No
(Mark Yes ONLY if Food Stamps are received in participant's name.)

B-10a. For how many months have you continuously received Food Stamps? _____
(Refers to the current cycle ONLY. Do not calculate lifetime assistance.)

B-11. Do you currently receive Disability benefits? Yes No
(Mark Yes ONLY if assistance is received in participant's name.)

B-11a. For how many months have you continuously received Disability benefits? _____
(Refers to the current cycle ONLY. Do not calculate lifetime assistance.)

B-12. Do you receive Unemployment Insurance? Yes No
(Mark "Yes" ONLY if assistance is received in participant's name.)

B-12a. For how many months have you continuously received Unemployment Insurance?

_____
(Refers to the current cycle ONLY. Do not calculate lifetime assistance.)

B-13. Do you receive Worker's Compensation? Yes No
(Mark Yes ONLY if assistance is received in participant's name.)

B-13a. For how many months have you continuously received Workers Comp? _____
(Refers to the current cycle ONLY. Do not calculate lifetime assistance.)

B-14. Do you currently receive child support? Yes No
(Mark Yes ONLY if child support is received in participant's name.)

B-14a. For how many months have you continuously received child support? _____
(Refers to the current cycle ONLY. Do not calculate lifetime assistance.)

MONTH ONE HEALTH ASSESSMENT: MOM

MOTHER'S OVERAL HEALTH

E-1. Would you say that, in general, your health is:

____Excellent

____Fair

____Don't Know

____Good

____Poor

____Refused

E-1a. Since your new baby was born, have you scheduled a postpartum check-up for yourself? Yes No

(A postpartum checkup is the regular checkup a woman has about 6 weeks after she gives birth.)

EMOTIONAL HEALTH

E-2. Would you say that, in general, your mental and emotional health is:

____Excellent

____Fair

____Don't Know

____Good

____Poor

____Refused

E-3. Since your new baby was born, how often have you felt down, depressed, or hopeless?

____Always

____Sometimes

____Never

____Often

____Rarely

E-4. Since your new baby was born, how often have you had little interest or little pleasure in doing things?

____Always

____Sometimes

____Never

____Often

____Rarely

PRENATAL CARE:

E-5. In which month of the pregnancy was prenatal care started?
(Do not count a visit that was only for a pregnancy test or only for WIC.)

____Month 1

____Month 2

____Month 3

____Month 4

____Month 5

____Month 6

____Month 7

____Month 8

____Month 9

____ Did not receive prenatal care.

E-5a. How many prenatal visits did you have during the entire pregnancy? _____

NUTRITION

E-6. During the last 3 months of your most recent pregnancy, how many times a week did you take a multivitamin, a prenatal vitamin, or a folic acid vitamin?

____ I did not take a multivitamin, prenatal vitamin or folic acid vitamin at all

____4 to 6 times a week

____1 to 3 times a week

____Every day of the week

E-7. During your most recent pregnancy, were you on WIC ? Yes No
(WIC is the Special Supplemental Nutrition Program for Women, Infants, and Children)

E-7a. Are you currently receiving WIC for yourself? Yes No

FOOD SECURITY

E-8. Are there times when you do not have enough food for your family?

____No

____Yes, some of the time

____Yes, all of the time

____Hardly ever

____Yes, most of the time

TOBACCO USE BY PARTICIPANT

E-9. Have you smoked at least 100 cigarettes in your entire life? (NOTE: 5 packs = 100 cigarettes)

____Yes

____Don't know/Not Sure

____No

____Refused

E-9a. How often do you smoke cigarettes?

____Every day

____Not at all

____Refused

____Some days

____Don't know/Not Sure

E-9b. In the 3 months before you got pregnant, how many cigarettes did you smoke on an average day? (A pack has 20 cigarettes)

____41 cigarettes or more

____1 to 5 cigarettes

____21 to 40 cigarettes

____Less than 1 cigarett

____11 to 20 cigarettes

____I didn't smoke then

____6 to 10 cigarettes

E-9b1 [NOTE: Try to get a specific number of cigarettes and enter here:] _____

E-9c. In the last 3 months of your pregnancy, how many cigarettes did you smoke on an average day? (A pack has 20 cigarettes)

____41 cigarettes or more

____1 to 5 cigarettes

____21 to 40 cigarettes

____Less than 1 cigarett

____11 to 20 cigarettes

____I didn't smoke then

____6 to 10 cigarettes

E-9c1 [NOTE: Try to get a specific number of cigarettes and enter here:] _____

E-9d. Do you now smoke cigarettes every day, some days, or not at all?

