

Adolescent Maternal Nutrition and Health in Uganda: Voices from the Community

by

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This thesis consists of material all of which I authored or co-authored: see Statement of Contributions included in the thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners. I understand that my thesis may be made electronically available to the public.

STATEMENT OF CONTRIBUTIONS

I, Josephine Nabugoomu, am the sole author for Chapters 1, 2, 3, 7 and 8 which were written under the primary supervision of Dr. Rhona Hanning with input from Dr. Kitty Corbett and Dr. Gloria Seruwagi.

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Josephine Nabugoomu designed the study tools, recruited participants, pretested study tools, conducted all of the individual interviews, and analyzed the data. Dr. Gloria K. Seruwagi, Dr. Rhona Hanning, and Dr. Kitty Corbett coordinated and monitored data collection and analysis.

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ABSTRACT

INTRODUCTION: Over one quarter of adolescent girls in rural Uganda and more than one fifth of them in the Busoga region of Eastern Uganda experience pregnancy and childbirth. These young mothers have disproportionately high rates of poverty, food insecurity, social isolation and poor health, and lack adequate access to health care and employment. Improvement of adolescent maternal/child nutrition and health may be compromised by a number of barriers faced by young mothers. Challenges met by stakeholders who could support adolescent maternal/child health may also complicate issues. Community-level action is a key strategy to reverse the cycle of oppression for these girls and their offspring. There is scanty literature about studies that have focused on needs and barriers of teenage mothers, opportunities available in the community, challenges faced by service providers, and stakeholder recommendations and avenues of capacity building in rural Eastern Uganda with a goal of understanding influences on adolescent maternal/child nutrition and health. Moreover, the application of the social cognitive theory and ideas borrowed from the social ecological framework to this issue helps to emphasize the individual and environmental (social/economic/physical/nutrition/health service) factors that interact to influence the behaviors of young mothers. Since an aim of the research is ultimately to guide community-level intervention, it was important to understand context from the perspectives of a range of stakeholders of adolescent maternal/child nutrition and health relevant to the geographic setting of rural Jinja district. This study could help to inform further research and may help in forming feasible and acceptable community-based interventions towards enhancing adolescent maternal/child nutrition and health.

OBJECTIVES AND METHODS: This qualitative research examined, from the perspectives of a range of community-level stakeholders, the needs, barriers, opportunities, challenges, recommendations and areas of capacity building for improved adolescent maternal/child nutrition and health. The research was conducted in the rural Budondo sub-county of Jinja district, Uganda.

Based on constructs of the social cognitive theory (SCT), in depth individual interviews were conducted among 101 purposively sampled respondents recruited from parishes surrounding 6 public health centers of the study area. The study participants included: pregnant adolescent mothers (n=11); lactating young mothers with infants of 0-6 months (n=8); lactating mothers of infant 7-12 months (n=6); mothers of young mothers (n=6) and grandmothers of young mothers (n=5). Other interviewees were: midwives (n=7); traditional birth attendants (n=3); village health team members (n=5); doctors (n=4); teachers (n=5); head teachers (n=11); agriculture officers (n=3); religious leaders (n=3); village political leaders (n=6); staff members of non-governmental organizations in the study area (n=5); and sub-county and district area administrators (n=13). Interview recordings were transcribed word for word and then translated into English. Codes were created from the transcribed interviews based on the constructs of the SCT model (individual factors; environmental factors [including social, economic, physical, nutritional and health service environments] and, as relevant, behavioral factors) and *a priori* themes of the study objectives. Using Atlas-ti 7.5.4 phrases in each transcript were linked to the created codes which were networked towards the main theme of adolescent maternal/child nutrition and health.

RESULTS:

Needs reported by the study include schooling and home-based employment at the *individual level*; belonging and encouragement at the *social level*; jobs and money to purchase basic needs at the *economic level*; and shelter, beddings and clothing at the *physical level*. Other needs included: food for young mothers and their infants at the *nutrition level*; and medical supplies, health home visits and training in good newborn care practices at the *health service level*.

Barriers identified were: young mothers' lack of knowledge in income generation and food preparation skills and confidence to handle new responsibilities or stay in school *at the individual level*; harsh treatment and stigmatization by family members and medical staff *at the social level*; and, *at the economic level*: young mothers' lack of experience in income generation, lack of

academic job qualifications and/or capital/fees for self-employment, heavy responsibilities of motherhood, lack of markets, and government programs such as the National Agricultural Advisory Services (NAADS) which support adults and men with agricultural items, like seeds for planting or animals for rearing, but not girls. At the *physical level*, barriers included long distances and slippery roads to the health centers or training programs, failure to inherit land by girls (unlike boy children), and restriction from sharing houses with their parents as, culturally, young mothers are taken to become in-laws belonging to the families of the boys/men they had sex with. At the *nutrition level*: infants did not benefit from exclusive breastfeeding (EBF) due to a range of maternal factors including, in some cases, negative attitudes towards breastfeeding, insufficient breastmilk, return to school, or breastfeeding problems; and at *health service level* barriers included: late reporting of medical personnel, long waiting lines, absence of medicines, failure to receive delivery materials, absence of tailored medical attention, and poor health communications.

Opportunities identified at the *individual level* were the positive attitudes of some young mothers towards: taking-up health advice and practices, laboring for a pay and keeping their pregnancies to term. At the *social level*, some parents and community members were kind and caring, and provided emotional support. At the *economic level*: some family and community support in transferring income generation skills to young mothers was identified. Similarly, at the *physical level*: provision of land and shelter by family and community members was sometimes reported. At the *nutrition level*: provision of food by families, and training and support in maternal/child feeding were assets. At the *health service level*, medical care and availability of health-related staff were reported for some health centers. These cases could be held up as examples.

Challenges raised by stakeholders that could block the identified opportunities included: at the *individual (stakeholder) level*: demotivation due to serving with a low/no pay and negative attitudes of community members, and inadequate training in adolescent maternal care; at the *social level*: lack of an organization supporting young mothers; and at *economic level*: uncertainty

regarding how to use available resources to better serve young mothers and how to enhance the quality of agriculture and handcrafted products to be competitive for desired market prices. At the *physical level*, challenges included use of the available land by families to better their own lives rather than their daughter's, finding ways to provide for more proximal services, e.g., equipping village health team members (VHTs) with protective materials for their work. At the *nutrition level*, challenges included determining how to improve the skills in food preparation for mothers when faced with a lack of food and trained facilitators, and at *health service level*, meeting medical needs with poor access to medical supplies, poor working conditions and understaffing.

Recommendations given by stakeholders included: *individual level*: sensitization of family and community members to support young mothers, and motivation of community members with pay; *social level*: community collective responsibility and policing for better health services, special schooling for young mothers, supervision of medical staff, presidential directive to fathers of babies who fail to assume financial responsibility, and use of suggestion boxes at health centers. At the *economic level*: employment creation, improved facilitation in agriculture, payment of service providers, putting up vocational institutes, and prioritizing the health sector within the national budget were recommended. At the *physical level*: building medical staff houses and operating theatres, provision of medical equipment, and supporting local health-related personnel with protective gear and delivery materials, were suggested. Further recommendations included, at the *nutrition level*, use of tailored nutrition education videos and expanding food preparation facilities, while at the *health service level*: adequate, timely and informed supply of medicines and medical supplies, employing more medical staff, having a designated space or health center for young mothers, and use of tailored health education videos.

Capacity building avenues that were suggested included: at the *individual level*: training health personnel to meet the needs of young mothers, training young mothers and VHTs in income generation skills and use of adult VHTS by future organizations that could support young mothers;

at the *social level*: training teachers and community workers to counsel parents; and at the *economic level*: teacher training to, in turn, train youth on handcraft skills while VHTs could train and monitor projects of young mothers. Other areas of capacity building included: at the *physical level*: training of local health-related personnel on use of anthropometry equipment to support better monitoring of maternal and child growth; at the *nutrition level*: training community workers in nutrition and food preparation to better support their training of mothers, and at the *health service level*: training of community workers, like VHTs, in the unique maternal/child health needs of adolescents and monitoring, and licensing traditional birth attendants (whose could be revised by the World Health Organization).

DISCUSSION: The study revealed perceptions of diverse stakeholders that call for improved well-being of adolescent mothers and their infants at the individual and environment level in rural Uganda. By understanding the needs, barriers and supports of young mothers, challenges of service providers and suggested solutions, it may be possible to consider opportunities to shift behavior or overcome obstacles.

Lessons from strategies used by a number of organizations in the study area or other districts in rural Uganda could be taken up for improved adolescent maternal/child nutrition and health. At the individual level, counselling, sensitization, and peer groups could be used to encourage, support and strengthen positive attitudes and practices of young mothers. For example, since young mothers were involved in family agriculture and home-based employment, personal projects in the same could be possible, while, staying in school could also be possible for mothers who were interested in schooling. At the social level, information sharing, counselling and sensitizing families, local community members, district administrators, civil society organizations and policy makers, could shift collective support for young mothers at home, schools, and health centers, as demonstrated elsewhere [Leerlooijer et al., 2014]. At the economic level, partnering with non-governmental organizations and government programs in the area could help in

providing skill training, and grants, in the form of money or resources, to support income generation by young mothers. The said programs could also support train-the trainer opportunities for educators and other community workers. Use of agriculture for income generation is an ideal opportunity in the region as young mothers are involved in agriculture, since, on the gender level, women and girls are the major agriculture labor force in Africa. At the physical level, lessons learned from other studies could help to improve the well-being of young mothers through avenues such as family joint land ownership or and lobbying for infrastructure improvement and support to service providers such as medical staff, VHTs, and TBAs. At the nutritional level, production of food through crop growing and bird/animal rearing, in addition to adolescent maternal child nutrition education is important as suggested by several studies [Nabugoomu et al., 2015a; Nabugoomu et al., 2015b; Nabugoomu & Hanning, 2015; Shefner-Rogers 2014, Berti et al', 2010]. Nutrition education by VHTs who are the community-based workers could also be explored as an opportunity suggested by other studies [Stanback et al., 2007; Tylleskär et al., 2011; Kirkwood et al., 2013; Penfold et al., 2014; Flax et al., 2014]. This opportunity would be possible as some of the VHTs were willing to use their homes for training of young mothers in practical food preparation skills. At the health service level, district and national authorities could be lobbied, so as to aid in the training of medical staff in adolescent friendly services, and taking and recording of measurements of young mothers and translating these measurements in a manner that can be understood by the young mothers. Lobbying to facilitate home visits by health-related personnel could also be helpful. Training of VHTs and TBAs in maternal/child health education and health monitoring by organizations such as World Vision [Ononge et al., 2016] could also help since VHTs and TBAs were trusted by community members. For example, these service providers could be used as agents of change for gender and cultural biases. This study involved a large, diverse sample of participants and hence captured a broad range of views. Conducting interviews in homes or places of work helped to make use of observations and extra information from non-

participants for triangulation of information. In addition, observations at health centers were triangulated with views of stakeholders.

CONCLUSION: Using the SCT, this study identified a range of needs and barriers faced by adolescent mothers in rural Uganda making them vulnerable to poor maternal/child health. Participants also identified opportunities that could support young mothers, challenges of service providers, and gave feasible steps to addressing the needs, barriers and challenges by building on available opportunities to enhance health and well-being. This research underpins the importance of research at the community level and the inclusion of knowledge users and decision makers in the process. Findings of this study may help to direct future community-based interventions for improvement of adolescent maternal/child nutrition and health.

Keywords: Adolescence, maternal/child, nutrition, health, needs, barriers, opportunities, supports, challenges, recommendations, capacity building, social cognitive theory, structural violence, structure, agency, gender, feminist, policy.

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DEDICATION

To my dear and ever loving husband Professor Fabian Nabugoomu for supporting, believing in, and standing by me at all times. You are an incredible and extraordinary husband and father.

To our blessed children Lydia Esther Nabugoomu and Ruth Deborah Nabugoomu for inspiring, encouraging and loving me. You are our miracles and priceless gifts from God Almighty.

I am nothing without you my blessed and loving Family. It is a glorious and heavenly honor for us to be part of each other. May we forever defend, protect, uphold, preserve, honor and love each other as the Nabugoomu Heritage and first lineage of Professor Fabian Nabugoomu.

May God favor and bless us the Nabugoomu Heritage!

Yes we are the Nabugoomu Heritage! Ebenezer, this far God has brought us. 1Samuel 7:12!

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LIST OF ABBREVIATIONS

ANC	Antenatal Care
EBF	Exclusive Breastfeeding
FAO	Food and Agriculture Organization
HIV	Human Immunodeficiency Virus
ITN	Insecticide Treated Bed Net
LCI Chairperson	Local Council 1 Chairperson
MDIs	Microfinance Deposit-taking Institutions
NAADS	National Agricultural Advisory Services
NAPW	National Action Plan on Women
NGO	Non-governmental Organization
ORE	Office of Research Ethics
PEFO	Phoebe Education Fund for Orphans & vulnerable children
SCT	Social Cognitive Theory
TASO-REC	The AIDS Support Organization Research Ethics Committee
TBA	Traditional Birth Attendant
TIBF	Timely Initiation of Breastfeeding
UCU	Uganda Christian University
UNCST	Uganda National Council for Science and Technology
WHO	World Health Organization
VHTs	Village Health Team Members

THESIS OVERVIEW

The main goal of this study was to identify individual and community-level needs, barriers, supports and opportunities available to adolescent mothers, challenges of service providers, and suggested recommendations and avenues of capacity building towards enhancing adolescent maternal/child health in rural Eastern Uganda. This thesis reveals the perspectives of a range of stakeholders of adolescent maternal/child nutrition and health relevant to the geographic setting of rural Jinja district at the individual and environmental (social, economic, physical, nutrition, and health service) levels. The *introduction* gives an insight into the magnitude of the study problem and from a review of literature. *Chapter 2* gives the rationale, study goal and objectives and *Chapter 3* is the study methodology. *Chapter 4* describes multiple stakeholder perceptions of needs and barriers of adolescent mothers towards enhancing their maternal/child nutrition and health. *Chapter 5* gives an insight into multiple stakeholder perceptions of both opportunities for young mothers and challenges of service providers towards enhancing adolescent maternal/child nutrition and health. *Chapter 6* explores multiple stakeholder recommendations and suggestions for capacity building towards addressing needs, barriers and challenges related to adolescent maternal/child nutrition and health, and making good use of the available opportunities. The *general discussion* summarizes stakeholders' perceptions and my own reflections, informed by the literature, on the experiences of young mothers and recommendations for improving their well-being.

1.0 INTRODUCTION

Adolescence is a transition period between childhood and adulthood (10 to 19 years) with important biological, intellectual, and psychosocial changes [WHO, 2004]. This period brings physical and sexual maturity and myriad behavioral, social and environmental influences that can contribute to adolescent pregnancies [WHO, 2004; Alberga et al., 2012]. Adolescent pregnancy, compounds already heightened nutritional needs increasing the risk of maternal malnutrition and fetal health problems. The risks of poor maternal outcomes such as preterm birth and low birth weight are also higher among young mothers compared to their adult counterparts, increasing the possibility of health problems [WHO, 2004; UNFPA, 2013]. Adolescent pregnancy not only negatively affects the young mothers socially and economically but also their families and communities [WHO, 2004; UNFPA, 2013]. The majority of adolescent mothers drop out of school with fewer skills, reducing their opportunities of gainful employment [WHO, 2004; UNFPA, 2013]. All these occurrences easily lead to a cycle of food insecurity and poor health.

1.1 Prevalence of Adolescent Pregnancies and Childbearing

According to a 2013 year report by the World Health Organization (WHO), 28% of adolescent mothers in the Sub-Saharan give birth before the age of 18 years [UNFPA, 2013]. To make matters worse, 95% of all births by girls aged 15 to 19 years in the world occur in low- and middle-income countries [WHO, 2017]. The WHO projects a 57% rise in the number of adolescent pregnancies by 2030 in Eastern and Southern Africa and by the same projected year, the number of girls under 15 years will increase from a current estimate of 2 million to 3 million [UNFPA, 2013].

In Uganda, a developing country, it was reported that 25% of the adolescents (15-19 years) become pregnant [UBOS, 2016] with higher rates in rural Uganda (27%) than in urban Uganda (19%) [UBOS, 2016]. The UDHS also reports that in the Busoga region of Eastern Uganda, 21% of the adolescents aged 15-19 years have begun child bearing [UBOS, 2016]. Much as this rate is lower than that of other regions of the Eastern Uganda such as Bukedi (30%), Teso (28%), Bugisu (28%), it is significant and of public health concern since nutritional and health risks are greatest for those who give birth at the youngest ages [UNFPA, 2013; Nabugoomu & Hanning, 2015]. This high prevalence of adolescent pregnancy occurs within a context in which there is a law against induced abortions [CEHURD, 2016; Davies, 2016; Mukasa, 2015; Larsson et al., 2015] and low acceptance and use of contraceptives among female adolescents, possibly due to religious beliefs or low education [Kabagenyi et al., 2016].

The public health challenge imposed by adolescent pregnancy and motherhood represents an extreme along the spectrum of challenge within the rural context in the developing nation of Uganda. It could well be argued that these girls have the farthest to travel before the United Nations Sustainable Development Goals that most affect their health and wellbeing are achieved: goal 1: to eradicate poverty; goal 2: to end hunger; and goal 3: to promote good health and well-being; goal 4: quality education; goal 5: gender equality; goal 6: clean water and sanitation; goal 8: decent work and economic growth; goal 8: reduced inequalities; goal 9: infrastructure (e.g., within education and training, health care); goal 10: reduced inequalities [United Nations, 2015].

1.2 Risks of Adolescent Pregnancies and Childbearing

There are few studies showing the risks of adolescent pregnancies and childbearing in Uganda, however studies conducted in other countries of Africa or developing countries among pregnant women (a group which includes adolescent mothers) have been used in this literature.

1.2.1 Risks of Adolescent Pregnancies

1.2.1.1 Risks of Adolescent Pregnancies to Adolescent Mothers

Nutritional requirements for pregnant adolescents are higher than those of pregnant adult women due to the fact that the adolescent has to cater to her growth needs as well as the needs for growth of the fetus, placenta, blood supply, and maternal stores for lactation [reviewed in Nabugoomu & Hanning, 2015; FAO/WHO/UNU, 2001]. Pregnancy during adolescence versus adulthood may also increase risk of: preeclampsia, miscarriage, preterm delivery, still birth, vaginal tears, fistula, caesarian delivery, postpartum hemorrhage, HIV infection, and maternal mortality [UNFPA, 2013; MOH, 2011; WHO, 2004; Adeyinka et al., 2010]. Globally, pregnancy and childbirth are the second leading cause of death for adolescent girls [UNFPA 2013], while in Uganda, pregnancy related problems such as obstetric complications, abortion, and childbirth are the leading cause of death among adolescents [Neema et al., 2004]. Maternal death places surviving infants of adolescents at even greater risk of subsequent food insecurity, malnutrition, and poor health.

High rates of adolescent pregnancies, and early child bearing increase the risk of nutritional vulnerability, food and nutrition insecurity, and poor health for the young mothers and their offspring [ICRW, 2010; King, 2003; Malamitsi-Puchner & Boutsikou, 2006]. A study by Yassin and colleagues (2004) found that over 60% of the pregnant adolescents in Egypt had poor

knowledge about good nutrition during pregnancy [Yassin et al., 2004]. Atuyambe and colleagues (2005) revealed that pregnant adolescents in Uganda had inadequate food to eat and risked not meeting nutritional requirements during pregnancy [Atuyambe et al., 2005]. In addition, adolescents in Uganda are at risk of poor nutritional status and may enter pregnancy when malnourished [Hambidge et al 2014], especially since they do not plan to become pregnant [Okereke 2010; Ilika & Anthony, 2004; Leerlooijer et al., 2014]; are of low socio-economic status [UBOS 2016, Atuyambe et al., 2008; Atuyambe et al., 2009; Leerlooijer et al., 2014] and consume diets based on a limited variety of plant based foods [FAO 2003; Huybregts et al., 2009] which predispose them to nutritional deficiencies in energy, protein, iron, zinc, and vitamin A [Nyambose et al., 2002; Habimana et al., 2013; Oguntona & Akinyele, 2002].

Since most young mothers drop out of school, they are most likely to lose their careers and may never have gainful employment [Neema et al., 2004]. It is important that needs, barriers, and opportunities available to adolescent mothers are discovered so as to establish interventions that aim at enhancing their nutritional status and health.

1.2.1.2 Risks of Adolescent Pregnancies to the Offspring

Pregnancy during adolescence may increase risks of still births [UNFPA, 2013], neonatal mortality [Yego et al., 2013], and infant mortality [MOH, 2011; WHO, 2004; Adeyinka et al., 2010], moreover, surviving offspring of adolescents are at risk of adverse effects such as low birth weight (LBW) and intrauterine growth retardation (IUGR) [WHO 2004; UNFPA, 2013; Adeyinka et al., 2010; Keskinoglu et al., 2007; Zohdi et al., 2012; Althabe et al., 2015; Ganchimeg et al., 2014; Garba et al., 2017; Onoch et al., 2014; Rao et al., 2001]. A cross-sectional population-based study

involving 2226 mother-child pairs conducted in Brazil by Britto and colleagues (2013) showed that short (≤ 152 cm) and young mothers (<20 years) were more than 3 times as likely to have babies with LBW (OR – 3.05, 95% CI:1.44-6.47) [Britto et al., 2013]. These complications likely arise, in part, from maternal malnutrition and persistent poor health of mother and child, and can affect ongoing food and nutrition security. Antenatal depression, which is also more common among adolescent than older mothers, can contribute to the increased risk of preterm birth, IUGR, LBW [Grote et al., 2010, Althabe et al., 2015; Ganchimeg et al., 2014] and postnatal depression [Wissart et al., 2005; Heron et al., 2004].

1.2.2 Risks of Early Childbearing

1.2.2.1 Risks of Early Childbearing to Adolescent Mothers

Early childbearing and motherhood can be a source of emotional stress and social stigmatization where the young mothers are looked at as misfits in the society [UNFPA, 2013; Varga, 2002]. Their parents may maltreat them saying they went against the norms [UNFPA, 2013], while their peer group who continue with education do not associate with them [Varga, 2002]. Since the young mothers drop out of school, and take on a new role of parenting and child care, they may not be able to get jobs leading to financial instability and economic stress. , In many cases, they are not helped by their family members, who look at teenage pregnancy and childbearing outside of marriage as a taboo, or their boyfriends and his family who deny the responsibility [Varga, 2002].

1.2.2.2 Risks of Early Childbearing to the Offspring

Many of the families begun by young mothers have been identified as poor and their children as being at risk of a cycle of poverty, poor growth, and food insecurity [Koniak-Griffin & Turner-

Pluta, 2001; Grote et al., 2010]. Postnatal mental health disorders, like depression, can delay initiation of breastfeeding, and negatively affect nutritional care of the infant increasing their nutritional vulnerability [Grogger & Bronars, 1993; Kowaleski-Jones & Mott, 1998]. In Ethiopia, adolescents had negative attitudes and intentions towards exclusive breastfeeding in the event that they became mothers [Hadley et al., 2008].

