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Barriers and Facilitators to Participation in Support Groups and Counseling Services in Promotion of Infant and Young Child Feeding Practices in West Timor, Indonesia

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2008

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An abstract submitted to the Faculty of the
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Abstract

Barriers and Facilitators to Participation in Support Groups and Counseling Services in Promotion of Infant and Young Child Feeding Practices in West Timor, Indonesia

by Molly Pilloton

Background: Optimal infant and young child feeding (IYCF) practices have the potential to reduce health outcomes related to undernutrition in developing countries. A number of strategies are being implemented to improve IYCF, improve nutrition, and related maternal and child health outcomes. There is limited research as to what are effective methods for improving IYCF practices.

Objective: The study explores the barriers and facilitators to participation in MtMSG in West Timor, Indonesia. Additionally, the study also explores the role of other support groups, and investigates alternative resources of IYCF information.

Methods: A doer/non-doer survey (D/ND) (n=29) investigated the differences between those who attend, or facilitate, MtMSG, and those who do not. Focus group discussions (FGDs) (n=12) investigated the village perceptions of MtMSG and alternative support groups. In-depth interviews (IDIs) (n=4) investigated the trust relationships and decision-making processes. Lastly, key informant interviews (KIIs) (n=5) investigated the national context of IYCF.

Results: Major themes from the data indicated that MtMSG were not functioning optimally due to the didactic style of the group and the duplication of IYCF information that women receive. Data also demonstrate that husbands are prominent influences on decision-making, and that women experience issues of privacy and lack of trust that may prevent participation in MtMSG.

Discussion/Conclusion: The didactic style and the duplication of IYCF information that women receive inhibit participation in MtMSG. Women, instead, are turning to individual counseling, or receive information as a part of a monthly growth monitoring day. Support groups should be restructured to create a supportive environment, while limiting didactic nature. Individual counseling should be scaled up to reflect women's feelings regarding privacy and trust. Lastly, buy-in from husbands is valuable, regardless of the strategy. Evidence from this study can be used to inform future CARE programming.

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Friends and Family

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Chapter 1: Introduction

Nutrition is critical to human development because of its lasting effects on immunity, cognitive development, and physical wellbeing, cutting across all areas of health and economic wellbeing. Though some nutrition-related gains have been made, maternal and child undernutrition continue to impede the health and wellbeing of people living in poverty. Globally, undernutrition accounts for 11% of the disease burden and at least 3.5 million deaths in children under five years of age annually (Bhutta, et.al., 2008). At least one-third of all deaths annually can be attributed to maternal and child undernutrition, with millions more women and children suffering from related illnesses.

The "Window of Opportunity" is the term used to describe the crucial time period of pregnancy to two years for appropriate and adequate nutrition practices for an infant (Bryce, et.al., 2008). The current recommendations for optimal infant and young child feeding (IYCF) practices put forth by the World Health Organization and UNICEF are as follows:

- early initiation of breastfeeding (meaning, within one hour of birth),
- exclusive breastfeeding for first 6 months,
- and introduction of foods that are nutritionally adequate, and complementary to continued breastfeeding at 6 months, with breastfeeding continuing to at least two years of age (World Health Organization, 2002; World Health Organization, 2010).

Taking a step back, why is breastfeeding so important? The benefits of breastfeeding are countless, and include improved survival, growth, and development for children in both developing and developed countries. Early initiation of exclusive breastfeeding creates a foundation for healthy growth and development. Breast milk composition makes it a critical source of energy, vitamins, and minerals. It has a protective effect for newborns, in that it can reduce mortality and fight illness by creating a healthy immune system. Additionally, adults who were optimally breastfeeding as infants, have better health outcomes, including lower cholesterol, lower blood pressure, and lower rates of being overweight or obese (World Health Organization, 2010).

Breastfeeding also has significant benefits for the mother (Labbok, 1999). First of all, breastfeeding provides an opportunity for the mother and infant to bond, creating an attachment. This attachment has benefits for both the mother and infant, in that it creates a stress-response, and also provides a sense of comfort and trust. Additionally, as a mother bonds with her child, she will experience increased self-esteem, and even a sense of accomplishment as a mother. There are both immediate and long-term health benefits for the mother when she breastfeeds (Else-Quest, et.al., 2003). By initiating breastfeeding early, post-partum bleeding reduces, and contracts the uterus to allow it to return to a more normal size. As a mother continues to breastfeed, fertility is delayed, and therefore breastfeeding can act as a family planning method, known as lactational amenorrhea method (LAM) (USAID and Access Family Planning Initiative). Mothers who breastfeed also tend to have reduced risk of contracting some cancers, including ovarian cancer and breast cancer (Leon-Cava et.al., 2002).

These countless benefits contribute to lowered health care costs, and create an opportunity to efficiently and effectively promote health among mothers and infants in developing countries. And yet, there are still many infants who are not optimally fed. In fact, globally, only 35% of infants are exclusively breastfed for the first 6 months of their life. And yet, if all children, worldwide, were optimally fed, 1.5 million under-fives' lives could be saved (World Health Organization, 2010). Because of these discrepancies in recommendations and behavior, there are currently a number of interventions under investigation to identify the best strategies to bridge this gap.

Through the *Window of Opportunity* program, CARE seeks to enable and empower mothers to make informed decisions regarding their own health status and the health of their children through mother-to-mother support groups, individual counseling services, and group action-oriented education. Mother-to-mother support groups and individual counseling provide supportive outlets and education opportunities to empower mothers, and improve their nutritional knowledge and practices. By improving the mother's health and the health of her child, CARE is empowering the woman and child in an effort to maximize human potential through nutrition, and create sustainable behavior change. *Prima Bina* is a part of the larger *Window of Opportunity* project of CARE International that "works to promote, protect, and support optimal infant and young child feeding and related maternal nutrition practices by improving the enabling environment, strengthening health system support, and empowering communities and individuals to

make optimal infant and young child feeding and related maternal nutrition choices." (CARE, 2007).

In West Timor, roughly 48.2% of infants were exclusively breastfed through their first six months (CARE, 2007). However, there is also a trend of introducing pre-lacteals in the first four days, often water, sometimes with sugar, or infant formula. At six months, the introduction of complementary foods is recommended, and currently only 30% of infants receive them. These data demonstrate pressing needs for interventions that are culturally appropriate, supportive, and sustainable. Discrepancies in IYCF recommendations and actual behavior require an investigation into an appropriate response, that incorporate education, support, family and supporters. CARE's *Window of Opportunity*, and locally, *Prima Bina*, projects has sought to do just that- offer a well-rounded strategy for improving IYCF practices and rMN.

Problem Statement: This study addresses the contextual barriers and facilitators to MtMSG in West Timor, Indonesia. In order to understand the factors contributing to the effectiveness of *Prima Bina* and work to prioritize strategies for the Ministry of Health (MOH), the goal of this study is to understand how best to approach optimal IYCF practices and related maternal nutrition for the mothers and children in the catchment area. The specific research questions for this study include:

1) What are the barriers to participation in mother-to-mother support groups (MtMSG) in Timor Tengah Utara (TTU) and Belu districts in West Timor, Indonesia?

2) What are the facilitators of participation in mother-to-mother support groups (MtMSG) in Timor Tengah Utara (TTU) and Belu districts in West Timor, Indonesia?

3) What other social support groups are currently operating in the community and what aspects of these groups are successful?

4) What are other resources promoting optimal IYCF practices do women access?

Significance Statement: The findings from this study will be used to generate conclusions and recommendations to CARE can inform future programming, provide comparison data to be considered with the other program areas, and can contribute to the growing literature related to support groups as a behavior change strategy for infant feeding.

Definition of Terms

Arisan	lottery type activity, in which participants pool money, and the winner takes the collected monies
BCC	behavior change communication
Bidan	West Timor midwife
CARE	Cooperative Agreement for Relief Everywhere
CCF	CARE Community Facilitator
EBF	exclusive breastfeeding
FGD	focus group discussion
IDI	in-depth interview
IRB	Institutional Review Board
IYCF	infant and young child feeding
Kader	West Timor community health worker and health educator
Lopo	West Timor covered area for sitting, often in the village "center"
Mantri	West Timor nurse
MCH	maternal and child health
MDG	Millennium Development Goal
MtMSG	mother-to-mother support group
NGO	non-governmental organization
Posyandu	mandatory, monthly growth monitoring sessions in West Timor villages
rMN	related maternal nutrition
WHO	World Health Organization

Chapter 2: Review of the Literature

Maternal and Child Health (MCH) and Infant and Young Child Feeding (IYCF) Practices, Globally

Increasing attention is being directed towards maternal health and child health, globally, as a response to broadening gaps in health outcomes between developed and developing countries. With the creation of the United Nations (UN) Millennium Development Goals (MDG), this attention has focused into concrete goals that could improve health from many angles by 2015. MDGs 4 and 5 are specifically focused on child health and maternal health, respectively. MDG 4 seeks to reduce the under-five mortality rate by two-thirds by preventing and treating the most prevalent diseases and infections among children worldwide through adequate and proper nutrition. MDG 5 seeks to reduce the maternal mortality ratio by three quarters by improving reproductive health services and implementing timely interventions to ensure safe pregnancies and births (UN, 2010). As a result, many studies have emerged since the MDGs were introduced to contribute to tracking the progress of programs and interventions aiming to support these critical goals for women and children. These studies, subsequently, are increasing access, improving services, raising awareness, and helping populations make progress toward meeting the MDGs.

MDGs demonstrate the global commitment to, and the importance of, maternal and child health (MCH), as a foundation for a healthy life. Within a family, mothers and children are the most susceptible to experiencing the effects of poverty (UN, 2010). While there

have been gains in the last ten years related to MCH, there is still much progress to be made to meet the MDGs, but also to serve the world's women and children. According to the WHO, maternal and child undernutrition account for ten percent of the global burden of disease, and contributes to about one-third of child deaths worldwide (WHO, 2012). In 2010, the global prevalence of stunting, wasting, and underweight for children under five in developing countries were 29.2 percent, 9.6 percent, and 17.9 percent, respectively (WHO, 2011). One focus of this overarching issue of MCH is the element of infant and young child feeding (IYCF) practices, which provides a foundation for improved child survival, healthy growth and development, and prevention of diseases and infections for children (WHO, 2010).

IYCF has found its place in the spotlight of MCH studies and interventions. Adequate IYCF practices can address stunting, wasting, and underweight indicators, and therefore, the WHO and UNICEF have created a set of global recommendations for best practices related to IYCF. The current recommendations are:

- "early initiation of breastfeeding with one hour of birth;
- exclusive breastfeeding for the first six months of life; and
- the introduction of nutritionally adequate and safe complementary foods at six months together with continued breastfeeding up to two years and beyond. (WHO, 2010)"

Despite these recommendations, there are still gaps in adequate nutrition, and grave consequences, related to maternal and child undernutrition. Undernutrition has a broad range of consequences, affecting health and social development. Specifically, undernutrition has been associated with poor development among children under two and put children at risk of diarrhea, malaria, measles, and other diseases, and consequently morbidity and mortality (Black, et.al., 2008). Suboptimal IYCF also has lasting consequences into adulthood. Inadequate nutrition as a child can reduce one's ability to fight disease, attain and attend school, and their eventual economic productivity (Victora, et.al., 2008). Those with histories of undernutrition experience infections in more devastating manners, either experiencing re-infection, reduced ability to fight the infection, or both (Guerrant, et.al., 2008). The more social consequences, such as education and economic productivity, are issues that turn around and influence the health and social development of their children, and continue the cycle of MCH-related issues.

There are a number of factors that contribute to suboptimal IYCF practices, and further, gaps in MCH indicators. Factors lie within individual, family, community, and systemic levels, thus creating a complicated issue to tackle. Individual factors such as maternal education, self-efficacy, and autonomy can contribute to a woman's ability to adequately feed her children (Kalita, 2006). Other factors include socio-economic status, community perceptions, and access to services and support can also play a substantial role IYCF practices and behaviors (ibid). These factors contribute to a woman's agency, but also trickle down to affect child health. This continuation and cyclical manner of factors,

contributes to poor IYCF practices, poor child health outcomes, and poor maternal health outcomes, and thus, requires appropriate attention and interventions.

