Focus Groups on Infant Care Practices in Missouri

Final Report in Fulfillment of Contract C305174001 for the Missouri Department of Health and Senior Services

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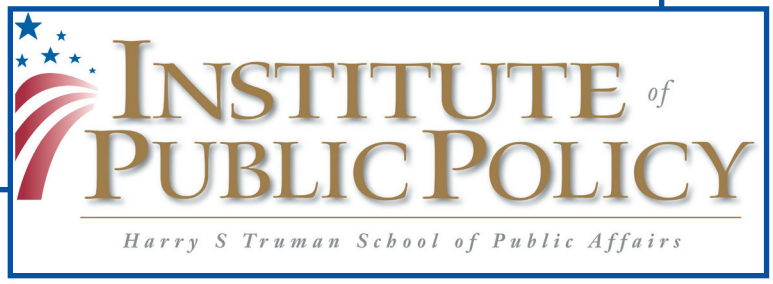

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The goal of this research project was to better understand how individuals, primarily low-income African-American parents in Missouri, make decisions on infant care practices, specifically those focused around feeding and sleeping.

Methods

Eighteen focus groups were conducted across the state of Missouri with parents and other relatives of children under 12 months. Focus groups were held in major metropolitan areas (Independence, Kansas City, St. Louis City, and St. Louis County), minor cities (Cape Girardeau, Columbia, Jefferson City, and Springfield), and non-metropolitan locations (Macon, Maysville, Moberly, New Madrid, Sedalia, and Sikeston) throughout Missouri. Table 1 shows the geographic location for the focus groups.

Table 1. Focus group sites

Major	**Minor**	**Non-Metropolitan**
Independence	Cape Girardeau	Macon
Kansas City (2)	Columbia	Maysville
St. Louis City	Jefferson City	Moberly
St. Louis County	Springfield	New Madrid
Barnes Teen Parenting Clinic, St. Louis (3)		Sedalia
		Sikeston

Characteristics of Participants

Overall, 136 persons participated in this project. A survey was administered to participants, which included mothers, fathers, and relative caregivers of young children (0-12 months), prior to the start of the focus group. Although the majority of participants (79%) were mothers, fathers and caregivers comprised ten and eleven percent respectively.

A sizeable percent (44%) of participants were from the St. Louis area. This was not by design, but because of successful outreach in that location. Overall, 57 percent of participants were from either the St. Louis or Kansas City area. Another seventeen percent were residents of "minor" areas, and the remaining twenty six percent were from non-metropolitan areas.

Table 2. Racial composition of participants by location

Location	White	African-American	Multi-Racial
Cape Girardeau	3 (30%)	7 (70%)	0 (0%)
Columbia	2 (50%)	1 (25%)	1 (25%)
Independence	4 (100%)	0 (0%)	0 (0%)
Jefferson City	2 (66%)	1 (33%)	0 (0%)
Kansas City (June)	1 (20%)	2 (40%)	2 (40%)
Kansas City (September)	0 (0%)	6 (100%)	0 (0%)
Macon	3 (75%)	1 (25%)	0 (0%)
Maysville	4 (100%)	0 (0%)	0 (0%)
Moberly	4 (100%)	0 (0%)	0 (0%)
New Madrid	0 (0%)	6 (100%)	0 (0%)
Sedalia	11 (100%)	0 (0%)	0 (0%)
Sikeston	6 (100%)	0 (0%)	0 (0%)
Springfield	4 (66%)	2 (33%)	0 (0%)
St. Louis (Barnes 1:00)	3 (23%)	7 (54%)	3 (23%)
St. Louis (Barnes 2:20)	5 (36%)	7 (50%)	2 (14%)
St. Louis (Barnes 4:30)	1 (14%)	6 (86%)	0 (0%)
St. Louis City	3 (25%)	9 (75%)	0 (0%)
St. Louis County	0 (0%)	14 (100%)	0 (0%)
Total	56 (42%)	63 (52%)	8 (6%)

Overall, more than half (52%) of participants identified themselves as African-American; 42 percent identified themselves as white; and six percent designated multi-racial. As Table 2 clearly shows, our racial composition varied greatly by location. Eighty percent of our participants in St. Louis were African-Americans, or multi-racial, as were 90 percent of participants in Kansas City. Focus groups in both New Madrid and Cape Girardeau were also comprised primarily of African-Americans participants. This is not surprising, since the largest concentrations of African-American

populations in Missouri are in St. Louis, Kansas City, and the Bootheel. On the other hand, there was little racial diversity in locations such as Sikeston, Sedalia, Moberly, Macon, Maysville, and Independence.

According to the survey instrument, approximately 62 percent of mothers reported having ever breastfed a child. This number is fairly consistent with other data, both nationally and for Missouri, on breastfeeding initiation.

As expected, there were differences in breastfeeding initiation by race, although the discrepancy was not as large as might be expected. Multi-racial mothers were most likely to breastfeed (although the sample for this group is quite small), followed by white mothers and African-American mothers. Even so, more than half of the African-American mothers in this project had breastfed at some point.

Focus Group Results

The focus groups started with a question exploring how the youngest child was fed (breastfed, formula fed, or a combination). Overall, focus group participants had very positive attitudes towards breastfeeding, even those who did not breastfeed or did not do so for a long duration. Only a minority of women did not attempt breastfeeding or chose only to formula feed *prior* to giving birth.

For those women who did initiate breastfeeding (approximately 62 percent according to the survey results), several themes emerged. These included: health benefits to the baby, emotional bonding, convenience and cost. Many women who formula fed reported having problems breastfeeding, such as difficulty latching and pain. However, the primary reason for formula feeding was convenience, especially for mothers in school or who were employed.

The focus groups also solicited information regarding solid foods, namely what age children began having solid foods, the type of food received, and the reasons behind the age and type of food chosen. Most families were aware of, and followed, a similar schedule for the introduction of solid foods, somewhere in the neighborhood of 3-6 months. Additionally, the majority of infants were given rice cereal or baby food first. Another common early food was mashed potatoes. Many participants reported sticking to a strict schedule with regards to solid foods, or responding to babies physical cues. Some parents, however, introduced solid foods very early. Many of these parents reported being influenced by other family members, particularly the child's grandmother.

About half of the focus group was devoted to issues around sleeping, primarily where children slept, their sleeping position, and again, reasons for those decisions. In terms of where children slept, there were two main responses—either a crib/bassinet or the parents' bed. Sharing a bed was very common among participants; at least half of the parents spoken to kept the infant in bed with them.

Among those who slept with their child, reasons cited included emotional attachment and security/safety. Many parents felt they could better keep an eye on their child, particularly with regard to breathing, by keeping the baby in their bed. Some parents acknowledged that the baby just ended up in their bed accidentally, a practice particularly true for breast fed babies whose mothers often fell asleep while feeding.

Some parents, however, felt their child was safer by sleeping in a crib. Others asserted that children needed their own space.

The idea of "Back to Sleep" was well known by participants, but this advice was not always followed. The complexity of rebreathing air was not understood and the dangers of switching a child between back and stomach sleeping were not known. In general, there was a lack of understanding and confusion regarding SIDS.

Many parents were concerned that children on their back could choke; because of this fear, it was common for children to sleep on their side as a compromise. Because medical advice regarding sleeping position has shifted over the years, participants were more likely to discount such advice, and instead rely on information from a grandparent. SIDS was also frequently referred to as crib death; because of this, several participants would not put their baby in a crib, not understanding that SIDS could happen in other locations.

An overarching theme of the focus groups was the concept that mothers weigh information from a variety of sources and then make a decision based on the perceived needs of their child. Most of the mothers sought information about child care and nutrition from a variety of sources including female relatives, doctors and other medical experts, as well as agencies like WIC and Parents as Teachers. While some information sources may hold more influence in the minds of a mother, the majority agreed that the most important thing for a mother to do was listen and then do what is best for her child.

Focus Groups on Infant Care Practices in Missouri

Overview

Infant mortality rates (IMR) in the United States have dropped since 1971 but there continues to be a consistent difference in the IMR between African-Americans and whites. According to data from 2001, the mortality rate of African-American infants was over two times the rate of white and Hispanic infants.[1] According to data provided by the Annie E. Casey Foundation[2], the overall infant mortality rate in the U.S. in 2001 was 6.8 deaths per 1,000 live births. The rate, however, varies tremendously by race. The rate for white Americans in the same year was 5.7, and for African-Americans, 13.5. In Missouri, the IMR peaked in 2002 at 8.5. Efforts to reduce IMR in the United States are on-going and have focused on strategies ranging from laying infants on the back for sleep (to reduce SIDS), car safety seat requirements for leaving a hospital following birth, and encouraging better infant nutrition through the promotion of breastfeeding.

Research has clearly demonstrated several factors are positively associated with higher rates of breastfeeding, including maternal age, income, and education level. Married women were more likely to breastfeed than their unmarried counterparts. There are also racial differences in breastfeeding rates. According to data from the Centers for Disease Control, 55 percent of African-American women initiated breastfeeding, compared to 74 percent of whites.

Based on data from several sources (Centers for Disease Control, Ross Survey and Metabolic Screening[3] tests in Missouri) rates of breastfeeding initiation in Missouri range from 62 to 64 percent. These overall initiation rates are lower than the national rate which is around 68 percent. There are clear racial discrepancies in Missouri based on the Metabolic Screening data. The initiation rate for whites is 69 percent while the rate for African-Americans is only 45 percent. For individuals who classify themselves as multi-racial, the breastfeeding initiation rate falls in the middle, at 59 percent.

Breastfeeding has benefits for both mother and child including nutritional, economical, immunological, and psychological advantages over formula feeding.[4] While efforts to meet the national goals to increase breastfeeding initiation rates have been effective in some regions of the United States, there are still disparities among ethnic and socio-economic groups. Women with incomes between 100% and 185% of the federal poverty level (FPL), for example, breastfeed at a rate of 67 percent, while women with an income over 350% FPL breastfed at a rate of 79 percent.[5] Disparities in infant health and infant mortality rates may be reduced by improving breastfeeding rates among populations with low breastfeeding.

Given the implications for children of different feeding and sleeping choices, encouraging more women to breastfeed, and to practice safe sleeping practices is an important public health policy. What factors are associated with different choices regarding feeding and sleeping behavior? In order to develop the health promotion tools necessary to encourage parental changes it is vital to understand the issues and attitudes that surround a woman's decision making process. It is also vital to have a clear understanding of how the attitudes of a woman's social support network impacts these decisions.

Project Goals

The goal of this research project was to better understand how individuals, primarily low-income African-American parents in Missouri, make decisions on infant care practices, specifically those focused around feeding and sleeping.

Methods

Eighteen focus groups[6] were conducted across the state of Missouri with parents and other relatives of children under 12 months. In accordance with the RFP, focus groups were held in major metropolitan areas (Independence, Kansas City, St. Louis City, and St. Louis County), minor cities (Cape Girardeau, Columbia, Jefferson City, and Springfield), and non-metropolitan locations (Macon, Maysville, Moberly, New Madrid, Sedalia, and Sikeston) throughout Missouri. Table 1 shows the geographic location for the focus groups.

Table 1. Focus group sites

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		Sikeston

Sites were selected based on geographic location, demographic composition (such as average household income, percentage of African-American population, and poverty level), and consultation with the Missouri Department of Health and Senior Services (MDHSS). Thus, although Macon County has a relatively low African-American population, compared to the other locations chosen, it also has one of the highest infant mortality rates in the state. Appendix A provides detailed information for each of counties chosen for this study, including the infant mortality rate.

Focus groups were scheduled in a public facility in each location. Often the location was a county health department or hospital. In a few cases, such as New Madrid and Sedalia, the focus groups were held in a community resource center. Contacts in each community were consulted about a location that was both appropriate and accessible. In several instances, locations were scheduled in new facilities following feedback from local contacts. Pulaski County, originally chosen as a site for a focus group, was dropped after numerous contacts in the community reported a lack of appropriate or accessible facilities. Appendix B shows the specific sites used for each of the focus groups.