Adolescent mothers in rural Uganda and their infants are extremely vulnerable to food insecurity, nutrition insecurity and poor health due to a broad range of social determinants. The overall goal of this study was to establish foundational knowledge from which to plan intervention strategies. It was important to initially gain a sense, from a range of perspectives representing those closest to the issue, of the needs and barriers faced by adolescent mothers in Uganda, what opportunities for change might be available, what challenges service providers met, and their recommendations for change and capacity building. Before we could even begin to formulate the questions to gather that information, we needed to know what the literature relevant to adolescent motherhood in similar contexts suggested in line with these needs, barriers, opportunities, and challenges. Since the situation of young mothers in Uganda is extremely complex, it is helpful to use theory to examine some components of the problem. There are a number of possible theories that might frame the issues, however, social cognitive theory (SCT) was chosen to frame this study as discussed in section 3.1. The SCT examines the inter-relationships (or reciprocal determinism) between individual factors, such as knowledge, attitudes and beliefs; environmental factors, including social, economic, physical, nutrition and health service; and behaviors, such as eating behaviours, or healthcare practices [Glanz et al., 2008; McKenzie & Smeltezer, 1997; Bandura, 2004], The theory has been used in a number of studies or programs aimed at promoting nutrition

and health related behavior change [Hall et al., 2015; Doerksen & McAuley, 2014; Anderson-Bill et al., 2011].

1.3 Needs of Adolescent Mothers in rural Eastern Uganda

Perceived needs of adolescent mothers affect their well-being as demonstrated by the limited number of studies conducted on the needs of adolescent mothers in Uganda and examples drawn from studies conducted among mothers, some of which included adolescents Uganda [Atuyambe et al., 2005; Leerlooijer et al., 2014; Ayiasi et al., 2013; Babirye et al., 2011]. The current study further explored the needs of young mothers as perceived by multiple stakeholders - a strategy used in some of these studies.

1.3.1 Individual Needs

A study conducted in Swaziland showed that 48% of the young mothers wanted to continue with their education while 39% preferred to have vocational training, and 6% preferred to have stable marriages and homes [Mngadi et al., 2003]. In addition, adolescent mothers in Swaziland expressed the need to learn about how to be good child caretakers [Mngadi et al., 2003], while those in Bangladesh needed education about child feeding, childcare, and family planning techniques [Hackett et al., 2015].

1.3.2 Social Needs

Mngadi and colleagues showed that adolescent mothers needed to be cared for by their partners, parents, and the community, and that they needed financial support and to be married [Mngadi et al., 2003]. Other studies conducted among mothers (including young mothers) in Africa show that

social support played a role in the wellbeing of mothers and/or infants. A study conducted in Swaziland showed that adolescent mothers needed to be given moral and financial support by their partners, parents, and the community [Mngadi et al., 2003]. Another study by Engebretsen et al (2010) revealed that in Eastern Uganda, support from men and male involvement in promoting safe infant feeding was important [Engebretsen et al., 2010], and in Western Uganda, support of fathers and families was found to enhance adherence to EBF [Matovu et al., 2008]. The study by Engebretsen et al (2010) used discussion interviews among 8 focus groups (4 for men and 4 for women), giving a total of 81 individuals in Mbale District of Eastern Uganda [Engebretsen et al., 2010].

1.3.3 Economic Needs

Economic gains alleviate poverty and help young mothers to sustain themselves [Atuyambe et al., 2005; Leerlooijer et al., 2014]. Poverty is a common occurrence among adolescent mothers more so than among adult mothers [Leerlooijer et al., 2014; Mngadi et al., 2003; Hackett et al., 2015], especially in the rural areas of Uganda, as they do not have jobs [Leerlooijer et al., 2014; Atuyambe et al., 2005; Kaye, 2008], since most of them have left school and may not find gainful employment [Leerlooijer et al., 2014; Atuyambe et al., 2008; Kaye, 2008]. A study by Leerlooijer et al (2013) revealed that unmarried teenage mothers of the Teenage Mothers Project (TMP) in Manafwa (Eastern Uganda) had a high need for income generation [Leerlooijer et al., 2013]. The unmarried teenagers of TMP requested to be given a female goat that would provide milk for them and their infants once weaned, and income, and the goat's offspring could be traded for a cow [Leerlooijer et al., 2013]. Recommendations from Atuyambe and colleagues (2009), who conducted key informant and focus group discussions with married pregnant adolescents in Central Uganda, were

that young mothers could be helped to start up income generation projects such as chicken rearing, keeping domestic animals, vegetable growing, and making handcrafts (e.g., mats, baskets, table cloths) in order to improve their financial status [Atuyambe et al., 2009]. In Swaziland, adolescent mothers wanted to find jobs for self-sustainability [Mngadi et al., 2003]. In Central Uganda, adolescent mothers did not have jobs or any income. For example, the young mothers needed money to pay for transport to seek medical care at the modern health centers that were inaccessible, and instead resorted to finding help at the traditional health sectors nearest to them and traditional herbs given by grandmothers [Atuyambe et al., 2009]. However, some adolescents get complications during birth and the TBAs have to refer them to the modern health centers. Unfortunately, sometimes it is too late and the young mothers end up dying [Atuyambe et al., 2009].

1.3.4 Nutrition Needs

Atuyambe and colleagues (2005) found that in comparison to adult mothers, young mothers in Wakiso District, Uganda lacked food to eat [Atuyambe et al., 2005], which could lead to food insecurity. In addition, adolescent mothers in Masindi revealed that they needed nutrition education [Ayiasi et al., 2013]. Research by our team showed that nutrition education of child caregivers in Uganda increased the adoption of orange-fleshed sweet potatoes to increase vitamin A intake by children (2-6 years), and had positive effects on caregiver knowledge, attitudes, and feeding practices [Nabugoomu et al., 2015a; Nabugoomu et al., 2015b]. Similar education to support dietary diversity would benefit at-risk pregnant adolescents as well if found to be needed. Moreover, there are a number of reviews [Girard & Olude, 2012; Nnam, 2015; Ramakrishnan et al., 2014; Salam et al., 2014; Yuan et al., 2014; Bhutta et al., 2013; Shetty, 2009] and intervention

studies [Jahan et al., 2014; Kimani-Murage et al., 2013], that associate nutrition education with improved maternal and child health. A systematic review by Girard and Olude (2012) revealed that nutrition education and counselling was more effective in increasing gestational weight gain and birthweight, and reducing the risk of maternal anemia in pregnancy and risk of preterm delivery when integrated with nutrition support such as food or micronutrient supplements or nutrition safety nets [Girard & Olude, 2012].

1.3.5 Health Service Needs

Adolescent mothers in Swaziland expressed the need to learn about how to be good child caretakers [Mngadi et al., 2003]. There is also evidence that comprehensive, quality interventions that include health education, healthcare, and monitoring (with sufficient intensity and frequency), behavioral change, and environment support (food, mosquito nets, and skills development) can improve nutrition and health outcomes [Shefner-Rogers 2014, Berti et al 2010]. Such needs and opportunities once identified among young mothers can be exploited. A study conducted by Ayiasi and colleagues (2013) in Masindi district of western Uganda revealed that mothers (both adolescent and adult) felt the standard health education given to them was less important as it did not include education about what to feed during pregnancy and how to breastfeed the baby, which led to them not complying with attendance of ANC services because what was taught was not new [Ayiasi et al., 2013]. Ayiasi and colleagues (2013) also revealed that young mothers, especially in the rural areas, needed awareness about appropriate newborn care practices including caring for the cord, keeping the baby warm, and timely initiation of breastfeeding (TIBF), so as to increase chances of child survival [Ayiasi et al., 2013]. This study interviewed adolescent and adult mothers, and health workers, and employers and trainers in the health care [Ayiasi et al., 2013],

which supports the proposed plan for the current study of interviewing such categories of key individuals by this study.

1.4 Barriers Faced by Adolescent Mothers in rural Uganda

Much as it is important to establish the needs that young mothers have, it is also important to identify the barriers they face in improving their maternal and child health. According to Ensor and Cooper (2004), there may be an availability of reasonable quality health services offered in developing countries however, researchers and policy makers also need to give attention to what enhances or lowers the demand for health services especially among the poor and vulnerable populations [Ensor & Cooper, 2004]. In some developing countries, however, the health services may not be available or accessible to adolescent mothers [Mngadi et al., 2003], and if they are, convenience and accessibility are a problem for young mothers especially due to related costs and stigmatization from the staff or adults [Tylee et al., 2007]. This may predispose the young mothers and their children to ill health [Mngadi et al., 2003]. There are limited studies conducted on the individual, social, economic, physical, and service barriers faced by Ugandan adolescent mothers, however several examples can be drawn from studies conducted among mothers, some of which included adolescents.

1.4.1 Individual Barriers

In Central Uganda, young mothers revealed that the midwives had negative attitudes, were harsh, unkind and mistreated them [Atuyambe et al., 2009; Atuyambe et al., 2008; Atuyambe et al., 2005; Kaye, 2008; Kyomuhendo, 2003]. Some adolescent mothers also lacked the power to decide for themselves on a number of issues. For example, in central Uganda their husbands had the power

to decide where they and their babies had to go for medical care since the men provided the money [Atuyambe et al., 2009; Kwagala, 2013], while in Kampala, some husbands refused their wives to take children for immunization [Babirye et al., 2011]. In addition to the apparent unwillingness of husbands to provide financial resources, general economic hardship can contribute to suboptimal health choices.

1.4.2 Social Barriers

Young mothers face harsh treatment and abuse from family members who blame them for becoming pregnant at a tender age and this hinders effective communication between them and the parents [Atuyambe et al., 2005]. According to Tylee et al (2007), adolescents may not seek healthcare due to fear of stigmatization and lack of confidentiality from the medical staff [Tylee et al., 2007]. Negative treatment received by the young mothers from health workers may affect their health seeking practices [Mngadi et al., 2003]. In central Uganda, young mothers expressed concern that the modern healthcare system had no confidentiality and could not accommodate cultural considerations [Atuyambe et al., 2008]. The harsh treatment from family and community members may be fuelled by cultural beliefs that look at adolescent pregnancies as a taboo [Mutebi, 2016] and yet a form of disappointment [Atuyambe et al., 2005; Kaye, 2008].

1.4.3 Economic Barriers

Compared to adult mothers, adolescent mothers generally have less education, are more likely to be single parents and unemployed or to have low paying jobs, placing them at high risk of poverty, food insecurity, and inability to attend healthcare [Nwobo & Panti, 2012]. A qualitative study conducted in Kampala district (Uganda) by Rwashana and colleagues (2014) found that improved

socio-economic status of mothers would help with improving their health and use of health services [Rwashana et al., 2014].

1.4.4 Physical Barriers

In Uganda, women and girls lack personal land to carry out agricultural activities that could be used for economic gains. Most of the land belongs to husbands or relatives of husbands who decided on what to cultivate or keep on the land [World Bank, 2009; Hanstad et al., 2010], and this could hinder agriculture of food crops and bird rearing by young mothers.

1.4.5 Nutrition Barriers

Lack of nutrition education also hinders mothers and their infants from attaining good nutritional status. In Egypt, El Shafei and colleagues (2014) revealed that breastfeeding education was an important factor in favoring EBF [El Shafei et al., 2104] among mothers aged 15-25 years. Working/schooling young mothers introduced complementary feeds to their infants at an early time as they had to return to work soon after birth [Mngadi et al., 2003] and this may hinder their infants from receiving the benefits of EBF.

1.4.6 Health Service Barriers

Lack of or inadequate health care can lead to poor nutritional status among adolescent mothers. In Mexico, Casanueva and colleagues (2003) investigated the effect of late prenatal care (access after 20-34 weeks of gestation) on the nutritional status of 163 pregnant adolescents aged 11–17 years; and found that late prenatal care versus early prenatal care was associated with increased risk of maternal anemia, iron deficiency, and zinc deficiency [Casanueva et al., 2003]. Several other

studies have identified that adolescent mothers are more likely than older women to receive inadequate prenatal care and are at higher risk of poor nutrition and nutrition-related complications including pregnancy-induced hypertension, pre-eclampsia, and anemia [Lenders et al., 2000; Umans & Lindheimer, 2001]. This may be the case in Uganda where adolescent mothers have been found to attend fewer than the minimum four ANC visits [Atuyambe et al., 2008] recommended by WHO [Lincetto et al., 2006; Upadhyay et al., 2014]. ANC provides interventions and services aimed at improving maternal and child health including: early detection and management of obstetric complications; tetanus toxoid immunization; intermittent preventive treatment for malaria during pregnancy (IPTp); management of any detected infections including HIV and other sexually transmitted diseases (STDs); and health education in the areas of breastfeeding, early postnatal care, and proper pregnancy spacing [Upadhyay et al., 2014]. In Sudan, Elhassan and colleagues revealed that mothers who never attended ANC had a six fold higher likelihood of having LBW babies (OR – 5.9, 95% CI: 1.4-24.4, P=0.01) compared with their counterparts who attended ANC [Elhassan et al., 2010].

Lack of translation of health indicators to mothers keeps them ignorant of how to enhance their wellbeing. In Masindi (Uganda), it was revealed that much as mothers underwent blood tests for analysis of haemoglobin and anaemia, the hospital staff never informed them of the results [Ayiasi et al., 2013]; interventions would not be taken by the mothers since they were ignorant of their nutritional status as regards the said indicators.

1.5 Opportunities and Supports available to Adolescent Mothers and their Infants

There are a limited number of studies conducted on opportunities and community support for adolescent mothers in Uganda. However several examples can be drawn from studies conducted among mothers who may be adolescents or adults.

1.5.1 Opportunities at the Nutrition/Health Service Level

Health centers in Uganda offer a range of services and resources. A recent study revealed that in Masindi, Uganda, for example, the health centre provided mothers with insecticide treated bednets (ITNs) during the first ANC visit; during subsequent ANC visits, mothers were provided with health education in the areas of malaria, HIV, immunization, and importance of hospital delivery and the materials to carry to hospital to be used by the health staff during delivery [Ayiasi et al., 2013]. In central Uganda, young mothers revealed that they had to use TBAs as an alternative to modern midwives because unlike the midwives, TBAs were compassionate and kind [Atuyambe et al., 2009; Atuyambe et al., 2008; Atuyambe et al., 2005; Kaye, 2008; Kyomuhendo, 2003]. Mothers in Kapchorwa District, Uganda preferred the services of TBAs as they provided comfort and care during pregnancy, delivery, and in the postnatal period, yet they also followed and preserved cultural norms [Kwagala, 2013]. The personal characteristics TBAs bring to their work could be held as an example for others.

1.5.2 Organizations in Jinja District that Support Maternal/Child Well-being

There seems to be no organization in Jinja district that specifically takes care of adolescent maternal nutrition and health. However, some are those concerned with maternal health in general from which future intervention studies can take lessons. These will be discussed in this section.

Though many of the services of these organizations have not been formally evaluated, some of these that have been chosen are SOUL Foundation and PEFO (Phoebe Education Fund for Orphans & vulnerable children) Uganda which were situated in the study area of Budondo sub-county.

1.5.2.1 SOUL Foundation

SOUL Foundation's programs focus on education, food security, women's empowerment and maternal health in partnership with other organizations or foundations [SOUL Foundation, 2017]. SOUL partners with parents and pays 50% of the school tuition and also provides sanitary towels and computer skills in schools, to mention a few of their services. The food security helps in increasing nutritious foods and income generation through fish farming, chicken cooperatives, goat cooperatives, and livestock and agriculture training [SOUL Foundation, 2017]. SOUL establishes fish ponds in communities where mature fish are harvested and some are sold or consumed as an animal protein. SOUL also trains and gives farmers especially women in plant and animal husbandry, new crops and breeds. Women are also encouraged to form groups of 3-4 called cooperatives and come up with facilities that will be used to keep birds and animals then get trained. Once these are established they are either given broiler chickens (commercial chickens for meat production) or goats. In the case of chickens, groups are given a minimum of 300 broilers that can be reared and sold then the money reinvested for the next person in the group. The goat cooperative also works on a group-revolving basis where a kid is given to the next group member [SOUL Foundation, 2017].

The program of women's empowerment gives women seed financial grants to carry out a sustainable business and reinvest the profits, trains women in tailoring skills, and has also helped

form women's' groups that make baskets and beaded products of bags and jewelry [SOUL Foundation, 2017]. To improve maternal/child health, SOUL Foundation trains mothers, husbands and VHTs in prenatal care; the organization and plans to build a birthing center and midwifery school. In addition to this, VHTs are trained in health education in the areas of safety during and after pregnancy, advice on healthy living and monitoring health indicators. Improvement of the birthing environments of TBAs is also one of the strategies of improving maternal/child health, such that lighting, birthing facilities, water and sanitation areas are provided [SOUL Foundation, 2017]. Leveraging the strength of peer groups, training in health, income generation and food security; and community involvement are strategies used by SOUL Foundation that could be borrowed by future intervention studies aimed at improving adolescent maternal/child nutrition and health.

1.5.2.2 PEFO Uganda

PEFO (Phoebe Education Fund for Orphans & vulnerable children) has not only a number of programs that benefit orphans/vulnerable children and their caretakers, who are usually grandmothers but also has a project for adolescent mothers in Busia district of Eastern Uganda. The programs address education, enterprise and economic empowerment, healthcare, and housing for the elderly. Some of the projects that aim at improving the health and economic status of the children and grandmothers will be discussed in this section. Grandmothers are given seeds and banana suckers or any one animal (pig, goat, cow) and 10% of the crop harvests or two piglets or one kid are given back to the organization with the harvests given to weaker grandmothers that may have not cultivated any food or had poor yields. The grandmothers are also given training and start-up capital to do petty businesses in selling farm produce or cloth-wares then allowed to save

the profits [PEFO Uganda, 2017]. Grandmothers also form peer groups that meet and share knowledge [PEFO Uganda, 2017]. PEFO also protects and empowers grandmothers to defend their rights. PEFO Uganda works with other health providers to have mobile clinics and health camps; they monitor the health of the children and grandmothers in the organization, [PEFO Uganda, 2017]. Training in agriculture (pig farming, poultry keeping and crop growing) and vocational skills (carpentry, tailoring and hair dressing) are also undertaken by PEFO Uganda [PEFO Uganda, 2017]. In Busia district, adolescent mothers were economically empowered by PEFO Uganda through the “adopt a goat” project in which they are given goats at a ceremony where parents and community members are also encouraged to help mitigate teenage pregnancies and create attractive environments that could improve the well-being of young mothers and also keep girls in school [PEFO Uganda, 2017]. In addition to paying school fees for orphans and vulnerable children, PEFO has put up a library and reading resource center at its headquarters in Ivunamba village (Budondo sub-county, Jinja district) that students are free to use at no cost. For self-sustainability, PEFO asks trainees of their vocational skills to pay a fee and hires out its multi-purpose hall to the community for given functions in Jinja [PEFO Uganda, 2017]. PEFO’s strategies of sensitization, peer groups, health monitoring, training in income generation, seed grants, food security, supporting community initiatives/creativity, giving back to the community and project sustainability could be borrowed by future adolescent maternal/child nutrition and health studies.

1.5.2.3 TASO Jinja

TASO (The AIDS Support Organization) Jinja is one of the service centers of TASO Uganda. Although their main goal is to support persons living with HIV/AIDS, and their household, a

number of projects relate to the well-being of women. Some of those projects include: training in health, home visits, care, voluntary counselling and testing by trained volunteer community nurses; vocational training skills such as tailoring, hair dressing and mechanics; financial seed grants for self-sustainability; sensitization of community members through seminars, use of peer educators for high-risk groups, such as boda (commercial motor bike) cyclists and prostitutes; use of songs, dance and drama; and provision of free medication [TASO Jinja, 2015]. Several strategies used by TASO Jinja could be borrowed by future intervention studies aimed at improving adolescent maternal/child nutrition and health.

1.5.2.4 BRAC Uganda

BRAC Uganda aims at enhancing the livelihood of community members through: improved food security and productivity by providing good quality agriculture items at a low cost; empowering out of school adolescent girls by mentoring and training them in life skills; giving loans to especially women for financial empowerment; and improving child health where community health workers are given drugs (e.g., anti-malarials and painkillers) to sell at a cheap price, hence bringing services closer to mothers and their infants [BRAC Uganda, 2017].

1.5.3 Organizations in Eastern Uganda that Support Adolescent Mothers

In Uganda, there are a number of non-governmental organizations (NGOs) that support young mothers, some of which are based in Eastern Uganda. In this section, two of these NGOs are discussed with lessons that can be drawn from their activities by future studies.

1.5.3.1 The Teenage Mothers Project (TMP)

TMP was implemented in 2000 in the eastern District of Manafwa of Uganda with an aim of empowering unmarried teenagers to cope with the stress motherhood, furthering of education, and dealing with community stigmatization [Leerlooijer et al., 2014; Leerlooijer et al., 2013]. The TMP carried out interviews among key individuals to identify perceptions of the needs, barriers, opportunities, and supports available to the unmarried teenage mothers. This project worked with the unmarried teenage mothers; community educators; schools; health professionals; governmental, religious, and tribal leaders; and staff of a community based organization, the African Rural Development Initiatives (ARDI) [Leerlooijer et al., 2014]. The TMP was funded by the Dutch organization Adopteer een Geit (Adopt a Goat), which gave each of the mothers a goat. The approach of listening to views of adolescent mothers and members of the community about what they needed and involving multiple stakeholders in enhancing the wellbeing of unmarried teenagers may have led to the sustainability of the TMP for 12 years as of 2012 [Leerlooijer et al., 2014], a strategy that can be borrowed by future studies. Evaluation interviews based on the socio-ecological framework among a total of 23 former teenage mothers, community leaders, and TMP implementers revealed that TMP was successful at providing a female goat to each teenage mother, which led to income generation and improved wellbeing [Leerlooijer et al., 2014]. TMP was also successful in contributing towards a more supportive social environment at school (for teenagers that reenrolled in school), family and community level. The evaluation study by Leerlooijer et al (2014) supports aspects of this study such as: interviewing of a number of stakeholders and basing the study on a methodological theory or framework [Leerlooijer et al., 2014].

1.5.3.2 The Pelletier Teenage Mothers Foundation (PTMOF)

The Pelletier Teenage Mothers Foundation (PTMOF) in Uganda was founded in 2011 in Wakiso District, and is funded by supported in Canada [PTMOF 2015; Devxchange 2015]. PTMOF provides young mothers with vocational skills such as baking, tailoring, and hair beauty; and also facilitates the education of the offspring of the teenage mothers [PTMOF, 2015; Devxchange, 2015]. The activities of PTMOF among teenage mothers point towards supporting young mothers with income generation skills training and helping in childcare, strategies that could be borrowed by future intervention studies.

1.6 Challenges Faced by Service Providers of Adolescent Maternal/Child Health

Health workers in Masindi, Uganda revealed that they were so few serving a large number of mothers that they did not have the time to provide all the expected ANC services, as they had to monitor normal labor, aid delivery and identify complications that require referral to higher level health facilities [Ayiasi et al, 2013]. A study by Chi and colleagues (2015) to find out determinants of maternal, sexual, and reproductive health in post-conflict areas of Northern Uganda and Burundi, revealed that health service providers were faced with challenges of poor supply and inadequate stocking of drugs which affected timely delivery of services to mothers [Chi et al., 2015]. In Burundi (a developing country), there was a challenge of lack of infrastructure, equipment, medication, and personnel. The ratio of physician-to-resident, and midwife-to-pregnant mother for Burundi was at 1:19,231 and 1:123,312 respectively [Chi et al., 2015]; below ratio recommended by WHO of 23 physicians or midwives to 10,000 patients (1:435) [WHO, 2015]. In Jinja District however, the midwife-to-pregnant women ratio is at 1:185 [UBOS-Jinja district, 2009] suggesting and adequate number of personnel to take care of pregnant mothers, yet

the physician-to-resident ratio is 1:45,051 [UBOS-Jinja district, 2009], suggesting an inadequate number of physicians to take care of health needs of the population.

1.7 Implications for Capacity Building in order to address the Barriers and make good use of the available Opportunities

In addition to perceived recommendations and avenues of capacity building by stakeholders, results of the current study will be used to draw implications for capacity building in addressing needs and barriers, and making good use of the available supports, and for further research or interventions towards enhancing adolescent maternal and child health.