____Every day

____Don’t know / Not sure

____Some days

____Refused

____Not at all

E-9e. How many cigarettes do you smoke on an average day now? (A pack has 20 cigarettes)

____41 cigarettes or more

____1 to 5 cigarettes

____21 to 40 cigarettes

____Less than 1 cigarett

____11 to 20 cigarettes

____I don’t smoke now

____6 to 10 cigarettes

E-9e1 [NOTE: Try to get a specific number of cigarettes and enter here:] _____

SECOND-HAND SMOKE

E-10. Does anyone living in your household cigarettes, cigars, or pipe tobacco?

____Yes

____Don’t know/Not Sure

____No

____Refused

E-10a. Does anyone smoke inside the home?

____Yes

____Don't know/Not Sure

____No

____Refused

E-10b. Which of the following statements best describes the rules about smoking inside your home now?

____ No one is allowed to smoke anywhere inside my home

____ Smoking is allowed in some rooms or at some times

____ Smoking is permitted anywhere inside my home

FAMILY PLANNING

E-11. Are you or husband or partner doing anything now to keep from getting pregnant? (Some things people do to keep from getting pregnant include not having sex at certain times [natural family planning or rhythm] or withdrawal, and using birth control methods such as the pill, condoms, vaginal ring, IUD, having their tubes tied, or their partner having a vasectomy.)

Yes No

E-11a. What are your reasons or your husband's reasons for not doing anything to keep from getting pregnant now? (check all that apply)

____ I am pregnant now (E-11d)

____ My husband or partner doesn't want to use anything

____ I don't think I can get pregnant

____ I am not having sex

____ I don't want to use birth control

____I can't pay for birth control

____ I want to get pregnant

____ Other _____

E-11b. Do you have a plan in place to keep from becoming pregnant once you resume having sex?

____Yes

____No

____Don't know/Not Sure

E-11d. Have you seen a doctor about your new pregnancy? Yes No

OTHER RESOURCES

E-12. Do you participate in any other programs that help you find services or resources?

____Yes (E-12a)

____No

____Don't know/Not Sure

E-12a. What are the other programs? _____

REFERRALS

E-13. [Interviewer: Check all referrals that you made for participant.] (Check all that apply)

____Food Stamps

____WIC

____Employment/Job Skills

____Food Bank

____Family Planning

____Other_____

DO NOT ANSWER THE FOLLOWING QUESTIONS IF THE CLIENT IS A MINOR

If the participant is under 18 years old, stop here and go to next section

INTIMATE PARTNER VIOLENCE

E-14. The next questions are about things that may have happened before and during your most recent pregnancy. During the 12 months before you got pregnant with your new baby, did an ex-husband or ex-partner push, hit, slap, kick, choke, or physically hurt in any other way? Yes No

E-14a. During the 12 months before you got pregnant, were you physically hurt in any way by your husband or partner? Yes No

E-14b. During your most recent pregnancy, did an ex-husband or ex-partner push, hit, slap, kick, choke, or physically hurt you in any way? Yes No

E-14c. During your most recent pregnancy, were you physically hurt in anyway by your husband or partner? Yes No

MONTH ONE HEALTH ASSESSMENT: INFANT

F-1. Infant's date of birth: _____

F-2. Birth outcome: [Interviewer: Remember to fill out a separate form if mom gave birth to twins.]

____Single Birth

____Twins

____Multiple birth (triplets or more)

F-3. Is the baby of Hispanic, Latina, or Spanish origin? Yes No

F-3a. Baby's race:

____ African American or Black

____ American Indian or Alaska Native

____ Asian

____ Native Hawaiian or Other Pacific Islander

____ White

____Other

F-4. Sex: Female Male

F-5. Baby's birthweight:: _____lbs _____oz (NOTE: There are 16 oz. in a pound.)

F-6. After your baby was born, was he or she put in an intensive care unit?

____ Yes

____ No

____Don't Know

F-6a. Was your baby born with special needs?
(Special needs include physical, mental, behavioral, or medical disabilities or delays)

____ Yes ____ No

HEALTH CARE/INSURANCE

F-7. Was your new baby seen by a doctor, nurse, or other health
care worker for a one week check-up after he or she was born? Yes No

F-7a. Do you have one or more persons you think of as your child's personal doctor or nurse? (A personal doctor or nurse is a health professional who knows your child well and is familiar with your child's health history. This can be a general doctor, a pediatrician, a specialist doctor, a nurse practitioner, or a physician's assistant.)