A comprehensive contact strategy was employed for each community. A list of contacts was developed for each geographic region using a common list of agencies. These agencies included WIC, University of Missouri Extension, Early Head Start, Head Start, Division of Family Services, Parents as Teachers, county and city health departments, and health clinics. In addition, internet searches were performed on each community to find location specific resources, such as a community resource center or parenting groups. Each agency was then contacted and provided a brief overview of the project. After verifying the mailing address and contact name for the agency, an informational packet containing a summary of the project and recruitment fliers was mailed. Darin Preis, Missouri Head Start Coordinator, also sent an email to local Head Start agencies requesting support for this project. In smaller communities, businesses, such as convenience stores and laundromats, were contacted and provided fliers to hang on community bulletin boards.

The recruitment fliers contained a toll free telephone number for potential participants to call for more information and to sign up for a focus group. Upon calling the number, a short survey was conducted to determine if the caller fulfilled the criteria necessary for the research project. All respondents meeting the criteria were invited to participate and provided with additional information on the date, time, and location of the focus group. Respondents also provided contact information so a reminder call could be placed one day prior to the focus group.

Our initial goal was to invite 25 people with the expectation that 10-12 participants would arrive to take part in the focus group. Despite working with a wide ranging number of groups to obtain participants for each of the target areas, turnout at the initial focus groups was low. The short time frame for this project proved to be a barrier to effective recruitment for these focus groups. Additionally, the incentive of $15 (given as a Wal-Mart gift card) did not seem to be high enough to attract the attention of potential participants. Childcare was secured at the earliest groups, but this practice was soon discontinued due to difficulty in securing adequate facilities and to an overall lack of interest from parents. Many women with infants preferred to simply bring their child to the focus group; this practice worked well and allowed us to increase the incentive to $30 or $45, depending upon the specific location.[7]

After several focus groups with disappointing turnouts, several recruitment strategies were employed simultaneously. The focus groups continued to be publicized through as many organizations and individuals as possible. In locations with less developed infrastructure, high traffic sites (primarily WIC clinics) were secured to conduct interviews with the target population. Additionally, a few key organizations were targeted and agreed to host focus groups. For example, the Barnes Teen Parenting Clinic agreed to allow focus groups on the same day clients would be attending an educational seminar. By working directly with an organization and conducting the focus group at the same time people were gathered for other reasons, the attendance improved dramatically. While a successful approach, it was time intensive to make contacts with the right people and groups and arrange a meeting time that was mutually agreeable. The short time frame for this project would have prevented all focus groups from being arranged in this manner. For instance, it took over six weeks of calls back and forth to coordinate with the right people at Barnes and to find an agreeable date. Another such event held in conjunction with Caring Communities in Kansas City was also rather time intensive. Conversations with this organization began in July and it was September 29 before a focus group was arranged and conducted.

The first strategy (open focus group) was originally utilized to insure individuals with diverse experiences and views, based on the hypothesis that those heavily engaged with a specific agency would hold different attitudes and beliefs than others not as connected to such organizations. However, the partnering groups had missions that were sufficiently different enough as to not influence participants on key research areas (feeding and sleeping). In fact, at groups that were "sponsored" by organizations, a wide range of views and knowledge regarding both feeding and sleeping practices were voiced.

Regardless of the specific outreach methods, an extensive time period was the most important factor in recruitment. The greatest recruiting success was in the St. Louis area, a location saved until near the end of the project. The timing of the St. Louis area focus groups allowed for an eight week timeframe to contact organizations and publicize the event. Although partnering with Barnes Parenting Center accounted for several groups, the other two focus groups in the St. Louis area were "open". Each of these focus groups was full (12 and 14 persons) and in fact, many persons who called to inquire were turned away.

Characteristics of Participants

The RFP specified that 50 percent of participants needed to be low-income minorities (later defined as African-American by MDHSS) and that focus groups should include mothers, fathers, and relative caregivers of young children (0-12 months). At the beginning of the project, the goal was to have relatively homogenous groups. Specifically, one focus group would be comprised of currently pregnant or women with young children, while another would focus on caregivers, fathers, and support persons. The division of focus groups by demographic characteristics appeared to be a method of focusing the discussion on relevant questions and facilitating more dialogue and engagement. As the project progressed, however, it became apparent that the common thread that allowed homogenous groups was having (or expecting) an infant in the family. Additionally, in several cases several individuals from the same family unit wanted to participate together. Having different perspectives in the same group actually added to the discussion and richness of the data so. Subsequently, all types of respondents were allowed at each focus group.

Originally, caregiver was strictly defined as a relative who provided care to an infant on a regular basis. One of earliest focus

groups (Springfield) was targeted for relative caregivers only, and after speaking with persons in the group, the confusion over who was included in that term came to light. Several of the research questions focused on how family influenced parental decision making and the phrase "relative caregiver" did not resonate with potential participants or contacts in the community. This confusion clearly contributed to low turnout in Springfield. Following discussions with MDHSS, the relative caregiver was redefined as a grandmother or other female relative, and advertising flyers were changed to read "relatives" or "grandmothers". The change in strategy assisted in the recruitment of grandmothers at subsequent focus groups.

Survey Protocol

A survey alone would not have been sufficient for this project, but by having participants in the groups complete a survey prior to the discussion, the richness of the data collected for this project was increased. Different survey instruments were constructed for mothers, fathers, and relatives. These surveys were color coded to easily identify the target population. Each survey took approximately 5-10 minutes to complete. Through the surveys, information was collected on several main areas:

- Demographic information, including race, age, age at first birth, educational level, and employment status (In consultation with MDHSS, many of the demographic questions mirrored those from the Behavioral Risk Factor Surveillance Survey for comparability purposes.);
- Initiation and duration of breastfeeding; and
- Attitudes and knowledge of breastfeeding, using the Iowa Infant Feeding Attitude Scale.

Surveys for each type of participant are included in Appendix E.

Focus Group Protocol

Each focus group was attended by at least two team members, and audio taped. Rooms were arranged with chairs in a circle around a table. This style of arrangement allowed the facilitator and the note taker to see name badges and walk around the room when necessary. The circle arrangement also allowed the participants to see each other and engage in a more free-flowing conversation than a traditional classroom arrangement would have allowed.

Upon arrival, each participant received a nametag, an informed consent, and a survey. In the case of emancipated minors who attended, each was asked to sign an informed consent document. The consent documents discussed focus group participant rights including confidentiality and the disclosure of risk. The consent statement was also read at the beginning of each focus group and participants received a copy of the statement to keep. The consent statement contained contact information for the researchers and the University of Missouri-Columbia Institutional Review Board. Copies of both types of consent forms are provided in Appendices C and D.

At the beginning of the focus group, each participant was asked to complete a survey. Following completion of the survey, the focus group discussion started with a brief overview of participant rights and introductions. Each participant was asked to share his/her name and the number and age of children in the family. The focus groups were moderately structured and started with "Some women bottle feed, some women breastfeed, and some women use a combination of methods. What did you do with your child?" This starting statement allowed participants to provide information on their experiences without feeling the moderators were espousing a particular view or were searching for a specific answer.

After discussing infant feeding decisions and practices, the conversation moved to the introduction of solid foods. Approximately half way through the focus group, the facilitator introduced infant sleeping practices as the next topic of conversation. These questions focused on where the infant slept and the position of the infant when laid down to sleep. Finally, the discussion moved to the types of information people receive about infant care, where the information originates, and trusted sources of information. The relatively few key questions in the focus group discussion guide allowed each individual adequate time to respond and elaborate on answers. The focus group discuss guide is provided in Appendix F.

Focus groups (including surveys) lasted between 60 and 90 minutes, depending on the number of participants and how the discussion progressed. At the end of each focus group, participants were thanked and gift cards were distributed. A thank you note was also mailed to each participant a few days following the focus group. Following the focus group, audio files were transcribed and then double checked for accuracy with the information from the note taker. Larger focus groups were double-recorded to assist the transcriptionist. Surveys were coded and entered into SPSS for analysis.

Survey Results

Overall, 136 persons participated in this project. Table 2 provides detailed information on location and type of participant. Interviews were conducted in only a few locations (Cape Girardeau, Maysville, Sikeston, and Springfield) and accounted for only ten percent of the total. Clearly, the majority of participants were mothers (79%). Fathers and caregivers comprised ten and eleven percent respectively.

A sizeable percent (44%) of participants were from the St. Louis area. This was not by design, but because of successful outreach in that location. Staying in St. Louis for two consecutive days was very beneficial for recruiting purposes. While the original plan was to conduct one focus group at Barnes Hospital, word of mouth spread information to other potential participants. As a result two additional groups were conducted at the hospital. Overall, 57 percent of participants were from either the St. Louis or Kansas City area. Another 17 percent were residents of "minor" areas (Springfield, Jefferson City, Columbia, and Cape Girardeau), and the remaining 26 percent were from non-metropolitan areas.

Table 2. Type and number of participants by location

Location	Mothers	Fathers	Relative/ Caregivers
Cape Girardeau	7 [1]	1	2
Columbia	4	0	0
Independence	3	0	1
Jefferson City	3	0	0
Kansas City (June)	5	0	0
Kansas City (September)	8	0	0
Macon	4	0	0
Maysville	3 [2]	0	1 [1]
Moberly	3	1	0
New Madrid	5	0	1
Sedalia	8	1	2
Sikeston	4 [4]	1 [1]	1 [1]
Springfield	3 [3]	1	2
St. Louis (Barnes 1:00)	8	3	2
St. Louis (Barnes 2:20)	11	2	2
St. Louis (Barnes 4:30)	4	2	1
St. Louis City	10	2	0
St. Louis County	14	0	0
Total	107	14	15

[1] Includes one personal interview.
[2] Includes two personal interviews.
[3] Includes three personal interviews.
[4] Includes four personal interviews.

Overall, more than half (52%) of participants identified themselves as African-American; 42 percent identified themselves as white; and six percent designated multi-racial. As Table 3 clearly shows, our racial composition varied greatly by location. Eighty percent of our participants in St. Louis were African-Americans, or multi-racial, as were 90 percent of participants in Kansas City. Focus groups in both New Madrid and Cape Girardeau were also comprised primarily of African-Americans participants. This is not surprising, since the largest concentrations of African-American populations in Missouri are in St. Louis, Kansas City, and the Bootheel. On the other hand, there was little racial diversity in locations such as Sikeston, Sedalia, Moberly, Macon, Maysville, and Independence.

Table 3. Racial composition of participants by location

Location	White	African-American	Multi-Racial
Cape Girardeau	3 (30%)	7 (70%)	0 (0%)
Columbia	2 (50%)	1 (25%)	1 (25%)
Independence	4 (100%)	0 (0%)	0 (0%)
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Kansas City (September)	0 (0%)	6 (100%)	0 (0%)
Macon	3 (75%)	1 (25%)	0 (0%)
Maysville	4 (100%)	0 (0%)	0 (0%)
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New Madrid	0 (0%)	6 (100%)	0 (0%)
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St. Louis (Barnes 1:00)	3 (23%)	7 (54%)	3 (23%)
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St. Louis (Barnes 4:30)	1 (14%)	6 (86%)	0 (0%)
St. Louis City	3 (25%)	9 (75%)	0 (0%)
St. Louis County	0 (0%)	14 (100%)	0 (0%)
Total	56 (42%)	63 (52%)	8 (6%)

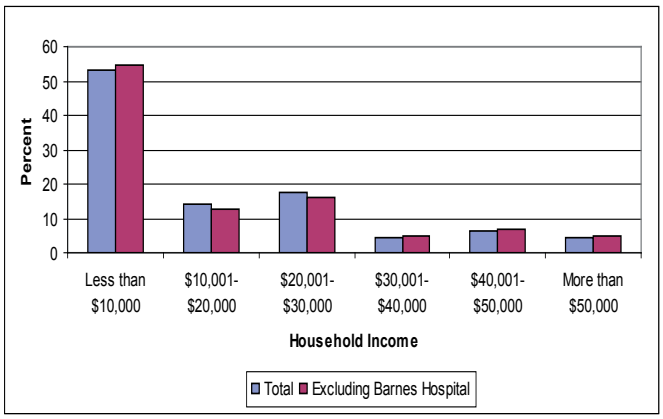
The goal of this project was to speak with both parents of young children as well as parents-to-be. Twenty-nine percent of participants were pregnant at the time of the focus group, although this figure is inflated by the large number of pregnant teens at the Barnes focus groups. When Barnes participants are excluded, 14 percent of participants were pregnant at the time of the focus group.