Capacity building is commonly used as an approach of community health promotion and encompasses community participation and development [Simmons et al., 2011; Njie-Carr et al., 2012; Levine et al., 2013; Hacker et al., 2012; Ahluwalia et al., 2010; Kim et al., 2009; Braun et al., 2006; Raeburn et al., 2006; Yeatman & Nove, 2002; Hawe et al., 1997]. Smith and colleagues (2006) define capacity building as *“the development of knowledge, skills, commitment, structures, systems and leadership to enable effective health promotion. It involves actions to improve health at three levels: the advancement of knowledge and skills among practitioners; the expansion of support and infrastructure for health promotion in organizations, and; the development of cohesiveness and partnerships for health in communities”* [Smith et al., 2006: 2]. This definition suggests that capacity building is a process that uses the strengths and opportunities available in a community to address the weaknesses so as to enhance, promote, and sustain good health, all of which are initiated and driven by the community members. Examples of community strengths and opportunities are individual member skills and abilities, collaborations, social cohesion, positive

attitudes and norms, commitment, resources, and supportive structures and systems [Simmons et al., 2011].

Capacity building and empowerment seem to be more successful if not only community based but also meaningful, feasible, and sustainable [Hacker et al 2012, Ahluwalia et al 2010, Hawe et al., 1997]. In Tanzania, a collaboration between the Government and CARE-Tanzania lead to implementation of the Community-Based Reproductive Health Project (CBRHP) in 2001 [Ahluwalia et al., 2010]. The CBRHP trained and empowered village health workers (VHWs) in helping to reduce maternal mortality and enhance maternal health through education, encouraging pregnant women to attend prenatal care, identifying danger signs in pregnancy, and referring mothers to hospitals in case of emergency obstetric care. A follow-up study after six years showed that VHWs sustained the training and skills acquired which had improved maternal and infant outcomes [Ahluwalia et al., 2010].

There is evidence that young mothers in Uganda experience a number of needs and barriers. Literature also reveals organizations that are involved with improving the well-being of young or adult mothers, and the challenges faced by service providers in Uganda. As discussed in the sections above, few qualitative studies have been conducted in Uganda to identify the needs and barriers faced by young mothers and challenges faced by some service providers. The studies used individual interviews [Ayiasi et al., 2013; Rwashana et al., 2014; Kyomuhendo, 2003], focus groups [Engebretsen et al., 2010] or both interviews and focus groups among a number of stakeholders [Atuyambe et al., 2009; Ayiasi et al., 2013; Atuyambe et al., 2005; Leerlooijer et al., 2013; Leerlooijer et al., 2014; Kaye, 2008; Kwagala, 2013; Babirye et al., 2011; Chi et al., 2015].

Only one of these studies used a methodological theory of the socio-ecological framework to evaluate the work of the Teenage Mothers Project [Leerlooijer et al., 2014]. Our study takes on a lens of the social cognitive theory and ideas borrowed from and the social ecological framework to identify perceptions of young mothers, family members, health-related personnel, educators, agriculture officers, religious leaders, local political leaders, NGO staff, district administrators in the rural areas of Jinja district, eastern Uganda. This study goes beyond identifying needs and barriers of young mothers by revealing the opportunities available to young mothers at family and community level have been identified pointing out organizations in the study area that could support adolescent maternal/child nutrition and health. Challenges of over 70 service providers and recommendations and capacity building towards improvement of adolescent maternal/child nutrition and health were also suggested by the 101 participants of this study.

2.0 STUDY RATIONALE AND OBJECTIVES

2.1 Rationale of the Study

Adolescent pregnancy in Uganda is common. Adolescent mothers are highly vulnerable to poor nutrition and health and, in turn, their infants are at risk. Adolescent pregnancy/motherhood in Uganda is therefore an important maternal and child health problem. The literature indicates that there are many determinants of poor adolescent maternal/child nutrition and health, and that these needs are manifest at different levels. The levels at which needs of adolescent mothers manifest include: individual factors like knowledge, skills, and incidence of illnesses; social factors like support from their families in the area of providing them with resources; physical environmental factors e.g., availability and accessibility of food; and economic factors e.g., financial resources to support their access to food, healthcare, and other basic needs. These needs may be accentuated in adolescent mothers because of barriers they face at all levels like poor education attainment, lack of power to make choices to improve health within the family, stigmatization, lack of skills to support income generation, and, like many mothers in Africa, poor access to health services. The adolescent mothers may also not meet their needs due to the challenges faced by individuals that provide maternal/child services like nutrition, health, education and income generation.

This literature provides a strong foundation for the current study. Nevertheless, at the start of this thesis research there had been no comprehensive study in rural Eastern Uganda (or rural Jinja district) on the needs and barriers of adolescent mothers, opportunities available in the community, challenges faced by service providers, and stakeholder recommendations and avenues of capacity building that has looked at influences across individual and environmental (social, economic,

physical, nutrition, health service) levels with a goal of understanding influences on nutrition and health. Such community level research was important to set a foundation for culturally appropriate, feasible, and acceptable, interventions. The study adds knowledge in using social cognitive theory (SCT) as the main methodological framework [Glanz et al., 2008:42; McKenzie & Smeltezer, 1997; Bandura, 2004] to help explore the individual and environmental (social, economic, physical, nutrition, and health service) factors that interact to influence the behaviors of young mothers, and suggestion of pragmatic recommendations from and for the community.

No previous study has focused specifically on needs and barriers of teenage mothers, supports available to young mothers, challenges of service providers, and recommendations and avenues of capacity building, as suggested by stakeholders in rural Eastern Uganda, with a goal of understanding influences on nutrition and health. Before needs and barriers can be addressed, it is important to identify areas that need action by appreciating opportunities available and identifying challenges, and involving community members' recommendations and suggestions on areas of community building. Moreover, the unique application of the social cognitive theory (SCT) [Glanz et al., 2008: 169,170,273,274; McKenzie & Smeltezer, 1997; Bandura, 2004] helps to emphasize the individual and environmental (social, economic/physical/nutrition/health service) factors that interact to influence the behaviors of young mothers. Since the aim of this research was ultimately to guide community-level intervention, it was important to understand context from the perspectives of a range of stakeholders of adolescent maternal/child nutrition and health relevant to the geographic setting of rural Jinja district.

2.2 Purpose of the Research

The purpose of this research is to generate answers to a set of basic considerations that will help communities and programs improve adolescent maternal and child nutrition and health at the social cognitive theory model and ideas borrowed from the social ecological framework. The research is designed to answer the following questions:

1. What are the perceived needs of adolescent mothers towards enhancing their maternal/child nutrition and health?
2. What barriers do adolescent mothers face in accessing services to meet their needs?
3. What are the challenges faced by service providers of adolescent maternal/child health services?
4. What are the opportunities available to support adolescent mothers and their infants (0-12 months)?
5. What do stakeholders recommends and perceive as avenues of capacity building towards addressing needs, barriers, and challenges, and making good use of the available supports/opportunities?
6. Based on the 'lessons learned' from this research and the relevant literature, suggest strategies that can be applied by stakeholders in improving maternal/child nutrition and health.

2.3 Study Goal and Specific Objectives

The study helped to identify perceived individual and community-level needs, barriers, supports and opportunities related to adolescent maternal/ child health, and outline recommendations and suggested avenues of capacity building towards enhancing maternal/child health in Eastern

Uganda. The specific objectives of the study were constructed around the social cognitive theory (SCT) dimensions as they inter-relate with behaviors that support health. The environment factors were differentiated to consider social environments, economic environments, physical environments, nutrition-related environments and health service-related environments, and, as relevant, broader macro-level environmental influences, consistent with the social-ecological model, as discussed in section 3.1. The specific objectives of the study were to:

1. Describe multiple stakeholder perceptions of the needs of adolescent mothers towards enhancing their nutrition and health including:
 - a) Individual needs.
 - b) Social environmental needs.
 - c) Economic environmental needs.
 - d) Physical environmental needs.
 - e) Nutrition environmental needs.
 - f) Health service environmental needs.

2. Describe multiple stakeholder perceptions of barriers faced by adolescent mothers and their infants (0-12 months) in attaining good maternal/child health, including:
 - a) Individual barriers.
 - b) Social environmental barriers.
 - c) Economic environmental barriers.
 - d) Physical environmental barriers.
 - e) Nutrition environmental barriers.

- f) Health service environmental barriers.
3. Identify multiple stakeholder perceptions of the availability and adequacy of community-level opportunities and services to support the health of adolescent mothers and their infants (0-12 months), including opportunities at the:
- a) Individual level.
 - b) Social environment level.
 - c) Economic environment level.
 - d) Physical environment level.
 - e) Nutrition environment level.
 - f) Health service environment level.
4. Describe multiple stakeholder perceptions of challenges faced by stakeholders who provide services to adolescent mothers and their infants at the:
- a) Individual level.
 - b) Social environment level.
 - c) Economic environment level.
 - d) Physical environment level.
 - e) Nutrition environment level.
 - f) Health service environment level.

5. Describe multiple stakeholder recommendations and suggestions for capacity building towards enhancing adolescent maternal/child nutrition at the:
 - a) Individual environment level.
 - b) Social environment level.
 - c) Economic environment level.
 - d) Physical environment level.
 - e) Nutrition environment level.
 - f) Health service environment level.

6. Integrate the various perceptions of needs, barriers, opportunities, challenges and community-level recommendations into a richer more comprehensive understanding of maternal child health within the community context of rural Jinja district, Uganda from which to propose feasible steps forward.

3.0 METHODOLOGY

3.1 Study Design and Conceptual Framework

This was a qualitative study based on the social cognitive theory (Figures 4.1, 5.1 and 6.1). Theoretical models to help understand individual health behavior and behavior change include the Health Belief Model, Transtheoretical Model, Stimulus Response Theory, Theory of Reasoned Action, Theory of Planned Behavior, Precaution Adoption Process Model, and Problem-behavior [Resnicow, 1997; Glanz et al., 2008: 42; Glanz, 2017]. However, the proposed study will be based on an interaction between individuals, their communities and broad determinants of health/ health behavior [Glanz et al., 2008: 42; Glanz, 2017]. Examples of models that could have been suitable for this study include Content's Integrative Model of Mediators of Health Behavior Change [Contento, 2008], the Social Ecological Framework (SEF) and Social Cognitive Theory (SCT) [McKenzie & Smeltezer, 1997; Glanz, 2017].

The SCT makes use of the reciprocal determinism of the personal (or individual) factors, environmental factors, and behaviors [Glanz et al., 2008: 169,170,273,274; Glanz, 2017; McKenzie & Smeltezer, 1997; Bandura, 2004], and has been used in a number of nutrition and health related behavior change promotions [Hall et al., 2015; Doerksen & McAuley, 2014; Anderson-Bill et al., 2011].

Content's Integrative Model of Mediators of Health Behavior Change is more suitable for understanding factors influencing behavioral choices, and to provide guidance on the evaluation of the effects of an intervention study that goes beyond dissemination of information [Contento, 2008]. The Social Ecological Framework (SEF) has components of individual and environmental

factors which are also covered within the SCT [McKenzie & Smeltezer, 1997; Glanz, 2017], but also broader influences. Levels of the SEF include: individual influences like attitudes and skills; interpersonal factors, such as family and friends; organizational factors like health centers and insurance; community factors, e.g., media, community organizations and employers; and policy factors [Glanz, 2017; McKenzie & Smeltezer, 1997]. This study used SCT because it better describes how personal factors, environmental factors, and behavior of individuals influence each other. Nevertheless, the environmental determinants referred to within the SCT are better differentiated within the SEF. Hence, this study borrowed the use levels of the SEF to enrich the SCT and environment is differentiated to consider social environments, economic environments, physical environments, nutrition-related environments and health service-related environments. As relevant, broader macro-level environmental influences, like socio-political, cultural or policy environments, are discussed.

The SCT proposes that there is an interaction among personal factors, environmental factors, and behavior [Glanz et al., 2008: 169,170,273,274; McKenzie & Smeltezer, 1997; Bandura, 2004]. For needs and barriers faced by young mothers, the theoretical perspective underlying Chapter 4 of the study was the assumption that for adolescent mothers, personal factors like knowledge of good maternal and child nutrition and health and income generation skills; and environmental factors like accessibility and availability of food, family and community support, and adolescent friendly health centers; interact to enable them to seek sufficient and timely medical care, and practice good nutrition, which may reciprocally lead to improved health. This is illustrated in Figure 4.1. For Chapter 5, opportunities available to support young mothers and challenges of service providers, the theoretical perspective underlying the study was that, if the young mothers could be helped to

develop personal skills like agricultural knowledge; and helped to acquire environmental supports like land to grow food; these may interact to enable improved nutrition and health for young mothers. For suggestions on recommendations and areas of capacity building (Chapter 6), the theoretical perspective underlying the study was that personal factors like addressing stigmatization of young mothers from service providers; and environmental factors such as employment of parents, timely drug supply, training of community members in adolescent service; may interact to enhance positive behaviors like supporting young mothers and their infants.

3.2 Epistemological Stance

The study leaned towards the epistemological stance of postpositivism with an aim of pin-pointing and understanding the determinants of the nutrition and health of adolescent mothers and their offspring, not limited to the researcher's prior knowledge from literature or experience [Creswell, 2014; Ritchie & Lewis, 2003; Bisman, 2010; Hutton, 2009; Crossan, 2003; Racher, 2003; Clark, 1998]. Unlike the positivism stance that leans towards the use of statistics and experiments as research approaches where the researchers and participants are independent of each other, postpositivism takes on the approach that theories, background, knowledge and values of the researcher can influence research [Creswell, 2014; Ritchie & Lewis, 2003]. The study therefore used both a deductive approach through a set of questions influenced by the SCT [Creswell, 2014; Ritchie & Lewis, 2003; Bisman, 2010; Hutton, 2009; Crossan, 2003; Racher, 2003; Clark, 1998], and an inductive approach where open ended research questions for freely given views of multiple stakeholders were used [Swift & Tischler, 2010; Ritchie & Lewis, 2003]. The deductive approach begins with a hypothesis or theory [Creswell, 2014; Ritchie & Lewis, 2003], in this case the SCT, hence a top-downward communication while the inductive approach uses open questions and

allows for interviewees to take the lead [Swift & Tischler, 2010; Ritchie & Lewis, 2003] giving an upward communication. No predictions were made about what was happening in the community, rather the gathered data was used to understand the determinants of maternal/child health and what the community made sense of all these aspects [Swift & Tischler, 2010; Ritchie & Lewis, 2003; Bisman, 2010; Hutton, 2009; Crossan, 2003; Racher, 2003; Clark, 1998].

3.3 Study Site

The study was conducted in Jinja District of Eastern Uganda. The poverty report of Uganda (2014) reports that in 2012/2013, 22.8% of Ugandans in the rural areas were poor compared to 9.3% in the urban areas [UNDP, 2014]. At the regional level, Eastern Uganda has a poverty rate of 24.5% [UNDP, 2014; World Bank Group, 2016] and by year 2012/2013, this region had the highest rate of the insecure non-poor [54.3%] from 33.9% in 1992/1993 making it the poorest of regions in Uganda [UNDP, 2014]. According to recent national population and housing census, 50.5% of the residents of Jinja district of Eastern Uganda are female while 63.4% are located in rural areas [UBOS, 2014] and 34.7% of the residents are adolescents [UBOS-Jinja district, 2009]. The main occupation is subsistence farming [UBOS, 2014]. In addition, although this district is multi-ethnic 77% of the population are Basoga by tribe [UBOS-Jinja district, 2009] making it easier for the interviewer who conducted interviews in the Lusoga language among participants that could not communicate in English. The district authorities documented their support for the study.

The study took place among rural communities of Budondo sub-county, one of the 6 sub-counties of Jinja district of Busoga region in Eastern Uganda [UBOS, 2014] (Appendix I). Budondo sub-county is located 25 km from Jinja Town, has a population of 51,560 (51.8% being females and

48.2% males) [UBOS, 2014] and 36.3% of its residence are below the poverty line [UBOS-Jinja district, 2009]. Budondo sub-county has 5 Parishes (Ivunamba, Namizi, Nawangoma, Buwagi, and Kibibi) and 35 villages. Budondo has 6 government owned health centers including: Budondo health center IV which is a referral health center in the whole sub-county and is found in Namizi Parish; Lukolo health center III and Nawangoma Health center II found in Nawangoma Parish; Kyomya health center II is in Buwagi Parish; Kibibi health center II is in Kibibi Parish; and Ivunamba health center II is in Ivunamba Parish [UBOS, 2014].

Culturally, while there are no data indicating religious beliefs specific to the study area, the majority of Ugandans are Catholics (40%) and Anglicans (32%) [UBOS, 2014]. Moreover, the rural parts of Uganda have most of the nation's Catholics (81.3%) and Anglicans (80.8%), compared to the urban areas with 18.7% and 19.2%, respectively [UBOS, 2014]. This suggests that many participants in the current study would follow these religions. Another relevant aspect of context is that, in Uganda, it is a criminal offence to impregnate a girl under the age of 18 [Rutaremw, 2013], much as the rate of adolescent pregnancy is high [UBOS, 2016].

3.4 Inclusion Criteria

All participants taken up by the study had signed the study consent forms and had resided in the given health center community within Budondo sub-county or Jinja district (for the administrator participants) for at least 3 years. In addition, adolescent mothers were those who: were aged 10-19 years, carrying their first pregnancy, or having their first baby (aged 1-6 months or 7-12 months), and were attending or had attended a primary, secondary, or tertiary school in Budondo sub-county at least 3 years prior to study.

3.5 Study Sample and Recruitment

Individual interviews were conducted with 101 key individuals including: 11 pregnant adolescent mothers; 7 lactating adolescents having their first baby aged 1-6 months and 7 lactating having their first baby aged 7-12 months, 6 mothers, 5 grandmothers, 7 midwives, 4 doctors in-charge of health centers, 3 traditional birth attendants (TBAs), and 5 village health team members (VHTs). Others included 6 local council 1 (LCI) chairpersons who are the village political leaders, 3 religious leaders, 5 teachers, 11 head teachers, 3 agricultural officers, 5 non-governmental organization (NGO) staff, and 13 administrators of Budondo sub-county and Jinja district. Each of the parishes surrounding the 6 health centers was represented by at least one participant within the categories of young mothers, family members, community workers and area leaders. Study participants who met the inclusion criteria were recruited by purposive sampling [Ritchie & Lewis, 2003; Tongco, 2007; Draper & Swift, 2010] by 6 community based VHTs who were the study guides and gate keepers [Ritchie & Lewis, 2003], as demonstrated to be most effective in some studies conducted in developing countries [Ayiasi et al., 2010; Guldan et al., 2000; Ceesay et al., 1997; Kaestel et al., 2005; Roy et al., 2005].

Mothers and grandmothers represented family members closest to young mothers; midwives, TBAs, VHTs represented the nutrition and health service providers; and agriculture officers were important informants in the area of food and agriculture skills. Midwives (with a minimum qualification of certificate in midwifery or registered comprehensive nursing) are found at any of the 6 health centers in the study area, although pregnant mothers in labor can access them in their homes. Traditional Birth Attendants (TBAs) are present in most villages and while many have low or no specific formal training in pregnancy and child birth, they are often highly accepted by

community members. Most of the TBAs who are community-based adult females have grown-up carrying out deliveries and this may be the reason why mothers go to them at the time of deliveries instead of reporting to the modern health centers. Village Health Team members (VHTs), who are majorly female, are also community based adults with a minimum education level of lower secondary education level. Each of the health centres in the study area has a team of trained community based VHTs whose work is to monitor the health of community members, referring the sick for medication, giving out medications like deworming drugs, carrying out door-to-door immunizations, and educating community members on how to maintain good health. Midwives are paid by the government of Uganda, TBAs are paid privately by mothers who deliver at their facilities while VHTs are voluntary workers. Other valuable study participants included: teachers who had taught young mothers within the 3 years prior to this study; religious leaders who gave spiritual support to young mothers; NGO staff working with youths and maternal nutrition and health who gave information on adolescent maternal/child health supports; and head teachers, local political leaders and district administrators who contributed recommendations and suggestions for capacity building.

The study had planned to include married adolescent mothers and their husbands however this proved difficult. In Namizi, 5 married young mothers had consented to taking part in the study but were harshly treated by their husbands who threatened to punish and send them away if they participated in the study. The parents of their husbands also turned around and supported their sons saying it was against their culture and religion to disobey a husband. (Since it was these same sons supporting them financially in their old age, the decision made by these husbands wasn't debatable.) The cultural rationale was seen as a cover-up by the VHTs who said the main reason

for the refusal of married young mothers taking part in the study was the husbands' fear of being accused of marrying young girls; others thought that the mothers would give away family "secrets" in the form of negative experiences. In other villages, very few young mothers were married and none of them consented to participating in the study. With such a reception, the team agreed that we go ahead and look for the husbands and get their views. The VHTs looked for the husbands (mainly adolescent boys), most of whom were not staying with the young mothers, and while some of them agreed to the interview, they later turned this down for fear of being implicated by the law enforcers (police force workers of the sub-county). It had been planned that in each village, 2-3 of the baby's fathers would be spoken to. On the agreed days of the interviews however, none of these men were found at home apart from one in Kibibi who hid in the house on seeing the team. The mothers found in the home would then tell the team to leave their sons alone because they were not sure of the paternity of the said infants. It is worth noting that males that impregnate adolescent girls are usually taken into prison and so they fear to talk to strangers and their parents, especially their mothers, defend them fiercely. These fathers of the babies, together with their mothers, advised that young mothers had to prove the paternity by use of DNA tests. However, this was an expensive venture that the young mothers/their families could not afford, hence an escape route for the boys/men. Each of the villages was given a whole day to recruit the fathers of the babies and would look for them at trading centers and sugarcane plantations. However, some were harsh, seemingly under the influence of alcohol or drugs, others ran away to hide while bold ones threatened us with the knives being used to cut the canes and this was not safe for the team. There was, therefore, no interview held with the married young mothers and husbands or fathers of the babies. I believe that views from husbands would have enriched the study and views of

married young mothers could have been different from those of the unmarried teenage mothers that participated in this study.

3.6 Ethics

The study was cleared by the Office of Research Ethics of the University of Waterloo (ORE # 20708), The AIDS Support Organization Research Ethics Committee (TASO-REC) [TASOREC04/16-UG-REC-009] and Uganda National Council for Science and Technology (UNCST) [number SS4013] (Appendix II). Written support was also given by Uganda Christian University (UCU); Ministry of Health for Uganda, Ministry of Education for Uganda, Jinja district, and Budondo sub-county, and local community leaders (Appendix III). Appendix III also includes a research grant award letter from the Nestlé Foundation for the Study of Problems of Nutrition in the World, Lausanne, Switzerland. Information letters translated in Lusoga language (Appendix IV) were given to the participants of this study by VHTs and written consent was obtained.