Behavior Theory

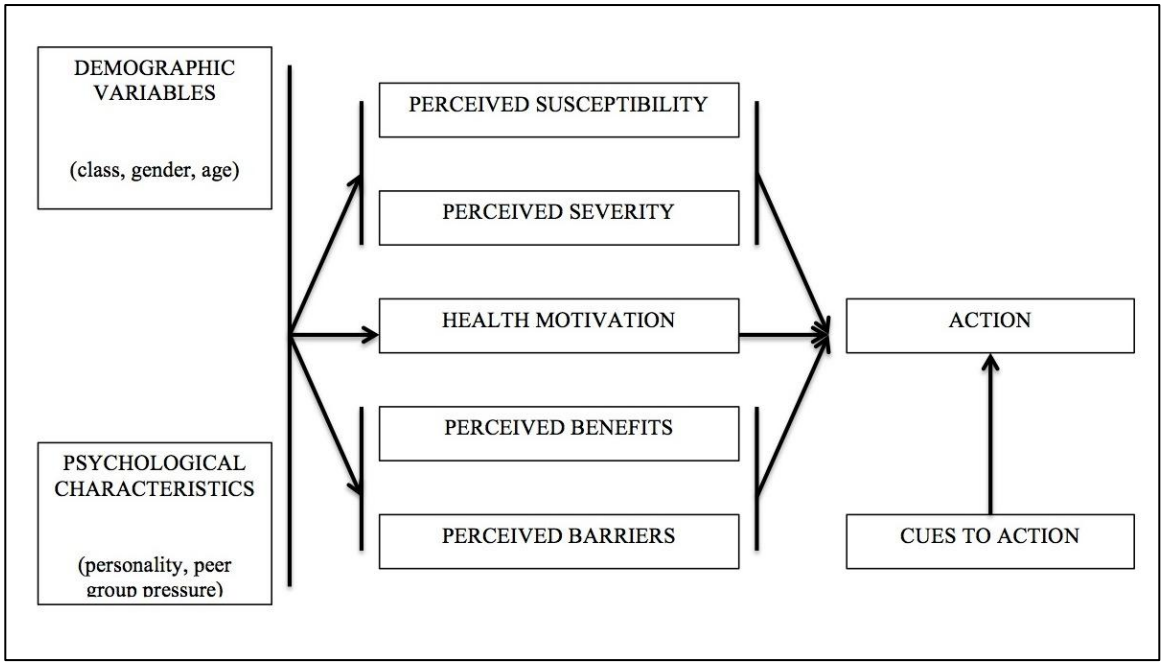
When it comes to the actual practices of IYCF, there are a number of behavior theories that contribute to our understanding of the gaps in MCH. As previously indicated, a contributing factor to IYCF is a woman's self-efficacy. Self-efficacy is a fundamental component of social cognitive theory, and is defined by psychologist, Albert Bandura, as one's belief in their ability to succeed in certain situations (Bandura, 2001). Self-efficacy is a large determinant of one's actions and approach to goals and challenges. It also is a component to the larger social cognitive theory, which posits that a person can acquire knowledge through observing others' behaviors by utilizing two mechanisms, agency and efficacy (Bandura, 2001). Agency, the second component of social cognitive theory, is a large part of behavior change, in that it allows a person to have control over his or her own development (ibid). Social cognitive theory addresses multi-level determinants in terms of health. Socio-structural and personal determinants of health are incorporated in this theory, and therefore indicate levels in which interventions and health promotion may be nested (Bandura, 1998). For example, one's socioeconomic status, often related to a community's power dynamics, can largely influence a person's ability to access health services. This may elicit the inclusion of targeting socioeconomic status in a larger health access improvement intervention.

One's belief in their own ability to act (efficacy), and the actual ability they have to control their behaviors (agency), can directly be associated with these socio-structural and personal determinants. Health behavior models often include efficacy and agency for this reason, and can manifest in health behavior models as positive deviance, role-modeling, and socially-oriented interventions (ibid). The concept of empowerment, which includes themes of efficacy and agency from social cognitive theory, is often a strong element within social support interventions, due to its demonstrated effects on health behaviors. Social environments are strongly tied to health, and by creating an environment of support, the community can make larger strides together to improve its health outcomes because the community can identify its own problems and therefore, its own solutions (Rosato, et.al., 2008). The problems communities can tackle may start off as small in scale, but may eventually tackle larger issues.

In addition to social cognitive theory, the health belief model offers an explanation for why people engage or do not engage in certain health behaviors. This model operates in three major classes: individual perceptions, modifying factors, and likelihood of action (see Figure 1). Each dimension contributes to an overall explanation of a person's behavior. This model has been used to address a number of health issues, including influenza, alcohol use, diabetes, and many more (Janz and Becker, 1984). This model explains the process of one's cognitive process for behaviors. Individual perceptions include one's perception of importance, threat, and benefits of a particular behavior. Each of these components can be attributed to personal opinion, but also the environment in which this behavior operates. Modifying factors include all the variables that contribute

to the behavior, ranging from age and socioeconomic status, to relationships, to the media portrayal of the behavior. Likelihood of action encompasses the perceived barriers to action, likelihood of taking preventative action, and the cues to action. These are the final factors in the process to action, and are found in community perceptions, conversations with trusted confidants (often partners), and abilities to access support, such as health services and providers. Health belief model has been a basis for many health behavior programs because of its ability to target cognitive changes, and utilize one's beliefs as a foundation for change (Conner and Norman, 2005). The model is effective in a number of health behavior interventions, but mostly in the following capacities: preventive behaviors, sick role/adherence behaviors, and clinic use. Ranging from contraceptive use, adherence to prescribed regimens, and visits to health providers, the model's versatility and general applicability has dictated the success of many studies (ibid).

Figure 1. Health belief model.



(Adapted from Conner and Norman, 2005)

In addition to investigating relationships and support to create behavior change, there are some economic theories that can explain the actual act of decision-making. In "social economics", the process of weighing costs and benefits to all sides of a decision is valuable to understanding how a person may digest interventions, or plan out a single day. The nature of how information is spread, also known as diffusion theory, involves a series of decisions on an individual level (Kumar, et.al., 2010). Malcolm Gladwell, the author of the book, The Tipping Point: How Little Things Can Make a Big Difference, identifies three "laws" of something becoming a trend. These include the individual adopters, "stickiness", and the power of context. (Gladwell, 2002). Each of these provides insight to each component of change: the people involved, how "sticky" or attractive or unique the idea is, and the environment in which the trend is housed. Each person innately will weigh these in his/her mind, and this process is often referred to as the rational choice theory (Tversky and Kahneman, 1981; Simon, 1955). This theory outlines the framework of social and economic behavior, citing human rationality, defined strictly for this theory as weighing costs and benefits, is the primary driver of the decision-making process.

Decision-making based on risk perception among the general population, and specifically in health care settings, follows a similar model. Theories such as expected utility, or game theory, are other theories of decision making, often grounded in economics and psychology, for its bases in logic and balance (Lopes, 1994). Economically, decisions are made with a risk-aversion perspective, while psychologically, decisions are made with a weighing of preferences and maximizing choices (ibid). Decisions, not necessarily related

to health, follow a personal analysis of risk aversion by considering preferences in hopes of maximizing subsequent choices. This holds true for health care settings. In situations of accessing particular health services, patients follow a similar model for decision-making, incorporating economics and concepts of rationality, and reasonability (Stewart and DeMarco, 2005). Economic perspectives can dictate behavior, in considering options. These theories and perspectives are especially relevant to decisions to behave in certain ways, and specifically relevant to this study, participate in a certain activity.

These theories of behavior offer a variety of foundations for health interventions. Interventions can be based within one's belief and ability to succeed in something, the process leading to action, and the process of choice. While the theories are distinctly different, it is possible to see where they overlap in an intervention. The target population must believe that they can achieve something, have the community and resources with which to act, and the freedom to choose what action they take. What these theories have in common, is a sense of independence, but also a sense of support, that is necessary to taking action related to health. Independence of choice, have a range of options, and the knowledge to make an informed decision, and taking appropriate action is just as important as the sense of support. Support can come in the form of a team of health professionals, family members to consult, and a community that can facilitate a discussion related to the issues.

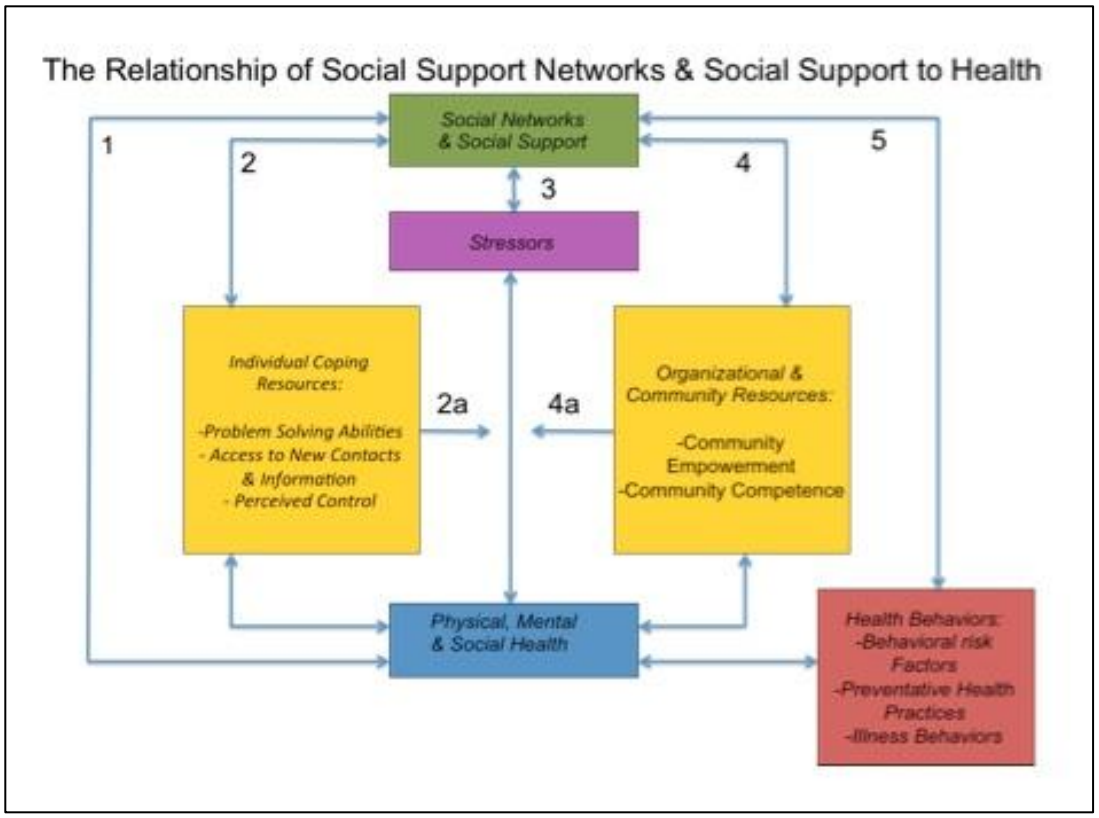
Social Support, and its Role in Health Interventions

Social support derived from strong, trusting relationships is essential to everyday life, and the obstacles people face daily. This type of support is invaluable to any person. In instances where a person has a sufficient quantity and quality social support relationships, his or her physiological processes experience beneficial effects (Uchino, et.al., 1996). Social support has been identified as preventive of mortality (Berkman and Syme, 1979), but also improves physical health outcomes (Uchino, 2006). Today, social support is being investigated as a link to health and wellbeing, specifically how might affect health conditions of people of all ages (Bowling, 1991). Close relationships provide an outlet for people to share experiences and learn lessons from trusted sources. Additionally, some other benefits of these relationships are that they can significantly reduce risks of psychological reactions to stress. Therefore, certain relationships may reduce emotional distress, and provide opportunities for solutions of everyday problems (Thoits, 1986). Literature suggests that social support equips people with improved health outcomes and enhanced ability to reap the benefits of relationships including trust, a place to confide in, and reciprocal learning. Additionally, social support creates an environment in which people feel comfortable to deal with stress, and overcome challenges. This dynamic mechanism of social support makes it an attractive component within health behavior change interventions.

Social support and the networks created surrounding support have been investigated to understand their influence on health outcomes. This concept can be explained through a model developed by Glanz et.al., called “The Relationship of Social Support Networks and Social Support to Health. (see Figure 2). Social support has been used in response to

a number of health issues, and the mechanisms under which social support operates to achieve certain health outcomes, and overall wellbeing, are portrayed in this model (Glanz, et.al., 2008). Each pathway represents a different relationship between social networks and social support, and those factors that affect an individual, ranging from individual abilities, to outside stressors, in achieving optimal physical, mental, and social health. For example, the fourth pathway represents the relationship between social network support, community resources, such as empowerment and competence, and health (Glanz, et.al., 2008). As the community experiences increased empowerment among its people, and increased level of competence (often through knowledge transfer, education, and sensitization), the community may reap the benefits of greater social network support. The community may also experience greater overall health outcomes, as a result.