Table 4. Percent pregnancy status of participating mothers

	Currently Pregnant	Not Currently Pregnant
Total	28.6	71.4
Excluding Barnes Hospital focus groups	14.4	85.6

Since 50 percent of respondents were required to be low-income, and because income has been shown to be associated with higher rates of breastfeeding, the survey asked about reported household income. Overall, participants were quite poor, with more than half reporting household incomes of less than $10,000 (Figure 1). Another 30 percent had household incomes under $30,000. The distribution was very similar when examined without participants from Barnes Hospital.

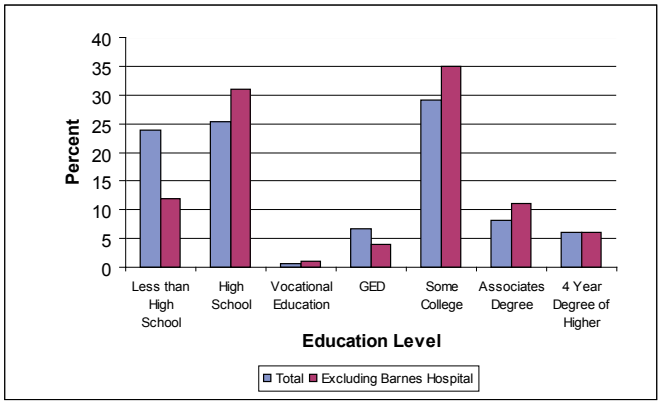
Figure 1. Percent reporting household income



The survey also asked about use of WIC, food stamps, and food pantries in the past twelve months. Large numbers of participants relied on both public and private assistance. Seventy-six percent of all respondents received WIC in the past twelve months, 65 percent received food stamps, and 27 percent relied on assistance from a food pantry. Among mothers, an astonishing 84 percent received WIC benefits. There was also one notable difference by race. African-American participants were much more likely to have received food stamps (76%) than whites (55%). There were no racial differences regarding receipt of WIC or food pantry assistance.

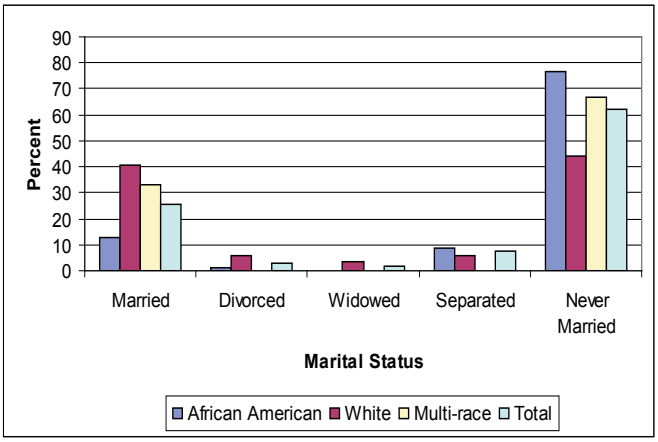
Overall, participants had relatively low levels of educational attainment (Figure 2). Just over 38 percent had more education than a high school degree; only 6 percent had earned a four year degree. Again, however, these numbers are somewhat inflated because of the large number of high school students in the Barnes focus groups. When those participants are excluded, only 12 percent lacked a high school degree. The percent of college graduates remained unchanged, while the percent with some college experience increased slightly. Regardless, almost half of participants had a high school degree, GED, or less.

Figure 2. Education level of participants



Almost two-thirds of participants had never been married; 25 percent were married, while the remainder were either divorced, widowed, or separated (Figure 3). Marital status also varied dramatically by race; 41 percent of whites, 33 percent of multi-racial persons, but only 13 percent of African-American participants were married. Conversely, 44 percent of whites were classified as never married, compared to more than 76 percent of African-Americans. Although not shown here, very few fathers were married (8%), compared to one quarter of mothers and one third of caregivers.

Figure 3. Marital status of participants



Just over one-third of mothers were employed (either for themselves or someone else). Employment rates were substantially higher for both fathers and caregivers. On the other hand, a sizeable percent of both mothers and fathers were students. Although not shown in this table, whites were more likely to be employed, while African-Americans were more likely to be students.

Not surprisingly, our participants were fairly young. Ages ranged from 14 to 65, with an average age of 25. Seventy-five percent were under age 30. Age at first birth was also quite young; 68 percent had a child by age 20, and only five percent of participants waited until 30 or older to have their first child.

Table 5. Employment status of participants

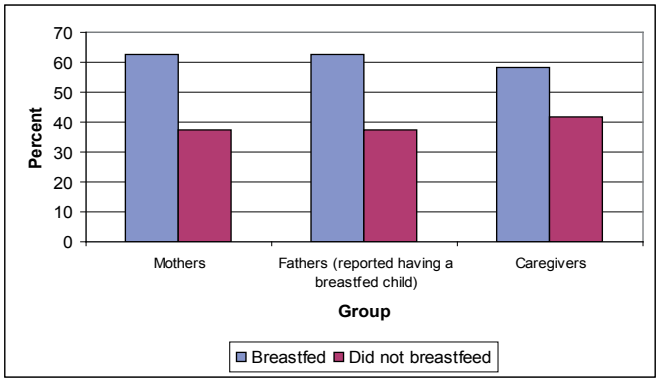
	Mothers %	Fathers %	Caregivers %	Total %
Employed for wages	32.1	53.8	58.3	36.6
Self-employed	1.9	7.7	0	2.3
Out of work 1 year plus	9.4	0	0	7.6
Out of work less than 1 year	16.0	0	8.3	13.7
Homemaker	18.9	7.7	16.7	17.6
Student	21.7	30.8	8.3	21.4
Retired	0	0	8.3	0.8

The survey contained two questions regarding use of physicians—the time at which prenatal care was first obtained, and the age of the child for the first doctor visit.[8] The vast majority (75%) of participants obtained prenatal care in the first trimester; in fact, more than half had seen a doctor by the time they were seven weeks pregnant. Only a small number of women (10%) waited until fairly late in the pregnancy (greater than 20 weeks) to see a physician.

Most children also saw a physician at an early age. Half reported visiting a doctor within the first week of birth, while 75 percent had a check up by two weeks of age. A small percent (25%), however, reported waiting for 4-6 weeks to take their child to a physician.

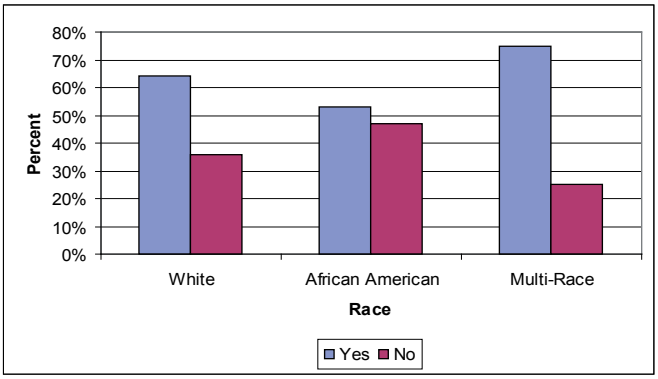
The survey also collected information on breastfeeding initiation and duration. Approximately 62 percent of mothers reported having ever breastfed a child (Figure 4). These numbers are fairly consistent with other data, both nationally and for Missouri, on breastfeeding initiation.

Figure 4. Percent of participants who reported having ever breastfed



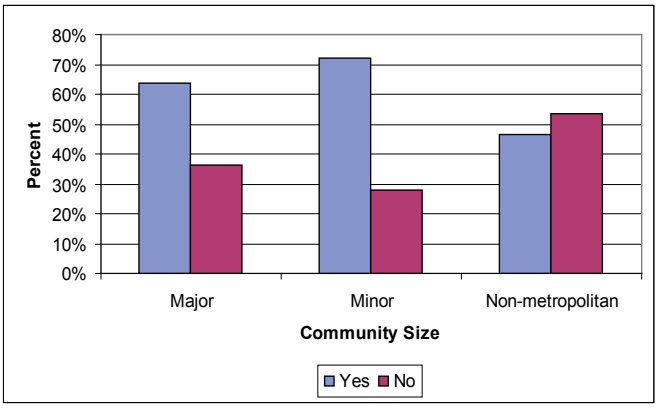
As expected, there were differences in breastfeeding initiation by race, although the discrepancy was not as large as might be expected. Multi-racial mothers were most likely to breastfeed (although the sample for this group is quite small), followed by white mothers and African-American mothers. Even so, more than half of the African-American mothers in this project had breastfed at some point.

Figure 5. Breastfeeding status by race



A bigger discrepancy occurred when examining breastfeeding status by location (Figure 6). Mothers in non-metropolitan areas were substantially less likely to breastfeed than those in other locations. As focus groups are not designed to be representative of the larger population, this may simply be an artifact of the people who participated, yet it seems worth further exploration. Although not directly comparable, it is somewhat consistent with national numbers that report the lowest rates of breastfeeding initiation in non-metropolitan areas, and the highest in suburban areas (Centers for Disease Control, 2003).

Figure 6. Breastfeeding status by location



For those women who did breastfeed, the average duration was just over five months. Length of time, however, varied quite widely, a fact reinforced in the focus groups. Some women initiated breastfeeding in the hospital, yet did not continue doing so upon discharge. Some women breastfed for only a week or two, while others continued doing so for more than a year. Among women who chose to breastfeed, white women tended to breastfeed for slightly longer durations, but the difference was less than a month.

Table 6. Response to Iowa Infant Feeding Scale

Statement	Strongly Agree (%)	Agree (%)	Neutral (%)	Disagree (%)	Strongly Disagree (%)
The benefits of breast milk last only as long as the baby is breast fed.*	16.7	12.9	16.7	30.3	23.5
Formula feeding is more convenient than breastfeeding.*	19.5	14.3	27.8	19.5	18.8
Breastfeeding increases mother infant bonding.	55.6	27.8	10.5	3.0	3.0
Breast milk is lacking in iron.*	2.3	8.3	27.8	33.8	27.8
Formula fed babies are more likely to be overfed than breast feed babies.	10.7	28.2	40.5	14.5	6.1
Formula feeding is the better choice if the mother plans to go out to work.*	14.9	20.1	33.6	24.6	6.7
Mother who formula feed miss one of the great joys of motherhood.	16.4	29.1	26.9	17.2	10.4
Women should not breastfeed in public places such as restaurants.*	6.0	9.7	15.7	29.9	38.8
Breastfed babies are healthier than formula fed babies.	32.8	28.2	23.7	6.9	8.4
Breast fed babies are more likely to be overfed than formula fed babies.*	1.6	3.9	37.2	34.9	22.5
Father feel left out if a mother breast feeds.*	3.0	13.6	30.3	35.6	17.4
Breast milk is the ideal food for babies	42.7	29.8	17.6	6.1	3.8
Breast milk is more easily digested than formula.	41.4	33.1	20.3	3.8	1.5
Formula is as healthy for an infant as breast milk.*	8.3	22.6	30.8	28.6	9.8
Breastfeeding is more convenient than formula.	26.5	23.5	31.1	14.4	4.5
Breast milk is cheaper than formula.	69.9	20.3	4.5	3.8	1.5
A mother who occasionally drinks alcohol should not breastfeed her baby.*	55.6	17.3	12.8	8.3	6.0

* Variables reversed scored to calculate total infant feeding attitude score.

The final section of the questionnaire included the entire Iowa Infant Feeding Attitude Scale (IIFAS[9]). This scale consists of a series of questions asking about attitudes of, and knowledge towards, breastfeeding. The purpose of the scale is to examine the psychological and social factors associated with a choice to breastfeed or formula feed.[10] Previous research has shown the IIFAS is a valid and reliable scale that can accurately predict a parent's choice of breastfeeding or formula feeding. Table 6 shows the breakdown of respondents for each question.