3.7 Provision for a Referral or Linkage to Care

A referral linkage to care was one of the mandatory processes of ethics and care wanted by the TASO-REC and this had to be explicitly identified by any researcher before ethics clearance was given. The UNCST would only give ethics clearance after a given research ethics committee was in agreement with the research proposal, especially the methodology to be used. In the case of this study, the TASO-REC was chosen as the committee and hence the provision of a referral linkage. I sat down with the TASO-REC Administrator to explain my fear that apart from giving the honorarium of 10,000 Uganda shillings (UGX) (an equivalent of 2.8 U.S. Dollars) to compensate participants for their time, any extra help could be seen as inappropriate incentive for participation. He was firm in his answer that one cannot leave a study participant in pain or to die instead of

saving the situation and that this was the reality on ground and was seen as a service and not a form of “buying” participants. He identified that some participants that were in urgent need of medical care might not be eligible to participate until they recovered and could be replaced with other participants. The research team of this study when informed was also in agreement with this development. An audit of existing service providers and stakeholders of adolescent maternal/child health and nutrition was undertaken prior to the study from which a local response team of concerned, caring, and qualified local leaders, community members, professionals, and health centers was identified to provide support to any study participants that needed it [WHO, 2001]. A few of such scenarios (most of which have been well elaborated in section 7.0) came up in different villages especially among the young mothers; as the PI, I intervened with use of appropriate funding. In Kibibi Parish a lactating infant (6 months) of the Adolescent mother was helped to receive medical care at a cost of 10,000= Uganda shillings (UGX) (an equivalent of \$2.8 U.S. Dollars). In Buwagi, the PI also gave financial help of 10,000= Uganda shillings (UGX) (an equivalent of \$2.8 U.S. Dollars) to a young mother to have sutures of the vaginal tears removed after 5 months of pain. In Lukolo, a young mother who was set to go for her ANC but lacked transport fees, was driven to Budondo Health Center III with the study team and given 5,000= Uganda shillings (UGX) (an equivalent of \$1.4 U.S. Dollars) to be transported back home. In Nawangoma during the second follow-up interview with one of the area leaders, the study team found his daughter with a sick infant that she had delivered only 4 days back. The PI gave her 10,000= Uganda shillings (UGX) (an equivalent of \$2.8 U.S. Dollars) to fill prescriptions.

3.8 Data Collection

Interview guides, tailored to specific target study participants and translated into the Lusoga language, were used as data collection instruments for this study (Appendix V). Key questions were themed on individual factors and environmental factors (social, economic, physical, nutrition, and health service) relevant to: needs and barriers of adolescent mothers; opportunities available to adolescent mothers and the challenges met by service providers; and recommendations and capacity building. Interview guides were pre-tested in rural Butagaya sub-county with a few members representative of the target groups, which helped to simplify questions further. At the start of each interview, participants were welcomed, told of the purpose of the interviews, assured of anonymity and confidentiality, and then asked if the interview could proceed and be voice-recorded. At the end of the interviews, participants were thanked for their participation, reassured of their confidentiality and compensated for their time. Interviews were done over one face-to-face occasion, were conducted by the researcher and notes were taken by a local recording assistant. Interviews took ~45 to 60 minutes while short conversations with administrators took less than 15 minutes. There were only 3 follow-up interviews with 3 area local political leaders (that were also participants) to witness meetings that they held with parents of impregnated girls and the boys responsible. These follow-up meetings were attended on invitation during some of the fieldwork travels of data collection. Data collection took 12 weeks from March 21, 2016 to May 9, 2016. For the transcripts, participants were concealed by use of identifier codes.

3.9 Data Analysis

Interview recordings were transcribed word for word then translated into English. Codes were created from the transcribed interviews based on the constructs of the SCT model and *a priori*

themes of needs and barriers under the categories of environmental factors and personal factors affecting adolescent mothers. The codes were framed as a parent-child coding scheme [Basit, 2003], with the main themes being: needs and barriers, opportunities and challenges, recommendations and avenues for capacity building, and responses were coded as the sub-themes. These created codes were checked by the research team. Using Atlas-ti 7.5.4 phrases in each transcript were linked to the created codes which were networked towards the major theme of adolescent maternal/child nutrition and health using thematic analysis [Attride-Stirling, 2001; Smith & Firth, 2011; Ritchie & Lewis, 2003; Braun & Clarke, 2006] as shown in Figures 4.2, 5.2, and 6.2. There are sub-themes/responses that could fit in more than one theme (namely needs and barriers, opportunities and challenges, recommendations and avenues for capacity building) or level of the SCT, but the PI discussed these with the research team and it was agreed that these be left in the themes or levels where they had received the strongest response. For example, among the barriers, failure to own land or share houses with parents could fit as a social barrier, physical environmental barriers or economic barrier. In addition to this, integration of notes and observations was also done for triangulation of information sources [Carter et al., 2014]. After analysis, results were rolled out using the query tool of Atlas-ti and checked by the research team.

3.10 Management of Bias during Data Collection, Analysis and Reporting

It is important to manage bias in qualitative research so as to enhance validity, reliability, and dependability of the findings; and enhance generalization of the results [Silverman, 2013; Green et al., 2007; Erlandson et al., 1993; Ritchie & Lewis, 2003; Gill et al., 2008; Norris, 1997; Collier & Mahoney, 1996]. Selection bias was handled by explaining to the study coordinators (VHTs) the importance of the research, inclusion criteria, and integrity in recruiting participants

[Rajendran, 2001]. Moderator bias from the researcher and recording assistant during interviews was managed by having a neutral facial expression, body posture and language, tone and language style, and dressings [Ritchie & Lewis, 2003; Gill et al., 2008; Shenton, 2004; Rajendran, 2001]. The interviewer was calm while at the same time keeping up with challenging participants in a friendly manner so as not to “give-up” her power position as the in-charge. The PI’s experience as a high school teacher, decent and culturally accepted dressing, and good command of both English and the Lusoga language spoken mainly in the study area were an added advantage to building rapport and confidence with the interviewees. This may have helped the interviewees to be as truthful as possible and not give responses that are to ‘please’ the moderator.

Biased questions were managed by avoiding leading questions and probes, and opinions from the researcher [Gill et al., 2008; Shenton, 2004; Rajendran, 2001; Mehra, 2002], and being careful of sensitive questions that participants would not want to answer because they may be taken as secrets or cultural issues that are not debatable. Misunderstanding of questions was managed by using simple and clear language, short questions, clarifying of questions, and being patient with the interviewees, not rushing them through the process. Bias arising from unanswered questions were controlled by recruiting experienced participants especially for the key individuals as specified in the inclusion criteria [Ritchie & Lewis, 2003; Shenton, 2004; Rajendran, 2001]. However, the researcher was careful not to insist on questions that were proving difficult for some participants so as to avoid discomfort.

Biased answers that were untrue or partially true were controlled by reading the respondent’s body language and if the answer seemed untrue, probes would be used to seek for clarity. Mistake and

error bias was controlled by cross-checking of information even after the interviews. Mood bias was also checked so that participants do not talk out of excitement or even anger. This control for moods and calming down of participants was commonly done with the pregnant young mothers as they would be tensed up before the interviews. Individual interviews, comments of passersby and observations from home, health centers and surrounding areas were triangulated so as to also check biased answers [Silverman, 2013; Green et al., 2007; Erlandson et al., 1993; Shenton, 2004; Rajendran, 2001; Collier & Mahoney, 1996].

For discipline in reporting and analysis of the results, the researcher exercised objectivity and an open mind, avoiding as much as possible influences from her knowledge, experiences, beliefs, and state of mind [Silverman, 2013; Green et al., 2007; Erlandson et al., 1993; Ritchie & Lewis, 2003; Gill et al., 2008].

3.11 Justification of Study Methods

3.11.1 Use of Qualitative Research

Qualitative research gives researchers the advantage of observing the world through the perceptions of respondents hence contributing to knowledge from experience but not just logic [Silverman, 2013; Erlandson et al., 1993; Green et al., 2007]. This formative study was designed to obtain rich yet detailed information [Silverman, 2013; Erlandson et al., 1993; Green et al., 2007] from the community stakeholders of adolescent maternal/child nutrition and health. Much as the study used *a priori* themes based on the SCT theory, this qualitative research approach helped to identify a number of subthemes.

3.11.2 Use of Individual Interviews

Interviews were used as a tool of data collection to provide an open-ended yet in-depth investigation into circumstances [Silverman, 2013; Erlandson et al., 1993; Green et al., 2007] surrounding adolescent maternal/child nutrition and health. Interviews further helped the study to obtain a wide range of multi-sectoral perspectives of adolescent maternal/child well-being in rural Uganda. The interview guides that were drafted by the researcher and reviewed by the research team were tailored to specific target study participants. The interview guides had open ended questions that gave room to probes so that as much information as possible was collected [Gill et al., 2008; Ritchie & Lewis, 2003]. In addition, the interview guides were structured in a way that simple and less sensitive questions were asked first so as to build confidence and rapport with the interviews [Gill et al., 2008]. Much as the guides were used for interviews, flexibility for elaboration of information that was important to participants was allowed during the interview process [Gill et al., 2008; Ritchie & Lewis, 2003; Draper & Swift, 2010]. For example, participants went ahead to freely give their views about the causes and ways of reducing adolescent pregnancies and school drop-outs as this would potentially avoid the negative experiences of young mothers. Only individual interviews were used in the study because the researcher felt that adolescent motherhood and well-being was such a culturally sensitive issue and focus groups would not allow for the same freedom of privacy. Individual interviews gave an assurance of confidentiality to the study participants. The researcher was also able to confidentially draw the attention of interviewees to particular issues for clarification and request for additional information for “more absolute” perspectives, fill-in of gaps, and to improve the trustworthiness of data.

3.11.3 Study Rigor

To further ensure rigor and trustworthiness of this qualitative study, four scientific criteria warranted attention including credibility, transferability, dependability, and confirmability [Silverman, 2013; Erlandson et al., 1993]. Credibility of data is the evaluation of whether the findings were true, and this is improved through prolonged engagement, triangulation, peer debriefing and member checking [Silverman, 2013; Erlandson et al., 1993]. The researcher spent time with the local political leaders, VHTs, midwives, doctors, teachers and head teachers for quality engagement. Triangulation of views was done thorough interviews, observations and conversations with the neighbors of participants in some cases and the broader group of participants. Members of the research team for this study were a great resource for the researcher during data collection and analysis through their unbiased and objective feedback. Member checks were done by the researcher through asking if the information she had was correct and re-visiting or ringing study participants to make any clarifications. Such follow-ups were done with some of the area local leaders.

Transferability is the degree to which the findings of an inquiry can be transferred in other contexts or subjects. Thick descriptions of the circumstances and experiences of the young mothers and their stakeholders done in this study may help in ‘external validity’ and ‘generalization’ of results. The consistency of study findings and repeatability with the same or similar subjects and contexts is referred to as dependability [Silverman, 2013; Erlandson et al., 1993]. External audits to check study consistency improve dependability [Silverman, 2013; Erlandson et al., 1993]. Often points were reinforced by different community members. Also the data were compared with findings from different parishes and examples from studies done in similar contexts. In addition, the

researcher's supervisor, a team of academics from Canada and Uganda monitored and assessed the processes of data collection and analysis.

Confirmability is the measure of how well the findings are supported by the data collected and not by the researcher's bias or interests [Silverman, 2013; Erlandson et al., 1993]. The study content and invitation letters clearly spelled out the researcher's professional background, reason for conducting the study, and contact information for the researcher and supervisors were indicated. Hence there may have been some influence among some participants (e.g., expectation bias). Nevertheless, as the researcher is Ugandan, a mother and spoke the local language, position was not felt to exert a strong bias. Reflexivity is a technique that can establish confirmability. Reflexivity is the continuous scrutiny and reflection if the researcher's engagements, interpretations and methods were right [Silverman, 2013; Erlandson et al., 1993]. This was done through thorough deep thoughts and making notes about the processes of the study and asking for views from the research team members where confusion arose.

3.11.4 Thematic Analysis and Tree Coding

I employed thematic analysis of transcribed data to identify, examine, analyze, and generate sub-themes of *a priori* themes which allowed for a detailed description and interpretation of data in line with the research question [Attride-Stirling, 2001; Braun & Clarke, 2006]. Codes were framed from data and structured into in a parent-child coding scheme [Basit, 2003]. This coding scheme helped to organize themes and summarize key features of a large body of data [Braun & Clarke, 2006; Creswell, 2015] that linked to the global themes of improving maternal/child nutrition and health in what is called a thematic network [Attride-Stirling, 2001]. These broad themes were

needs, barriers, challenges for service providers, opportunities, general recommendations and recommendations for capacity building. For each, data were further coded according to levels of the SCT framework. The generated themes and sub-themes were categorized for analysis then used for interpretation and report writing [Attride-Stirling, 2001; Braun & Clarke, 2006; Creswell, 2015]. The results may be translated into the Lusoga language for the benefit of future interventions to improve adolescent maternal/child nutrition and health in rural Uganda. Such a form of knowledge-to-action approach is important as most models of knowledge to action towards improving health equity emphasize the importance of being informed by participatory research [Davison et al., 2015].

3.11.5 Data Analysis Software

I used Atlas-ti 7.5.4 qualitative data analysis software which assisted in organizing quotations that supported various codes and sub-codes and helped in synthesized results. According to Paulus and colleagues, it is important that researchers provide detailed descriptions of qualitative data analysis software used to aid understanding by the readers [Paulus et al., 2017]. Transcripts and codes were imported into the Atlas-ti software and specific codes were dragged and dropped onto sections of each transcript in a thematic analysis while looking out for similarities and differences in quotes. Given the large number of transcripts, the Atlas-ti 7.5.4 qualitative data analysis software helped to maximize efficiency compared to manual analysis. My training in the use of Atlas-ti 7.5.4 qualitative data analysis software was done through a hands-on training by a qualitative data analysis specialist in Uganda.

4.0 NEEDS AND BARRIERS OF TEEN MOTHERS IN RURAL EASTERN UGANDA: A QUALITATIVE STUDY OF PERCEPTIONS OF MULTI-STAKEHOLDERS OF ADOLESCENT MATERNAL/CHILD NUTRITION AND HEALTH

OUTLINE

Introduction: For adolescent mothers in rural Eastern Uganda, nutrition and health service needs may be compromised by a range of factors. Identifying individual and environmental (social, economic, physical, nutrition, health) needs and barriers at the local level is an important first step before considering community-based interventions that support positive nutrition and health behaviors.

Methods: This qualitative research was conducted in Budondo sub-county (Jinja district), Uganda. Based on constructs of the social cognitive theory, in depth interviews were conducted with purposively sampled adolescent mothers (n=25); family members (n=11); health personnel (n=19); community leaders and workers (n=33); and district administrators (n=13). A thematic analysis approach using Atlas-ti (version 7.5.4) was used.

Results: Young mothers' needs included: going back to school and home-based small businesses (individual), care and belonging to their families (social), employment (economic), shelter, clothing, personal land and animals (physical), food (nutrition), and medical care and delivery materials (health service). Lack of confidence and skills in income generation and food preparation were individual barriers to meeting the needs of young mothers, while harsh treatment was a social barrier; pregnancy/childcare and lack of academic qualifications were the barriers at the economic level; and lack of shelter and land were barriers at physical level which were complicated by cultural beliefs that favored boys. Nutrition barriers included lack of foods to make complementary feeds for infants while health service related barriers included lack of medicines and tailored health care, and poor health communications at health centers.

Conclusions: Using the social cognitive theory, this study identified needs of young mothers and barriers they face in improving their maternal/child nutrition and health. Adolescent-mother-and-child-friendly services and environments are called for at the local level while continuing to reduce broader socio-cultural and economic barriers to health equity. Findings of this study may help to direct future interventions for improvement of maternal/child nutrition and health.

Keywords: Adolescence, maternal/child, nutrition, health, needs, barriers, social cognitive theory, structural violence, gender, agency, structure, feminist, policy.

4.1 INTRODUCTION

In year 2013, the World Health Organization (WHO) reported that 28% of adolescent mothers in sub-Saharan African give birth before the age of 18 years [WHO/UNFPA, 2013] and to make matters worse, 95% of all births by girls aged 15 to 19 years in the world occur in low- and middle-income countries [WHO, 2017]. In Uganda, a developing country, it was reported that 25% of the adolescents (15-19 years) become pregnant with this being more common in rural Uganda (27%) than in urban Uganda (19%) [UBOS, 2016]. In the Busoga region of Eastern Uganda, 21% of the adolescents aged 15-19 years have begun child bearing [UBOS, 2016] making it a significant and of public health concern [WHO/UNFPA, 2013].

Many of the adolescent mothers in developing countries do not meet the required nutrient intakes due to food insecurity [Atuyambe et al., 2005] and poor knowledge about good nutrition during pregnancy [Yassin et al., 2004]. Pregnancy during adolescence versus adulthood may also increase risk of poor pregnancy outcomes [WHO/UNFPA, 2013; MOH, 2011; WHO, 2004], occurrences that could easily lead to a cycle of poor maternal and child health.

In Uganda, a number of studies on pregnancy or motherhood indicate needs, or barriers to meeting needs, in relation to aspects of well-being [Atuyambe et al., 2005; Leerlooijer et al., 2014; Nabiwemba et al., 2014; Ayiasi et al., 2013; Babirye et al., 2011; Atuyambe et al., 2008; Atuyambe et al., 2009]. Nevertheless, no known study has focused on needs and barriers of teenage mothers in rural Eastern Uganda with a goal of understanding influences on nutrition and health. Moreover, the unique application of the social cognitive theory (SCT) [Glanz et al., 2008: 169,170,273,274; McKenzie & Smeltezer, 1997; Bandura, 2004] helps to emphasize the individual and environmental (social, economic/physical/nutrition/health service) factors that interact to influence the behaviors of young mothers. Since the aim of this research was ultimately to guide community-level intervention, it was important to understand context from the perspectives of a range of stakeholders of adolescent maternal/child nutrition and health relevant to the geographic setting of rural Jinja district.

The specific objectives of the study were to describe multiple stakeholder perceptions of both the needs of adolescent mothers towards enhancing their maternal/child nutrition and health and the barriers adolescent mothers face in meeting their needs, at the individual and environmental (social, economic, physical, nutrition, and health service) levels.

4.2 METHODOLOGY

For this section of 4.2, please refer to the following areas of chapter 3.0 as regards: study design and conceptual framework; epistemological stance; study site; inclusion criteria; study sample and recruitment; ethics; data collection; data analysis; management of bias during data collection, analysis and reporting; and justification of study methods.

4.3 RESULTS

4.3.1 Demographic Characteristics of the Respondents

All the adolescent mothers who participated in the study were aged between 14 and 18 years, unmarried and unemployed. The family members in this study includes mothers and grandmothers of the young mothers. Married/cohabiting adolescent mothers and the infant's fathers did not agree to participate in this study. Demographic characteristics of all study respondents are in Table 4.1.

4.3.2 Perceived Needs and Barriers of Young Mothers

Perceived needs and barriers of young mothers were reported by different stakeholders of adolescent maternal/child well-being at the individual and environmental (social, economic, physical, nutrition, health) levels and as summed up in Tables 4.2 and 4.3 (Appendix VI) with respondent counts and frequencies. The counts given in Table 4.2 and 4.3 (Appendix VI) account for perceptions of a mixture of study participants in their categories and not for individuals. The counts in Table 4.2 represent the number of mentions, not the number of respondents who reported something that was coded into that category; this explains why the number in many cells is greater than the number of respondents. For results in Table 4.2 the percentage of all needs and barriers that relate to different levels of the social cognitive theory model are presented and further broken down by participant category (mothers, NGO staff, community workers, local leaders, etc.). Social environment needs and health service barriers accounted for the greatest percentage of all responses of all levels of the SCT at 33.6% and 33.7% respectively as showed in Table 4.2. Young mothers in comparison to other respondents reported a higher percentage of needs at the social environment level (48.4%), economic environment level (51.2%), physical environment level (38.9%) and health service environment level (36%). For the case of barriers, young mothers also

gave a large number of these at the: individual level (42.6%); social environment level (41.5%); economic environment level (43.8%); and health service environment level (33.5%).

Various quotes have been provided in this paper; they were selected to illustrate the codes and also to represent the voices of the informants and nature of the interview data. Other selected quotes are available in Table 4.4, Appendix VI. Other items in Appendix VII include allocation of participants by parish/ village (Table 4.5), the question guide (Table 4.6), the interview schedule (Table 4.7), and summary demographic characteristics (Table 4.8).

4.3.2.1 Individual Level

Results reported in this section and the rest that follow are organized according to needs or barriers at the different levels of the socio-ecological model (see Table 4.3). Table 4.3 consists of comments raised pertaining to sub codes (e.g., mothers' need for money) that are presented as a percentage of respondents for that section, e.g., needs at the individual level, without differentiating who the comment came from. This lumping of respondents was done when perspectives from stakeholders did not differ and so a bigger picture of what came from a whole range of respondents in this study. The reality of the few perceptions that differed were confirmed through triangulation of information. For example, a young mother reported that she was in need of money as the father of her child ran away from the village after raping her and so wasn't available to help her out. Her mother and VHT however contradicted this, saying the young man was a fellow student with whom they had a long standing mutual relationship, and who was known in the home, but could not give any support as he wasn't working. In this case, it was apparent that the young mother was not raped though the need for financial support was correct and that the father of her child lacked money to aid financial support.

4.3.2.1.1 Needs at Individual Level

Eighteen (45%) out of 40 stakeholders who commented reported that adolescent mothers had a need for money as some pursued small businesses such as selling snacks; those businesses are continued by their parents at times when the young mothers are at school. Some of the young mothers made handcrafts like baskets, mats and ropes for sale, and all of them could cultivate food crops and rear animals with their parents.

“I so much wanted to get back to school because I have the heart to study, complete and also get a job. I need money for fees and so I make and sell spiral salty doughnuts for money needed. During school days I cook and leave the spiral salty doughnut with my mother and she sells them for me.” Adolescent Mother 1.

A need for modern medication and biomedical health care and to get back to school were also reported as individual needs of young mothers.

“I need medication and so have to always go to the health center. I also take my child to hospital for immunization or when sick because I know it is good and we will be given care and become healthy.” Adolescent Mother 2.

4.3.2.1.2 Barriers at Individual Level

It was perceived by 24 (53.3%) of the 45 stakeholders who commented that young mothers lacked knowledge in income generation skills, such as handcrafts. This is an individual factor that could be used to enhance their economic status. Some appeared to lack the confidence to take on new responsibilities of self-sustainability while others were perceived to be lazy at making handcrafts. In addition, according to 16 of the 45 study participants, some of them stopped going to school on their own even when there were schools willing to keep them. Young mothers also lacked knowledge about practical food preparation to make food for themselves and their infants.

“They (adolescent mothers) do not make handcrafts because they do not know how to make

them.” Community Worker 1.

“They (young mothers) lack confidence and they tell me that they do not know anything, even if you tell them to go and buy things like mineral premix (feed of animals/birds) they will tell you that they do not know mineral premix.” Community Worker 1.

4.3.2.2 Social Environment Level

4.3.2.2.1 Needs at Social Environment Level

According to 32 (40.5%) of the 79 respondents who commented, young mothers in rural areas of Uganda needed to belong to their families. Twenty (25.3%) of these respondents reported that the mothers needed marriage as most of them were staying with their parents instead of their children’s fathers, most of whom had denied responsibility or run off for fear of being arrested by police.

“My parents do not trust me anymore. They abandoned and treated me badly, abusing and chasing me away. They [parents] lost hope in me, am looked at as being useless and a failure.” Adolescent Mother 2.

The young mothers also expressed a need to belong to their families or those of the father of their baby as their families were sending them away yet their baby’s father or his parents were not taking them up. Young mothers identified the need to be loved, cared for and trusted by their families and community members instead of being abandoned or abused by them. This could have impacted their health as some thought of carrying out unsafe abortions. Stakeholders in the health service sector perceived that adolescent mothers were at a high risk of high blood pressure and depression during and after pregnancy due to stress received at home.

“Ever since my mother got to know that I am pregnant, she abuses me and wants to chase me away from home and she says that I should go to the person who made me pregnant yet he ran away. She does not show me love or care [about me] and never trusts me with anything saying that I am useless.” Adolescent Mother 3.

4.3.2.2.2 Barriers at Social Environment Level

Some parents and community members were of the view that they had to be tough on the young mothers to teach them and other children in the family/community lessons not to repeat or do the same mistake. This might help explain the harsh treatment and abuse experienced by young mothers that was reported by 34 (48.6%) of the 70 respondents who commented.