____ Yes, one person

____ No

____Refused

____ Yes, more than one person

____Don't know

F-8. Does your baby have any kind of health care coverage, including private health insurance, or government plans such as Medicaid or the Children's Health Insurance Program (CHIP)? (CHIP is a type of state-sponsored health insurance coverage that a child may have. The name of the plan varies from state-to-state.)

____ Uninsured

____Private Insurance

____ Medicaid / CHIP

____Don’t know/Not sure

WIC

F-9. Is your baby signed up for WIC? Yes No
(WIC is the Special Supplemental Nutrition Program for Women, Infants, and Children.)

SLEEP POSITION

F-10. How do you most often lay your baby down to sleep now?

____ On his or her side

____ On his or her stomach

____On his or her back

BREASTFEEDING

F-11. Did you ever breastfeed or pump breast milk to feed your new baby after delivery, even for a short period of time? Yes No

F-11a. Are you currently breastfeeding or feeding pumped milk to your new baby? Yes No

F-11b. How old was your baby when she/he completely stopped breastfeeding or being fed breast milk?

____ 1 to 2 days

____ 2 weeks

____ 5 weeks

____ Less than 1 week

____ 3 weeks

____ 6 weeks

____ 1 week

____4 weeks

____ 7 weeks

F-11c. How old was your baby when she/he was first fed formula?

____ 1 to 2 days

____ Less than 1 week

____ 1 week

____ 2 weeks

____ 3 weeks

____ 4 weeks

____ 5 week

____6 weeks

____ 7 weeks

____ My baby has not been fed formula

F-11d. This next question is about the first thing that your baby was given other than breast milk or formula. Please include juice, cow's milk, sugar water, baby food, or anything else that she/he might have been given, even water. How old was your baby when she/he was first fed anything other than breast milk or formula?

____ 1 to 2 days

____ Less than 1 week

____ 1 week

____ 2 weeks

____ 3 weeks

____ 4 weeks

____ 5 week

____6 weeks

____ 7 weeks

____ My baby has not been fed anything except breast milk or formula

F-11e. What were your reasons for not breastfeeding your new baby? Check all that apply:

____ My baby was sick and was not able to breastfeed

____ I was sick on medicine

____ I had other children to take care of

____ I had too many household duties

____ I didn’t like breastfeeding

____ I tried but it was too hard

____ I didn't want to

____ I was embarrassed to breastfeed

____ I went back to work or school

____ I wanted my body back to myself

____ Other_____

F-11g. What were your reasons for stopping breastfeeding? Check all that apply:

____ My baby had difficulty latching or nursing

____ Breast milk alone did not satisfy my baby

____ I thought my baby was not gaining enough weight

____ My nipples were sore/cracked/bleeding

____ It was too hard, painful or too time consuming

____ I thought I was not producing enough milk

____ My baby was jaundiced (yellowing of skin/whites of eyes)

____ I felt it was the right time to stop breastfeeding

____ I went back to work or school

____ I got sick and was not able to breastfeed

____ I had too many other household duties

____ Other_____

LEARNING / CHILD DEVELOPMENT

F-12. During the past week, how many days did you or other family members tell stories or sing songs to your baby?

____ No days

____ 1-2 days

____ 3-4 days

____ 5-6 days

____ Everyday

F-13. During the past week, how many days did you or other family members read to your baby?

____ No days

____ 1-2 days

____ 3-4 days

____ 5-6 days

____ Everyday

FATHER INVOLVEMENT

F-14. Since the baby's birth, how often has the father contributed money or child support for this baby?

____ not at all

____ on a regular basis

____ once in a while

____ all the time / baby's father lives in the home

F-14a. In the past month, how often did your baby's father feed or eat meals with the baby?

____ not at all

____ several times a week

____ less than once a week or about once a week

____ everyday

F-14b. In the past month, how often did your baby's father bathe, diaper, or dress the baby?

____ not at all

____ several times a week

____ less than once a week or about once a week

____ everyday

F-14c. In the past month, how often did your baby's father play with the baby?

____ not at all

____ less than once a week or about once a week

____ several times a week

____ everyday

F-14d. In the past month, how often did your baby's father read to the baby?