Overall, participants were fairly well informed regarding breastfeeding. For example, a majority did not agree that the "benefits of breast milk last only as long as the baby is breastfed." Overwhelmingly, participants agreed that breast milk was healthier than formula and that breast milk is the ideal food for babies. There did not seem to be much support for the idea that breastfeeding made the father feel left out, and only a minority disagreed with the statement "mothers who formula feed miss out on one of the great joys of motherhood".

However, there were some interesting racial differences regarding attitudes and knowledge. African-American participants were more likely to agree that formula fed babies were overfed, compared to breastfed babies. African-Americans were also more likely to agree or strongly agree that breastfed babies are healthier than formula fed babies, and that breastfeeding is more convenient than formula. However, African-Americans were more likely to view formula as the better choice if the mother was returning to work.

Figure 7. Formula fed babies are more likely to be overfed than breast feed babies

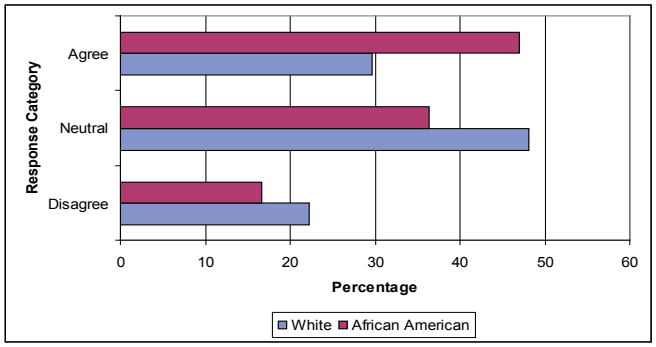


Figure 8. Breastfed babies are healthier than formula fed babies

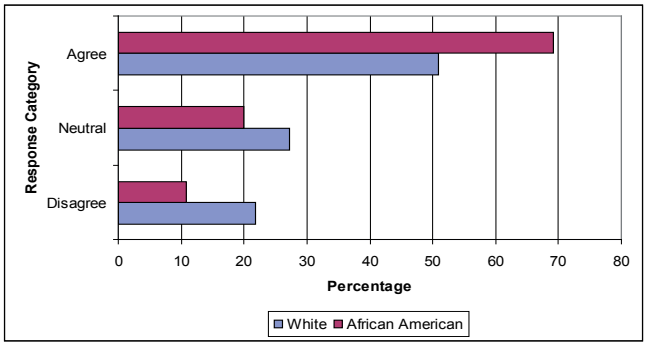


Figure 9. Breastfeeding is more convenient than formula

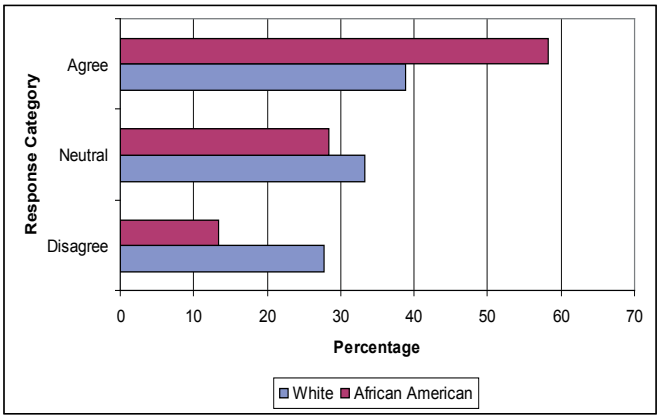
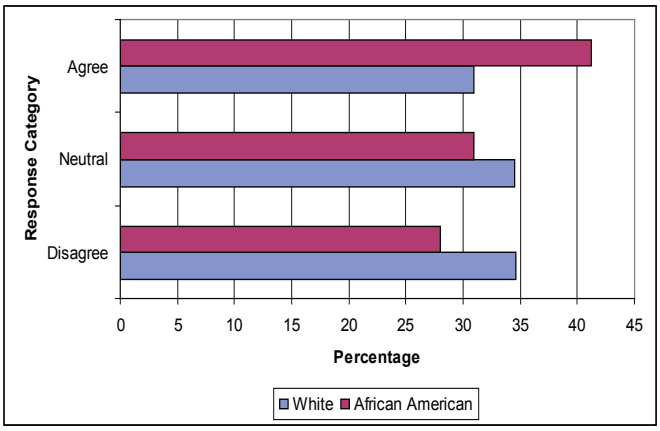


Figure 10. Formula feeding is the better choice if the mother plans to go out to work



The total scale score was calculated for each participant; higher scores represented more positive attitudes towards breastfeeding. Overall, the average score was 60. The total score was estimated separately by race and by breastfeeding status. Interestingly, the overall score did not differ by race; in fact, the score was almost identical. This is true even though there were clearly differences for particular questions, as shown previously. There were, however, clear differences by breastfeeding status, with women who chose to breastfeed having higher scores. The lowest scores were for white women who chose not to breastfeed, and the difference by breastfeeding status was greater for white women.

Focus Group Results

Breast Feeding

The focus groups started with a question exploring how the youngest child was fed (breastfed, formula fed, or a combination). Overall, focus group participants had very positive attitudes towards breastfeeding, even those who did not breastfeed or did not do so for a long duration. Only a minority of women did not even attempt breastfeeding or chose to only formula feed *prior* to giving birth.

For those women who did initiate breastfeeding (approximately 62 percent according to the survey results), several themes emerged.

Health Benefits

For many who chose to breastfeed, a primary reason was for health benefits. The slogan that "breastfeeding is best" was recounted in all focus groups, and appeared well known to many women, including those who chose to formula feed. Women talked about breast milk having better nutrients for their children, lowering the risk of allergies, ear infections, colds, and improving lifelong health. According to a mother in Cape Girardeau, *"I knew it was healthier and it would keep them from getting sick and ear infections and all that*". According to another mother, "*everyone says that it is better for the baby*". Others talked about breast feeding being related to an increased IQ and bigger babies. This information about health benefits came from a number of sources, including family and friends, physicians, nurses, and WIC. The positive health benefits of breastfeeding were so well known, several of the young mothers noted they would breastfeed for a short duration, just so that their baby could reap some of the benefits, "*until I leave the hospital* (wanting the baby to get the colostrum)" or "*for at least a few weeks"* or "*I'm going to breast feed the three days until like the milk comes in and then I might stop and bottle feed*".

Bonding/Natural Aspects

A second frequent theme related to the positive bonding aspects of breastfeeding. Many women believed breastfeeding enabled them to bond with their children in a special way. As described by a mother in St. Louis, *"I feel like you are really connected to your child when you breastfeed because you are sharing your body with your child like you have been for the last nine months*". A mother at a different focus group in St. Louis commented that " *it* (breastfeeding*) is just an intimate experience… you are bonding with that child, you are looking at them, they are very close to you*". Others talked about how only a mother could breastfeed and fulfill that need for a child, such as the mother in Columbia who liked *"being able to soothe her* (child) *in that way"* or the mother in Sedalia who noted that "*nobody else can have that bonding time through that* (breastfeeding)*, and it is just cool*".

Related to that, but less frequently noted, was the idea that breastfeeding was the "natural" way to go. A woman in Sedalia noted *"It's a natural thing. I mean every mammal in nature breastfeeds."* In fact, one African-American male partner who was particularly in favor of breastfeeding noted:

> *"Well I think that breastfeeding is really. . . it just makes sense so the fact that it is out of the mothers body and all that stuff, it just seemed like it would, it was made for that, that is the reason for the breast, why women have breasts is to breastfeed…you don't see a pig giving his little piglet a bottle or nothing like that…I feel it is the more natural way."*

Convenience

A third reason many chose to breastfeed was for convenience. This was especially true for middle of the night feedings when women noted they didn't have to worry about getting up and going to make a bottle. A mother in Cape Girardeau commented that "*I actually think that breastfeeding is more convenient… giving my son formula, it takes twice as long! You have to make the bottle and then you got to wash the bottle, and you know, with breastfeeding, especially at night when you're putting the baby to bed, it's so much easier, just you've got it ready, and it's the right temperature."* According to a mother in Macon, *"I like not having to get up in the middle of the night, other than getting up to get him* (baby)*, but don't have to go to the kitchen and do a whole lot of stuff"*.

Additionally, women who successfully breastfed often commented that breastfeeding was more convenient than bottle feeding since one doesn't have to carry around numerous ingredients. A participant in KC said "*you didn't have to carry around all of this water, formula, bottles, make sure they are clean and stuff like that*". Women always felt prepared, and were never caught off guard without supplies.

Cost

Cost was mentioned by several women as a benefit of breastfeeding, but this factor did not seem to be a primary reason behind feeding choices. Moreover, cost was often mentioned only after specific probes, and more as an afterthought. On the other hand, several women did mention that WIC provided vouchers for formula and thus, cost was not an issue in their feeding decision, although some mothers commented WIC vouchers were not sufficient for the amount of formula they needed. One woman explained "*WIC helps a little but it only like lasts me like a quarter of a month and it is gone"* while another stated *"the formula do like tends to run out and I was like getting food stamps so I always kept some on the side just for reasons there, like they ran out of food or anything because WIC do run out. They really do"*.

Formula Feeding

There were a number of reasons for formula feeding a child including convenience and an inability to breastfeed, whether it was due to a medical condition at birth or frustrations.

Convenience

By far, women who formula fed noted convenience as the primary reason. This took several forms. Many noted they simply didn't want to be tied down and formula feeding gave them the ability to rely on others, including the fathers, to help in the feeding process. According to one mother *"I hated feeling tied down with the breastfeeding. My husband and I like to go out…and you know if you leave the baby, you can only leave the baby for a certain amount of time"*. Several women specifically mentioned work and school as impediments to breastfeeding. *"Instead of when I'm at school, I can't think 'Oh, I gotta go back home and feed'. I just go ahead, have the bottle ready, there is formula there, this what you do. It's something I can just take"*.

For some mothers, work didn't affect the choice of feeding, but the duration, such as this mother in Sikeston. *"The first child I breastfed 5 weeks because I was going back to work. The second and third kids I breastfed for 10 and 11 months because I was home"*.

When asked about pumping, most women either didn't want to try it, didn't have access to a good quality pump, found the process frustrating and painful, or felt they didn't get enough milk. Overall, very few women successfully pumped for any period of time. Access to a quality pump was a factor for some women. Inexpensive pumps were ineffective and many women did not have the means to purchase a high quality pump. As one woman said, *"I'd like to pump if I could afford a breast pump, but the one I had broke…"* Additionally, when asked follow-up questions, many women either didn't seek out assistance with pumping, or didn't receive help for this process. As one mother in Kansas City noted, "*I couldn't figure out how to do it, and I didn't want to ask nobody to show me how to do it and I just let it go"*. Another mother commented*, "that might be one of the reasons I stopped doing* (breastfeeding) *because I would get frustrated trying to pump and it was like nothing --just forget it and I'm thinking because nothing is pumping out, the baby isn't getting anything"*.

Frustration with breastfeeding

Although many women professed a desire to breastfeed, another common theme that emerged was frustration. For example, many women initiated breastfeeding at birth, but commented that the baby just didn't take to it, or didn't latch correctly so the process was discontinued. As a woman in Springfield summed it up, *"It's not that I wasn't going to do it. I couldn't do it."* This reaction from a mother in New Madrid was fairly typical, "*I breastfed at first, but it was just too uncomfortable for me*". A mother in St. Louis noted that "*I couldn't get the milk to come out*," while another commented that "*I tried to breastfeed, but I couldn't get the hang of it*". This was especially true once women left the hospital and were without assistance for their child. For example, according to a mother in Sikeston: *"I was breastfeeding and she stopped taking it. She was doing good in the hospital…we came home and she screamed and fought me and it was just so hard"*.

Despite these difficulties, many who had not successfully breastfed commented that they would try again with an additional child.