“When your daughter gets pregnant, you are not happy because you took her to school to study and look after you in future. Now instead of bringing home a qualification for a better future, one brings another burden, which is why we [parents] have to teach them [young mothers] a lesson. If you are not tough, even the young ones can make the same mistake. We [parents] are not happy about how these girls are embarrassing and letting us down”
Family Member 1.

It was also reported by 25 (35.7%) of the 70 respondents that some pregnant adolescents who might have wanted to continue with school were not accepted. In some cases those who went back after delivery were abused by their peers.

“Girls may want to continue with school but they are not allowed to go to school while pregnant, they (school Administrators) say that they will spoil the rest of the girls....who may think that even when they get pregnant they will be allowed to continue with school. Those who deliver would have loved to go back to school but they fear to be abused by their peers and for others the parents believe that they are already spoiled and can't study again. For others, the parents are poor and cannot help out” Area Leader 1.

4.3.2.3 Economic Environment Level

4.3.2.3.1 Needs at Economic Environment Level

Out of the 65 respondents, 22 (33.8%) who commented reported that young mothers in rural Uganda needed money to buy medicines, foods that were craved and personal effects, and to pay for transport costs as their parents were too poor to support them. Jobs or self-employment were needed by young mothers so as to empower themselves economically as reported by 31 (47.7%) and 12 (18.5%) out of the 65 respondents.

“I need a job to work so that I can provide for my needs and those of the baby because my mother does not have money to give me.” Adolescent Mother 2.

“These young mothers want to participate in animal rearing but they need capital. They would be looking after dairy cattle, goats and chicken.” Area Leader 2.

4.3.2.3.2 Barriers at Economic Environment Level

According to 80 respondents who commented, various perceived avenues of improving the economic status of young mothers in rural Uganda were hindered by: lack of academic qualifications for given job vacancies since they had dropped out of school and so could not get meaningful employment and payment (20%); lack of financial support from their poor parents (25%); lack of capital to become self-employed with petty businesses (16.2%); and their being pregnant or having a child which employers linked to laziness as they needed time to rest or no time to handle a job with childcare (10%). Income generation skills, e.g. agriculture and making handcrafts, would be an alternative to help in improving the economic status of young mothers, but the young mothers lacked markets for their handcraft products as the products were deemed unattractive, they lacked money to pay at facilities like NGOs that provided income generation skills at a fee, or they perceived distances to these NGOs to be too long. Moreover, available government program of NAADS [National Agricultural Advisory Services] discriminated against them as such programs prioritized and gave free seeds and animals for rearing to adults with established homes.

“They (adolescent mothers) do not make handcrafts because they lack money to buy the materials needed as they no longer get them free of charge. Their parents also can’t help as they are very poor. Even what they make does not have market because they are not so attractive.” Community Worker 2.

“NAADS usually gives [agricultural items] to adults with established homes. And even if NAADS were giving youths seeds like beans, maize and animals to rear too, many boys will overshadow the girls” Area Leader 3.

4.3.2.4 Physical Environment Level

4.3.2.4.1 Needs at the Physical Environment Level

A house to sleep in and comfortable beddings for the young mothers and their infants were reported by 22 and 10 of the 62 respondents who commented respectively. In addition, clothing, like maternity wear during pregnancy, which also presented a barrier to their visit to the health centers; and shoes and soap were some of the physical needs expressed. Perceptions of personnel in the health service sector indicated that in comparison to infants of adult mothers, infants of young mothers were more likely to have respiratory illnesses (flu, cough) and diarrhea that may result from the poor sleeping conditions.

“Those pregnant girls need good dressing. They lack maternity dresses for example she may visit the hospital for ANC while putting on a T-shirt and sometimes they put on sandals made from old car tyres and sometimes they walk bare footed because they cannot even afford simple shoes. At home, they do not have good bedding and their babies lack bedsheets and blankets” Health-related Personnel 1.

4.3.2.4.2 Barriers at the Physical Environment Level

Long distances and slippery roads during rainy seasons presented a barrier to young mothers from accessing health centers or training programs. Lack of appropriate wear was reported by 31.3% (21 of the 67) respondents who commented as a barrier to mothers to visit health centers was Culture, a social factor, presented barriers to meeting physical environment needs as reported by 13 (19.3%) out of the 67 respondents. For example, culture hindered young mothers in rural Uganda from sharing a house with their parents, as they are taken to be on the side of their children’s fathers having evidently had sex with them, leading to them sleeping under poor conditions that could hinder well-being of both mothers and infants.

“They (young mothers) sleep under very poor conditions on nylon (sugar-empty) bags and papyrus mats and they usually sleep in the small huts of their brothers or in the ‘sitting room’ where it is cold because the parents take it that they are now in laws [can’t share

homes with their pregnant daughters because they represent the boys/men they had sex with].” Educator 1.

Stakeholders also reported that owning of land by young mothers was made difficult by a culture that never allowed girls to inherit land. A lack of land and animals hindered young mothers from making decisions on what to grow or rear.

“They (young mothers) don’t own land for themselves because our culture does not allow girls to inherit land. They also look after their parents’ cattle, goats and chickens they do not have their own. They cannot decide on what to grow or rear, they follow what their parents want.” Area Leader 3.

4.3.2.5 Nutrition Environment Level

4.3.2.5.1 Needs at Nutrition Environment Level

Young mothers in rural Uganda needed food of the right quality and quantity as over 50% (33 of the 65) respondents who commented expressed that they only ate what was provided with no special consideration of their needs due to a lack of money for parents to buy the foods. It was perceived by health personnel that young mothers in comparison to adult mothers were more likely to have low maternal weight gain during pregnancy and anemia, and deliver infants with low birth weight due to poor feeding. There was also a need for the right complementary feeds for the infants (7 to 12 months) that could have led to a perception from health personnel that infants of young mothers were at a high risk of underweight.

“They don’t get proper feeding like the right quantity of food or foods that they crave because their parents don’t have money to buy them all the foods that they need.” Area Leader 4.

4.3.2.5.2 Barriers at Nutrition Environment Level

Some infants of young mothers did not benefit from exclusive breastfeeding (EBF) because their mothers in some cases lacked sufficient breastmilk or had to go back to school or work which

hindered infants from benefiting from EBF. It was also perceived that EBF was further hindered by young mother's lack of knowledge or mentorship regarding breastfeeding, for example, their fear of breasts becoming wobbly on losing their firm shape (locally referred to as "socks") or inability to manage discomfort, e.g., a feeling of tickling in breasts while breastfeeding, and sore nipples.

"Cookery practicals [for appropriate foods during and after pregnancy and complementary feeds] are not taught to young mothers yet that would help the mothers to be healthy. We only teach the foods to be eaten theoretically from charts however in Budondo Health Centre IV and Lukolo Health Centre III all mothers are sometimes taught how to cook using videos that are in English." Health-related Personnel 2.

A total of 24 (39%) out of the 62 respondents reported that as the mothers lacked appropriate foods and practical knowledge in food preparation, their infants were unlikely to receive the right complementary feeding.

"Most of them (young mothers) feed the babies on what they eat, just mashing it. I have my neighbor who feeds the baby on cassava porridge yet the baby is very young but because she doesn't have breast milk. It is recommended for the children to start complementary feeding when they are 6 months but some of them start it before it is six months and they give them hard foods like potatoes." Community Worker 3.

4.3.2.6 Health Service Environment Level

4.3.2.6.1 Needs at Health Service Environment Level

Over 45% (37) of the 80 respondents who commented reported that adolescent mothers were in need of medicines and 20% (16) of them perceived a need for delivery materials like the "Mama Kit" but absence of these discouraged young mothers from seeking medical care or meant that those that went to health centers were not able to be served. A "Mama Kit" is a sealed package of delivery materials including plastic/polythene sheet, cord ties, razor blades, cotton wool with gauze, gloves and a child health card. Young mothers in rural Uganda reported a need for follow-

up home visits by medical personnel after pregnancy and training in good newborn care practices, such as keeping a baby warm before and after bathing, baby cord cleaning.

“I am about to give birth to my baby. The midwife gave us a list of items to buy for delivery like mama kit, gloves, baby clothes, basin, soap but I do not have any of them. My mother cannot provide these, even getting money for buying medicines and food is a problem for her.” Adolescent Mother 4.

4.3.2.6.2 Barriers at Health Service Environment Level

Hindrances to seeking medical care included physical barriers, like long distances to the health centers and slippery roads during rainy seasons. Other barriers that could affect adult mothers as well included late reporting of medical personnel to the health centers; harsh treatment from the medical staff or midwives; long waiting lines; lack of maternity wear; and failure to receive delivery materials e.g., Mama Kits that were provided at health centers and had to be paid for yet some mothers lacked the money to do so.

“The medical workers reach at 10:00am finding long lines waiting. When they reach, they first sign the attendance book and then converse and later work on us yet they have to leave early. They are so tough, they abuse us and don’t care much yet we will have come from far and waited for them.” Adolescent Mother 5.

Twenty four (27.6%) of the 87 respondents who commented reported that absence of medicines at the health center was a major barrier to seeking modern health services.

“When there are no medicines and you go the first time they prescribe for you, second time and third time when there are no medicines, can you go back the fourth time?” Health-related Personnel 3.

Young mothers reported that results of all measurements regularly done for maternal weight, infant weights, malaria, HIV, anemia and blood pressure were told to mothers and recorded in their personal books, but were rarely communicated to them in a way that gave a clear explanation about their health status and that of their infants. Self-weighing of weight for mother and infant was done

by mothers, and results were told to a midwife who would then write the figures in their personal health record books. It was also perceived that young mothers were not having tuberculosis (T.B) tests, and lacked records on infant length and head circumferences. These gaps could hinder monitoring of the health of their infants. As well, a lack of designated space or time to address the specific health concerns of young mothers separate from adult mothers made it difficult to freely ask questions.

“When the mothers go for ANC they are not separated from old mothers and these girls become uncomfortable. They cannot ask questions even if they have problems because they fear the adult mothers. Sometimes they (young mothers) are worked on last and they (midwives) abuse them asking them why they got pregnant while still young, this makes them fear to go back for ANC.” Area Leader 5.

4.4 DISCUSSION

The study reported that young mothers in rural Uganda had various needs relevant to nutrition and health that were not met by their families or the communities they lived in. Our study agrees with other studies on needs of young mothers such as: jobs and employment [Leerlooijer et al., 2014; Kaye, 2008; Atuyambe et al., 2005], knowledge in income generation skills, personal land and animals [Atuyambe et al., 2005], and barriers e.g., abuse, stigma [Atuyambe et al., 2005], lack of academic qualification [Leerlooijer et al., 2014; Atuyambe et al., 2008; Kaye, 2008], harsh treatment at health centers [Atuyambe et al., 2009; Atuyambe et al., 2008; Atuyambe et al., 2005; Kaye, 2008; Kyomuhendo, 2003] and schools [Atuyambe et al., 2005]. Sadly, these situations have not changed since the years of these studies’ reports.

Key findings of this study include a need for support to meet even basic needs such as food and shelter, a sense of love and belonging to their families or those of the baby’s father, and medical care. Efforts to find solutions to given needs were also thwarted by a number of barriers at family,

community or societal levels, including negative cultural beliefs, unattractive school environments, and lack of education and training e.g., in income generation skill and newborn care. Other barriers included lack of medicines and unavailability of staff making health centers “empty”, lack of translation of health information to mothers, lack of home follow-ups, unfavorable environments at health centers and lack of a designated space or time to address the specific health concerns of young mothers separate from adult mothers. These health-related barriers seem to defy the WHO six building blocks of an ideal healthcare system aimed at efficient and quality service delivery including: service delivery, adequate workforce, information systems, accessibility to medicines, financing of the health sector, leadership and governance [WHO, 2010].

Pregnancy is experienced biologically by females, but some of the barriers faced relate to the social response to gender. The negative cultural belief that hindered young mothers from acquiring land or sharing houses with their parents is a gender-based problem; favoring the boy child is a practice that is common in Uganda [Atiku, 1994]. Moreover, harsh treatment from families, schools and the community to young mothers so as to ‘teach’ them or other female siblings/ classmates lessons about premarital sex is also gender biased; the males that impregnated the girls were less severely affected. Such acts of cultural and gender marginalization and inequalities seems to suggest that young mothers in rural Uganda are victims of structural violence [Farmer, 2004; Farmer, 2009; Page-Reeves et al., 2013; Basnyat, 2017; Roberts, 2009; Montesanti & Thurston, 2015; Montesanti, 2015; Lewis & Russell, 2013] that leads to social exclusion; their occupancy of the bottom level at the social hierarchy in their communities causes suffering and pain [Farmer, 2009]. The gender biases that are promoted by cultures also complicate matters further as these are

historical processes and forces conspire to cause further suffering [Montesanti & Thurston, 2015; Montesanti, 2015; Farmer, 2009].

This study was based on the social cognitive theory and the social ecological framework. By understanding the needs of young mothers and the barriers to meeting these needs at a range of levels, it may be possible to consider opportunities to shift behavior or overcome obstacles. At an individual level, young mothers were found to lack education and skills. Opportunities for young mothers to better their lives; might include giving them incentives to go back to school, and sensitizing schools and communities to support them. Seeking modern health care, going back to school, making money from petty home-base businesses like fried snacks and handcraft, and cultivation of crops and rearing animals are points of strength and resilience of young mothers that could be strengthened and used to improve their well-being.

At a social level, barriers could be mitigated through fostering an attitudinal shift amongst those in positions of influences and different service providers. For example, Kirstenstoebenau (2014), with the help of the Forum for African Women Educationalists in Uganda, shared with district administrators, policy makers, civil society organizations and policy makers the plight of adolescent mothers and other girls that needed to enroll back in school in West Nile region of Uganda after war and displacement. The said audience was encouraged to standup for the well-being of not only girls but also young mothers who were out of school [Kirstenstoebenau, 2014]. Opportunities for such information sharing could support a shift in areas such as education and income generation, e.g., through parents faithfully caring for small businesses of young mothers who return to school (individual factor) and fostering a sense of belonging, love and care for young

mothers that may be create circumstances of vulnerability (social level). In addition, stigmatization and harsh treatment towards young mothers from their peers and educators is common in rural schools with no or weak support systems. This could be also be mitigated through sensitization of educators by those in positions of influence. The level of drop out in the primary schools is high with 40% of Grade 1 completing primary circle [World Bank, 2014] this may be a demotivating factor to returning to school by the adolescent mothers who have had a social and emotional disruption. Sensitization would also foster meeting basic needs for shelter, clothing, land (physical level); food for mothers and infants (nutrition level); and providing positive, accessible health care services (health service level). Over time, communities may transition in their acknowledgement of teen mothers as a collective responsibility.

At the economic level, avenues of partnering with organizations that would offer hands-on skill training need to be explored to support income generation by young mothers as this may improve the well-being of both mother and child [Negash et al., 2015]. Support from such organizations is important because the level of poverty in the rural setting of Uganda [UNDP, 2014; World Bank Group, 2016] and the high prevalence of barriers related to lack of money among parents as reported by this study suggest that families, even if willing, may hinder substantive economic support to young mothers. Seeking and finding help from an external organization was demonstrated by one partnership in Uganda where Wakisa ministries helped enroll young mothers in a modern technology agricultural school, Agromax [Wakisa ministries, 2017]. Similarly, the Teenage Mothers Project (TMP), funded by the Dutch organization Adopteer een Geit (Adopt a Goat) in Manafwa district (eastern Uganda), was reported to have improved the economic status of young mothers by giving each a goat and helping them re-enroll back into schools. The support

of families, communities and a community based organization, the African Rural Development Initiatives (ARDI), were all part of the strategy of collective responsibility [Leerlooijer et al., 2014; Leerlooijer et al., 2013]. Other economic factors could be addressed at a macro and policy level. For example, this study identified gender and age discrimination of NAADS [National Agricultural Advisory Services] in only serving adults with established homes when giving out free seeds and animals for rearing yet some adolescent mothers could use their parents' land for crop growing and animal rearing if given the farm grants of NAADS. Sensitization could also be used to encourage all families to avail land for growth of food or rearing animals by young mothers since women are the main providers of agriculture labor in Africa [Palacios-Lopez et al., 2017; World Bank, 2009]. A certified family ownership of land was demonstrated to be effective by a study in Ethiopia [Muchomba, 2017].

At the nutrition level, while lack of appropriate food and education about complementary feeds were barriers for infant nutrition, the practice of teaching theoretical content knowledge versus practical skills in healthy food preparation at health centers was not considered helpful. Intervention strategies of nutrition education and farming [Nabugoomu et al., 2015a; Nabugoomu et al., 2015b; Nabugoomu & Hanning, 2015; Henry et al., 2015; Shefner-Rogers, 2014, Berti et al., 2010] could support improvement in this area. Studies by Nabugoomu and colleagues (2015) showed that nutrition education of child caregivers in Uganda increased the adoption of orange-fleshed sweet potatoes to increase vitamin A intake by children (2-6 years), and had positive effects on caregiver knowledge, attitudes, and feeding practices [Nabugoomu et al., 2015a; Nabugoomu et al., 2015b].

At the level of the health service environment, lack of communication of health information about maternal/child measurements in a way that was meaningful to young mothers by their community-level midwife/nurse is a barrier that could be addressed through health provider behavior change. Improvement in attitudes and care by service providers may need lobbying for at the macro environment level of district and national government.

Young mothers in Uganda could also fully benefit from gender and/or women-supportive policies such as the Uganda National Gender Policy (2007) [Uganda, 2007; UNDP/Uganda, 2016] and Uganda's National Action Plan on Women (NAPW) [UN/Uganda, 2018; UNDP/Uganda, 2016] if well implemented, monitored and evaluated. Internationally, young mothers could benefit from gender-equity related interventions funded by organizations such as Canada's Feminist International Assistance Policy [Government of Canada, 2017], Food and Agriculture Organization (FAO) [FAO, 2018], Bill Melinda Gates Foundation [Bill Melinda Gates Foundation, 2018] and the Nestlé Foundation for the Study of Problems of Nutrition in the World, Lausanne, Switzerland [Nestlé Foundation, 2018]. Better still, policies that seek to empower girls and women could be adopted by the government of Uganda.

4.5 CONCLUSION

Young mothers in rural Uganda face numerous needs and barriers towards enhancing their well-being and collective efforts at individual, family and community levels will be needed in order to improve. A need to belong, employment, reenrollment in school, basic physical needs, medical care and materials, food and infant feeds were needs of young mothers in rural Uganda identified through the 101 individuals interviewed for this study. The study also reported barriers that hindered young mothers from meeting their needs including lack of life and economic skills, abuse,

negative cultural attitudes, and lack of medicines and other health tailored services at the health centers. Guided by the social cognitive theory and social ecological framework, the individual and environmental needs and barriers identified through this study point to the need for behavior change on the part of individuals, families, community, society and government to better support these very vulnerable young women and their babies. Findings of this study may help to direct future interventions for improvement of maternal/child nutrition and health.

Figure 4.1: Social cognitive theory framework of perceived needs and barriers of adolescent maternal/child nutrition and health

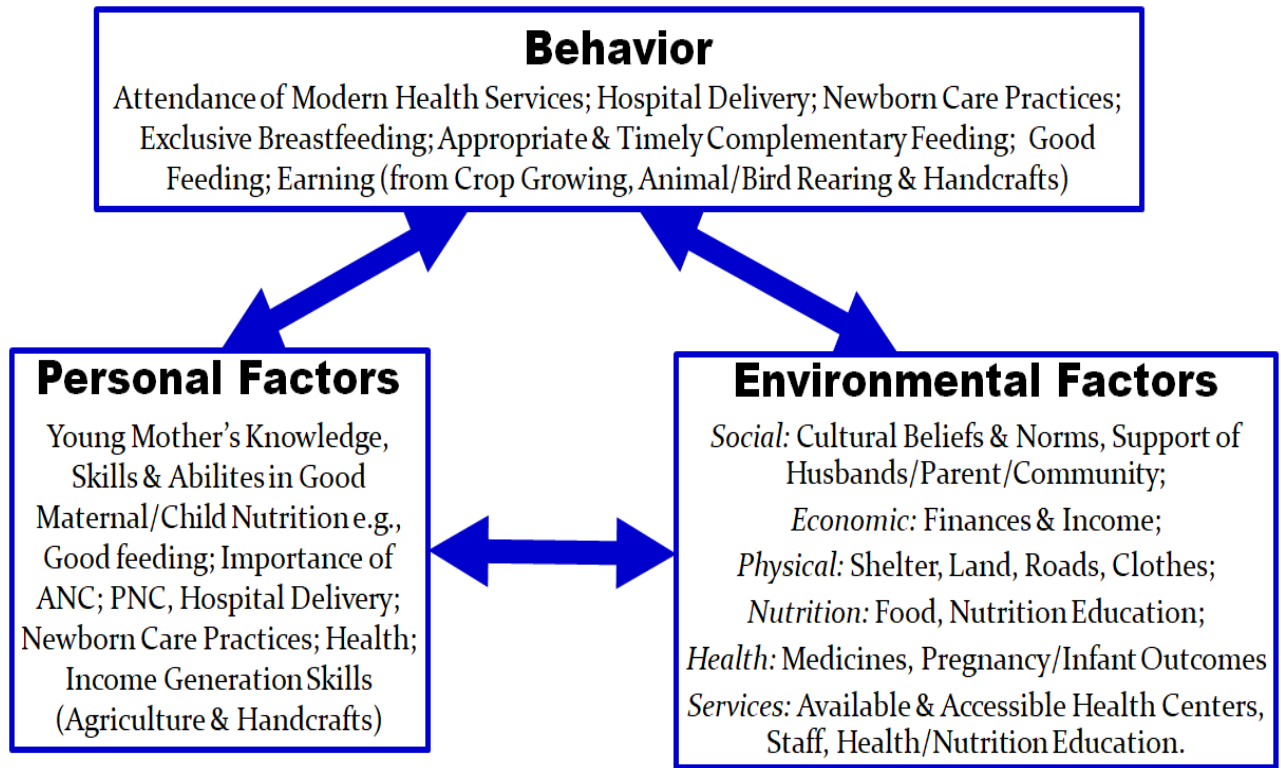
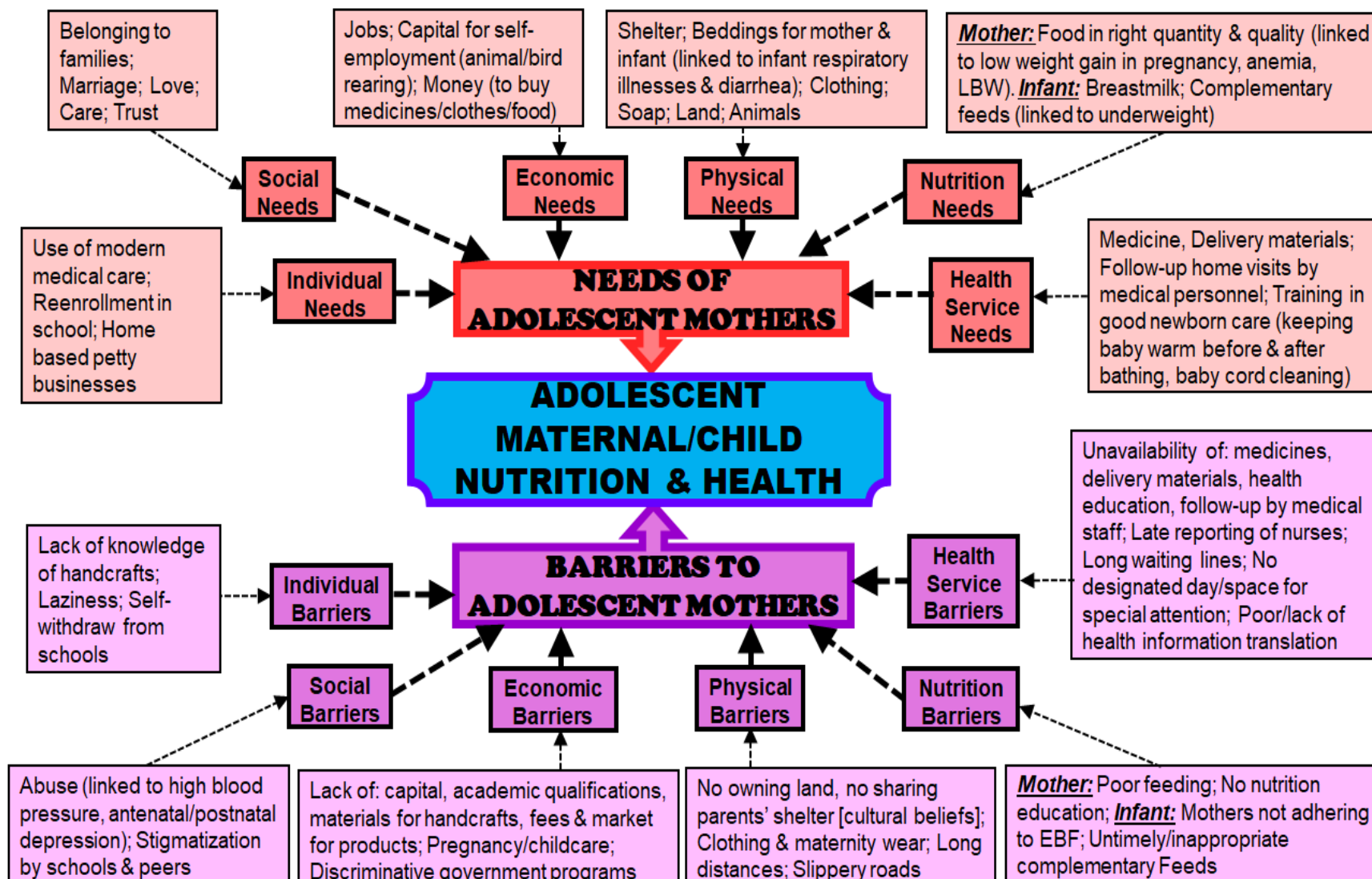


Figure 4.2: Thematic network of perceived needs and barriers of adolescent mothers



Adapted from: Attride-Stirling J. Thematic networks: an analytic tool for qualitative research. Commission for Health Improvement, England. Qualitative Research. *SAGE Publications* (London, Thousand Oaks, CA and New Delhi). 2001;1(3):385-405.