Figure 2. The Relationship of Social Support Networks and Social Support to Health model.



(Adapted from Glanz et.al., 2008)

With the understanding of all the benefits of social support, participatory women's (and support) groups have emerged as a potentially effective way to promote healthy behaviors, especially related to maternal and infant health practices. These are a few studies that indicate women's groups, especially participatory support groups, can improve health outcomes, especially related to maternal and infant health. Each of these studies were founded on the principal that support can act as a medium for health promotion, and promotion of optimal health behaviors through participation in a structure that offers a sense of community. With a solid support structure, one person's concept of agency and empowerment contributes to a larger feeling among those in the group. This group dynamic of empowerment and competence also can affect one's ability to problem

solve on their own, access appropriate information and resources to make informed decisions, and give individual's a sense of control (Glanz, et.al., 2008). The process is not unidirectional. There are many concepts in play, and create a push-pull relationship link between social network support and physical, mental, and social health.

One to note, was a study that investigated the health belief model as an explanation of breastfeeding practices (Sweeney and Gulino, 1987). In a prospective study context comparing intentions and behaviors related to breastfeeding, women utilized each dimension of the model in their decision-making process, but each dimension had different strength of contribution to the decision for each participant. Aside from decision-making processes, the other major factor contributing to decisions and action related to breastfeeding, was the attitudes and beliefs of an important person, namely of a husband or partner. It seems inherent that people will weigh factors contributing to a decision differently in their own internal analysis.

IYCF Promotion Strategies

To date, there have been many studies conducted to observe breastfeeding and complementary feeding strategies in developing countries, to identify cultural and operational barriers and facilitators to effecting change among individuals and communities. A number of strategies have been utilized in previous studies and interventions to promote optimal IYCF practices. Strategies are primarily broken down into education interventions, support interventions, or supplementation interventions. Some studies have determined that support groups for breastfeeding have improved

breastfeeding practices, including timely exclusive breastfeeding and duration of breastfeeding (see Table 1). Social support ranges from peer support, to community health worker (CHW) facilitated support. Regardless, support groups offer places where experiences can be shared in a safe space, and with that understanding, trust can be built to solve group members' problems. Trust relationships are key elements to the concept of the support group. In order to create a safe environment in which people feel comfortable to share, group members have to create relationships that are built on trust, and on common things. When people share feelings, interests, frustrations, it creates a foundation to build upon. There also is more of an incentive. This creates friendships, which means people are peers, and can be an ideal place in which to learn (Alcock, 2009). The concept of peer education through support environments shows the opportunity, to not only discuss sensitive topics, but also to find solutions that are feasible and acceptable among the group.

Table 1: Effect of social support group interventions on maternal and child health outcomes

Reference	Site	Study Design	Intervention	Findings
Mananhar, et.al., 2004	Nepal	Cluster randomized controlled trial	Women's groups, convened by a female facilitator. Groups utilized "action-learning cycles" to identify prenatal problems, and create solutions or strategies to combat them. Groups were held weekly, for ten weeks.	Neonatal mortality rate (NMR) in the intervention cluster was 26.2/1000 live births, while NMR in the control cluster was 36.9/1000 live births. Adjusted odds ratio (AOR) was 0.70 (95% CI: 0.53-0.94) Maternal mortality ratio (MMR) in the intervention cluster was 69/100,000, while MMR in the control cluster was

				341/100,000. AOR was 0.22 (95% CI: 0.05-0.90). Intervention cluster participants were more likely to access prenatal care and services than the control cluster participants.
Azad, et.al., 2010	Bangladesh	Cluster-randomized controlled trial	Health service capacity training for traditional birth attendants. Included monthly groups to incorporate "participatory action and learning" among women in the groups to address neonatal and maternal health issues.	Cluster-level mean NMR was 33.9/1000 live births in the intervention clusters, while cluster-level mean NMR was 36.5/1000 live births in the control clusters (risk ratio: 0.93, 95% CI: 0.80- 1.09)
Wade, et.al., 2006	Nepal	Randomized controlled trial	Women's groups were implemented to address perinatal care issues. Four outcomes were investigated among the women in the intervention cluster groups: "attendance at antenatal care, use of a boiled blade to cut the cord, appropriate dressing of the cord, not discarding colostrum." These outcomes were	Women in the intervention clusters experienced significantly better odds of performing each of the four targeted outcomes (ORs ranged from 1.92 to 3.13). Intervention groups demonstrated more positive change, but non-member women also benefited.

			evaluated as "better, good, bad, or worse."	
Tripathy et.al., 2010	India	Cluster-randomized controlled trial	Monthly women's groups were convened to support participatory action and learning for women. Also facilitated development of strategies related to maternal and child health problems.	NMR was 55.6, 37.1, and 36.3 per 1000 during the first, second, and third years of the intervention in the intervention clusters. NMR was 53.4, 59.6, and 64.3 per 1000 in the control clusters. NMR was 32% lower in intervention clusters (OR: 0.68, 95% CI: 0.55-0.66).
Dearden et.al., 2002	Guatemala	Controlled community intervention trial	Population census was conducted in two program and two control communities to investigate the effects of La Leche League Guatemala.	31% of mothers in program communities indicated that counselors had advised about breastfeeding, 21% received a home visit, and 16% attended a support group. Of the women in program communities who both received a home visit and attended a support group, 45% exclusively breastfed. Data only demonstrates impact of La Leche for first year, and does not address long term impacts.
Baqui, et.al., 2008	Bangladesh	Cluster-randomized controlled trial	Clusters were randomly assigned to one of two interventions. One intervention offered home visits from community health	NMR were 29.2, 45.2, and 43.5 per 1000 in home-care, community-care, and comparison groups, respectively, in the last 6 months of the 30-month

			workers (home-care), while the second intervention offered group sessions led by community mobilizers (community-care). The primary outcome was reduction in neonatal mortality.	intervention. NMR in home-care experienced a 34% reduction (adjusted relative risk: 0.66, 95% CI: 0.47-0.93) during the last 6 months of the intervention versus the comparison. There was no reduction in NMR in the community-care arm (ARR: 0.95, 95% CI: 0.69-1.31).

A lot of attention has been paid to breastfeeding promotion through peer support and counseling programs. Peers are often identified as key players in health promotion, because it removes any sense of hierarchy and power relationships, and therefore can create an environment that is entirely devoted to solving a problem. Peers have been widely successful in education, providing support, and improving breastfeeding exclusivity rates and duration among mothers (Bhutta, et.al., 2008; Bhutta and Labbok, 2011; Kruske, et.al., 2004; Ingram, et.al., 2004). Peer counseling is a variation of a the broader concept of peer support, but is more focused on individual counseling and education sessions, but still involves a peer to lead such session. Individual counseling, especially home-based counseling, has demonstrated beneficial effects on increasing breastfeeding initiation, exclusivity, and duration (MacArther, et.al., 2009; Morrow, et.al., 1999). Peer interventions have had success in health promotion, especially breastfeeding, but its success may largely depend on the environment, both physical and social.

One strong example of success in this type of model is the program, *La Leche League. La Leche League* was developed in 1957 by a small group of women to offer education and encouragement regarding breastfeeding to other women. Currently, it is operating in 50 countries, and has reached over 6 million women (Shea, 1992). The model includes trainings, counselors, and support groups for mothers in need of breastfeeding support and education. Through the three arms of this intervention, women can receive assistance with the technical aspects of breastfeeding, as well as support for the emotions surrounding the act of breastfeeding (Shea, 1992). Women exposed to information through these *La Leche League* strategies experience greater knowledge gains and improved breastfeeding behaviors than women who are not exposed (Dearden, et.al., 2002). The model of peer support and education has proven effective within this context, but does not address complementary feeding practices, in conjunction with breastfeeding practices. While research tends to focus on breastfeeding, and perhaps unintentionally ignores complementary feeding practices, several studies express that the continued development of proper breastfeeding practices are needed to support the time after the six months of exclusive breastfeeding, namely the time for complementary feeding practices (Dearden et.al., 2002; Dewey and Brown, 2003).

Questions relating to the appropriateness and effectiveness of individual or group education and support in promoting health behaviors, specifically related to IYCF, are often an issue of cultural context. In fact, there is lacking conclusive evidence as to which strategy is better, and remains entirely a question of each situation, even when weighing the relevance of educational content, delivery of education, lay-person versus provider

education, and social capital generated from education (Gagnon and Sandall, 2011). There is currently too much variability in definitions of support, education, and methods of health promotion within a supportive strategy. This study seeks to understand the appropriateness and effectiveness of MtMSG in comparison with individual counseling and education in promoting IYCF practices, and contribute to the growing literature.

Indonesia

In light of growing research surrounding support and trust relationships, this study seeks to identify appropriate strategies of incorporating support into health promotion. Specifically, this study will evaluate the support groups that were implemented by CARE, as a part of a larger project called the *Window of Opportunity.* Through the *Window of Opportunity* program, CARE seeks to enable and empower mothers to make informed decisions regarding their own health status and the health of their children through mother-to-mother support groups, individual counseling services, and group action-oriented education. Mother-to-mother support groups and individual counseling provide supportive outlets and education opportunities to empower mothers, and improve their nutritional knowledge and practices. By improving IYCF and related maternal nutrition (rMN), CARE is empowering the woman and child in an effort to maximize human potential through nutrition, and create sustainable behavior change.

West Timor, Indonesia is one of the sites that CARE has implemented the *Window of Opportunity* program. West Timor is situated in East Nusa Tenggara, the larger province, which sits in the southeast area of Indonesia's archipelago. This location puts it at risk for

a number of natural disasters. The combination of severe weather, resulting in some natural disasters, and seasonally prolonged droughts has led to a significant decrease in crop output, thus affecting the population's ability to maintain a consistent food supply, and therefore adversely affecting health status. Food insecurity can create issues with pregnancy, and future health issues for the child. Children born out of food insecure environments have increased chances of low birth weight and chronic disease (Ivers and Cullen, 2011). Additionally, the benefits of breastfeeding can improve this situation for children, but can only do so much.

Over 30% of the East Nusa Tenggara population lives below the poverty line. Within this province, 53% of infants aged 12-23 months are stunted, according to the 2008 Church World Service, Helen Keller International, and CARE nutrition survey (Church World Service, HKI, CARE, 2008). The nutritional status and prevalence for children under two in the *Window* program area in West Timor according to underweight, stunting, and wasting indicators as identified by World Health Organization (WHO), are 50.7%, 34.5%, and 9.8%, respectively (CARE, 2010). For mothers, the greatest issue to their nutritional status is iron and Vitamin A supplementation. As a part of antenatal care (ANC), they are supposed to receive 90 iron tablets, when in fact only 74.8% of mothers in TTU and 63.3% of mothers in Belu receive the full amounts. Post-delivery, mothers should receive Vitamin A capsules, but only 65.1% and 32.2% of mothers in TTU and Belu, respectively, receive the set amount (CARE, 2010). Due to issues related to food security, supplements are necessary to improve nutritional status because of lack of access to adequate quantity and quality of food.

Indonesia experiences the full spectrum of health outcomes, as there are people who live in poverty on a daily basis in one province, and people who live very well in larger cities, without the concern of where their next meal will come from. Therefore, the health care system may not adequately respond to every situation. The health system has been criticized by many, for many reasons. One reason is that there is low density of health facilities at the district level, and cannot reach those who do not have access to care (Heywood and Harahap, 2009). In order to provide care and access to services to those who need it most, it is critical to have community buy-in, so that health systems may build off of already strong social networks in order to address community health (Howard, 2007). Community buy-in may be a solution, but it requires a workforce to buy into providing care.

In Indonesia, midwives have repeatedly been identified as key players in solving this health care access disparity. There is an outcry for increasing midwife capacity because it will improve female education outcomes, increase the number of providers in more remote locations, and build upon a workforce that already is sought after for care (Heywood and Harahap, 2009; Achadi, et.al., 2007). While they are the ideal population for reducing the disparities in health access for more remote villages, incentives for midwives to relocate to these areas is another issue. By providing care for those that need it, midwives put themselves at risk of their own financial instability (Ensor, et.al., 2009). This creates an opportunity for restructuring, but also demonstrates the connection to poor health outcomes and insufficient provider capacity.