Even women who successfully breastfed noted that it was often frustrating in the beginning when they were new to the process. The amount of help, or perceived help, available to women with new infants varied tremendously. Many reported about very helpful lactation staff or hospital nurses. One reported that a lactation nurse would "*call me at home and make sure that everything is okay*" and another said a lactation consultant came in "*after birth and was encouraging*". Others, however, had very different experiences and did not feel much assistance had been forthcoming. In Kansas City a woman flatly said the lactation staff at the hospital "*did not tell me how to use the breast pump or anything"*.

Related to that, many women found breastfeeding painful. According to a mother in Sedalia, "*And these lactation consultants say oh well, it is not supposed to hurt. Well, it does. And everybody I ever talked to that tried breastfeeding said it hurts*". Likewise, a mother in St. Louis noted, "*When I first started, I am breastfeeding her but her grip was like so hard, I had blood from the nipples, and so I stopped breastfeeding and changed over to the Enfamil…her grip was getting real forceful and I just couldn't take it*". Many mothers who successfully breastfed also mentioned this as an issue. A mother in Independence said, "*I hated it. I cried. It was bad, but I stuck through it and I'm glad I did"*.

Quantity and quality issues were also concerns expressed by women who had unsuccessful breastfeeding attempts or who simply chose formula feeding. Women in several locations worried the infant was not getting the quantity of milk necessary for healthy development through breastfeeding. A typical statement was the baby was *"too greedy"* or *"I tried to breastfeed but she was just too hogsy"*. The grandmother of an infant might play on the fears of a mother concerned that her child was not getting enough milk. A mother in Cape Girardeau related what her mother said during her breastfeeding attempts*: "… you better give that baby a bottle, he's not getting enough milk"*.

Women were also concerned about the quality of the milk they produced. One woman related that after four weeks of breastfeeding her *"milk wasn't thick enough… didn't produce enough"*. For others, these concerns were related to a "lifestyle" that was not for breastfeeding or that they engaged in activities not appropriate to breastfeeding an infant. A mother in St. Louis stated *"but I smoke and I think that gets in your breast milk…"*

Although mentioned only rarely, some women were simply uncomfortable with the idea of breastfeeding, particularly in front of others. The issue of public exposure came up in about half of the focus groups and while many women said

a mother should have the right to feed a baby anywhere, some mothers were not comfortable with the process. One woman in St. Louis explained *"it was just uncomfortable to me to have my baby sucking on my breast. I was too young to have kids and I think that was really why it didn't work out"*. Others noted they just did not like the concept of feeding a child in that manner, *"I'd feel uncomfortable doing it in front of everybody"*. One mother in Kansas City indicated she did not breastfeed her first child *"because of the people in the house and I was embarrassed"*.

Family members also played a role in a mother's decision to breastfeed but this role was rarely the single factor in breastfeeding or formula feeding an infant.

Role of the father

Fathers tended to play a supportive role in feeding decisions rather than being a decision maker. A few expressed a preference for breastfeeding but almost all deferred to the mother on feeding issues, according to a father in St. Louis, *" I was with whatever, if she wanted to breastfeed that was cool, bottle feed that was fine too, but I learned that breastfeeding was better and real good for the baby, but she chose the bottle"*. Many men commented that although they thought breastfeeding was best, they would support whatever the mother chose to do. A mother in Sikeston explained that the father of the child "*wanted her to get the very first stuff* (colostrum) *and he was glad she did get all that stuff that comes out…He was also happy he gets to feed her now. But, he said it wasn't that big of a deal if I did or did not breastfeed*". Additionally, several mothers made it clear that the final decision was up to them. As a woman in St. Louis noted, *"my boyfriend is pushing for breastfeeding…and I told him I'd think about it, thought about it and would be no"*.

In only two cases during the focus groups did the father play an instrumental role in the mother's decision to *not* breastfeed. One of the fathers wanted the opportunity to play a role in feeding the child and felt breastfeeding would not give him this chance. The other father did not want the mother to breastfeed because he was not comfortable with the idea of her being publicly exposed.

Role of other family members

A large number of women, both white and African-American, reported family support for breastfeeding, particularly among mothers and grandmothers. It was not uncommon to hear something similar to this quote from a young mother in Macon: "*Well, my mom suggested it to me and she said it had more of the nutrients baby needs for it to grow up, so I thought I'd try it"*. This familial support occurred for both for women who did and did not breastfeed. *"I mean well my grandmother, she from way back so that's all they did was breastfeed and she thought that would be better for me to breastfeed so, but I was like, grandma, we are in a new generation"*.

In some cases, though family support for breastfeeding was mixed, especially for African-American women. A new mother in Cape Girardeau noted that her family discouraged her from breastfeeding because she was too young, *"everybody was shocked that I'm breastfeeding."* Another mother in Macon explained that the attitude of her family members made breastfeeding a more difficult decision. *"Everybody doesn't like it…your family, mothers-in-law, I don't know, and my sister-in-law said are you breastfeeding? …you're not going to do it until he's two are you? Just small remarks that bother you"*.

Other sources of advice and information were considered by women outside of family members. WIC was frequently cited as a proponent of breastfeeding and as a source of information for breastfeeding. *"The lady at WIC told me pros and cons about breastfeeding and how she tried to and she thought it was better to kinda give the mom and baby more bonding"*. Frequently, the women would listen to WIC and other sources of advice but it often led only to a decision to breastfeed in the hospital, not long-term breastfeeding plans. It appeared that a decision to breastfeed for a more extended duration was rooted more on the advice of family and the mother's personal decision making process.

Solid Foods

The focus groups also solicited information regarding solid foods, namely what age children began having solid foods, the type of food received, and the reasons behind the age and type of food chosen. Most families were aware of, and followed, a similar schedule for the introduction of solid foods, somewhere in the neighborhood of 3-6 months. Additionally, the majority of infants were given rice cereal or baby food first. Another common early food was mashed potatoes.

Schedule

A fairly large group of participants followed a strict schedule with the introduction of foods. This schedule came from a number of places, including WIC, physicians' offices, books, the internet, and even other family members. Thus, we frequently heard things such as *"the doctor said to wait until six months"* or *"according to the WIC chart, I could start food"*, or *"the doctor said the baby couldn't have solids until now"*. One woman contemplating solid food for her infant stated, *"I haven't tried it* (cereal) *yet, but I'm kind of wondering if it is a good idea because I don't feel like he is getting full. I'm going to talk to the doctor about it"*.

WIC vouchers were frequently mentioned in the discussion of solid foods. Some participants viewed the addition of cereal to WIC vouchers at four months as a sign that solid foods were now appropriate. As a mother in St. Louis explained, *"Another way to find out when to give my baby what was WIC was giving me vouchers like they recently started putting rice on his vouchers… and they'll probably put other stuff on there."* Others, especially women who were breastfeeding, indicated cereal was not added to the voucher because breast milk provided all the nutrition the baby required at four months.

Physical cues

Physical cues from the child were another common method of determining if a child was ready for solid foods. The cues varied, but there was a unified theme of a mother knowing when the child was ready for something more than breast milk or formula. An infant that is consuming large quantities of milk/formula or wanting to eat more frequently was one cue cited in locations throughout the state. One mother in Maysville said *"They wanted to eat all the time"* while another mother in Kansas City stated, *"I started him because he would drink bottles back to back and I was like jeez"*. Staring at a parent while eating or reaching for the food on a parent's plate was another cue parents cited as evidence of a child's readiness to eat solid foods. One mother in New Madrid described giving her child solid foods *"because she was eating with us, she want my food so I be giving it to her… she be putting her little hand in there and I'm like go on ahead"*. In Moberly, a mother shared a similar experience with her child: *"She acted like she wanted it every time I would sit down and eat, she'd be right on top of me"*.

Physical cues were frequently tied to discussions of sleeping. The concept of an infant being hungry, and as a result, not sleeping well was prevalent in many locations. In some cases, filling the child by adding cereal to a bottle started well before the typically recommended threshold of four months. As a woman in St. Louis City explained, *"I do it because my baby slept all night long, even from the hospital, he sleeps all night long now"*. Others waited a little longer to introduce solid foods, but made the decision because the infant was not sleeping through the night, and the mother believed he/she was still hungry. As one mother in Macon explained *"Mine was about three and half months because milk wasn't satisfying him and he wasn't sleeping at night or anything so I had to go to something else to fill him"*. A young mother in St. Louis City explained it simply *"and he sleeps better when he's fuller"*.

Early or non-traditional introduction

However, there were exceptions. In particular, participants in a focus group in North St. Louis County and Kansas City tended to introduce foods at a very early age, including cereal in the bottle and more table food. The early introduction of table food seemed to be more prevalent in urban African-American families, and was encouraged by extended kin, particularly grandmothers. One method of feeding an infant solid foods was through the addition of jarred baby food in a bottle. For the few that mentioned this practice, a bottle with baby food was viewed as a more convenient method of providing the child with the increased food needed. In other words, spoon feeding baby food was viewed as a slow process that took too much time. *"Well WIC wouldn't hear of that, they don't want to hear that, you spoon feed the baby. Well if you are working every day and you driving down the street you're not going to turn around* (and spoon feed the baby)*"*. Other infants were provided with straight table food. As one mother described it *"Well my mom was fixing him eggs as soon as he came home… she was sneaking it to him… she was like girl they need real food. So I keep her away from my momma"*. While these were not practices mentioned at every focus group, it is interesting to note that the other women in the focus groups where the topic was discussed did not view it as atypical or uncommon.

One theme that emerged among African-American women was of adding cereal to the infant's diet at an earlier age to prevent spitting up. Many times, the women indicated they received instructions for this practice from a doctor. *"He didn't advise me to go give him a bowl. He said to put it in the milk because my son would throw up just about everything"*. One mother explained that with her child, *"straight milk he was spit it back up, and if I put cereal in it he'd keep it down."* while another stated she started solid food at *"about 4 to 5 months because we had a problem with the formula coming up so we introduced a little bit of cereal to help hold that down in her stomach…"* It was unclear from the focus groups when this practice was prescribed by a doctor and when it was a home remedy for a perceived problem.

Mother as expert

One theme that emerged from the focus groups in relation to introducing solid foods was the concept that a mother is the best person to make the decision, regardless of outside advice. Several women indicated that there is no "right" age to introduce solid foods. A woman in St. Louis City explained "*my pediatrician, she told me that it's my baby and you have mother instincts and…your baby might react different from that, you do what you think is the best*". Others specifically discussed the advice they were given by experts and how they disregarded the advice. A woman in Kansas City summed up this perspective:

> *"See I'd go to like, I was on WIC with my oldest and I'd go to them and I'd be like, well, he's still hungry, this formula is not doing it, and they were like, oh can't feed him cereal til he's 3 months old, can't feed him baby food until he's this, and I kind of looked and her and I said ok. I didn't listen though, because it is your child and you know when they're hungry so you just have to do with mom what you think is best."*

Related to the theme that a mother is the best expert on her child is the concept that every child is different. This belief was more prevalent among women who already had a child, or who had a large amount of experience with children. As a woman in Maysville explained it *"I gave it to them when they were ready. And it's a different age, I don't care what your doctor says, it's different ages when they are ready"*. A mother in Columbia said she *"listened to what other people had to say but grandma and mom said everybody's child is different"*. Another mother in Cape Girardeau noted, "*I don't care what they tell you, you've got to find out what your child gonna do"*.

According to a mother in Kansas City, "*I've never been one to follow the doctors rules, wait until they are 4 months, 6 months, 9 months, because I mean, all babies are different...*"

Role of family

Family seemed to play an instrumental role in the early introduction of foods for this group, specifically mothers and grandmothers. According to a mother in St. Louis, *"our parents are totally different, you know what I'm saying, they have old ways, and you got to tell them, look momma, don't feed my baby no cereal, don't feed my baby no food"*. This view was reinforced at a later focus group in Kansas City, where mothers commented that it did not matter what they fed their children, since their mothers, as the child's caretaker, were feeding them what they wanted during the day. In fact, when asked explicitly, every one of the mothers reported that another family member, generally their mother, fed their child food without discussing it with them first. One woman commented, "*You think we trying to go by the book but they're over at grandma's and grandma has already given it to them anyway"*. A mother in St. Louis described her mother mixing formula with the broth from cooking greens. *"When I was like 3 months my momma put greens juice into my bottle, so she did the my like that…Like in the winter time the colds away and stuff, so they used to put greens into her bottle"*.