Table 4.1: Demographic characteristics of study respondents (N=101)

Participants and Variables		Frequency (%)
Adolescent Mothers		N=25
Age of Mother	12-15 years	28.0%(7)
	16-19 years	72.0%(18)
Pregnant/Lactating	Pregnant	44.0%(11)
	Lactating	56.0%(14)
Years of Residence in Study Area	>3<5 years	32.0%(8)
	5-10 years	0.0%(0)
	>10 years	68.0%(17)
Dropped out of School	Yes	96.0%(24)
	No	1.0%(1)
Employed	Yes	0.0%(0)
	No	100%(25)
Married	Yes	0.0%(0)
	No	100%(25)
Family Members of Young Mothers		N=11
Sex	Male	0.0%(0)
	Female	100%(11)
Years of Residence in Study Area	5-10 years	9.1%(1)
	>10<20 years	18.2%(2)
	20+ years	72.7%(8)
Health-related Personnel		N=19
Sex	Male	21.1%(4)
	Female	78.9%(15)
Working Experience in Study Area	>3<5 years	10.5%(2)
	5-10 years	26.3%(5)
	>10<20 years	26.3%(5)
	20+ years	36.9%(7)
Community Workers		N=06
Sex	Male	100%(6)
	Female	0.0%(0)
Working Experience in Study Area	>3<5 years	16.7%(1)
	5-10 years	0.0%(0)
	>10<20years	16.7%(1)
	20+ years	66.6%(4)

Educators		N=16
Sex	Male	56.3%(9)
	Female	43.7%(7)
Working Experience in Study Area	>3<5 years	0.0%(0)
	5-10 years	18.8%(3)
	>10<20 years	68.7%(11)
	20+ years	12.5%(2)
Area Leaders		N=19
Sex	Male	68.4%(13)
	Female	31.6%(6)
Working Experience in Study Area	>3<5 years	0.0%(0)
	5-10 years	42.1%(8)
	>10<20 years	47.4%(9)
	20+ years	10.5%(2)
NGO Staff		N=05
Sex	Male	60%(3)
	Female	40%(2)
Working Experience in Study Area	>3<5 years	80%(4)
	>5<10 years	0.0%(0)
	>10<20 years	20%(1)
	20+ years	0.0%(0)

5.0 SUPPORTING TEEN MOTHERS IN RURAL EASTERN UGANDA: A QUALITATIVE STUDY OF STAKEHOLDERS' PERCEIVED OPPORTUNITIES AND CHALLENGES

SUMMARY

Introduction: Adolescent pregnancy negatively affects the young mothers, their families and communities in rural Uganda contributing to poor nutrition and health for mother and offspring. We have previously identified a range of individual and environmental (social, economic, physical, nutrition, health service) needs of young mothers and barriers faced in attaining these needs. Identifying opportunities and challenges at the local level is an important step before considering feasible and acceptable community-based interventions to support positive nutrition and health of adolescent mothers and their infants in rural Eastern Uganda.

Methods: This qualitative research was conducted in Budondo sub-county (Jinja district), Uganda. Based on constructs of the social cognitive theory, in depth interviews were conducted with 101 purposively sampled adolescent mothers, family members and community workers and leaders. A thematic analysis approach using Atlas-ti (version 7.5.4) software was used.

Results: Opportunities to support positive nutrition and health at the individual level included positive decision making regarding health care and practices by some young mothers. Opportunities at environmental levels included: *social level*: examples of family and community support; *economic level*: training opportunities in income generation skills; *physical level*: provision of housing and shelter to young mothers by some family members; *nutrition level*: provision of food by sharing from family; and at the *health service level*: availability of adequate modern health and local services in some instances. Nevertheless, these opportunities were often not realized due to a range of challenges. Challenges at the *individual level* of the mother included limited means to gain knowledge or skills to support good decisions, poor attitudes of some, e.g.,

towards breastfeeding; Challenges among service providers included lack of motivation, skill (e.g., in making handcrafts) or training, e.g., in adolescent-friendly approaches. Challenges at environmental levels included: *social level*: poor attitude of parents towards community workers that visited young mothers at home and harsh treatment of young mothers by medical staff; and *economic level*: inability to receive income generation materials, poor markets and poor farm yields. At the *physical level*, some families had insufficient land and could not fully support agriculture activities by young mothers; at the *nutrition level*: lack of food and facilities for food preparation limited training to young mothers; and at the *health service level*: inadequate medical supplies and understaffing.

Conclusion: Stakeholders reported opportunities at all levels of the social cognitive theory that could be exploited to support behaviors and environments for improved maternal/ child health. Nevertheless, a range of challenges were identified that would also need to be addressed to enable opportunities to be fully acted on for positive behaviors. This research can inform action through local and national platforms to support good adolescent maternal/child nutrition and health.

Keywords: Adolescence, maternal/child, nutrition, health, supports, challenges, social cognitive theory, gender, agency, structure, feminist, policy.

5.1 INTRODUCTION

The period of adolescence brings physical and sexual maturity and myriad behavioral, social and environmental influences that can contribute to adolescent pregnancies [WHO, 2004; Alberga et al., 2012]. Adolescent pregnancy not only negatively affects the young mothers socially and economically but also their families and communities and could easily lead to a cycle of poor health for the young mothers and their infants [WHO, 2004; UNFPA, 2013].

The WHO estimates that in developing countries, girls under 15 years of age account for 2 million births per year [UNFPA, 2013]. To make matters worse, the WHO projects a 57% rise in the adolescent pregnancies by 2030 in Eastern and Southern Africa and by the same projected year, the number of pregnant girls under 15 years will increase from 2 million to 3 million [WHO/UNFPA, 2013]. According to the Uganda Demographic Health Survey (UDHS) of 2016, 25% of adolescents in Uganda (15-19 years) become pregnant and adolescent pregnancy is more common in rural Uganda (27%) than in urban Uganda (19%). In the Busoga region of Uganda, it was reported that 21% of the adolescents (15-19 years) have begun child bearing [UBOS, 2016]. This situation is of public health concern given the low age of these young mothers, risking their nutritional health and well-being [UNFPA, 2013; Nabugoomu & Hanning, 2015] as well as that of their infants.

In Uganda, a number of studies revealed strengths of adolescent mothers [Ayiasi et al., 2013; Atuyambe et al., 2005; Atuyambe et al., 2008; Leerlooijer et al., 2014] and challenges of service providers [Lutwama et al., 2012; Chi et al., 2015; Chi et al., 2015]. We have previously identified diverse needs facing young mothers in Uganda and barriers they face in addressing these needs.

The task of addressing the needs can seem daunting. Examining what works or can work, from the perspectives of those at the community level, is a first step to identifying areas for action. Along with these opportunities, appreciation of the challenges faced in realizing the actions can further help in setting priorities. No single study has focused on opportunities available to adolescent mothers and challenges of stakeholders in rural Eastern Uganda with a goal of understanding influences on nutrition and health. Moreover, the unique application of the social cognitive theory (SCT) [Glanz et al., 2008: 169,170,273,274; McKenzie & Smeltezer, 1997; Bandura, 2004] helps to emphasize the individual and environmental (social/economic/physical/nutrition/health service) factors that interact to influence the behaviors of young mothers and service providers. Since the aim of this research was ultimately to guide community-level intervention, it was important to understand context from the perspectives of a range of stakeholders of adolescent maternal/child nutrition and health relevant to the geographic setting of rural Jinja district.

The specific objectives of the study were to describe multiple stakeholder perceptions of both opportunities for adolescent mothers towards enhancing their maternal/child nutrition and health service and what challenges stakeholders, who were service providers, faced in serving young mothers. Responses were framed according to individual and environmental (social, economic, physical, nutrition, and health service) levels.

5.2 METHODOLOGY

For the methodology of this chapter, please refer to the following areas of chapter 3.0 as regards: study design and conceptual framework; epistemological stance; study site; inclusion criteria; study sample and recruitment; ethics; data collection; data analysis; management of bias during data collection, analysis and reporting; and justification of study methods.

5.3 RESULTS

5.3.1 Demographic Characteristics of the Respondents

All the adolescent mothers who participated in the study were aged between 14 and 18 years, unemployed. Only one was re-enrolled in school. The family members in this study included mothers and grandmothers of the young mothers. Married/cohabiting adolescent mothers and the infant's fathers did not agree to participate in this study. Demographic characteristics of all study respondents are in Table 5.1.

5.3.2 Opportunities for Adolescent Mothers and Challenges of Service Providers

Opportunities potentially available to support young mothers and the challenges faced by service providers presented themselves at the individual and environmental (social, economic, physical, nutrition, health service) levels as summed up in Tables 5.2 and 5.3 (Appendix VI) with respondent counts and frequencies. The counts given in Table 5.2 and 5.3 (Appendix VI) account for perceptions of a mixture of study participants in their categories and not for individuals. The counts in Table 5.2 represent the number of mentions, not the number of respondents who reported something that was coded into that category; this explains why the number in many cells is greater than the number of respondents. For the results in Table 5.2 the percentage of all opportunities and the percentage of all challenges that relate to different levels of the social cognitive model are presented and further broken down by participant category (mothers, family members, etc.). Health service environment challenges and economic challenges accounted for the greatest percentage of responses related to all levels of the SCT, at 22.3% and 24% respectively. Compared to other respondents, young mothers gave a higher percentage of responses about opportunities at the:

individual level (41%), social environment level (39.1%), physical environment (39.2%) and health service opportunities (35.1%) although the young mothers represented 24.8% of all participants. On the other hand, the health-related personnel gave the largest number of health service environment challenges (60%) in spite of being 38.6% of all participants, while, young mothers gave 27.1% and health personnel 21.4% of the economic challenges.

Various quotes have been provided in this paper. Other selected quotes are available in Table 5.4 (Appendix VI). Other items in Appendix VII include allocation of participants by category and village/parish (Table 5.5), the question guide (Table 5.6), the interview schedule (Table 5.7) and summary demographic characteristics (Table 5.8).

5.3.2.1 Individual Level

The following sections present results according to opportunities or challenges at the different levels of the socio-ecological model (refer to Table 5.3). For Table 5.3, comments raised pertaining to sub codes (e.g., mothers making handcrafts) are presented as a percentage of respondents for that section, e.g., opportunities at the individual level, without differentiating who the comment came from. This lumping up of respondents was done because the perspectives from stakeholders did not differ and so a bigger picture of what came from a whole respondents was preferred. The reality of the few perceptions that differed were confirmed through triangulation of information. For example, some mothers and grandmothers reported to have escorted their daughters for ANC/PNC to the health centers yet the young mothers, VHT and some neighbors spoken to said the opposite. In that case, it was taken that young mothers were not escorted by their mothers or grandmothers.

5.3.2.1.1 Opportunities at Individual Level

According to respondents, some adolescent mothers displayed a positive attitude through attending health care appointments even without being escorted by relatives. Other positive attitudes from young mothers include: attendance of hospital delivery; carrying their pregnancies to term instead of carrying out abortions, cultivating crops and rearing animals with their family members; laboring for a pay by tilling land for community members who paid them (young mothers); and making handcrafts for sale among people who would buy them.

“I also made a (personal) decision to deliver my baby at Budondo (health center IV). Yes I breastfed the baby soon after birth and for 6 months [EBF] as advised. I also take my baby for immunization...Yes I decided on my own to sleep under a net as advised at the hospital” Adolescent Mother 1.

“I make baskets and mats for sale with my mother and also digging for people at a pay.” Adolescent Mother 2.

Trust of young mothers in the nurses was also perceived as an opportunity that led to them taking up medicines given by nurses (7 respondents), taking up health related advice such as using given insecticide treated bednets (3 respondents), and 9 respondents reported that young mothers were practicing TIBF (timely initiation of breastfeeding) and EBF (exclusive breastfeeding): (9 respondents).

5.3.2.1.2 Challenges at Individual Level

Failure to practice EBF, as perceived by 26%, was attributed to lack of emotional support for young mothers who feared to make their breasts grow old, while others had sore nipples. The opportunity to earn money was perceived as challenged by lack of persistence in acquiring income generation skills. The opportunity to support young mothers by some community members in rural

Uganda met obstacles such as: lack of motivation to take on additional work due to their own situation of feeling they (community workers) were underpaid or were not paid at all.

“The situation is getting out of hand and it will become worse until we all wake up. Right now we (medical staff) just do the basics and not get out of our comfort zones because this government is so selfish. They expect us to serve under such harsh conditions while they take all the fat pays home. I assure you, things are so bad but we will just look on and let the patients keep on complaining.” Health-related Personnel 1.

Lack of skill in adolescent maternal care did not allow for adolescent-tailored care by medical staff. Health related personnel (midwives, VHTs and TBAs) spoken to perceived that compared to adult mothers, young mothers were at a higher risk of caesarean delivery and vaginal tears due to narrow passages, and this justified tailored services.

“As staff (medical staff) we are not trained to cater for adolescent friendly services and I can confirm that our adolescent or teenage mothers suffer.” Health-related Personnel 2.

5.3.2.2 Social Environment Level

5.3.2.2.1 Opportunities at Social Environment Level

Over 50% of the respondents who commented on opportunities at the social environment level reported that family and VHTs in rural Uganda supported young mothers by comforting, encouraging and advising them about not losing hope, and made decisions for mothers to deliver at health centers. Advice on attending medical care at modern health facilities, sleeping under an insecticide treated bednet (ITN) and practicing EBF was also done by family members and community members as reported by 23% of the respondents. TBAs were mentioned by some stakeholders to have a kind and caring attitude towards the young mothers. Some parents identified heeding advice given by community members and changing their attitudes towards their daughters. For example, it was perceived that some of those who took their daughters back to school led those

daughters to successfully complete their education. Other stakeholders reported that some medical staff had changed their attitude for the better and were working longer hours. Some local leaders also took on the role of calling for and facilitating meetings of the families of young mothers and their babies' fathers to solicit financial support for the babies from these fathers and their parents.

“My mother, grandmother, aunts, nurses and VHTs decided that I deliver at the hospital and advised me to take my baby to the hospital for immunization. They also told me to breastfeed exclusively.” Adolescent Mother 3.

5.3.2.2.2 Challenges at Social Environment Level

Mothers of young mothers may have the challenge of being seen as exclusively responsible for their children, e.g., these adult mothers' husbands (fathers of young mothers) blamed them (adult mothers) for the pregnancy of the teenage daughters as it was the wife's role to keep the daughters in good order. This in turn may have contributed to their own negative feelings towards their pregnant daughter.

“When the girl gets pregnant, the father will accuse the mother for having sent her daughter to go get pregnant just because women are expected to be in charge of good behaviors of children especially daughters.” Area Leader 1.

Members of the community, such as VHTs and village leaders, mentioned they would have visited young mothers, an opportunity of follow-up, but some parents were harsh to them and did not invite assistance. The opportunity of service given by medical staff was hindered by the community's negative attitude towards medical personnel, calling them thieves of medical supplies, and yet the response of medical staff was that medical supplies were unavailable.

“We (midwives) are not rude but we just correct them on a few issues like their poor hygiene and lack of delivery items such as gloves but people just have a negative attitude towards us saying we steal those things. Some girls come without gloves, do they expect us to deliver their babies with our hands and get infections?” Health-related Personnel 1.

A social challenge associated with teen pregnancy that area leaders identified, is animosity between the family of the pregnant teen and the family of the baby's father. Such disputes may revolve around accountability for economic and other support of the teen mother and baby and perpetuate a cycle of blame within the community.

According to 26% of the respondents, understaffing was a challenge of healthcare staff as this led to heavy workloads that left them with no time for extra work such as taking anthropometric measurements of patients. Translating information to patients regarding health indicators of the given anthropometric measurements or visiting young mothers at their homes was also affected by lack of time. Moreover, the medical personnel were not trained in adolescent special care.

“We (midwives) don't visit them (young mothers) because we are under-staffed yet you have to work everywhere like ANC, OPD [Out Patient Department] and by the time you finish, you are very tired. That is why even taking those simple weight measurements and explaining the health status of mothers or babies is hard so we just record their measurements” Health-related Personnel 3.

5.3.2.3 Economic Environment Level

5.3.2.3.1 Opportunities at Economic Environment Level

Majority of the respondents (86%) commented that some family members supported their daughters by providing them with financial support and transferring and monitoring of income generation skills, such as making mats, baskets, rearing of animals and crop growing. SOUL Uganda and PEFO (Phoebe Education Fund for Orphans & vulnerable children) were identified as providing avenues for income generation skills through vocational and agriculture training which young mothers could make good use of.

“SOUL Foundation teaches skills like fish farming, goat and chicken rearing, crop growing, tailoring, crafts like making jewelry and bags to all women, girls and men at no cost. Also women form groups of about 5, SOUL foundation then purchases for them about

300 chicks [broilers] to raise them. We have also started the program of send a goat just like send a cow.” NGO Staff 1.

5.3.2.3.2 Challenges at Economic Environment Level

The examples presented above would represent good opportunities to improve the economic status of young mothers in rural Uganda, but stakeholders reported that there were challenges in availability and access to such opportunities. Forty percent who commented on this area reported that lack of money was a barrier for parents and other community members like area leaders to provide for the young mothers. There was also inadequacy in supports for income generation e.g., lack of materials for making handcrafts or land for cultivation, high costs of agriculture items, unprofitable markets and livestock diseases.

“Many of us are really very poor and cannot afford many things. Agricultural equipment, seeds, fertilizers, pesticides and livestock medicines are sold at a high price which discourages us. We do not have profitable market for our produce, when the produce is flooded on market we lower the prices to avoid wastage of our produce hence making losses.” Community Worker 1.

Economic opportunities from NGOs and the NAADS (National Agricultural Advisory Services) government program in the study area were not benefiting some of the mothers because of lack of fees to pay for training in income generation skills at NGOs like PEFO Uganda. Young mothers however failed to be among the beneficiaries of the free seeds or animals for agriculture given by NAADS because unlike adolescent mothers, adults benefitted because they were established with homes and land for farming. Moreover, poor yields from the agriculture items of NAADS made respondents consider this government program inadequate.

“NAADS [National Agricultural Advisory Services] officers usually give out to adults with established homes especially those that support the government. The cassava for NAADS looks good on the leaves and steams but does not grow tubers. Their cattle give only one liter of milk

and they put you on pressure that you are not looking after them very well yet the breed of the cattle is poor however much you feed it. It is because they [NNADS officers] steal most of the money [meant to buy good quality agriculture items] and use the little that remains to buy us those poor quality items.” Area Leader 2.

5.3.2.4 Physical Environment Level

5.3.2.4.1 Opportunities at Physical Environment Level

Over 40% reported that some families supported their pregnant or lactating daughters by providing them with shelter and land for cultivation and animal rearing. In addition, VHTs had land and homes that they were willing to offer for training young mothers.

“They (young mothers) use their parent’s land to rear animals and grow crops.” Health-related Personnel 4.

“Yes, I can offer my land to train them (young mothers) in agriculture or my sitting room to train them in making handicrafts. My kitchen is big enough to train in cooking food but will need money to buy other items.” Health-related Personnel 5.

5.3.2.4.2 Challenges at Physical Environment Level

Even supportive families cannot always support their daughter’s income generation needs; for example, some of the land was infertile or some families lacked land and so had to rent farm land as theirs had been sold off.

“They (young mothers) use the land of parents but the problem we have is that the land is not enough as most of it is sold off or used to grow sugarcanes so one has to rent farm land and land is infertile.” Area Leader 2.

Long distances and lack of staff housing at the health centers lead to late reporting to work by medical staff hindering the opportunity of healthcare service. Similarly, long distance to the health centers and NGOs that provided health/nutrition education and vocational skills was also reported

by stakeholders to be a challenge. In addition, lack of umbrellas and protective footwear and lack of transportation in the form of bicycles hindered voluntary work of VHTs.

“We stay far from the health facility. The one house here at the health center is not enough for us. We travel by boda-bodas [hired motor bikes for transportation] and most times it will have rained so you have to wait for the rains to stop then you come to work. We lack transport. If they build houses for us, we can stay at the hospital and we stop coming late.” Health-related Personnel 1.

5.3.2.5 Nutrition Environment Level

5.3.2.5.1 Opportunities at Nutrition Environment Level

Sixty percent (58) of the 97 stakeholders who commented reported that families gave food to the young mothers in the quantities that were available. VHTs were reported to be the personnel that trained young mothers on theoretical aspects of foods to eat during and after pregnancy and complementary feeding.

“My mother gives me food but not enough, we share what is available.” Adolescent Mother 4.

In addition, medical personnel helped young mothers to practice timely initiation of breastfeeding (TIBF) and encouraged young mothers to practice exclusive breastfeeding (EBF).

“After delivering the baby, we immediately put the baby on the mother’s breast before they leave the delivery bed and we also encourage them to exclusively breastfeed for 6 months.” Health-related Personnel 6.

5.3.2.5.2 Challenges at Nutrition Environment Level

Fifty percent of the respondents who commented on the willingness of families to provide food to young mothers, also identified that this opportunity was challenged by the adequacy of available food as some families had a meal once a day and others had 2 meals a day. Other respondents

reported that training of young mothers in practical food preparation was hindered by a lack of funds, facilities, and skilled personnel.