In areas where there may be services available, why might women not access birthing, antenatal, and postnatal care services? The literature suggests that barriers to accessing services in rural areas of Indonesia, especially, are financial difficulties, lack of knowledge about such services, or even low education (Titaley, et.al., 2010; Titaley, et.al., 2010; Titaley, et.al, 2009). Financial difficulties included transportation or payment for services, or in some cases, both. In more remote areas, there may be a lack of knowledge about services, but also a limited availability of services, especially if providers have to travel, themselves, to the center. Lastly, low education rates may contribute to a lack of knowledge of services, or even appropriate responses to health issues. All of these barriers to accessing health care services create a population that may need care, and are simply not able to get it. These types of barriers indicate that in order to overcome access to health care barriers, there are larger, systemic issues that should be tackled, which then may trickle down to improved access.

If midwives are ideal, but not available, it is possible to utilize other people and relationships to improve health-seeking behaviors. Specifically, literature shows that husbands are often the primary support system, and play key roles in preparing for parenthood, as they take their own role as a father very seriously (Sweeney and Gulino, 1987). Husband or partner buy-in, in addition to their influence on a woman's decision to breastfeeding, or not, creates a dynamic power structure for health behaviors. Mothers who had adequate support from their husbands, who were educated in pregnancy, birth,

and IYCF topics, were more likely to have improved health and birth outcomes (Shefner-Rogers and Saad, 2004).

The Role of this Study

This study observes the effects of the *Window of Opportunity* mother-to-mother support groups (MtMSG) on participation and IYCF behaviors among women in its West Timor, Indonesia site. Locally, the *Window* project is called *Prima Bina*, and utilizes both MtMSG, as well as individual breastfeeding counseling services. This study addresses the methods and contextual barriers and facilitators to participation in MtMSG. In order to explain the effectiveness of *Prima Bina* and work to prioritize strategies for the Ministry of Health (MOH), the goal is to understand how best to approach optimal IYCF practices and rMN in the catchment area. It is evident that there is a gap in knowledge surrounding support groups as a mechanism for promoting health behaviors, specifically IYCF practices. When bringing all of these issues together: the role of support, the role of decision-making, key players specific to Indonesia's context, and the role of interpersonal relationships, this study seeks to address the question of how all of these dimensions of health behaviors converge, and can contribute to a successful intervention. Findings from this study will inform future *Prima Bina* strategies within its catchment area, as well as informing future MOH strategies for improving IYCF and rMN practices within Indonesia.

Chapter 3: Methods

Summary

The research utilized a cross-sectional, qualitative design to investigate the barriers and facilitators to participation in the *Prima Bina* mother-to-mother support groups (MtMSG) among mothers in selected villages in West Timor, Indonesia. Participants included pregnant and lactating women, *kaders*, and men. Data collection methods included a doer/non-doer analysis (D/ND), focus group discussions (FGD), in-depth interviews (IDIs), and observation. D/ND was a brief standardized survey that was administered to both participants and non-participants of MtMSGs to identify differences in behaviors among the two populations. This information helped to tailor future methods by identifying key issues related to participation of these groups and infant and young child feeding (IYCF) information access and support. FGDs were held with women, men, and *kaders* to identify village and gender roles, village understanding and perception of MtMSGs, the role of other social groups in the village, and responsibilities among families. IDIs were held with women to further investigate their relationships, elements of trust, and IYCF support and information sources. Preliminary results from D/ND informed FGD topics, while preliminary results from FGD informed IDI topics.

Setting

Within West Timor, *Prima Bina* is currently operating in 23 villages in two districts, Timor Tengah Utara (TTU) and Belu. Of these, three villages from TTU and three from Belu were included in this study. To maximize variability and facilitate a complete

understanding of West Timor, villages were purposively selected to create a balance of rural and suburban life. From TTU, data was collected from Banain A, Naiola Timur, and Oesena. From Belu, data was collected from Naikasa, Rafae, and Tohe. The rural villages were Tohe, Rafae, Banain A, and Naiola Timur, and the suburban villages were Oesena and Naikasa. These villages were selected because of ease of transportation, as well as ability to identify potential participants.

Participants

People identified for data collection fell into one of four targeted groups. Each target group was included for specific reasons related to their ability to contribute to a broader, more complete understanding of MtMSGs in the *Prima Bina* villages. (See Table 2.) D/ND, FGDs, and IDIs were held in Kefamenanu, West Timor. They were typically conducted in participant households, or in a village *lopo.* Based on the availability of the key informant, the researcher typically held KIIs in the NGO offices, or in one case, a restaurant. The KIIs took place in Kefamenanu or Jakarta.

Table 2. Rationale for Participant Inclusion

Population	Rationale	Methods used with population
Women	Women were included because they are the target population of MtMSG, and can provide first-hand experiences, feelings, attitudes, and beliefs about participation in support groups. Their reasons for participation and nonparticipation in MtMSGs were essential to the defining barriers and facilitators, and later, formulating recommendations for future programming.	D/ND, FGD, IDI
Kaders	*Kaders* were included because of their active roles of support within the	D/ND, FGD

	villages, and would give first-hand experiences, feelings, attitudes, and beliefs about facilitating such groups, as well as give some insight into why mothers in their villages may participate. *Kaders* were identified as key informants of MtMSGs processes and an alternative perspective on mothers' participation.	
Men	Men were included to provide a perspective on the powerful role of men in the family unit and village, through their feelings, attitudes, and beliefs. Men were identified through the D/ND as key players in family decision making processes, as such, were included in the study to understand familial and partner relationships, and their effect of IYCF practices.	FGD
IYCF professionals	Male and female IYCF professionals were included to provide the greater perspective on IYCF as a national issue. These professionals provided input on current strategies utilized by the government and NGOs, and recommendations for the future strategies Indonesia might employ.	KII

Inclusion Criteria and Definitions

For the D/ND, women and *kaders* were identified as participants, and included based on the following criteria:

- Women must be pregnant, lactating, or have a child under the age of two. Additionally, in order to be considered a doer, a woman must be an active or current participant in MtMSGs. Participation was defined as having attended at least one session in the last six months. If a woman had not attended MtMSG in the last six months, she was considered a non-doer.

- *Kaders*, or MtMSG facilitators, must be current or past facilitators of MtMSGs. In order to be considered a doer, a *kader* had to have facilitated at least one session in the last six months. If a *kader* had not, she was considered a non-doer.

For the FGD, men, women, and *kaders* were identified as participants, and included on the following criteria:

- Men must have a wife who is pregnant, lactating, or have a child under the age of two. Men were included with any range of experiences with MtMSG from any to no knowledge of MtMSG.
- Women must be pregnant, lactating, or have a child under the age of two. Women with any range of experiences with MtMSG from any to none, were included with
- *Kaders* with any range of experiences with MtMSG from any to none were included.

For the IDI, women were identified as participants, and included on the following criteria:

- Women must be pregnant, lactating, or have a child under the age of two. Women were included with none to any knowledge of MtMSG.

For the KII, IYCF professionals were identified as participants, and included on the following criteria:

- IYCF professionals could be men or women, and had a professional understanding of IYCF, in some capacity, in Indonesia.

All participants had to have been older than 16 years of age, and reside in the village of interest (applicable for D/ND, FGD, and IDI activities.)

Recruitment of Participants

Participants in D/ND surveys, FGDs and IDIs were selected by CARE community facilitators (CFs), who were responsible for *Prima Bina* villages. Participants were selected by CARE community facilitators (CCFs), who were responsible for *Prima Bina* villages. CFs invited eligible women who were available during the time that the research team was present in each village. For FGDs and IDIs the research team traveled to each village, arrived at the designated meeting place, and waited for the identified participants to arrive. For D/ND surveys participants were purposively selected by community facilitators from a list that included names, and locations of homes. In cases when none of the people on the list were available or interested in participating, snowball sampling was utilized to identify more potential participants. For the KIIs, IYCF professionals were purposively selected by a CARE Indonesia staff member, who acted as a liaison within Indonesia. Based on his contacts, the researcher was able to meet with each of the participants at scheduled appointments at their respective NGO offices.

Preparation

CARE International drafted a letter of support for submission to the Indonesian government to explain its presence in West Timor, claim responsibility for my personal safety, and identify the intentions of my study. Visas were secured prior to arrival, and renewed while in the country.

Prior to arrival, interview guides were developed with CARE staff, in both Atlanta and West Timor, and informed by literature related to social support groups. Upon arrival to West Timor, guides were pilot-tested both within the community and among CARE staff for cultural appropriateness, comprehensibility of proposed questions. Necessary changes were made before collecting data.

Tools and Procedures

Doer/Non-Doer Analysis

D/ND is a standardized survey tool that identifies contributing factors to a particular behavior by comparing those who "do" an activity, and those who "do not." For the purpose of this study, the tool was used to discern key themes contributing to participation and access to IYCF information and support to inform subsequent data collection methods. For the D/ND survey guide, there were two structured guides. Most questions in the guide had follow-up questions and probes that were identified to facilitate discussion. Questions were standard for both populations, and sought to identify those who participated in or facilitated MtMSGs, or doers, and those who did not participate, or non-doers, in order to begin determining some barriers and facilitators. Questions allude to support, motivation, consequences, and village perception of MtMSGs. This tool was selected for use because of its ability to screen for initial themes for further investigation and key players to incorporate in later data collection methods. D/ND surveys with women typically took place in a woman's house, or outside a woman's house. D/ND surveys with *kaders* typically took place in a *kader's* house, or

outsider her house. Rarely, surveys occurred in the traditionally covered area for sitting for the village, or *lopo.*

In total, 29 doer/non-doer surveys were conducted during June and July of 2011. Of the 29 surveys, 17 were conducted with women, and 12 were conducted with *kaders.* Surveys typically lasted between 25 and 60 minutes. For these surveys, the researcher asked questions that were translated to Bahasa for the participant; their responses were back-translated to English to the researcher.

Focus Group Discussions

FGDs were performed to investigate community attitudes of gender roles, decision-making processes, and the roles of support groups among women, men, and kaders in the villages. For the FGD, three semi-structured guides were developed for each participant group. For each FGD population, there was a standard set of twelve questions for each group, a few probes per questions that the facilitator could explore. If an unexpected theme emerged during the discussion, the facilitator was asked to further probe. The topics of discussion were determined by a rapid preliminary analysis of the D/ND, involving a theme list and frequency count. These topics included village perspectives on support group participation, decision-making processes, and defining roles of women, men, and health providers. FGDs were held in *lopos*, traditionally covered area for sitting for the village, or sometimes in a participant's home.

In total, twelve FGDs were conducted in July of 2011. Of the twelve FGDs, four were conducted with women, four were conducted with men, and four were conducted with *kaders*, from a combination of villages from both districts. FGDs typically lasted between 45 minutes and two hours. These groups included between three and ten people, were led by a CARE Indonesia employee in Bahasa, who had previously been trained in FGD facilitation.

In-Depth Interviews

IDIs were performed to determine the finer details of social networks, relationships, and responses to hypothetical situations that could inform researchers as to how women typically access support. For the semi-structured IDI guide, questions were formulated to elicit understanding of the intricacies of mothers' decision-making processes related to their family, and the family's health. This included their decisions to attend, or not attend, support groups. The questions were meant to be a more personal investigation of trust dynamics in networks and relationships in a woman's life. While topics were more personal, and aimed to contextualize behaviors, an adequate amount of rapport building was necessary to access feelings, emotions, and true thoughts. The guide included 13 questions. Follow-up questions and probes were used to facilitate discussion. IDIs were held in each woman's home.

In total, four IDIs were conducted in July of 2011. All four IDIs were conducted with women from two selected villages, one in each district. IDIs typically lasted between 45 minutes and 60 minutes. For these interviews, the researcher asked questions that were

translated to Bahasa for the participant and their responses were back-translated to English to the researcher.

Key Informant Interviews

KII interviews were held with the purpose of understanding national IYCF policies, as well as the NGO's programming related to IYCF or social support groups. The KIIs also gave an idea of the future of IYCF, specifically exclusive breastfeeding (EBF) and complementary feeding (CF), in Indonesia. Guides for these interviews were unstructured, but typically had three to four main questions and goals for the discussion. Interviews were primarily conversational, and open to whatever direction the key informant wanted to take. The question guide had a set of four standard questions about past and current IYCF strategies for the country and province, but the interview was intended to be free, and more of a narrative of the professional's opinion. Additionally, it was meant to discuss the variety of strategies, key players in IYCF programming, and what appears to be the best strategies. The KIIs were conducted in a range of locations, typically offices or a restaurant.