Sleeping Arrangements

About half of the focus group was devoted to issues around sleeping, primarily where children slept, their sleeping position, and again, reasons for those decisions. In terms of where children slept, there were two main responses—either a crib/bassinet or the parents' bed. Sharing a bed was very common among participants; at least half of the parents spoken to kept the infant in bed with them. Reasons for choosing place are described below.

Crib or bassinet

Being close to an infant, especially in the days following birth, was the main reason cited for sleeping location. For some parents, this desire to be close resulted in the bassinet or crib being placed next to or at the foot of the bed. Many women liked to be able to reach out and touch the baby while he/she was sleeping.

Safety was the major reason for placing a child in a crib or bassinet. Several women indicated they "slept wild" and were afraid they would roll over on the baby. *"I won't put my baby in with me because I'd probably suffocate it…"* or *"because I sleep too hard, the way I sleep I wouldn't know if I was rolling over on her"*. One mother in Kansas City recounted how the baby used to sleep in her bed, until she woke up one evening to find her husband rolling on the baby. From that point on, the baby always slept in his crib.

While some women fell into accidental sleeping patterns with their infant, many made conscious decisions about the child sleeping in a crib in either the same room or a separate room. For these women, it was vital that the child develop a sense of independence early and sleeping away from the parent's was one method of establishing the patterns from the outset. A woman in St. Louis City described it as wanting *"the baby to have its own space"*.

Parents' bed

For others, closeness translated into keeping the baby in the bed while the mother slept. Among the participants, sharing a bed with a child was a very common practice, even though many readily confessed that they knew they should not be doing it. Having the infant in the bed provided a level of closeness that a separate crib did not. One described sleeping with her child as *"the comfort and knowing they were with me, because I don't know, I felt bad if I had them somewhere else"*. Another mother talked about how since it was her first baby, she wanted to be with her and hold her all the time. A related aspect was safety and security. Many parents felt the baby was more secure right next to them, that they could *"feel and hear the baby breathing"*. Concerns about Sudden Infant Death Syndrome (SIDS) also played out here, as it was common to hear parents talk about how they could better keep an eye on their baby in their bed, and make sure nothing happened to him or her. According to one mother, *"…the reason I'm sleeping in bed with him is sometimes I'm up and I know he can't get SIDS if I'm up all night"*.

Some women who shared a bed with their infant described the decision as accidental, often as the result of falling asleep while breastfeeding. Many of these women have a crib and intended to place the baby to sleep in the crib every evening. One woman in Kansas City mentioned *"We had brand new cribs for all of my kids but none of them has ever slept in them"*. Others described returning cribs, bassinets, and playpens because they were going unused.

As the fatigue of nighttime feedings sets in, the women fall asleep during feeding. Eventually, the child starts to accept the mother's bed as the proper place to sleep and going back into the crib becomes difficult. Most mothers who discussed this situation were not exactly pleased that the child was sleeping with them at night but few were ready to face the struggles necessary to change the child's sleeping arrangements. A woman from Jefferson City explained, *"When I was breastfeeding, I'd lay down and he'd be laying next to me, we would both just fall asleep and it was just easier. I know it wasn't a good idea, but that is the way it worked"*.

While participants generally acknowledged that they knew they should not be sleeping with their child, those that did rarely appeared troubled about the safety implications. For example, a mother in St. Louis commented that "*Before I had my baby I was the last one sleep, I was everywhere all over my bed. But when you have a baby in the bed with you, your body just acts different, you are not going to roll over on top of your baby"*.

Others talked about how they held their child in a certain way to keep the baby safe, such as *"cupping the baby in your arm and that is a good method and that keeps you from rolling over on it because you will feel that pressure in your arm"*.

Reasons for choosing position

A chorus of "Back to Sleep" exclamations would fill the room when asked what position the infant was placed down at night. Almost all participants were aware of the Back to Sleep campaign and had been advised to put their baby on the back from numerous sources.

For women who do put their infant to sleep on the back, about a third of the focus group participants, the most common reason was the advice of experts and the Back to Sleep campaign. Several talked about how the advice seemed to be everywhere, on brochures, posters, magnets, and other infant-related trinkets provided by the hospital. As one woman stated *"Even if you try not to learn anything about babies, you hear that, I mean you don't even have to try… the doctor's office, any book you read, magazines…* " Others specifically stated that *"I lay my baby on her back to prevent the SIDS"*. Some women watched the actions of doctors and nurses *"even before you leave the hospital they put them on their back to sleep"* as a guide to determining how to lay an infant down at night.

This high level of awareness, however, did not necessarily translate into night-time sleeping behavior. While the message of "Back to Sleep" is a common refrain, the reality of how many infants sleep is much different. One theme that frequently emerged was a concern over choking if the baby was put to sleep on his/her back. Parents were concerned that a baby who spit up would swallow it if laid on his/her back. This fear of choking on the back was expressed by mothers in all locations but seemed to be a more salient issue for African-American parents. *"You still need to watch the baby on their back, due to vomit, and that way you can choke if they're on their back because it is going to go right back down"*. Many even gave examples of friends or relatives who had children with choking problems, *"I had a friend… and several times by being on his back he had choked so she started laying him on his stomach"* and *"because my cousin almost choked to death laying on his back*". Some women even talked about their own children, like the mother in Columbia who reported *"He choked when he was on his back. It was one night when he burped. Now I only put him on his back when he's sleeping real good"*. Another reason cited for not laying a child on the back was "*they look like they're in trouble*" or if the mother was concerned about the startle reflexes of the child fearing these reflexes were a sign the child was uncomfortable.

It is worth noting that when the issue of choking was inevitably raised, many participants would nod in agreement and comment they were also concerned about this issue. At no time did any participant disagree with the fact that choking could occur on the back or challenge another participant on this issue. Much education needs to be devoted to dispelling this myth among parents.

Many mothers were adamant about the child always sleeping on the back but others expressed a split-the-difference approach and laid the child on the side. Sleeping on the back was seen as uncomfortable for the child or mothers were concerned the baby would choke if lying on their back. The stomach was not seen as a good choice because of all the information gathered from experts and the Back to Sleep program. To ameliorate these concerns mothers would put the infant on their side using either rolled blankets, as described by this mother: *"I used the receiving blanket thing, it works out real nice, one behind 'em and one in front of 'em."* Others used commercially available "props" to insure the infant did not roll to the stomach during the night. By using a prop, a parent could prevent the baby from choking, as explained by this mother, *"I do the back too but I usually prop something up behind them so they are kind of on their side or at least tilt their head to the side where if anything does come up, they won't go back down"*.

For some parents, laying the child to sleep on the back or side meant going against advice from family members, particularly those of the previous generation. A mother in Cape noted that *"My mom even said, my babies all slept good on their stomach and I was like uh uh, I'm not putting him on his stomach because if something happens and then everybody told me to put him on his back and I put him on his stomach, how would I feel?*" A mother in St. Louis described how she would not let her child sleep with her mother, since she always put her daughter on her stomach, against the mother's wishes.

Others held the view that laying a child on the back is necessary at night, but it is acceptable for a baby to sleep on the stomach during naps. Most of these statements were followed by explanations of staying in the room and watching the baby constantly during a nap. "*If I wasn't in the room I didn't do it"* was a common refrain for women who did allow an infant to sleep on his/her stomach during a nap. The perception of women who report this practice focuses on the idea that SIDS is something that occurs when the baby is not closely watched by a parent.

For parents that did put a child to sleep on his/her stomach, it was widespread to use older relatives as justification for stomach sleeping. Many noted that they had slept on their stomachs and been fine. A mother in Columbia told how after asking her mother-in-law for advice, she felt okay about stomach sleeping, since all her mother-in-law's children had done so. A woman in Sikeston stated *"my grandma said that all seven of her children slept on their stomach"* when describing why she allowed her daughter to sleep on her stomach. A slight variation on this theme was the idea that the infant is sleeping on the stomach when with older relatives. As one mother explained, *"at my mother's house she sleep like on her stomach"* adding that it

was her mother's decision *"when she is watching her"*.
A common refrain was that babies slept better on their stomach, and that putting the child in this position enabled both the infant and mother to get some much needed rest. A woman in Sedalia shared her reasons for putting her infant on her stomach. "*She's slept on her belly since she come home from the hospital. She just wouldn't go to sleep…we just put her on her belly and she went to sleep and she sleeps a lot better like that."* While some mothers were unconcerned with the practice, others would explain what other safety practices were employed to make sure an infant sleeping on the stomach was safe. According to a mother from Independence: "*I think as long as, you know, you don't have all the pillows and the blankets, I think they are fine, really, because she sleeps flat on her stomach and she loves it"*. In these cases, the mother felt she was following best practices in infant care within the confines of the family's need to sleep.

Lack of understanding of SIDS
While the slogan of "Back to Sleep" was prevalent and parents understood it was related to SIDS, the reasoning behind the need to lay a child on the back was muddy. The complexity of rebreathing air was not understood and the dangers of switching a child between back and stomach sleeping were not known. In general, there was a lack of understanding and confusion regarding SIDS.

A surprising number of participants thought of SIDS as "crib death" and inferred that it could only take place in a crib. A father in Springfield described how the mother of his child would not use their brand new crib since her friend's baby had died of SIDS. A few women intended to have their child sleep outside of the parent's bed such as the mother who stated that the, *"baby had a bassinet and a crib before he was born, but I didn't want to do the crib thing because of SIDS. I was a nervous wreck"*

This theme was more prevalent among African-American women, especially the older female relatives in African-American families. One mother explained *"My momma scared, my momma scared of crib death. She don't want me to put the baby in the crib"*. Finally, other themes common among grandmothers included the idea that SIDS is new, *"that SIDS stuff wasn't going around"* when they were raising their children. This concept was not unique to African-American women as illustrated by this white grandmother in a rural area: *"and then all of a sudden all these babies start to die from SIDS and now they say put them on their back…"*

The fact that medical advice had changed added to this confusion. In virtually every focus group conducted someone mentioned that "they" used to tell parents to put their baby on the stomach to sleep. This change in messages led many to discount the health experts, believing that ten years from now, research would make other conclusions and the message would change yet again. The insistence of grandmothers and other family that the stomach was a safe sleeping position for infants exacerbated the confusion with new mothers. As one woman in Sedalia described the situation *"they used to say it was better to put them down one way and then they changed it a few years later…* (my mom) *was like they changed it all these times. It's however they go to sleep"*. Another mother in Cape Girardeau noted *"They used to say put them on their stomach because they would choke if they threw up"*. Likewise, a mom in Kansas City reported, *"my mom, she has her (baby) when I go to work, and she's like you know back in the day one day you put him on stomach and put them on their back and so it seem like nobody know*".

The Back to Sleep campaign has made a mark in the minds of those who participated in the focus groups. Rarely was a person unfamiliar with the slogan. While Back to Sleep is a success in terms of an advertising campaign, the participants lack an understanding of how Back to Sleep prevents SIDS from occurring. The focus group participants were, as a whole, genuinely interested in understanding how and why Back to Sleep prevents SIDS. The mothers, fathers, and relatives had a desire to do what is best for the infant but the slogan to not provide the depth of information necessary to negate the advice of family and friends. MDHSS should consider providing more parents and family members with the medical facts surrounding SIDS in addition to continuing the Back to Sleep campaign. By tying the message of Back to Sleep with the medical facts, new mothers may be more adamant in laying the child on the back.

Advice
An overarching theme of the focus groups was the concept that mothers weigh information from a variety of sources and then make a decision based on the perceived needs of their child. Most of the mothers sought information about child care and nutrition from a variety of sources including female relatives, doctors and other medical experts, and agencies such as WIC and Parents as Teachers. While some information sources may hold more influence in the minds of a mother, the majority agreed that the most important thing for a mother to do was listen and then do what is best for her child.

Some women took the view that differences in children, even sibling sets, should guide a mother's actions. One mother described the process as *"just kind of trial and error. Try something that you didn't hear about. I mean, as long as it's not too off the wall or something, try it once and if it don't work, try something else, cuz they are all different, all babies are different"*. A grandmother explained that she told her daughter *"I don't care what they tell you, you've got to find out on your own what your child gonna do"*.