“Those food preparation practicals [for feeding during pregnancy and complementary feeding] are not taught, we lack skills in that. Only 4 VHTs in the whole sub-county were taken for training by TASO some years back. We lack the funds and facilities to teach these. We only teach the foods to be eaten theoretically from charts.” Area Leader 3.

5.3.2.6 Health Service Environment Level

5.3.2.6.1 Opportunities at Health Service Environment Level

Young mothers in rural Uganda reported that health centers provided them with a number of antenatal care (ANC) and postnatal (PNC) services including iron/folic acid supplementation, management and treatment of malaria, detection and management of obstetric complications, immunization and vaccination, child spacing/family planning and HIV counselling and testing. Young mothers just like other mothers were only given free insecticide treated bednets (ITNs) and delivery support materials (e.g., gloves, mama kit) on condition of availability at the health center, otherwise one had to buy the ITNs or delivery materials. Respondents also reported that health education in rural Uganda was carried out at the health center by VHTs on topics such as danger signs during and after pregnancy. SOUL Foundation, an NGO, was reported by 15 (15.5%) of the respondents to also train mothers in maternal health education.

“We (SOUL Foundation) provide maternal/child nutrition education to both men and women who enroll in our class that are twice a week for 8 week. We talk about the danger signs of pregnancy, cervical cancer, HIV/AIDS and offer family planning services.” NGO Staff 1.

It was also reported by 29% of respondents that some of the health centers in rural Uganda whose staff lived close, were accessible and the staff treated young mothers well. Young mothers who could not access modern health centers could make use of TBAs who asked for low costs, were considered to be kind and had delivered babies of adults as well and so young mothers were

referred to them through testimony from their own mothers and peers who appreciated that service of TBAs.

“Girls are sent to me by their mothers or peers who have delivered here. I care for women well with kindness and even give them some food. There are no waiting lines, I am always available and not rude unlike the modern nurses. Also I charge them little money (20,000= UGX ~\$5.6 USD).” Health-related Personnel 7.

5.3.2.6.2 Challenges at Health Service Environment Level

Treatment of HIV, Sexually Transmitted Diseases (STD) and Tuberculosis (T.B) was only done at the health center III and IV. Inadequate/lack of medicines, medical supplies and equipment was an avenue for poor service delivery to the community members as reported by 60% of the respondents. For example, health centers lacked infant weigh scales so infants as young as 2 months were being weighed by mothers using panty/Sac weighing scales that were suitable for sitting babies. Infant head circumference and MUAC (mid upper arm circumference) tapes were also not available. In other health centers equipment such as weighing scales, TB (tuberculosis) detection machines, blood pressure monitors and incubators were faulty and waiting to be repaired. This made health monitoring difficult and may have contributed to poor maternal/child health. The whole sub-county lacked modern sterilizing equipment, a theatre for surgeries and an ambulance to swiftly take patients to referral hospitals. Lack of electricity not only made refrigeration of vaccines difficult but midwives had to use the light of their cell-phones to deliver mothers at night.

“We (health centers II and III) receive medicines but they are not enough. Our health center operates on the ‘push system’ where drugs are procured and sent to you without consulting with what is needed unlike the ‘pull system’ which is for health center IVs and referral hospitals who order for drugs they need in the quantities needed. From January to February, we didn’t receive gloves and from April to May we did not receive any anti-malarials like artesunate and coartem. Some things are just beyond our making. They (community members) keep saying that they see trucks off-loading boxes here but most of the times, the boxes contain condoms sent by the Marie Stopes organization and these are always in plenty. Electricity is a problem and our nurses perform night deliveries using their cellphone torches. Imagine we can’t even have a mini surgery and we have only one

incubator. When machines like that one incubator gets spoilt, repairing them takes ages and yet the population needs the services.” Health-related Personnel 8.

5.4 DISCUSSION

Using the SCT, the study reveals perceived opportunities relevant to adolescent maternal/child nutrition and health in rural Uganda in addition to the challenges faced by service providers. There are opportunities identified by this study that were reported by other studies in Uganda including that mothers preferring to deliver with the help of TBAs instead of using the midwives in modern health centers [Atuyambe et al., 2009; Kwagala, 2013; Keri et al., 2010; Kanabahita, 1993]. Challenges also reported by others included: understaffing for medical workers [Lutwama et al., 2012; Chi et al., 2015], low supplies of medical items and lack of medical equipment at the health centers [Chi et al., 2015]. Nevertheless, the multi-stakeholder perspectives of the current study provide greater breadth and depth of understanding of both opportunities and challenges. Opportunities that are already in place may provide a feasible first step to address the needs of young mothers in rural Uganda if ways can be identified to address the challenges.

As individuals, some young mothers made positive decisions at the health and economic level and socially, families and communities were able to provide some support to young mothers at the environmental level. These examples of positive behaviors can be encouraged for improved well-being of young mothers. Adolescent mothers, families and service providers demonstrated strength and resilience, even when faced with the same harsh experiences and environmental barriers facing others. This gives an opportunity of strengthening such positive behaviors for better coping mechanisms and empowerment of young mothers for tasks such as keeping the young women in and completing school [Ricks, 2016], as some parents accepted to take their daughters back to

school for a brighter future. The positive attitude of caring for young mothers by TBAs and the change of attitude among some medical staff who serve young mothers even beyond the official working time are strong points of resilience that can be looked at as attractive environments and social support for young mothers [Ricks, 2016].

In addition, young mothers stood against carrying out abortions and carried their babies to term. For some participants, this was felt to indicate the mother's individual strength since in Uganda induced abortions are considered illegal and only accepted if the aim is to save a woman's life, though the level of service and training has been found to be low [CEHURD, 2016; Davies, 2016; Mukasa, 2015; Larsson et al., 2015]. It should also be noted that use of contraceptives is low among female adolescents [Kabagenyi et al., 2016]. Low levels of education [UBOS, 2016; Kabagenyi et al., 2016] and religious beliefs [Kabagenyi et al., 2016] have been reported to account for the low acceptance and use of contraceptives. Thus in a socio-cultural context that may discourage contraception and prohibits abortion, teen motherhood occurs. There is an opportunity to better support mothers who find themselves in this situation.

Mothers of teen girls are blamed for the pregnancy of their daughters due to historic gender biases related to childcare [McKenna, 2014; FAO & ADB, 2013] and health-related communication in Uganda [Flax et al., 2017; Singh et al., 2014; Obermeyer et al., 2004]. Rather than perpetuate the negativity, mothers can be counselled to be friendly to their daughters [Ricks, 2016] so as to support them in coping with the new role of motherhood and also work with them in activities that improve daughters' economic well-being e.g., income generation and seeking out medical care.

Adolescent mothers did not have an organization that specifically supported them. SOUL Foundation and PEFO are some of the NGOs in the study area that young mothers could potentially benefit from. Existing challenges (e.g., that these NGOs are deemed inaccessible and do not give young mothers special attention) could be overcome by using community-based workers to train young mothers, as demonstrated by some studies in Africa aimed at improving health [Tylleskär et al., 2011; Kirkwood et al., 2013; Penfold et al., 2014; Flax et al., 2014]. SOUL's strategy of using cooperatives or groups of five peers who are trained in agriculture and vocational skills, and given seed grants in the form of finances or agriculture items [SOUL Foundation, 2017], could also be used for the improvement of adolescent maternal/child nutrition and health. SOUL Foundation also trains VHTs and midwives as community agents of improved maternal/child nutrition and health [SOUL Foundation, 2017] and these team members reach out to community members who may not get to the foundation offices due to long distances or lack of transport fees. BRAC Uganda also trains community health workers in health improvement and gives them an opportunity to purchase first aid medicines (e.g., anti-malarials and pain killers) at a low cost to be sold to patients in the rural areas. This is a way of bringing services closer to those who need them and at the same time allowing VHT members to earn some profit [Nyqvist et al., 2017; Nyqvist et al., 2016; BRAC Health, 2017]. Since VHTs were found by this study to be willing to serve at some pay, this may be an opportunity for improvement of adolescent maternal/child and well-being in rural Uganda. For example, the accessibility and availability of community health workers and antimalarial drugs was reported to have reduced child mortality (under 5 years) by 25% in 883 villages of the BRAC centers in all the 4 regions of Uganda [Nyqvist et al., 2017].

Poverty rates in rural Uganda are high [UNDP, 2014; World Bank Group, 2016] and our study found that economic challenges at 24% of all challenges as perceived by stakeholders, may not permit families to help their daughters financially. Besides, the high prevalence of barriers related to poverty, poor pay and lack of money raised by the current study suggest that families and community members, even if willing, may not be able to assist the adolescent mothers. However, external support through NGOs may offer help. The strategies used by PEFO to improve the economic well-being of the elderly and orphans in Jinja and adolescent mothers in Busia district of eastern Uganda, could be borrowed for self-employment of young mothers in the Budondo sub-county [PEFO Uganda, 2017]. Such employment of young mothers may improve the well-being of both mother and child [Negash et al., 2015]. The said strategies include: adopting a goat; counselling, encouraging and empowering communities to support young mothers and report cases of abuse; building up a saving scheme for young mothers; advocating for a supportive environment in school and at home; peer learning where young mothers can meet and encourage themselves; and training in vocational and agriculture skills. All the mentioned programs suggest that for improvement of adolescent maternal/child well-being, communities should be involved through counselling and empowerment towards helping young mothers and use of community-based workers [Kukla et al., 2017].

Most of the health-related challenges revealed by this study point towards lack of time due to low numbers of medical staff and heavy workload for health personnel and lack of funds. These factors could easily compromise the WHO six building blocks of an ideal healthcare system aimed at efficient and quality service delivery including: service delivery, adequate workforce, information systems, accessibility to medicines, financing of the health sector, leadership and governance

[WHO, 2010]. However, there are some opportunities that can be exploited for the improvement of adolescent maternal/child nutrition and health. There is a need to lobby for financial support from the government and external funders to pay VHTs. Payment would provide the incentive that VHTs described needing in order to extend and enhance their services. Using VHTs versus more distant service providers would allow for easy accessibility of services at such as offering home-based counselling, training and monitoring of adolescent maternal/child nutrition and health as demonstrated in other forms of health improvement [Tylleskär et al., 2011; Kirkwood et al., 2013; Penfold et al., 2014; Flax et al., 2014]. This could help with lessening the work to be done by the medical personnel.

In addition, since young mothers turned to TBAs as a preferred alternative compared to modern health services due to their kindness and affordable delivery fees and good recommendations from other mothers, modern medical staff and other community health workers such as VHTs could appreciate and take on this strategy of care and service. TBAs still have an important role and could be used as agents of change for the improvement of adolescent maternal/child nutrition and health through encouraged care and positive attitudes of family and community since they are trusted by community members in Uganda [Turinawe et al., 2017; Anastasi et al., 2015]. Training or retraining of TBAs with support of NGOs has been demonstrated elsewhere and more advocacy with the help of results of this study could be done for this to continue. For example, World Vision trained TBAs in safe delivery and risk factors related to delivery bleeding [Ononge et al., 2016]. SOUL Foundation has worked towards improving the birthing environment of TBAs [SOUL Foundation, 2017]. In order to capitalize on TBAs there needs to be a system to overcome the challenges with their services, like unhygienic practices to avoid possible maternal/child morbidity

and mortality as identified by Lawry and colleagues [Lawry et al., 2017]. The ministry of health of Uganda may have to look into this much as it banned the training and work of TBAs [Rudrum, 2016].

Taking and recording of measurements of young mothers and communicating these measurements to mothers such that they can have knowledge of how to improve their nutrition and health status can be done by the medical personnel once trained and provided with equipment and materials that can enhance service delivery such as MUAC tapes, ANC registers and adequate drug supplies, as shown in a study by Izudi and others [Izudi et al., 2017]. Resources for this type of training, service and supplies should be coming from government. Yet the challenges in this study suggest that support falls short of what Uganda's Ministry of Health says is available [Oketcho et al., 2015]. Lobbying at district, national and international levels worked to improve healthcare in HIV/AIDS [Agaba, 2009]. The government could be advocated to not only invest in interventions but also create attractive environments for their success [Maternal & Child Nutrition Study Group et al., 2013] as this may also improve adolescent maternal/child health.

Stakeholders of adolescent maternal/child nutrition and health improvement in rural Uganda to some extent have the power to make decisions for the well-being of young mothers, but this seems to be constrained by external factors (structure). As individuals (agencies), stakeholders for the improvement of adolescent maternal/child nutrition and health in rural Uganda may be willing to offer several forms of support but are hindered by external factors (structure). There is therefore a need to integrate and jointly handle the two approaches of agency and structure [Clifton et al.,

2013; Abel et al., 2012; Anaf et al., 2013; Bungay et al., 2011] for the improved well-being of young mothers.

Available policies that support women/girls in Uganda for example the Uganda National Gender Policy (2007) [Uganda, 2007; UNDP/Uganda, 2016] and Uganda's National Action Plan on Women (NAPW) [UN/Uganda, 2018; UNDP/Uganda, 2016] if strengthened could help in the improvement of the well-being of young mothers. In addition to this, advocates and researchers in Uganda could conduct interventions that are funded by international feminist supportive organizations such as Canada's Feminist International Assistance Policy [Government of Canada, 2017], Food and Agriculture Organization (FAO) [FAO, 2018], Bill Melinda Gates Foundation [Bill Melinda Gates Foundation, 2018] and the Nestlé Foundation for the Study of Problems of Nutrition in the World, Lausanne, Switzerland [Nestlé Foundation, 2018]. Uganda's government could also adopt policies that empower and improve the well-being of girls and women.

5.5 CONCLUSION

For adolescent mothers and infants in rural Eastern Uganda the cycle of poverty, malnutrition and ill health must not be inevitable. The challenges facing those who offer support or service are not deniable. Nevertheless, young mothers and other participants in this study pointed to opportunities for improvement. Key findings of challenges of service providers included lack of finances; lack of skill, materials and market for farm and handcraft products; and lack of an organization that specifically supported young mothers. In addition, lack of resources across the continuum of care contributed to demotivation among those providing support and services. All these challenges may network into a complicated service delivery that could negatively impact the health of young

mothers/infants and keep them in a cycle of poverty. This research underpins the importance of community interventions that act on available opportunities such as support from families, health-related personnel and NGOs with help from decision makers at local and international levels. Lessons learned from other contexts may help in taking these small steps forward for improved maternal/child nutrition and health.

Figure 5.1: Social cognitive theory framework of perceived opportunities of young mothers and challenges of service providers

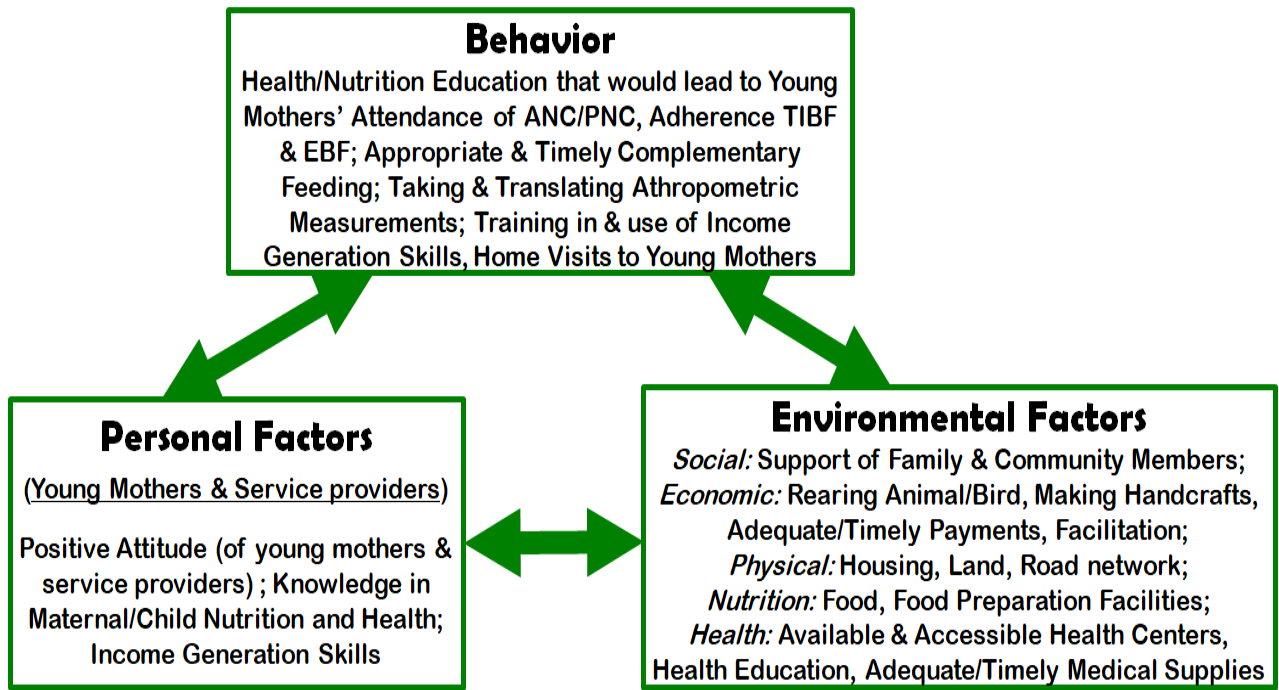
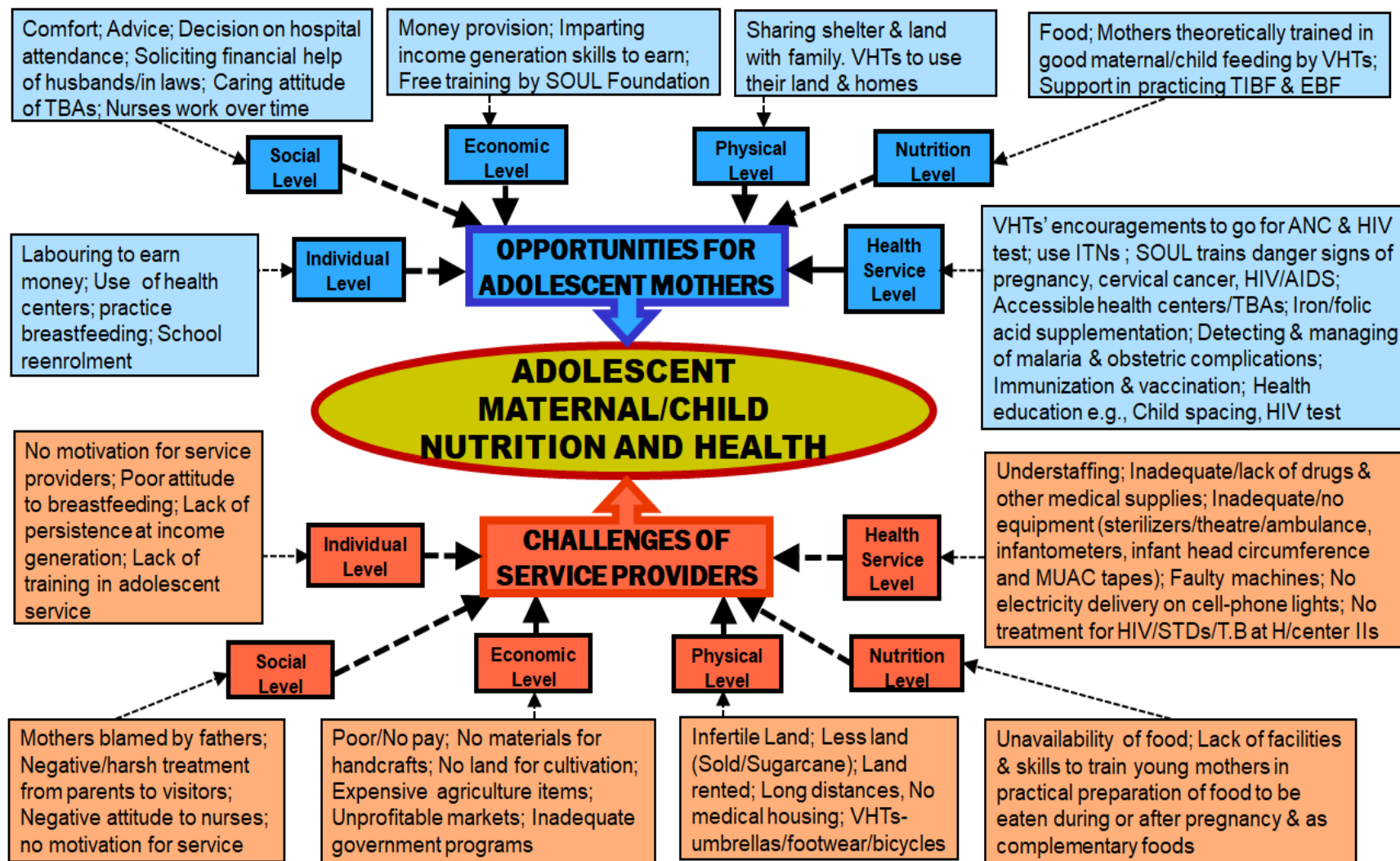


Figure 5.2: Thematic network of perceived opportunities of adolescent mothers and challenges of service providers of maternal/child nutrition and health based on participant responses



Adapted from: Attride-Stirling J. Thematic networks: an analytic tool for qualitative research. Commission for Health Improvement, England. Qualitative Research. *SAGE Publications* (London, Thousand Oaks, CA and New Delhi). 2001;1(3):385-405.

Table 5.1: Demographic characteristics of study respondents (N=101)

Participants and Variables		Frequency (%)
Adolescent Mothers		N=25
Age of Mother	12-15 years	28.0%(7)
	16-19 years	72.0%(18)
Pregnant/Lactating	Pregnant	44.0%(11)
	Lactating	56.0%(14)
Years of Residence in Study Area	>3<5 years	32.0%(8)
	5-10 years	0.0%(0)
	>10 years	68.0%(17)
Dropped out of School	Yes	96.0%(24)
	No	1.0%(1)
Employed	Yes	0.0%(0)
	No	100%(25)
Married	Yes	0.0%(0)
	No	100%(25)
Family Members of Young Mothers		N=11
Sex	Male	0.0%(0)
	Female	100%(11)
Years of Residence in Study Area	5-10 years	9.1%(1)
	>10<20 years	18.2%(2)
	20+ years	72.7%(8)
Health-related Personnel		N=19
Sex	Male	21.1%(4)
	Female	78.9%(15)
Working Experience in Study Area	>3<5 years	10.5%(2)
	5-10 years	26.3%(5)
	>10<20 years	26.3%(5)
	20+ years	36.9%(7)
Community Workers		N=06
Sex	Male	100%(6)
	Female	0.0%(0)
Working Experience in Study Area	>3<5 years	16.7%(1)
	5-10 years	0.0%(0)
	>10<20years	16.7%(1)
	20+ years	66.6%(4)

Educators		N=16
Sex	Male	56.3%(9)
	Female	43.7%(7)
Working Experience in Study Area	>3<5 years	0.0%(0)
	5-10 years	18.8%(3)
	>10<20 years	68.7%(11)
	20+ years	12.5%(2)
Area Leaders		N=19
Sex	Male	68.4%(13)
	Female	31.6%(6)
Working Experience in Study Area	>3<5 years	0.0%(0)
	5-10 years	42.1%(8)
	>10<20 years	47.4%(9)
	20+ years	10.5%(2)
NGO Staff		N=05
Sex	Male	60%(3)
	Female	40%(2)
Working Experience in Study Area	>3<5 years	80%(4)
	>5<10 years	0.0%(0)
	>10<20 years	20%(1)
	20+ years	0.0%(0)

6.0 A QUALITATIVE STUDY EXPLORING STEPPING STONES TO BREAKING THE CYCLE OF POVERTY, MALNUTRITION AND POOR HEALTH FOR TEEN MOTHERS IN RURAL EASTERN UGANDA

SYNOPSIS

Introduction: Adolescent mothers in Uganda are less likely than their adult counterparts to receive quality care and support. This could place young mothers at risk of poor well-being. Exploring recommendations for improving maternal/ child nutrition and health and avenues for capacity building across a range of individual, environmental or behavioral determinants is an important step towards considering feasible and acceptable community-based interventions that support nutrition and health behaviors.