____ not at all

____ several times a week

____ less than once a week or about once a week

____ everyday

REFERRALS

F-15. [Interviewer: Indicate all referrals that you made to assist participant.] Check all that apply:

____ Early Head Start

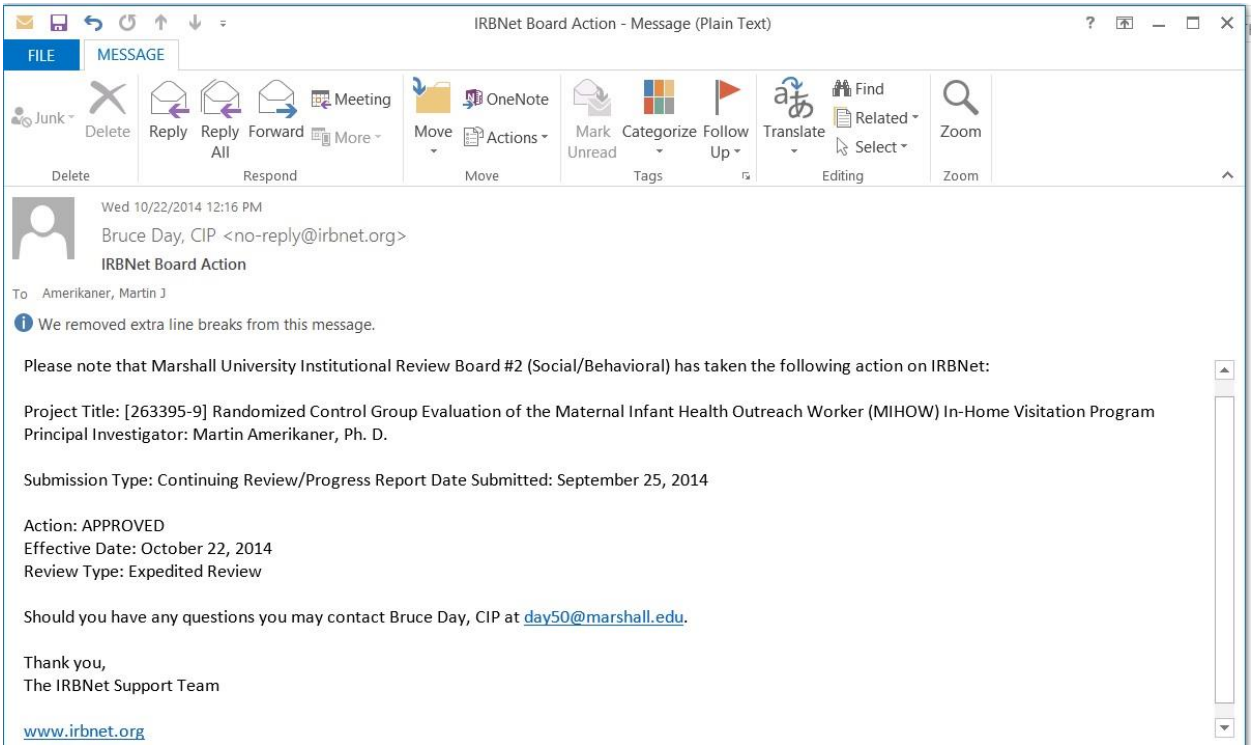
____ WIC

____ Special Needs

____ Other _____

Appendix C

Letter of IRB Approval



IRBNet Board Action - Message (Plain Text)

FILE MESSAGE

Junk Delete Reply Reply All Forward Meeting More Move OneNote Actions Mark Unread Categorize Follow Up Translate Find Related Select Zoom

Delete Respond Move Tags Editing Zoom

Wed 10/22/2014 12:16 PM

Bruce Day, CIP <no-reply@irbnet.org>

IRBNet Board Action

To Amerikaner, Martin J

We removed extra line breaks from this message.

Please note that Marshall University Institutional Review Board #2 (Social/Behavioral) has taken the following action on IRBNet:

Project Title: [263395-9] Randomized Control Group Evaluation of the Maternal Infant Health Outreach Worker (MIHOW) In-Home Visitation Program
Principal Investigator: Martin Amerikaner, Ph. D.

Submission Type: Continuing Review/Progress Report Date Submitted: September 25, 2014

Action: APPROVED
Effective Date: October 22, 2014
Review Type: Expedited Review

Should you have any questions you may contact Bruce Day, CIP at day50@marshall.edu.

Thank you,
The IRBNet Support Team

www.irbnet.org