Others took a more independent view of a mother's role in child rearing. This approach to decision making on child care seemed to be more pervasive with white women in rural areas.

The key element for these mothers was that they absolutely know what is best for their child. As one young mother in Macon put it *"When people keep on giving me advice its just like go away and I hate it. It's like, why can't I do what I want with him. It is no one's decision but mine"*. A woman in Maysville corroborated this attitude by saying "*when it comes to my children…it is something I have to do myself and I don't need your opinion telling me how to do this. I'll find out myself…you can give me all the advice you want, I don't care, still I'm doing it the way I'm most comfortable doing it"*. Another woman stated *"I think all the advice is not always good advice. There's always lots of advice"*.

Many African-American women said they relied a great deal on their own instincts and experiences with children, recounting how familiar they were with children. This point of view was summed by a participant in Kansas City who said*: "It's not nothing new to me. I just have a little girl. It is nothing new. All I've done is take care of kids because I helped my mother out because she had four kids, so it comes natural for me. I don't know any better, I guess"*.

However, African-American women also seemed more likely to listen to the advice of others, even if the advice was not incorporated into child rearing practices. As an African-American grandmother in Cape Girardeau put it *"I always say that I listen to anybody. It don't mean that I do it, but I listen because you never know you might learn something, that's the way I feel about it"*. Similar statements were echoed in other predominately African-American focus groups as illustrated by this quote, *"I listened to what other people had to say but grandma and mom said everybody's child is different"*.

Overwhelmingly, female relatives are the people mothers trust the most outside of themselves. When a mother has a question, she is likely to talk to her mother, her mother-in-law, grandmother, aunts, and sisters. *"I guess if I am uncomfortable with the information I get then I'll find answers from the family that make me feel a little more comfortable"*. Female relatives with children were viewed as the people who best understood the mother's child, the mother's situation, and had the family's best interest at heart. The maternal or paternal grandmother of the infant is generally the first person sought out when a question about child rearing arises. *"I usually just try to figure it out by myself and then I usually turn to my mom. If she can't figure it out then nobody can"*. New mothers viewed their mother or mother-in-law as examples of success in child rearing and placed a great deal of trust in the advice received from this source. As one participant in St. Louis explained *"We* (mother and daughter) *didn't disagree because this was my first child and I figured if don't nobody else know, my momma knows. She was the person I went to if I got any questions—momma, momma, momma"*. A mother in Kansas City explained that while experts may talk about what is best for babies in general, her mother would explain that *"this is our kind of baby…they don't know about our kind of baby, they don't know nothing about our kind of baby."*

As a general rule, the more children a woman had, the more trusted she was as a source of advice. Women in focus groups would often justify following a mother's or grandmother's advice by saying *"my grandmother has 14 kids"* or *"my granny… because she is old and she knows"*. One woman suggested a fellow participant should talk to her mother because *"momma has a lot of experience, she had nine kids."* A frequent follow-up to these comments was *"she didn't just luck out on what she did"* indicating that the perceived level of success with child rearing gave the woman more credibility to offer advice.

Experts, medical and social service, played a role in providing advice to mothers. Most mothers were not shy about calling a doctor or other health professional if she had questions. Mothers described calling doctors regularly: *"Me and my doctor are like on a first name basis, that's how much I call"*, or my doctor *"is on my speed dial, she's on my speed dial and I called her quite often during the past couple of years"*. Others viewed consulting an expert as a second step "*I'd say if common sense don't tell you I'd say the pediatrician"*.

The quality of medical advice varied between participants and, as a result, some were swayed to decisions that may be viewed as undesirable by other medical experts. For example, one woman in New Madrid intended to breastfeed her infant but *"the nurses scared me and told me that it hurt"* which led the woman to abandon her original plans. Another woman indicated that with all of her kids she had problems with *"some of the nurses were wanting to give them formula… I didn't like that, I just wanted them to bring them straight to me"*. There were even some instances when women reported getting information from health professionals that did not conform to the recommendations of the American Pediatric Association. In one case, a woman in Kansas City explained *"the doctors encouraged* (stomach sleeping) *something about their heads being flat and something of that nature. Said that they should lay on their stomachs and I just did it"*.

While mothers may seek advice or ask questions from outside experts, many felt no qualms in disregarding the advice. In part, this attitude was based on the idea that many of the women in the focus groups had experience with infants. Women in several locations talked about how long they have been around infants. *"I've been raised around babies my whole entire life, my mom was a nanny, and so, I mean I've been with babies"*. Frequently woman and grandmothers thought experts did not send consistent messages, *"…but I guess different doctors say different things"*. This sentiment was reinforced by the difference in suggested sleep position between the grandmother and the mother's generation.

Women also tended to disregard "expert" advice if it tended to be different from the direction they wanted to take. For example, a woman in Kansas City when discussing the introduction of solid foods recounted the following: "*I even said, I'm going to be a good mother, and I'm going to call my doctor and say how soon can I feed this baby some food, and he said, no, no, no, just*

because he's big don't give that baby no food and I said ok. You know what they say, listen to their grandparents because they know what you are talking about. And I said, you going to get some food. So he did".

The receptiveness of women to WIC advice and information varied from location to location. In some areas the women thought highly of the WIC office and frequently turned to WIC for information, such as Springfield, Macon, and Moberly. In other locations, however, the opinion of the WIC office was not as high. Despite wanting information from the WIC office, women in some areas viewed it as a place that only wanted to give out vouchers, not information or education. This view seemed to be especially prevalent in the St. Louis area. A few of the older women noticed this push towards vouchers and lamented that the WIC program does not provide the same kind of educational opportunities that it did in the past, the *"program has changed a lot"* and *"when I was with WIC it was a little more interesting than it is now"*. Others complained that the information provided by WIC staff was different from the material in the WIC office. A woman in Sedalia explained *"…they would contradict themselves by what they would tell you and then the information they give you in a pamphlet, it would be conflicting, they would contradict each other so a lot times we didn't… and mom didn't have an answer we'd just kind of go with somewhere in the middle…"*

For some women, it was not the quality of the advice that mattered but whether the WIC staff was receptive to their child's needs. This sentiment was especially apparent in terms of introducing a child to solid foods. Several mothers did not feel the consideration was given to the needs of her unique infant. One mother relayed this story *"See I'd go to like, I was on WIC with my oldest and I'd go to them and I'd be like, well, he's still hungry, this formula is not doing it, and they were like, oh can't feed him cereal til he's 3 months old, can't feed him baby food until he's this, and I kind of looked and her and I said ok. I didn't listen though, because it is your child and you know when they're hungry so you just have to do with mom what you think is best"*. The adamant attitude of WIC staff on guidelines made many mothers upset, one mother explained *"they actually get rude with you if you're not feeding their child that they say you are not supposed to feeding your child at a certain time"*.

Implications of Results

Focus groups were an ideal methodology for this project. It soon became apparent that for many persons, the decision making process was quite complex, and varied by situation and even by child. While some expected issues were raised, such as fear of choking for children on their back, new concerns also came to light. One such example was the confusion over SIDS and cribs, specifically the idea that SIDS only occurred in cribs. This finding would not have come to light if surveys were the only data collection method used in this project.

One striking result of the focus groups was the remarkable similarity between the findings of this project and those of a project conducted in New York City (Bettegowda, Manzano, and Boyd, 2004).[11] While the project in New York City focused exclusively on practices related to SIDS, many of the themes that arose were the same as those expressed by Missouri participants. For example, fear of the infant choking on the back, confusion over how SIDS occurs, reliance on a mother's instinct, and trusting mom's advice over those of experts each emerged in both the New York and Missouri study. While these themes were more common in predominately African-American areas of Missouri, the sentiments were by no means exclusive to African-Americans.

Overall, the processes by which parents make decisions around infant care are complex. Parents tend to seek out multiple sources of assistance, including other family members, health experts (physicians, nurses, WIC) and books, magazines, and internet sites. Clearly, personalities also played a role in what information parents used and the ultimate decisions made. Nevertheless, there does appear to be several ways in which information could influence decisions.

First, informational materials and educational programs should target grandmothers of the child, as well as parents. This is especially true among the African-American community. It was clear that grandmothers were influential in the decision making process and at times, their information squarely conflicted with that of "experts". This was most evident in regards to sleeping position and the introduction of solid foods.

Second, information regarding SIDS needs to squarely address some of the concerns voiced by parents. These include concerns over choking when placed on the back, the relationship between place and SIDS (i.e. it is not crib death), and the reason for the change in messages over the years. At a few focus groups, representatives from MDHSS discussed some of the issues afterwards with participants, and described in detail why babies would not choke on their back. The visual illustration provided by the MDHSS representative seemed convincing to the parents in the room and many noted that hearing the explanation helped them to understand the medical reasons for the safety procedures. It is precisely that type of message that needs to be continually reinforced.

Finally, health experts, especially WIC, should consider taking a new approach when working with families. Health experts should work with families to understand their unique situations and devise solutions that work for that family. These solutions must be healthy and safe for the child but, by listening to the worries and fears of parents, these solutions may be viewed as more acceptable. For example, many parents will continue giving solid foods at an early age. Given that fact, can parents be persuaded to give cereal, as opposed to table food? By talking to the parents, explaining the reasons for feeding and sleeping guidelines, and developing solutions that fit the needs of the family, health experts can have a far greater impact on the decision making process of families.

Appendix A

Demographic Information on Counties

Missouri Counties	Population, 2003 estimate	Population, 2000	White persons, percent, 2000	White persons, not of Hispanic/ Latino origin, percent, 2000	Black or African-American persons, percent, 2000	Persons of Hispanic or Latino origin, percent, 2000	Median household income, 1999	Per capita money income, 1999	2003 Infant Mortality Rate
Boone County	141,122	135,454	85.4%	84.4%	8.5%	1.8%	$37,485	$19,844	7.7
Cape Girardeau County	69,876	68,693	92.1%	91.6%	5.3%	0.9%	$36,458	$18,593	7.6
Clay County	194,247	184,006	92.5%	90.5%	2.7%	3.6%	$48,347	$23,144	5.7
Cole County	72,454	71,397	87.1%	86.4%	9.9%	1.3%	$42,924	$20,739	6.1
DeKalb County	13,063	11,597	89.1%	88.4%	8.9%	1.1%	$31,654	$12,687	5.3
Dunklin County	32,654	33,155	88.6%	87.4%	8.7%	2.5%	$24,878	$13,561	9.6
Greene County	245,765	240,391	93.5%	92.5%	2.3%	1.8%	$34,157	$19,185	7.3
Jackson County	659,723	654,880	70.1%	67.7%	23.3%	5.4%	$39,277	$20,788	7.4
Macon County	15,577	15,762	96.2%	95.6%	2.2%	0.8%	$30,195	$16,189	8.9
New Madrid County	19,187	19,760	83.2%	82.7%	15.4%	0.9%	$26,826	$14,204	9.1
Pettis County	39,344	39,403	92.1%	90.9%	3.0%	3.9%	$31,822	$16,251	9.0
Randolph County	25,045	24,663	90.6%	89.9%	7.0%	1.1%	$31,464	$15,010	11.2
Scott County	40,779	40,422	87.7%	87.1%	10.5%	1.1%	$31,352	$15,620	13.3
St. Louis City	332,223	348,189	43.8%	42.9%	51.2%	2.0%	$27,156	$16,108	13.3
St. Louis County	1,013,123	1,016,315	76.8%	76.0%	19.0%	1.4%	$50,532	$27,595	8.0