In total, five KIIs were conducted between May and July of 2011. The KIIs were held with NGO contacts based on their availability to meet. KIIs typically lasted between 45 minutes and 90 minutes. For these interviews, the researcher and participant spoke in English, but a translator was present in case of confusion or further explanation.

Audio Recording

All surveys were digitally recorded to properly capture all topics raised. Before conducting the survey, participants were asked to give permission to record the discussion, as a part of the informed consent process. The files were saved on the researcher's laptop, and backed up on an external hard drive. Both were kept locked in the desk in the *Prima Bina* office, and later in the researcher's apartment in Atlanta. Files were kept until they were transcribed, reviewed, and analyzed, at which point they were destroyed.

Ethics

The protocols, as developed in the previous section, were deemed exempt from review by Emory Institutional Review Board (IRB). Because the findings are relevant solely to the selected study regions, the findings are not generalizable, this study was not considered "non-research", and therefore, approval was not considered necessary. Although IRB review was not necessary, informed consent procedures were utilized to ensure confidentiality among study participants. Informed consent was obtained in private prior to engaging in research. Oral consent was obtained in order to accommodate all participants, regardless of their literacy levels and so that there was no record of the participant's name.

During the surveys, the research team took other procedures to maintain participant anonymity. Surveys were held in locations that were as private as possible, and ideally with just the participant. Names were not recorded to maintain anonymity during the discussion. When preparing transcripts, all transcripts were de-identified to continue

procedures to maintain anonymity. All audio files and transcriptions were kept on a password-protected laptop and external hard-drive. Both were stored and locked in the *Prima Bina* office, as well as the researcher's Atlanta apartment upon return to the United States. The recordings were later destroyed after transcribing, review, and analysis.

Data Analysis

While in the field, access to data analysis programming was not available. Rapid preliminary analysis was performed by hand to inform the different tools. After completing the D/ND, the researched reviewed the notes taken during the surveys to create a list of prominent themes. After creating this list, the notes were reviewed again to count the number times each of these themes came up in conversation. The structured survey guides allowed for easy identification of themes. These themes informed the pilot and finalized FGD guides. Based on the findings in the D/ND, men were included in the target FGD populations, in addition to the previously identified women and *kader* groups. Once FGDs were completed, the researcher performed the same procedures to identify prominent themes to be incorporated into IDIs. KII themes and questions were informed by the literature, and consultation of CARE USA and CARE Indonesia staff.

Upon completing data collection and returning to the United States, the D/ND, FGDs, IDIs, and KIIs were transcribed directly to English from Bahasa by a member of the Indonesian research team. Preliminary analysis of transcripts was performed manually to identify main themes using a color-coding system. Coded segments were highlighted to distinguish from other coded segments. Transcripts were uploaded to MAXQDA 2007,

and then coded and saved in the analysis program. Transcripts were coded within MAXQDA for deductive, inductive, and in-vivo codes. Memos were created to note progress, reactions, and create bookmarks of the transcripts throughout the analysis process. These were later compiled into a larger document, and cross-referenced with their placement in the transcripts for generation of the discussion outline. Quotes were also highlighted as representations of significant findings for incorporation into subsequent sections of the final report. Data visualization tools were used during analysis, namely MaxMaps, code matrix and code relations browsers, to identify related themes, and those most valuable answering the research questions.

Chapter 4: Results

The objective of the study is to investigate the barriers and facilitators to participation in mother-to-mother support groups (MtMSG) among mothers in selected villages in West Timor, Indonesia. The intent of the MtMSG is to provide a safe environment for mothers to discuss and share their experiences related to infant and young child feeding (IYCF) practices, including exclusive breastfeeding (EBF) and complementary feeding. The results provide insight into the issues of what is potentially effective, or not, in promoting participation among mothers in these villages. The results can inform the future of CARE's *Prima Bina* project, the Indonesia arm of the broader *Window of Opportunity* project. Additionally, the results can provide a perspective on the general strategy of support groups as a health behavior change intervention.

Structure of MtMSG

The qualitative data suggest that a facilitator of participation among women who attend MtMSG is the environment, which promotes and sustains the sharing of personal experiences and information. In the D/ND surveys, women indicated that their ability to share their experiences openly with their peers made them more inclined to return to support groups. Women also noted their appreciation for the ability to share, generally, in this environment. Both women and *kaders* noted this component of the support group as a benefit and driver of attendance (Box 1).

Box 1: Support environment

A woman said, "Also say a secret, they can tell stories about if they have a problem with the husband, they can tell the support group."

A *kader* said, "They can talk about anything. Support group is like… they take the model to support, but they can talk anything."

The data strongly suggest that women view the support group as a place for learning. While mothers cited their ability to share experiences, they noted more frequently that they learn from the other women in the group, and their experiences with EBF and complementary feeding. In FGDs, women indicated that they learn from the *kader,* but also from one another, based on their experiences with IYCF and raising their children. One mother noted the benefit of sharing as a group, but also problem-solving as a group. Together, they could create a better solution for a problem one of the group members was facing, than if she were to try to solve the problem on her own. Both women and *kaders* recognized the power of knowledge, especially relating to the health of their children. "I learn how to feed the child, and go home and do it that way. My child is healthy that way.", a woman shared. During the group, *kaders* also tried to start discussions based on the topics that had been chosen for the meeting. The most prominent discussion topics were observed to be EBF and complementary feeding. Yet topics were not limited to IYCF. The groups were also said to discuss hygiene, healthy eating, and general health of families. Women often brought their children with them to MtMSG, and consequently, their children were a natural discussion point within the group. Men varied on their knowledge of the support group, but the group that was aware of MtMSG, recognized it as a space for discussion and sharing.

Duplication, "waste of time", and Rational Choice

In spite of women seeing the support groups as a venue for sharing and learning, they also cited several barriers to participation. One principle barrier to participation is the belief that MtMSG is a "waste of time". This particular factor emerged as consequent to how women prioritized their time and activities. There a number of opportunities for a woman to learn about IYCF practices, that can eventually detract from overall participation in MtMSG. Each month, the village midwives (*bidans*), nurses (typically men, called *mantris*), and *kaders* host a growth monitoring session, called a *posyandu.* Mothers are required to attend as an agreement with the *bidans* at *posyandu*, and bring any children they have under the age of five to be weighed and measured. The penalty for not attending is a monetary fine, paid to the *posyandu* facilitators to be taken back to the local health post. It becomes an all-day affair, as many mothers travel from the far reaches of the village to attend this mandatory *posyandu*. After each mother and child has been weighed, measured, and given any necessary immunizations or medications, the *bidan* or *mantri* will take a few minutes to offer advice and education to the mothers about a health topic. Many of the topics covered in this teachable moment at *posyandu* do, in fact, overlap with those covered in MtMSG. When asked about the difference between information given at *posyandu* and the information given at MtMSG, a mother from Naikasa said, "just the same." Other mothers in Rafae, when asked the same question, agreed. Lastly, in the D/ND survey, almost all women who attended MtMSG said that it would not make a difference to them, or affect them, if there were no support

group, because of this replication. The information is the same at both sessions, and therefore may create a difficult decision for women to decide where to go.

Another instance in which women considered the MtMSG a "waste of time" was in response to their ability to contribute to their family's income. When women were asked what their typical day was like, or their primary responsibilities, it generally surrounded child rearing, cooking, cleaning, and helping her husband. Helping her husband alluded to a range of tasks, but primarily was related to a husband's work. Men were identified as the person in the family who is responsible for bringing home money for the family. Nearly all families had farmland, and men are the primary caretakers of the plot. During harvest season, women will help the men to collect the harvest and clean the grounds. In other seasons, women are often the ones who plant the seeds, while the men take on the task of maintenance while the seeds grow and mature into crops. Women described MtMSGs as a "waste of time" and choosing not to go because, for the families where the husband primarily worked on the farm, women would take time in their day to help. Other mothers who felt MtMSGs were a "waste of time" cited having difficulty attending because they had other responsibilities or were busy working at the family business, or making sure their children were going to school. Ensuring that the family has enough money to feed the family is the greatest concern among men and women, in addition to their children's wellbeing. As such when deciding whether to take time away from income generating activities to attend a voluntary event or a mandatory one that carries a penalty for nonattendance, women are more likely to attend the mandatory event.

Tradition

Data describing some traditional methods of post-natal care emerged in the analysis. The source of each example of a traditional method of care was someone of an older generation, mostly parents, or parents-in-law. While alluding to some power dynamics and generational differences, these traditional methods of care are worth investigating as a foundation for understanding some behaviors that may act as a barrier to participation. These methods included drinking a tea to "cleanse the body" after giving birth, making a small fire underneath the mother's bed to keep her warm after giving birth, avoiding taking the infant out when it is windy, as it may make the infant sick, and staying out of the sun, to not overheat and get sick (Box 2). These behaviors are still observed in villages in West Timor, and offer alternative methods for post-partum care. Traditional methods of care may, in some cases related to infant feeding, may conflict with recommended WHO guidelines, but for the most part offer an insight to tradition and reasoning for post-partum behaviors. These behaviors may, in fact, impede participation in support groups and they may not coincide with recommended IYCF practices, as discussed in the groups. These behaviors could potentially provide anecdotal evidence of conflicting practices, and explain tradition, dictating lack of participation.

Box 2. *Traditional post-partum practices*

For the mother
"…traditional medicine [i.e., herbs, teas], that kind of cleanses, like cleans the blood…"
"…she do not out of the house in the first week and the second week…"
"…when she take a bath she has to use hot water, not warm but hot. Maybe based on that she cannot touch the cold water, and after like, after 6 months…"

For the infant
"…mash up the rice and cook it for the baby…"
"…do not bring the baby out at noon…because the strong wind will cause, will make the baby sick…"

Other Resources and Logistics

The data demonstrate that when women have health problems, especially those related to their children, they are seeking out *bidans* or local health clinics and hospitals, instead of seeking out *kaders*, or support groups. In regards to their prenatal care, women often go for routine check-ups at the clinic with the *bidans.* Some women had home visits from the village *bidan*, a more informal setting for support, advice, and education. Women accessed *bidans* first when seeking help regarding their own health issues, in addition to those of their children. *Bidans* were identified more frequently for larger health issues, while *kaders* were identified for support during events. For example, one woman stated that "*bidans* have more education, and I see them for health questions, not *kaders*. *Kaders* do not have as much education, and don't go to school like *bidans.*" Women made the connection that *bidans* had more education, and therefore were more trustworthy health providers than a *kader.*

On a larger scale, another contributor to a woman's participation in MtMSG was the logistics surrounding the activity. Women indicated they had to walk, or rent a motorbike

taxi (*ojek*) in order to get to the MtMSG, or other health care services. In some cases, clinics were up to ten kilometers away. As for MtMSG, meetings were organized at the most central location possible, so that more women could attend with ease. MtMSG were held in village centers or central meeting places, *lopos*, at a *kader's* home, or even immediately after *posyandu.* In some villages, MtMSG were held immediately after *posyandu.* In these villages, there was increased participation in MtMSG. Other villages in which MtMSG did not follow *posyandu,* participation was not as consistent. This alludes to the ease and convenience of the MtMSG. As villages can be more suburban, or more rural, the differences in distances, and access to transportation, varied. Thinking surrounding the logistics of simply getting anywhere was evident in the data, as most families did not own their own motorbike. "Before I can do any activity, even support group or *posyandu*, I have to know to get there.", a woman said of her need to plan her transportation, and general logistics.

The time and location of the MtMSG was also an issue that emerged as a barrier to participation. From the perspective of the participants, some women experienced difficulty attending because of the time and location, because of the time it would take to get there, but also the time of day conflicted with their responsibilities. In response, a few of the *kaders* indicated the MtMSG participants had decided together on a time and location for the support group. This was in response to mothers saying they could not attend certain times, and the group made a decision together, to overcome this. Other *kaders* said that the group rotated locations, from one participant's house to the next. The flexibility of the *kaders*, as leaders of this activity, was essential to the participation of the

women, with the understanding that some logistics may prevent participation due to feasibility reasons.

Financial Incentives and Cues to Action

Some of the women, *kaders*, and men indicate that some groups offer an incentive for women to attend. *Kaders* indicated that some of these incentives may include food, drink, or *arisan* winnings. Food and drink often are offered to the children who attended, and create a very casual atmosphere, and opportunities for women to talk amongst themselves even before the group started. *Arisan* is a raffle-like activity, where participants will give a small amount of money, and there is one winner of the total collected monies. One kader mentioned "…they do the *arisan* so that people will come. [Another] *kader* said that *arisan* is supposed to be additional, not the reason." Among *kaders*, there appears to be a difference of opinion, but an understanding that *arisan* and the potential to win some money is an incentive for women to attend. In fact, another *kader* explicitly said, that "the mothers say if there isn't money, they won't come." This offers a much more direct consequence and connection, and suggests a woman's inclination to attend, with the possibility of gaining some additional money. FGD participants explained that *arisan* was a fun activity because of the potential to win. Therefore, participants said that in some cases, for example when the family has no money for food, that if there is an *arisan*, the activity alone was an incentive for the chance of bringing some money home.

Money was also described as having a large influence on participation, as money contributes to the logistical side of actions. If a family does not have enough money, they

will not be able to attend the support group. They also are greatly influenced by the benefits to their child, their perception of what the right thing to do is, and what other people will think of their decision. This concern for other peoples' perceptions of a decision alludes to the level of awareness in the village. Data demonstrate that people in the village are very aware of what is happening in the village, and are watchful of others, in both positive and negative ways. Additionally, when asked which influenced women more in their decisions, either shame or approval, approval was the most common response. Village approval and perception appeared to be common indicators of whether or not a mother attends MtMSG, or behaves in certain ways.

The concept of "being invited" emerged as a large indicator of participation in a number of activities, including MtMSG. Women who were invited to attend the support group felt obligated to attend, out of respect for the invitation. Women described a situation in which a person is not invited to attend an activity does not feel that they have the right to attend anyway. In fact, attending an activity without an invitation is frowned upon. *Kaders* utilized invitation in most cases to manage and organize the group. *Kaders* also indicated that their own path to becoming *kaders* was dictated by invitation, as someone like an elder *kader* or someone who worked at an NGO, had to invite them to the training. Invitation has a two-way effect of prompting behavior, and carries a heavy weight on decision-making regarding daily life activities.

When asked in the D/ND survey, women most frequently referenced their husband's opinion and money as things that most strongly influence their decisions to attend support

groups. Husbands play a very large role in a woman's decision-making process, as most women believe they need to make decisions jointly. Men understood that MtMSG was a place for women to discuss and learn about IYCF topics, and felt like they were not included. This was not described in a resentful way, but emerged as it was the woman's responsibility to attend, and therefore, the husband was not involved. Yet, based on their involvement in decision-making, this may explain low participation rates among women. Conversely, men could be a facilitator of participation if they were included in the support group.

Trust, and Support Relationships

The people women turned to most frequently in time of need, were their husbands. Husbands were the most trusted relationship, and also the most convenient for women. Other relationships that women depended upon, were also dictated by convenience. Women who indicated that they shared with their family members, described their proximity to their own home. Proximity constraints were a larger indicator of communication, and maintaining such relationships. Other relationships that were referenced included neighbors, reinforcing the theme of proximity. One mother described her baby as her best friend, stating that she would share any good news with her baby first, even before her husband, because she spends all day with her baby. Data demonstrated that families are extremely close, and can sometimes be the only place for socializing. Through observation, it was apparent that there is not much discussion or activity between neighbors during the day. Some villages were more active than the others, and this appeared to be dictated by the terrain. In quieter villages, there was an

element of distrust among the women interviewed. People would not share news, or seek support, from their neighbors for fear of being talked about to the rest of the village. One mother went as far as to say that "she talk to anyone beside this family, she feels like people will tell that she is not a good person…" Women do not want to share positive information, in some cases, because they prefer sharing only with the family, and those few people who are closest to them. Additionally, it appears that women do not want to be spoken about in the village, whether it is positive or negative discussion. Not only how people perceived a woman, but also what people could potentially say, was a contributing factor to interpersonal relationships, but also the village morale.

An example of this sense distrust around the village, a response to discourse, sharing news or asking for help, emerged among women. Women referenced "keeping silent" as a way to deal with an argument with someone (most hypothetical arguments were with husbands), or as a way to remain private with their thoughts or experiences. (It should also be noted, that during the course of the study, women would "keep silent" during surveys and interviews if they did not feel comfortable answering questions.) Across the female participants, "keeping silent" was a natural behavior, and did not elicit any frustration with the situation. Women characterized this with no sense of bias, whether it be gender or power, or any negative consequences. It was a typical response, and may introduce a concept of a woman's ability to share her feelings or experiences, even within close relationships.

Data suggested that people felt a sense of distrust within the village, indicated by the level of comfort women have with disclosing personal information, and the people they access for support. This information is valuable to understanding that a reason for not participating in a support group may be due to feeling uncomfortable. Alternatively, women may just feel more inclined to discuss in smaller groups, or even one-on-one, than in larger settings. Therefore, these feelings among women can inform a re-structuring of the support group model, or indicate an alternative method.

Alternative social groups

When asked about other social groups that operated in the village, there was a wide range of responses. Most social groups reflected and complemented daily life activities, such as farmer groups, savings and loans groups, and relocation family groups. The only leisure and hobby group identified was a weaving group among women.

Livelihood groups

Groups that reflected daily life were most frequently accessed among participants. Data indicate the priority of, and participation in, groups such as farmer groups and savings and loans groups. Some of these groups overlapped in objectives as well. When asked if they participated in another type of social group other than MtMSG in the past six months, a significant number indicated that they had, and the most prevalent was the farmer group. Farmer groups often were introduced as a way to collectively share responsibilities on farmland. Some farmer groups are strictly for men, or for women, or welcome both genders. Results from the D/ND survey indicate that most are directed by

NGOs, like PLAN International, who distribute seeds, and educate about certain agricultural techniques and skills in monthly meetings. Savings and loans groups were the second-most referenced type of group, as they offered an opportunity to pool resources for future expenditures. The example of utilizing this group, is contributing to the pool, and if there is some sort of family emergency in which a family needs a larger sum of money than they currently have, the group will offer a loan to the family, which must be repaid in an agreed manner and time. Another variation of this group was the *arisan* concept, which involves each participant contributing a small sum, and a random winner takes the entire pot. Some groups would hold the money after each contribution to build a larger pot from while people can withdraw money as a loan, and other groups had regular drawings of smaller sums of money. The data suggest that participation in these groups is voluntary, but people are accessing these groups for the economic benefits.

Groups that reflected hobbies of people that lived in the village were not referenced nearly as much as daily life social groups, but still contribute to understanding how people access groups, and for what reasons. In three villages, women identified having weaving groups, in which women would get together to weave and socialize. Women would do this together, creating a casual environment in which they can be productive, and also enjoy each other's company while they all work on their own weavings. Weaving was identified, in these villages, as another source of income. The weavings that were created within these groups were eventually sold by the individual families, and only contributed to individual family income. The data surrounding how women become

involved in this group is not definitive, but it appears that women either choose to participate, or have to be invited.

Chapter 5: Discussion and Conclusions

Summary

This study sought to explore the barriers and facilitators to participation in MtMSGs in West Timor. Through a series of qualitative data collection methods, a number of overarching themes emerged which summarized the barriers and facilitators to participation in MtMSGs that women experience. The structure and style of the support group appeared to be didactic, apparent in interviews and focus groups, as well as observation. The support group does not appear to be a support group at all, but more of a group education session. Additionally, women experience a duplication of IYCF-related information, whether it comes from the support group itself, the passing of traditional practices, counseling, or through *posyandu*. This creates a situation where a woman has to choose and prioritize the best method for her. The husband emerged as an extremely important player in general decision-making, not only related to support group participation, and therefore, could be utilized as a proponent of IYCF practices, as well as participation in support groups, if needed. Lastly, social trust and privacy emerged as a theme that may dictate a woman's comfort with participating in a support group environment.

Discussion of Findings

Didactic Style of MtMSG

The facilitation and management style for the support group acted as both a facilitator and a barrier to participation. Primarily, women, men, and *kaders* agreed that the support

group was an opportunity to learn something about IYCF, and it was evident through observation. Group facilitation was more instructional than free-flowing. Women said that *kaders* taught them, and that they would attend the support group to listen and learn. While this is a positive theme, it can also act as a barrier, as it may not ensure that the support groups are sustainable. Once IYCF and other health topics are exhausted in this group, there may not be a reason for women to continue to attend. By being mostly instructive and lacking the benefits one can receive from a supportive environment, the group may not offer any strong intrinsic or emotional incentives to motivate mothers to continue to attend after a single meeting (Glanz, et.al., 2008). For the short-term, this style may work, if it is understood as a series of education, versus a long-standing support group.

Social support, and support relationships, may reduce emotional distress, and offer opportunities to develop solutions to everyday problems based on the foundation of trust, and not instruction (Thoits, 1986). In a support group setting, it is clear that the environment, when functioning optimally, can enhance one's ability to confide in others, share things that may be extremely personal, and consequently, experience reciprocal learning (ibid). Reciprocal learning happens due to people sharing common stories and issues, and creates a place for everyone to discuss and solve the problem in a way that is most appropriate for the group. Didactic education is less flexible and responsive to the group, only offering a "one-size-fits-all" solution. When only offering instructions, such as the WHO guidelines for optimal IYCF practices, it does not take into account a woman's fears, difficulties, successes, or any personal relationship with IYCF. Therefore,

the didactic style of the group not only offers a problem for instilling optimal IYCF practices and values, but people are less likely to choose to return, if they are not receiving any social benefit other than instruction.

Participation across villages and districts was widely variable. Some support groups continued and operated naturally, offering more of a discussion environment than others. This was dependent on the motivation and the skills of the *kader*. Since some women cited their ability to share, and hear the experiences of other women, it appears that some groups are more supportive than others. Some of the groups do have a conversational environment, while others are much more instructional, without much time for discussion. It is possible that the general understanding of a support group may not include the social support component, therefore explaining the variability of benefits among women. Since groups are so heavily dependent on *kaders*, and their ability to facilitate and manage the groups, it would be important to look further into their training for facilitation, and ensure that adequate facilitation skills are present. Adequate facilitation does not mean strong instruction skills. If anything, it requires less instruction, and more abilities to foster a discussion that is free-flowing, empowering, and in a safe environment for everyone (Glanz, et.al., 2008).

Duplication

The data suggest that there are a number of resources available to women to access IYCF information. From IDIs and FGDs, these resources include are *bidans* at local health posts, *posyandu*, sharing of traditional practices, and MtMSGs. Variability in access of

these resources occurred due to logistics of transportation and time, mostly, among mothers. Regardless of this variability in access, there were a number of opportunities in a woman's life to learn about the recommended IYCF practices. While this could be a positive thing, that there are a number of places to learn, and reinforce IYCF practices, it also puts women in a position where they have to choose the most appropriate resource for their circumstances.

In villages where local health posts are relatively close to a woman's house, she will travel there for advice and assistance. Women trust *bidans* because of the knowledge and training, and by visiting local health post, they can also get routine checks to monitor their pregnancy. Additionally, some women consult with *bidans* as a part of individual counseling. Generally, *bidans* are sought after more frequently for issues related to maternal and child health, because of the trust women find in them (Achadi, et.al., 2007). There is not necessarily a problem with seeking advice, or consulting a *bidan*, but it does reduce participation in MtMSG. Individual counseling, especially with a *bidan*, may even offer a more thorough consultation, and perhaps the individual attention that may improve behaviors (ibid) more so than in a group, especially if the group is not functioning optimally. If women choose to consult individual counseling instead of participating in a support group, this may be a reflection of her personal choice and circumstances.

While the freedom to choose is compelling and positive, it can potentially detract from overall participation in support groups, because of the variety of options. This is why the

concept of the support group being a "waste of time" emerged. Women may already be accessing information and support through the local health post instead, for example. If women are thinking the primary benefit of support groups is education and sharing experiences, and if they are receiving it elsewhere, it is understandable as to why women may not participate in MtMSG. If a woman can receive education and support through a quick meeting, consultation, appointment, or counseling session, there is far less time "wasted" in regular, monthly group meetings to learn the same topics. This, again, contributes to the issue of decision-making, and rational choice, as a woman will have to make a decision based on what is best for her, and her priorities.

It is very simple: for support groups to operate, participants must choose to participate. In the case of this study, the decision to participate can be complicated by a number of modifying factors, such as the alternative resources for IYCF, other engagements, logistics, and the role of support relationships. Rational choice, especially when involving health decisions, includes the assessment of the rationality of the issue, and how reasonable it is to act (Stewart and DeMarco, 2005). Women decide to attend or not, because of the weighing the costs of benefits, which often include the alternatives. Logic and balance are also included in this internal process of selecting the best possible option (Lopes, 2004), and for some of the participants of this study, this was not the MtMSG. If one option is not especially compelling, or "sticky", or even easy, participation is mostly inconsistent and cannot be guaranteed, as there are good chances that it may not be chosen (Gladwell, 2002).