Appendix B

Specific Locations for Focus Groups

Date	Group Time	Location
6/22/2005	2:00 PM - 4:00 PM	Independence, Jackson County Health Department
6/24/2005	1:00 PM - 3:00 PM	Kansas City, Truman Medical Center Hospital Hill
7/1/2005	1:00 PM - 3:00 PM	Columbia, Boone County Health Department
7/5/2005	5:45 PM - 7:45 PM	Springfield, Early Headstart[12]
7/12/2005	1:00 PM - 3:00 PM	Maysville, Farmers Mutual Insurance Building[13]
7/13/2005	2:00 PM - 4:00 PM	Moberly, Randolph County Health Department
7/18/2005	1:00 PM - 3:00 PM	Macon, MDHSS District office building
8/1/2005	1:00 PM - 3:00 PM	Jefferson City, Cole County Health Department
8/3/2005	1:00 PM - 3:00 PM	Independence, MODHSS District Office
8/9/2005	2:00 PM - 4:00 PM	Cape Girardeau, Southeast Missouri Hospital
8/10/2005	10 AM - 12 PM	Sikeston, Missouri Delta Medical Center
8/10/2005	1:00 PM - 3:00 PM	New Madrid, New Madrid County Human Resources Council Community Partnership
8/15/2005	1:30 PM - 3:00 PM	St. Louis, Barnes-Teen Parenting Center
8/15/05	3:00- 4:30PM	St. Louis, Barnes-Teen Parenting Center
8/15/2005	4:30 PM - 6:00 PM	St. Louis, Barnes-Teen Parenting Center
8/16/2005	10:00 AM - 11:30 AM	St. Louis Peoples Health Center (Delmar location)
8/16/2005	1:30 PM - 3:30 PM	St. Louis County, North County Health Center
9/8/2005	4:00 PM	Sedalia, Pettis County Community Partnership
9/29/2005	5:30 PM	Kansas City, Faxon Montessori School, Caring Communities

Appendix C

Oral Consent Script

My name is Jane Mosley, and I'm here today on behalf of the University of Missouri. We have been asked to talk with you about different ways people take care of their infants, and how they make decisions regarding infant care. We are very glad you were able to come, because your opinions and experiences are very important in helping us and others in the state understand what type of information is most helpful to persons with young children. Your participation is this focus group is voluntary, and if, at any time you do not feel comfortable, you are free to leave.

I hope we will be able to have an informal discussion, and that everyone will speak up and say what they think. We want to hear your honest opinions, about these topics. There is no right or wrong answer. Because we want to hear what you really think, please feel free to agree or disagree with what other participants have said. Sometimes you may want to tell us about the experiences of other people that you know.

As you can see, we will be taping this discussion to make sure that we know exactly what everyone has said. We will do a written transcription from these tapes, but the transcription will not include your name. We will assign everyone a number, and that number will be used in the transcription so that everything you say is confidential, and can not be matched to you.

We have refreshments for you, so please just get up when you need something. We will talk together for about 90 more minutes and then we'll ask you to fill our a very short, anonymous form and we'll be giving you your Wal-Mart certificate as a thank you gift for the time you spent here today.

Do you have any questions before we start?

Appendix D

Infant Care & Nutrition Focus Groups
Emancipated Minor Consent Form

I agree to take part in the research project focusing on the infant care and nutrition practices by Dr. Jane M. Mosley. To be in the project:

- I will complete a survey about my parenting experiences and attitudes.
- I will participate in a focus group for about 90 minutes.
- We will talk about my infant care and nutrition practices and the people who have influenced those practices.
- I do not have to answer all of the questions if I don't want to. If, at any time I do not feel comfortable, I am free to leave.
- I will be given a $30 gift certificate to Wal-Mart (if I want one). Everyone will receive a gift certificate even if they choose to leave early although we hope you will stay the entire time as your opinions are important to us.
- The discussion will be taped to make sure that we know exactly what everyone has said. The tapes will be typed up but will not include your name. We will assign everyone a number, and that number will be used in the typed version so that everything you say is confidential, and can not be matched to you.
- If I decide I do not want to participate, it will not affect any services I might receive from this facility or other community agencies.
- I can contact Dr. Mosley at (573) 884-3381 if I have any questions about the project
- I may contact the Campus Institutional Review Board about general questions related to participation in MU research projects at (573) 882-9585.

CHECK ONE: _____**I agree to participate**.

_____**I do not want to participate at this time**.

PRINTED NAME: _____
(Emancipated minor participant)

DATE: _____

SIGNATURE: _____
(Emancipated minor participant)

Appendix E

Survey Items for Mothers

1) How old were you when you had your first child? If pregnant with your first child, how many years old are you now?

2) How many years old is your youngest child? If pregnant with first child, what month / year is your child due?

3) How many children do you currently have?
_____ Not applicable / child not yet born

4) How many weeks pregnant were you when you first saw a doctor or other health care professional? (Please answer based on last or current pregnancy if you have more than one child.) _____ Not applicable / child not yet born

5) After the birth of your child, how soon did the baby see a pediatrician or other health care professional? (Please do not count any pediatrician visits that occurred in the hospital right after birth.) _____ Not applicable / child not yet born

6) Have you ever breastfed?
Yes No Not applicable / child not yet born
If yes, what is the longest amount of time you breastfed? _____months

Survey Items for Fathers

1) How old were you when your first child was born? If currently expecting your first child, how many years old are you now? _____

2) How many years old is your youngest child? If currently expecting your first child, what month / year is your child due? _____

3) How many children do you currently have?

_____ Not applicable / child not yet born

4) How many of your children currently live with you?

_____ Not applicable / child not yet born

5) How many weeks pregnant was the mother of your child when she first saw a doctor or other health care professional? (Please answer based on last or current pregnancy if you have more than one child.)

_____ Not applicable / child not yet born

6) After the birth of your child, how soon did the baby see a pediatrician or other health care professional? (Please do not count any pediatrician visits that occurred in the hospital right after birth.)

_____ Not applicable / child not yet born

7) Were any of your children breastfed?

Yes No Not applicable / child not yet born

If yes, what is the longest amount of time your child was breastfed? _____months

Survey Items for Relatives

1) Do you have any children? Yes No
If yes, how old were you when you had your first child? _____

2) Are you currently caring for a child under 12 months of age?
If yes, what is your relationship to that child? _____

3) How many children do you have?
_____ Not applicable

4) How many weeks pregnant were you when you first saw a doctor or other health care professional? (Please answer based on last pregnancy if you have more than one child.) _____ Not applicable

5) After the birth of your child, how soon did the baby see a pediatrician or other health care professional? (Please do not count any pediatrician visits that occurred in the hospital right after birth.)
_____ Not applicable

6) Have you ever breastfed?
Yes No Not applicable
If yes, what is the longest amount of time you breastfed? _____months

Survey Items Common to All Instruments

What is your age? _____ years

What is the highest level of education you completed?

Less than high school
Completed high school
Vocational education after high school
GED
Some College
Associates Degree
4 Year College degree or Higher

Are you Hispanic or Latino?

Yes
No

Which one or more of the following would you say is your race?

White
Black or African-American
Asian
Native Hawaiian or Other Pacific Islander
American Indian or Alaska Native

Are you?

Married	Divorced
Widowed	Separated
Never married	

Are you . . .?

Employed for wages	Self-employed
Out of work for more than 1 year	Out of work for less than 1 year
A homemaker	A Student
Retired	

If employed for wages or self-employed, are you . . .?

Full-time (35+ hours per week), permanent
Full-time (35+ hours per week), temporary
Part-time (less than 35 hours per week), permanent
Part-time (less than 35 hours per week), seasonal or temporary

In the past 12 months did you

receive food stamps?	Yes	No	Don't know
receive food assistance from a food pantry?	Yes	No	Don't know
receive WIC?	Yes	No	Don't know

What is your total household income? Please include the income of all earners in your household.

less than $10,000	$10,000 – $20,000
$20,001 - $30,000	$30,001 - $40,000
$40,001 - $50,000	$50,001 and up

Please circle that answer that most corresponds with your opinion of the following statements.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
The benefits of breast milk last only as long as the baby is breast fed.	5	4	3	2	1
Formula feeding is more convenient than breastfeeding.	5	4	3	2	1
Breastfeeding increases mother infant bonding.	5	4	3	2	1
Breast milk is lacking in iron.	5	4	3	2	1
Formula fed babies are more likely to be overfed than breast fed babies.	5	4	3	2	1
Formula feeding is the better choice if the mother plans to go out to work.	5	4	3	2	1
Mothers who formula feed miss one of the great joys of motherhood.	5	4	3	2	1
Women should not breastfeed in public places such as restaurants.	5	4	3	2	1
Breastfed babies are healthier than formula fed babies.	5	4	3	2	1
Breastfed babies are more likely to be overfed than formula fed babies.	5	4	3	2	1
Fathers feel left out if a mother breast feeds.	5	4	3	2	1
Breast milk is the ideal food for babies.	5	4	3	2	1
Breast milk is more easily digested than formula.	5	4	3	2	1
Formula is as healthy for an infant as breast milk.	5	4	3	2	1
Breastfeeding is more convenient than formula.	5	4	3	2	1
Breast milk is cheaper than formula.	5	4	3	2	1
A mother who occasionally drinks alcohol should not breastfeed her baby.	5	4	3	2	1

Appendix F

Focus Group Discussion Guide

Some women bottle-feed, some breastfeed and some do a combination. Let's talk about your child. Which do you use and have you used? and when?

1) Breast/Bottle Feeding

- Pros/Cons of Each Method
- Who gave you advice on this/influenced decision?
- Specific role of father/grandmother in process
- Who gave you assistance/support—hospital, lactation, friends?
- Role of work/pumping? Did that factor in?
- Would you do the same with an additional child?

2) Solid Food
- What made you choose that food?
- What made you choose that time?
- Who did you talk to about that decision?

3) Sleeping Place
- Where physically do they sleep?
- What made you choose that?
- What do you like about that place for sleep?
- Same for other children?
- What advice/info have you gotten from people on sleeping?

4) Overall, if you have questions about your child who do you contact?
- Family, friends, doctor, WIC?
- Whose opinions and advice regarding child's health you do trust the most?
- Is Doctor a source of information?
- Role of pamphlets, public service announcements?

Overall prompts:
Can you tell me more about that?
Do you have anything to add on that?
How did you come to that decision?

(Endnotes)

[1] Hessol, Nancy & Ruentes-Afflick, Elena. "Ethnic Differences in Neonatal and Postneonatal Mortality" Pediatrics, Vol. 115, Issue 1, January 2005.

[2] http://www.kidscount.org

[3] Personal correspondence with Cathy Kruse, Statewide Breastfeeding Coordinator, Missouri Department of Health and Senior Services.

[4] Ruowei, Li, Darling, Natalie, Maurice, Emmanuel, Barker, Lawrence, & Grummer-Strawn, Laurence M. "Breastfeeding rates in the United States by Characteristics of the Child, Mother, or Family: The 2002 National Immunization Survey" Pediatrics. Vol. 115, No. 1, January 2005.

[5] Ruowei, Li, Darling, Natalie, Maurice, Emmanuel, Barker, Lawrence, & Grummer-Strawn, Laurence M. "Breastfeeding rates in the United States by Characteristics of the Child, Mother, or Family: The 2002 National Immunization Survey" Pediatrics. Vol. 115, No. 1, January 2005.

[6] The RPF required that the contractor conduct a minimum of 15 focus groups; this project exceeded that requirement.

[7] $45 incentives were provided in St. Louis City, St. Louis County and the September Kansas City focus group. Participants in all other focus groups in July, August, and September received $30.

[8] The specific question asked about the first visit to a doctor after leaving the hospital.

[9] De la Mora, A., Russell, D. W., Dungy, C. I., Losch, M., & Dusdieker, L. (1999). The Iowa Infant Feeding Attitude Scale: Analysis of reliability and validity. *Journal of Applied Social Psychology* 29(11), 2362-2380.

[10] Scott, J., Shaker, I., Reid, M. (2004). Parental attitudes toward breastfeeding: Their association with feeding outcome at hospital discharge. *BIRTH* 31(2), 125-131.

[11] Bettegowda, V., Manzano, K., Boyd, L. (March 2004). Beliefs and practices regarding Sudden Infant Death Syndrome (SIDS): Risk reduction among African-American mothers, fathers, and caregivers in New York City. New York City: Bureau of Maternal, Infant and Reproductive Health.

[12] Interviews in Springfield occurred in the WIC office.

[13] Interviews in Maysville occurred in the WIC office.

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