While factors contributing to a person's decision may vary, a person will weigh the same costs and benefits in making their decision (Stewart and DeMarco, 2005). Prioritizing income-generating activities, often as a result of food insecurity and a general sense of poverty, is something that may not be incorporated into an intervention's design. While this could actually be a key component to the support group, it is not incorporated into the existing support groups, and therefore may actually work against participation. This is something that could be identified in formative research. By understanding a person's decision-making process, and their priorities in daily life, it might be possible to plan an intervention accordingly, to cater to concerns or logistical barriers.

The role of *posyandu* posed the greatest "threat" to participation in MtMSG because of its strong, long-standing presence in the villages. Since attendance is required at *posyandu* for women with children under the age of five, and the opportunity for a quick education session with *bidans* and *kaders* immediately following, it is possible to see where the most prominent example of duplication occurs. Many women found it hard to argue with the ease of attending this education session, since they already knew they would give up most of the day to be at *posyandu.* For activities that are mandatory, there is no need to think of alternatives, or other engagements, especially in cases where there is a penalty for missing. This grounds the feelings of "waste of time" for women, as they are essentially receiving the same information twice- once in *posyandu,* and once in MtMSG. When there are competing activities, a person's perception of what is most reasonable, compelling, and easy, will dictate which they choose (Gladwell, 2002). For MtMSG, its

competition with a mandatory system of growth monitoring is extremely straining on its participation rates.

Some *kaders* included incentives for participation, including *arisan* or food or drink. Incentives have been utilized as a promotion strategy, and have proven successful in behavior change, namely IYCF (Wilmoth and Elder, 1995). Incentives, though, raise questions about true intentions of participation. Are people attending solely for the incentive? Or is it considered a "perk" to a larger benefit of attending? While it is hard to determine which it truly is, other contributing factors can help explain. When women identify their internal decision making process, including weighing the costs and benefits, many women identified money as a large factor, and the need to prioritize income-generating activities. Winning money in *arisan*, however small the sum may be, may strongly incentivize participation in MtMSG. While this is merely conjecture, it may offer an explanation for participation among women. Additionally, questions may be raised about the sustainability of interventions that are based around incentives. While this has been investigated in smoking cessation and weight loss, which are mostly prevention interventions, monetary and material incentives were used successfully to reduce certain behaviors (Marteau, et.al., 2009). Conversely, promotion interventions utilizing incentives have not been investigated, and also offer inconclusive evidence regarding the sustainability of such interventions (ibid). Further research must be conducted to clarify the role, appropriateness, and effectives of incentives as a promoter of behavior change.

Money was a large issue, among the participants. Everyone was concerned with their families finances, work, and being able to provide for their family. Each person's actions primarily contributed to income-generating activities, whether it is farming, weaving, or working at a family shop or business. If a woman was not working, she was responsible for taking care of her children. While both income-generating activities and child rearing are investments in their future, income-generating activities appear to be more immediate, as it contributes to child rearing. There is a general feeling of urgency to working, and making enough money to provide for your family, as if there was never a limit on how much work can be done to fix this problem. This uphill battle for families is often affected by food insecurity, natural disasters, and logistical feasibility. Food insecurity as a result of natural disasters, and time devoted to traveling to and from farms—all detract from a family's productivity, and creates a pressure of not feeling like making enough to get by.

Support Relationships

Women also discussed their close relationships, citing husbands and family members as the primary trust relationships in their lives. A husband's opinion was a major contributing factor to a decision, as well as a person for a woman to confide in. Husbands were extremely important, and therefore are ideal candidates for sensitization of MtMSG knowledge and understanding amongst the village, as well as internal promoters within the family to participate in activities that promote optimal IYCF. While husbands have already been identified as key players in a family's health (Sweeney and Gulino, 1987), for the context of West Timor, husbands may contribute to a buy-in with the woman,

which may influence her participation. There are already interventions that capitalize on the powerful role of husbands on motherhood in Indonesia, further proving that the husband can act as a true advocate while improving maternal and child health outcomes (Shefner-Rogers and Saad, 2004).

Family members that lived close to women were also often identified as support roles in decisions, sharing secrets, sharing good news. Some women shared about their friendships with neighbors, but that was not consistent among the villages. When women did spend time with neighbors, it was primarily for work. Some women would weave together, or walk to the farm together, but very few women indicated that they would share secrets or seek advice from neighbors. Therefore, this might suggest that there is distrust among women and their neighbors, or people in the village. Women cited not wanting to share their secrets or problems, or even good news, with people in the village because they did not want the village talking about them, or knowing their personal business. This may indicate a level of discomfort with sharing, or more broadly a discomfort with the people in the village. This may explain why there is inconsistent participation in MtMSG.

Relationships should function in a way that relationships and social support empower, especially when related to health (Glanz, et.al., 2008). But in instances like West Timor when they do not, people are not experiencing the benefits that they should. The lack of trust may be derived from a number of things, including a general culture of individualism, or can even be attributed to the island of Timor breaking apart, and East

Timor becoming independent in 2002 (CIA World Fact Book, 2012). Regardless of the source of this trust, it is an important lesson in understanding natural behaviors between people, and how it affects participation in social activities, such as MtMSG.

A number of findings from this study contribute to a broader understanding of why women are not accessing MtMSG consistently for IYCF information and support (Green, 1998; Hall, 2011; Sikorski, 2003). Women may see benefits in participating, such as an opportunity to learn and share experiences, but it may not necessarily ensure they do participate. Additionally, there are a number of barriers that may prevent a woman, or deter her, from participating in MtMSG. Many barriers are rooted in a woman's ability to make decisions, who influences those decisions, her ability and desire to access support from trusted sources, and more logistical elements, such as family finances and prioritization of activities. Many of these barriers merge together, and suggest much larger systems and constraints on daily life that women experience, and therefore may explain some of their health behaviors.

Strengths and Limitations

It is important to note that there are many strengths and weaknesses due to the nature of the study itself, and due to the conditions under which this study was conducted. It is essential to review the study itself, so that the results may be contextualized, and improvements may be made for future replication. Limitations of this study are just as important as its strengths, and may even be more informative to future research regarding support groups in promoting health behaviors.

One of the strengths of this study is iterative method of data collection. Each method informed the following method of data collection, so that only the most pressing themes were being pursued through questions and activities. The doer/non-doer survey results were synthesized in a rapid preliminary analysis to inform the creation of the focus group discussion guide, by identifying themes that were essential to investigate further. Another rapid preliminary analysis informed the interview guide, and identified further themes to discuss with interviewees. This process was especially helpful in being able to adapt to themes that were not expected when original guides were developed.

Another strength of this study was the triangulation of data collection, and therefor the variety of data sources. Due to the iterative process used, it became evident that there were key informants that had not been anticipated. When women identified their husbands as key players in their decision-making processes, it was clear it was especially important to discuss themes related to participation with the men. Had the doer/non-doer survey identified men as essential players in a woman's participation in support groups, the study may have missed any influence men had in health-seeking behaviors. In the end, it was extremely valuable to have a number of opinions from a variety of community members to contribute to the broader context of support groups in the villages, and the perceptions surrounding them. With a more well-rounded and complete perspective of the village, its processes, and the role support groups have in them, implications of the study, and the recommendations to CARE will be well-informed and contextually appropriate.

One of the limitations of this study is the time frame under which it was conducted. It may be inappropriate to think that real "answers" may be identified with only ten weeks of study. While it was possible to maximize those ten weeks, it was also difficult to thoroughly collect data, and subsequently, confidently make conclusions and provide recommendations. The time frame was constrained, such that, it was difficult to make arrangements for data collection immediately, including a training or capacity strengthening for the team, a planning meeting for the overall scope of the study, and time to ensure quality of methods. While there was a plan in place upon arrival to the site, coordination among local teams, and international teams, proved to be more time-consuming than anticipated. When conducting a study within a ten-week time frame, every moment counts because the time is so condensed. Some serious errors can occur because of not enough time, or time spent away from the data collection.

Related to this limitation is the issue of a small sample. This is, in part, due to the limited number of weeks on site. The lower numbers can also be attributed to the sample selection method. While participants were purposively identified by CARE community facilitators, participants were also selected randomly, which proved to be the most time consuming. CARE community facilitators would identify one person to talk to, and whether or not the person was home, the research team would walk door to door until we reached our daily goal of participants to interview, or the sun went down. Often, people were not home, or they did not meet the inclusion criteria for the given data collection method. While saturation was achieved in the analysis, findings and arguments may have

had a stronger foundation if the sample size was larger, allowing for a more thorough, comparative analysis of subgroups across women, villages, and the two districts.

Another limitation that should be accounted for is the quality of the translation from Bahasa to English. A CARE West Timor employee aided with translation during some data collection, posing questions to interviewees and translating to the researcher, and continuing the back and forth translation method. For focus group discussions, another CARE West Timor employee posed questions, but did not translate results back to the researcher throughout the process in hopes of maintaining a conversational flow. Both methods had its benefits and limitations. Constantly translating back and forth allowed for immediate probing of ideas that emerged, and minute-by-minute understanding of what was emerging from interviews, but a probable decrease in rapport during the interview process. It also, in some cases, increased the burden of time on participants. In both cases, each method was completely translated to English, verbatim, to allow for analysis. While the actual translations were helpful in determining key themes, the fact that some themes may have been left out due to translation despite being translated verbatim, may have detracted from the conclusions that were drawn. While some of the transcripts were verified with another Bahasa speaker, there are still details that may have been left out of the original recording that could contribute further to the final findings.

Contributions to the Literature

When comparing the results of this study to the larger literature on support groups as a mechanism to promote health behaviors, or specifically IYCF, there are a number of

elements of this study that contribute to current literature, and some that may contribute new perspectives. The limitations of this study may prove it difficult to compare to other, more comprehensive studies surrounding support groups, especially MtMSG. The findings from this study contribute to the understanding of the environment in West Timor, as a place for a support group intervention.

There are a number of studies that find that support groups are an effective intervention for IYCF promotion (Manandhar, et.al., 2004; Green, 1998; Hall, 2010; Lal, et.al., 1992; Azad, et.al., 2010; Wade, et.al., 2006; Wilmoth & Parker, 1995). These are just a few studies that identify social support as an effective component to a strategy, or a strategy itself, to promote EBF and IYCF, but are prominent studies for their findings. These studies reference a whole host of benefits, including, but not limited to, the social support and relationships developed, improved behaviors related to EBF and IYCF, increased attachment to the infant, and satisfaction with motherhood and their relationship with the infant. The studies also identify a number of the factors that contribute to the success of the support group intervention, often citing social support and incentives. While participants of this study did not identify improved relationships with the infant, participants did note improved health of the child, which suggests that it is understood that support group participation among women can benefit their families, as well. This study confirms the importance of relationships, namely among husbands, in decision-making, and consequently, IYCF behaviors.

Additionally, both education and social support are significant pillars to the support group concept (Glanz, 2008). It would be expected for these benefits to appear as a part of a support group intervention, if the intervention went according to plan. Ideally, the support group should introduce a space for groups to solve problems on their own terms, and creating solutions as a joint effort. Also, support groups should create a space for friendships based on trust, and a common theme (Uchino, et.al., 1996; Thoits, 1986). Within this study, women primarily referenced education as the major component, and benefit, of the support group, but the ability to share scratched the surface of social support. Women appeared to understand the benefit of sharing and group problem solving, but did not necessarily experience it within the support groups consistently. This study is an excellent learning opportunity to understand what works, and what does not work, with this population. This study demonstrates that support groups may not be the answer for this population, and further, may prove that support groups are not as effective as previously thought, or demonstrated, in the literature.

This different perspective could be attributed entirely to context. These findings may simply be due to the context of West Timor, and therefore, conclusions from this study may not translate to other sites or interventions attempting to utilize support groups. Additionally, there is still a lack of evidence that support groups are widely effective, mostly due to the issues of context. This study discovered barriers related to didactic styles and duplication of information, which may not be conducive to consistent participation. Especially in cases of families who live in poverty, and prefer income-generating activities to bolster the family economy, the support group model may not

match the community's needs, and therefore may not be utilized. But, in any case, this study provides new reasons why, that are specific to West Timor. These may not be generalizable to other populations, but may offer factors that can be further investigated in future studies, and perhaps in similar environments.

Lastly, this study contributes to the broader understanding of decision-making processes related to health behaviors. While this study did not primarily investigate decisions to exclusively breastfeed, it did investigate the decision to participate in a health-promoting activity. Behavior economics, rational choice, and theories of decision-making are long-standing topics of research. This study offers a perspective on decision-making, and the power of relationships on one's decisions. Additionally, it looks at how a person prioritizes, especially in a context of poor maternal and child health indicators and poverty. This study offers a new perspective on health promotion interventions, and the personal decision-making process that dictates the intervention's success or failure. The MtMSGs would only be successful if people attended, and by understanding a woman's decisions related to attending, this study answers questions for the MtMSGs, specifically, but can be an example for future support group interventions that require participation.

Generally speaking, there is limited knowledge of MtMSG and their effectiveness in Indonesia, especially in West Timor. West Timor has not been investigated as a site for health promotion or outreach, but certainly has many NGOs working within in to effect some change. There are a number of programs available to the people of West Timor, but limited literature about the effectiveness of each program, and the strategies they employ.

Therefore, this study contributes to the broadening knowledge of West Timor, its struggles and triumphs in health outcomes, the NGOs currently working with the people of West Timor, and CARE programming. This is beneficial for many reasons. West Timor is in need of help in addressing some major health concerns (especially those that are not meeting the Millennium Development Goals), and therefore can help to identify strategies that are most useful and effective in the West Timor context. Further, this study also allows for CARE to evaluate its own programming in accordance with their goals for the project.

Recommendations and Implications for the Future

For the purposes of *Prima Bina* in West Timor, it is possible that the support group model is not the best strategy. It is possible that the model can be altered and improved to achieve maximum results for the goal, while still catering to the needs and culture of its participants. The data provide insight into a number of avenues for improvement for *Prima Bina* itself, and some findings that may help contribute to a broader understanding of support groups as a general strategy.

In order to improve *Prima Bina,* there are a few strategies that should be further investigated, and possibly enacted in combination, or individually. Each recommendation requires a given amount of time for improvements to occur, but some may have more immediate effects than others. The options include: 1) restructure the support group model, 2) focus on current resources that women are accessing (namely local health posts and *bidans*), and 3) try an alternative approach that would replace MtMSG. Further

research should be conducted to determine cost-effectiveness, cost-efficiency, and acceptability of each of the following recommendations. Each of these recommendations is detailed in the next sections.

1. Restructure the support group model

Prima Bina has a number of strengths. The support group model is working in some villages. Even though it is currently not operating in other villages, for reasons of non-participation or *kaders* not having time available in their schedules, there are valuable lessons to be learned from the operational MtMSG. The MtMSG that appear to be working, and have consistent participation, offer a resource for women to learn from each other, and share their experiences and stories with the group, in a safe, confidential space. Education and learning is extremely valuable for IYCF promotion, but should not surpass the power of the support and relationships created in the group. A number of women only referenced the ability to learn something new in the support group, while only a few added their satisfaction with the support and sharing environment. Therefore, it would serve the participants, and eventually the non-participants, well to build more capacity among *kaders* to promote a more supportive environment.

Since women can access IYCF information in a variety of other places, the first option is to restructure and redirect the support group so it serves to primarily act as a place for social support, in keeping with the recommended model for MtMSG. A perfect example of functioning support groups is *La Leche League* (Shea, 1992). Not only are the groups functioning to promote a supportive environment in which women discuss exclusive

breastfeeding. *Kaders* could be re-trained to reinforce concepts of relationship building, trust building, and confidential discussions to create a less didactic support group environment, like the groups *La Leche League* directs. Additionally, facilitation skills should be revisited, so that there is less direction, and more free-flowing discussion in the group. If these improvements occur, women may discover they have more support in the village than they originally thought. This could be powerful for a number of reasons. As a goal of CARE's *Window of Opportunity* project, empowering women to make their own informed decisions is a powerful strategy to enable women. Therefore, if women are supported by friends, and feel they have access to health services and support when they need it, they may feel more empowered to make healthy decisions for themselves and their children (Dennis, et.al., 2002; Ingram, et.al., 2004; Kang, et.al., 2008).

Social support is a powerful mechanism for behavior change. In the context of West Timor, it might be strategic, and an incentive almost, to include men's participation in the group. Men may not actively attend, as that may detract from a woman's ability to share private things, especially if it is about her husband. Instead, men could be MtMSG advocates, of some sort, and promote participation, because they understand the benefits (Shefner-Rogers and Saad, 2004). They also should be included in the structuring of the group, and perhaps have their own men's group at the same time. Data demonstrate that men often have more time and ability to do more social activities, such as playing billiards or general relaxation. If there was an understanding that men would do those activities while women were at MtMSG, and they, too, were able to relax and socialize, perhaps the dual investment in MtMSG would ensure participation. Men and women

would be getting something out of a woman's participation, and may create a dialog of IYCF practices and investment between the already strong, and trusting, relationship.

This strategy of including both men and women could continue the support group strategy, if CARE feels it may create longer term effects. It may or may not be effective, due to a number of reasons, including the culture in the villages in West Timor. It may also detract from the support group model, if women perhaps did not feel like they could confidentially share issues, especially if they are related to their husband. This may take a larger investment in time, energy, and money to facilitate the continuation of the support group model, but may also prove to create a more lasting behavior change, and creating a more supportive environment in the villages. There is more of a risk with this strategy, because it may not prove to be effective, but also may have more sustainable benefits.

2. Focus on current resources that women are accessing

Another avenue for improvement in *Prima Bina* is to continue to strengthen the individual counseling between women and *kaders* or *bidans* for IYCF information. By strengthening this existing strategy, and creating a model more similar to community case management (CCM), this may be the best approach to educating a larger number of people in a way that is adapted to the culture. CCM has proved to be an effective method for combating pneumonia in children, but has also been demonstrated to improved timely IYCF practices, in addition to child infectious diseases (Lewin, et.al, 2010). CCM that utilizes lay health workers in primary and community health care increases care and education capacity, and can accommodate those who cannot travel to health posts, as the

services are brought directly to the people. Health workers can act as a first line of defense by being equipped with proper tools to identify issues, education the people in the village, and make necessary referrals to the health post, if needed (ibid). In West Timor, the *kaders*, who have already been identified as an attractive arm of IYCF and general health promotion, a simple restructuring of outreach may make this possible. *Kaders* could continue their activities of being directly in the community, and provide check-ins with families who have attended *posyandu* to provide appropriate education and support related to IYCF. In cases of health problems that *kaders* may not be prepared to handle according to a CCM-like model, they may refer, as the data demonstrate they already do, to the local health post.

As for the timing of outreach, the data were not clear in suggesting at which point women are accessing information and advice, but most women were visiting local health post for individual counseling related to IYCF practices. It is efficacious to begin counseling at the onset of pregnancy, especially with the active participation of a partner or husband, with improved likelihood of accepting recommended prenatal and infant feeding behaviors (Becker and Courtland Robinson, 1998). This would require some information regarding pregnancy detection, and when to test if you are pregnant, because women indicated a variety of times and methods at which they decided to check if they were pregnant. Women routinely checked their pregnancy, at the recommendation of their husbands and families, creating an opportunity for IYCF education in those appointments. Alternatively, *La Leche League* offers counseling for more technical breastfeeding assistance, which could also be beneficial for more one-on-one help (Shea,

1992). By focusing on a more individualized strategy, perhaps it may better match cultural context of individuality, but also allow for more specialized support, depending on what one woman needs versus another.

Due to their more reserved, almost isolated nature, this strategy may be more effective in the short-term. By focusing on the individualized support, IYCF information can be provided to match current practices among women, which is to seek confirmation of the pregnancy from a *bidan*, and get information in this appointment. It is unclear as to whether women are receiving information about IYCF during pregnancy from *posyandu*, because it may not be mandatory to attend until the child is born. Therefore, these individual appointments and meetings may be good opportunities to capitalize on. Some women cited home visits by *kaders* or *bidans* after they had confirmed they pregnancy at the local health post, and these visits could also provide a time for quick discussions and education in a less formal setting, than if it occurred in a local health post. While this may provide a shorter-term solution, it may be more sustainable because it is derived from village nature, and the instinct to interact with individuals more frequently than groups.

3. Try an alternative approach that would replace MtMSG

As per the request of CARE, some research has been done to explore other options, such as augmenting the support group model with a conditional cash transfer (CCT) program. CCT programs seek to promote behaviors by offering incentives for participation and action, and simultaneously building financial capital among those who are participating in the program. Eventually, it allows for participants to find relief in cases of poverty, in

addition to experiencing a new health behavior (Lagarde, et. al., 2009). There have been a few cases of CCT programs that have proven effective in improving health outcomes in low-resource communities, such as the *Oportunidades* program in Mexico, and *Bolsa Familia* in Brazil (Fernald, et.al., 2009; Castiñeira, et.al., 2009). Much research has been devoted to understanding the effectiveness of the CCT model, and it has proven to be effective in promoting preventative behaviors (Lagarde, et. al., 2009). Therefore, for the future of *Prima Bina*, it may be an option to further explore to bolster participation, with the understanding that much of the barriers that women experience can be attributed to lack of financial resources and poverty.

Recommendations for Research

On a broader scale than just CARE's *Window of Opportunity* project, this study answers some questions, and offers some new ones, as well. The data suggests that the support groups are operating, in some cases, but individual barriers for the participants can be too overwhelming to overcome. In D/ND and IDIs, women discussed their decision-making processes, which appear to follow rational choice theory, due to their weighing of the costs and benefits of each of their actions related to health behaviors. Their descriptions of prioritizing and perceptions of risk and consequences when choosing not to do something demonstrate operational barriers that a woman experiences, namely those that prevent her from accessing MtMSG to their full potential. While most literature has been devoted to looking at health behaviors as a result of a support group, this study stands out in its ability to look at decision-making abilities, and the economics of choice among the participants. Further research should be undertaken to understand the choices people

make related to their health, when they are under additional systemic pressures, such as low-resource environments, poverty, and high-risk areas for natural disasters. With this understanding, future programming and interventions may be better suited for the population, and offer more effective and beneficial results.

Another question that arose from this study is the relevance of IYCF as a topic for a support group model in this context. While many support groups are used to overcome more dangerous, stigmatized behaviors such as drug and alcohol addiction, it is questionable as to whether IYCF may be appropriate to be used in this capacity. Current literature demonstrates that support groups can be effective in a preventative nature, such as with addictions, but in terms of IYCF, there is still a need for further research, as the literature does not conclusively show that it is widely effective across prevention and promotion. Support has been proven to prevent risky health behaviors, such as smoking, and has been proven to be effective in IYCF promotion as well (Manandhar, et.al., 2004; Green, 1998; Lal, et.al., 1992; Azad, et.al., 2010; Wade, et.al., 2006; Wilmoth & Parker, 1995). For this study, the larger cultural context of West Timor may not be agreeable with the literature. Certainly, the relevance of a support group surrounding IYCF in West Timor, may not be as appropriate, as it may not comply with natural responses to seeking help or support. Support groups as an environment for socializing and health promotion is a current trend in public health programming, as there is not too much research surrounding it, but the research so far has deemed in effective. It is questionable about its effectiveness as a broad-sweeping approach to a number of cultures and contexts, and

therefore, before adopting it, the cultural context should be investigated to determine the appropriateness of a support group model.

Strategies regarding IYCF should be flexible, so that it is shaped by cultural context. Recommended behaviors should be clear and enforced through supportive encouragement and education. Social support cannot be ignored as a strategy to promote healthy behaviors, and therefore support groups should be revisited to ensure the foundation in proper support facilitation techniques. Additionally, health care providers should understand the context in which they are working to provide flexible recommendations and care. For West Timor, health care providers should be more supportive and available, and willing to follow up with patients and those seeking support. Midwives have proven to be the most sought after health care provider in similar contexts to West Timor in Indonesia, and therefore can act as an effective population for promotion, treatment, support, and education (Heywood and Harahap, 2009). They also should be in communication with local and international NGOs, who are trying to combat relevant and local health issues, to be well-informed of additional options, as there is an obvious duplication of services and resources. There is an incredible need for communication amongst these groups who seek to promote healthy behaviors, to prevent conflicting outreach, and provide optimal support and programming to the people of West Timor.

In closing, the research conducted on participation in MtMSG in West Timor, Indonesia contributes to the growing interest and research in support groups as a mechanism for

promoting IYCF practices and behavior change. While MtMSG in West Timor may not be highly effective or functioning, they demonstrate great potential, as well as learning opportunities for the future. Systems can be strengthened to maximize support, or new strategies can be investigated to better suit the West Timor context. There is a great need for further research into participation in MtMSG and its abilities to effectively enhance IYCF behaviors, and consequently, maternal and child health outcomes.

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