Methods: This qualitative research was conducted in Budondo sub-county (Jinja district), Uganda. Based on constructs of the social cognitive theory, in depth interviews were conducted with 101 purposively sampled adolescent mothers, family members and community workers. A thematic analysis approach using Atlas-ti (version 7.5.4) was used.

Results: Recommendations included: *individual level*: kind treatment of young mothers; *social*: community support, community policing for better health services, and use of suggestion boxes at the health centers; *economic*: employment creation, improved facilitation in agriculture, payment of service providers; *physical*: building medical staff houses and theatres, and providing medical equipment, anthropometry tools and delivery materials; *nutrition*: use of tailored nutrition education videos and creating nutrition education facilities; and health service: adequate and needs-based supply of drugs, use of tailored health education videos and designated space to address concerns of young mothers. Suggested areas for capacity building included: *individual level*: training health personnel to serve young mothers; *social*: training teachers and community workers to counsel parents; *economic*: training instructors in handcraft skills; *physical*: training of

local health-related personnel in use of anthropometry equipment; *nutrition*: training community workers in nutrition and food preparation skills; *health service*: facilitating community workers in acquiring maternal/child health and monitoring skills.

Conclusion: Recommendations and areas of capacity building point towards specialized community-based adolescent maternal/child friendly supports and services that build on available strengths at individual and environment levels of the social cognitive theory.

Keywords: Adolescence, maternal/child, nutrition, health, recommendations, capacity building, social cognitive theory, gender, structural violence, structure, agency, feminist, policy.

6.1 INTRODUCTION

Adolescent mothers in Uganda reportedly lack nutrition, economic and social resources due to unavailability and inaccessibility [Atuyambe et al., 2005; Ilika & Anthony, 2004; Leerlooijer et al., 2013]. In addition, young mothers and their infants have been reported as unlikely to receive quality health care [Atuyambe et al., 2008; WHO, 2007]. Regarding capacity building that encompasses community participation [Simmons et al., 2011], several examples in public health in Africa [Njie-Carr et al., 2012; Ahluwalia et al., 2010] and other parts of the world [Levine et al., 2013; Hacker et al., 2012; Kim et al., 2009; Braun et al., 2006; Raeburn et al., 2006; Yeatman & Nove, 2002; Hawe et al., 1997] could be used to improve the health of young mothers and their infants [Ahluwalia et al., 2010].

In Uganda, a number of studies made recommendations ranging from fostering supportive environments at health centers [Atuyambe et al., 2005; Atuyambe et al., 2009], homes and

communities [Atuyambe et al., 2008; Ayuambe et al., 2005; Maly et al., 2017; Leerlooijer et al., 2014], to putting up income generation projects [Atuyambe et al., 2009]. In-service training of health service providers [Ayuambe et al., 2005; Lutwama et al., 2012; Chi et al., 2015; Keri et al., 2010] and redevelopment of health facilities [Chi et al., 2015] were avenues of capacity building reported. We have previously identified diverse needs and barriers facing young mothers in Uganda, and opportunities available for improvement of adolescent maternal/child health and challenges faced by stakeholders, including service-providers, in addressing these needs. The task of addressing the needs and challenges can be complicated, but examining what works or can work, from the perspectives of those at the community level, is a first step to identifying areas for action.

Community recommendations and suggested avenues of capacity building towards handling identified needs, barriers, and challenges, while appreciating given opportunities, can further help in setting priorities. No study has focused on recommendations and avenues of capacity building in rural Eastern Uganda with a goal of exploring improvement of maternal/child nutrition and health. Moreover, the unique application of the social cognitive theory (SCT) [Glanz et al., 2008: 169,170,273,274; McKenzie & Smeltezer, 1997; Bandura, 2004] helps to emphasize the individual and environmental (social, economic/physical/nutrition/health service) factors that interact to influence the behaviors of young mothers and service providers. Since the aim of this research was ultimately to guide community-level intervention, it was important to understand the context from the perspectives of a range of stakeholders of adolescent maternal/child nutrition and health in rural Jinja district.

The specific objectives of the study were to explore multiple stakeholder recommendations and suggestions for capacity building towards addressing needs, barriers and challenges related to adolescent maternal/child nutrition and health, and making good use of the available supports/opportunities. Responses were framed according to individual and environmental (social, economic, physical, nutrition, and health service) levels.

6.2 METHODOLOGY

For this section of 6.2, please refer to the following areas of chapter 3.0 as regards: study design and conceptual framework; epistemological stance; study site; inclusion criteria; study sample and recruitment; ethics; data collection; data analysis; management of bias during data collection, analysis and reporting; and justification of study methods.

6.3 RESULTS

6.3.1 Demographic Characteristics of the Respondents

All the adolescent mothers who participated in the study were aged between 14 and 18 years of age, unemployed and only one of the young mothers had re-enrolled in school. The family members in this study includes mothers and grandmothers of the young mothers. Married/cohabiting adolescent mothers, the children's fathers and relatives of these fathers were not involved as participant in this study. Fathers who were approached refused to participate yet married/cohabiting young mothers were not accepted to participate in the study by the infant's fathers or family members of the said fathers. Demographic characteristics of all study respondents are in Table 6.1.

6.3.2 Recommendations and Capacity Building to Address Needs, Barriers, and Challenges for the Improvement of the Welfare of Young Mothers

Recommendations and suggestions of ways of building capacity to handle identified challenges were given at the individual and environmental (social, economic, physical, nutrition, health service) levels as summed up in Table 6.2 (Appendix VI) with respondent counts and frequencies. The counts given in Table 6.2 and 6.3 (Appendix VI) show perceptions of a mixture of study participants in their categories and not for individuals. The counts in Table 6.2 represent the number of mentions, not the number of respondents who reported something that was coded into that category; this explains why the number in many cells is greater than the number of respondents. In addition, Table 6.2 gives the number of respondents raising points for a specific sub-category, e.g., recommendations for remaining/re-enrolling in school, as a percentage of all respondents making recommendations at the specific level of the SCT (e.g., individual recommendations) and does not differentiate by respondent category (e.g., young mothers versus family members). Economic environment recommendations and avenues of capacity building at the health service level accounted for the greatest percentage of responses of all levels of the SCT at 24.9% and 43.9%, respectively as showed in Table 6.2, appendix VI. Compared to other respondents, young mothers reported a higher percentage of economic recommendations (34.3%) while administrators had the highest number of suggested avenues of capacity building (13.4%) in general.

Various quotes have been provided in this paper, other quotes are available in Table 6.4, Appendix VI. Other items in Appendix VII include allocation of types of participants (Table 6.5), the question guide (Table 6.6), the interview schedule (Table 6.7), and summary demographic characteristics (Table 6.8).

6.3.2.1 Individual Level

Results in this section and others that follow are reported according to recommendations and suggested avenues for capacity building at the different levels of the socio-ecological model, refer to Table 6.3. Table 6.3 consists of comments raised pertaining to sub codes (e.g., collective responsibility to support young mothers) that are presented as a percentage of respondents for that section, e.g., recommendations at the social level, without differentiating who the comment came from. Lumping up of respondents was preferred because the perspectives from stakeholders did not differ and so a bigger picture of what came from a whole range of respondents in this study was taken. The few perceptions that differed were clarified through triangulation of information. An example of information triangulation in the case of individual capacity building (training of service providers) and economic recommendation of paying service providers is given here. One midwife reported that they needed a salary raise and additional in-service training to improve their work training mothers in nutrition/health education and practical food preparation skills; however, this was not the view of young mothers, VHTs, other midwives, doctors, and health-related administrators. It was reported and argued out that VHTs and not midwives needed payment and training as it was them that were mandated to undertake nutrition and health education. (Moreover, their current service did need improvement, as it was based on chats and not practical skills, like hands-on food skills demonstrations for young mothers). In such a case, views that both midwives and VHTs needed training and payment for the extra work were taken.

6.3.2.1.1 Recommendations at Individual Level

Over 70% of respondents on individual recommendations suggested that parents and health workers should be sensitized on the importance of handling young mothers with kindness and love, and for parents not to lose hope in their daughters. Keeping or reenrolling the young mothers back in school was recommended, a choice that could be supported by family members who could help with financial support and childcare. Motivation of community members, such as medical workers and political village local leaders by increasing their payments was also recommended.

“Our parents should be advised not to lose hope in us, we are not useless. Much as we made mistakes, we can reform. They should love and care for us by giving us money to buy what we want and taking us back to school.” Adolescent Mother 1.

6.3.2.1.2 Capacity Building at Individual Level

Training of young mothers in making handcrafts or practical skills at accessible vocational schools was suggested by 50% of respondents so as to give them capacity of self-employment and hence, self-sustainability. There was also a call for training midwives in adolescent friendly services and kind treatment of young mothers.

“They (young mothers) should be trained in practical income generating skills at vocational schools like tailoring, machine repairs, making bags out of beads, decorative mats and baskets and jewelry so that they earn a living.” Educator 1.

6.3.2.2 Social Environment

6.3.2.2.1 Recommendations at the Social Environment Level

Study participants recommended community collective responsibility to help mothers to stay in their [parent’s] homes, give young mothers support and help young mothers with the heavy load of childcare so that they reenroll back to school. Other recommendations were putting up a special school for young mothers. In addition, adult VHTs were chosen by 41% of stakeholders as the

most suitable workers for future initiatives to support young mothers as they were community-based, experienced and would not migrate away from their villages.

“After delivery, some girls want to go back to school but then they don’t have care for their babies and so my recommendation is that people should come up to help such girls who have delivered so that they can go back to school and also care for their babies.” Health-related Personnel 1.

The President of Uganda was also called upon to give a directive towards soliciting for support from irresponsible fathers of the babies of young mothers because as the highest governing political authority, the masses would respect his word.

“The President (of Uganda) should come up and speak tough to all boys who impregnate girls and refuse to take care of them and their babies, because he is the highest authority and no one can disobey his directive. Don’t you hear people saying that ‘something must be done because it is a directive from above’?” Area Leader 1.

Other stakeholders suggested that medical staff who refused to live in the health center houses needed to be forced to do so for timely reporting to work. Strict supervision of medical staff in their work by government drug inspectors and community policing to ‘guard’ medical supplies that are said to be taken by medical staff was suggested as a way of improving health services. As well, community advocacy for better health services was perceived as another way of improving the health of young mothers in rural Uganda.

“All community members should be a ‘police’ for the drugs and equipment they say are misused or stolen and for health personnel who do not work. Each and every community member must wake up and demand for better health services from their health center personnel because the drugs [are supplied] and [medical] staff are paid well.” Area Leader 2.

6.3.2.2.2 Capacity Building at Social Environment Sector

Training of teachers and VHTs to counsel parents and young mothers was suggested as a way of capacity building.

“All teachers in schools and the community-based VHTs should be trained to help in counselling parents and the girls but they should be given some money as allowances otherwise there will be no progress.” Educator 2.

6.3.2.3 Economic Environment Sector

6.3.2.3.1 Recommendations at Economic Environment Sector

Provision of income generation projects for parents and young mothers was perceived by over 40% of stakeholders as a way of improving the economic status of young mothers. It was suggested that young mothers would like bird rearing (local chicken or kuroilers) or rearing goats that did not need a large grazing area, as a form of income generation, although they also grew several crops with their families. In addition, young mothers might like making handcrafts (bags out of beads, decorative mats and baskets and jewelry) or be given capital or projects for self-employment.

“They (young mothers) would want looking after chicken because the products from handcrafts don’t have market and yet chicken has market. These days people prefer kuroilers because you can sell them in 4-5 months and you can sell one bird between 20,000= to 30,000= UGX. Kuroilers are not very expensive in terms of treatment unlike broilers which are expensive to take care of and a bird is sold at 7,000= UGX. Even goats are easy to keep compared to cows because you use a small place or you just tie it at the road and it eats grass. They also grow vegetables, maize, potatoes and cassava with their parents.” Area Leader 3.

The government was advised to provide cheap agriculture equipment for easy access by mothers, train agriculture extension workers and financially prioritize the health service sector. In addition, VHTs could be trained in income generations skills so as to train young mothers too. Increasing salaries of medical workers to motivate them was suggested by 25% of respondents while, 11% respondents recommended paying TBAs and VHTs for their services. Putting up factories to employ young mothers was also suggested.

“I can assure you that the locals will continue complaining in vain until when this

government will wake up and [financially] prioritize health. Right now they are prioritizing defense and buying army items; even recently there was a supplementary budget passed but most of the money is going to defense. With such issues even if they chase all of us and replace us with other medical staff, the condition won't change at all so let the government wake up and stop deceiving people using political gigs to gain votes.” Health-related Personnel 3.

6.3.2.3.2 Capacity Building at Economic Environment Sector

In line with capacity building, 60% respondents felt that VHTs should be trained in various income generation skills so as to also train young mothers and monitor the projects of young mothers, while teacher training institutions could train handcraft skills.

VHTs should be well trained in income generation so as to also train and monitor young mothers in what they were doing.” Area Leader 2.

6.3.2.4 Physical Environment Sector

6.3.2.4.1 Recommendations at Physical Environment Sector

Government was urged to give health centers facilities and equipment such as operating theatres, modern sterilizers, incubators and ambulances by over 40% respondents. Building staff houses at health centers to shelter medical workers was suggested so as to reduce distances from their homes, hence supporting their reporting to work on time. It was also suggested that VHTs should be given delivery materials and mosquito nets that could be given to young mothers, and weighing equipment to use in the community.

“We try so hard to save lives but the conditions are not easy. You can imagine we do not even have an incubator and when we get a baby that needs one, we just wrap them up, get a boda-boda [commercial bike] for the mother and quickly send them to Jinja referral hospital. So let the government provide us with life-saving equipment and materials otherwise the situation is bad. We should be upgraded to a modern hospital with a theatre because the patients needing surgery are many.” Health-related Personnel 4.

In addition, provision of protective boots and umbrellas to use during rainy seasons, and bicycles to ease transportation was recommended to improve the work of VHTs. It was recommended by TBAs that they receive government support through providing them with mattresses for delivery, delivery materials and weighing equipment.

“VHTs should be given equipment’s like boots and Umbrellas especially during rainy seasons. They should get for them bicycles to enable them reach all places and should be given monthly allowance.” Community Worker 1.

“It [government] should give us mattresses for delivery, weighing equipment and some little salary because we work for the government. We also need delivery materials for mothers because they pay us so little which can’t cover those materials needed.” Health-related Personnel 5.

6.3.2.4.2 Capacity Building at Physical Environment Sector

It was suggested that TBAs, who also deliver mothers as an alternative to modern health centers. VHTs, who are the community workers, be trained in the use of maternal/child anthropometric equipment.

“TBAs deliver many mothers. They could be given weighing equipment and trained on how to use them. VHTs also move around communities for immunizations, they should also be trained on how to use measuring equipment for mothers and babies.” Area Leader 4.

6.3.2.5 Nutrition Environment Sector

6.3.2.5.1 Recommendations at Nutrition Environment Sector

Making nutrition education videos tailored to the local area and language was recommended for educating young mothers about feeding and childcare by 43 % of the respondents.

“We need videos made in our area and local language about feeding of pregnant women and babies and childcare, unlike those made in English as many mothers do not understand the language.” Health-related Personnel 6.

In addition, provision of a food preparation facility for training young mothers in cooking foods

appropriate for pregnant and lactating mothers, and infants was also suggested by 40% of respondents. It was also suggested that once facilitated with the needed foods, equipment and funds, VHTs could conduct the training of young mothers at their homes.

“We should have a cooking area that is well facilitated at the health centers where young mothers can be trained. Young mothers can also be trained at the homes of VHTs if well facilitated by providing the cooking equipment, foods and allowances.” Area Leader 5.

6.3.2.5.2 Capacity Building at Nutrition Environment Sector

Training VHTs in nutrition education and nutritional status monitoring, including practical food preparation for adolescent maternal and infant feeding, was suggested.

“Empower and train VHTs in areas of nutrition and cooking of those needed foods for mothers and babies.” Area Leader 6.

6.3.2.6 Health Service Environment Sector

6.3.2.6.1 Recommendations at Health Service Environment Sector

It was recommended by close to 50% who made health service recommendations that the government should increase the amounts of needed drugs sent to health centers in rural Uganda. Other recommendations included: increasing the number of medical workers to deal with the heavy workload and relocating medical workers that were not performing their duties.

“More medical staff members should be recruited because the work is a lot and patients are many. We also need a salary raise.” Health-related Personnel 7.

Making health education videos tailored to the local area and local language was also suggested for educating young mothers in areas such as infant/child/maternal care. In addition, provision of a designated day and time to address concerns of young mothers separate from adult mothers or putting up special health centers for young mothers would help give them special attention, as suggested by over 20%.

“They (nurses) should be separating us from adult mothers and give us our own day and time so that they work on us alone just like the patients of HIV/AIDS.....” Adolescent Mother 2.

It was also suggested that doctors should be involved and consulted when re-stocking drugs so that the qualities and quantities matched what is needed.

“We are given insufficient drugs compared to the large number of patients we receive. The suppliers do not follow up to know when they should re-stock drugs. I would recommend that let orders be made by us the in charges because they are the ones who are supposed to know when the drugs have run out of stock and the amount needed by our many patients.” Health-related Personnel 7.

6.3.2.6.2 Capacity Building at Health Service Environment Sector

According to 30 stakeholders that commented, areas that need capacity building in the health service sector in rural Uganda include training VHTs in health education and childcare (57%), and monitoring of maternal/child health (30%). In addition, retraining/training and licensing of TBAs in the right child delivery processes was suggested by 13% of the respondents since TBAs are available and accessible alternatives to modern health workers.

“Empower and train VHTs in areas of childcare and health education and monitoring the health of the young mothers. Retrain a female medical staff to take care of these young mothers when at the health center.” Area Leader 8.

6.4 DISCUSSION

Participants recommended a number of areas for improvement and capacity building that leverage existing strengths to improve adolescent maternal/child nutrition and health in rural Uganda. Some of the participant recommendations, including keeping/re-enrollment of young mothers in school [Leerlooijer et al., 2014; Maly et al., 2017], community support for mothers to remain in their parents’ homes [Maly et al., 2017], tailored attention with health care [Atuyambe et al., 2005], self-employment in the form of goat rearing [Leerlooijer et al., 2013], and putting up income

generation projects in handcraft making, crop growing and animal rearing [Atuyambe et al., 2009] were also recommended by earlier studies in other areas of Uganda.

At the individual level, the resilience of young mothers was echoed by several participants as the teenage mothers kept on with life, facing the situation positively with some contributing to their financial status through a number of economic activities such as agriculture. Given that these young mothers are faced with a system of structural violence [Farmer, 2004; Farmer, 2009; Page-Reeves et al., 2013; Basnyat, 2017; Roberts, 2009; Montesanti & Thurston, 2015; Montesanti, 2015; Lewis & Russell, 2013] made worse by the negative cultural beliefs/practices, low socioeconomic status, and gender-related discrimination [Farmer, 2009; Montesanti & Thurston, 2015; Montesanti, 2015], their ability to face life and move on should be supported. In the case of this study, structural violence experienced by young mothers from family and community members may be a form of displacement of frustrations where, for example, a mother who is blamed for her daughter's pregnancy by her husband as a form of gender bias takes it out on adolescent mother. Medical staff faced with low pay, heavy workloads, poor or no medical supplies, lack of staff housing and poor working conditions also seem to place their burden and disappointment of unmet needs onto the young mothers as an easier target than government. All these forms of structural violence and painful social processes bring suffering and could keep the young mothers broadly lacking in power and socially excluded [Clifton et al., 2013; Abel et al., 2012].

At the social level, a change of attitude of parents and community members, so as to be kind, care for young mothers and reenroll them into schools, is possible, as demonstrated by Leerlooijer and colleagues (2014). This recommendation was made possible for young mothers in Manafwa

District of eastern Uganda where the Teenage Mothers Project (TMP) sensitized and persuaded the family and community members to support reenrollment into schools [Leerlooijer et al., 2014; Leerlooijer et al., 2013]. This strategy of persuasion and sensitization could also be extended to help young mothers in acquiring personal land as a physical asset from their families, so as to use it for agriculture.

The Teenage Mothers Project (TMP) also gave each of the young mothers a goat to rear for economic sustainability [Leerlooijer et al., 2014; Leerlooijer et al., 2013] with support from the African Rural Development Initiatives (ARDI), whose community-based staff members did a needs assessment, and the Dutch organization Adopteer een Geit (Adopt a Goat), which gave each of the mothers a goat [Leerlooijer et al., 2014]. This strategy of lobbying for partners within available NGOs (SOUL Foundation and PEFO Uganda) to enhance young mothers in similar ways could be borrowed by future interventions. Partnership may be especially important because the high poverty rates in rural Uganda [UNDP, 2014; World Bank Group, 2016], and the recommendations raised by the current study suggest that families, even if willing, may not be able to assist the adolescent mothers. Partnering organizations might help furnish the income generating projects, training support or capital/supplies as recommended by many participants as a capacity-building avenue.

Another ‘best practice’ project funded by an external organization is the Pelletier Teenage Mothers Foundation (PTMOF) in Wakiso District of Uganda. The initiative, funded by PTMOF friends in Canada [PTMOF, 2015; Devxchange, 2015], provides young mothers with vocational skills such as baking, tailoring and hair beauty; and also facilitates the education of the offspring of the

teenage mothers [PTMOF, 2015; Devxchange, 2015]. These activities of PTMOF could help economic and social recommendations in the study area as well. Another program, the Center for Education Innovation Profiles, offers secondary school and vocational training to teenage girls at Pader Girls' Academy in Pader northern Uganda and cares for their children to give adolescent mothers free time for school. In Kenya, Hope for Teenage Mothers gives young mothers vocational skills training for economic improvement [Sifuma, 2015]. Improvement of the education and economic status of young mothers is critical, as it may boost the well-being of both mother and child [Negash et al., 2015]. NGOs could help support community recommendations.

Microcredits for financial empowerment of young mothers could be lobbied for from the available NGOs and MDIs (microfinance deposit-taking institutions) in Budondo sub-county or Jinja district, such as BRAC Uganda [BRAC Uganda, 2017], Pride Microfinance Ltd [Pride Microfinance Ltd, 2017], Finca Uganda Ltd [Finca Uganda Ltd, 2017], and Opportunity Bank [Opportunity Bank, 2014]. In addition, as recommended by the study participants, training in making handcrafts, whose market could be advocated for locally and nationally, could be another NGO-supported strategy to enhance self-employment and economic empowerment of young mothers. TASO Uganda operates in the region and could help to train young mothers in vocational skills such as carpentry, hair dressing, tailoring and mechanics [TASO Jinja, 2015].

At the nutrition and health service level, education of mothers by community-based workers [Kirwood et al., 2014; Penfold et al., 2014; Berger et al., 2005; Khan et al., 2005] or medical personnel at the health centers [Mersal et al., 2013; Akter et al 2012] could be a strategy for improvement of maternal/child nutrition. Community health workers that visited mothers and

educated them on good maternal, newborn care and health practices were found to improve maternal/child well-being in Uganda and beyond [Sitrin et al., 2015]. However, nutrition education, in the absence of food to eat, as revealed for some young mothers may not be helpful. Supporting agriculture (crop growing and animal rearing) as an alternative strategy, should be successful, because on a gender level, women and girls are the biggest agriculture labor force in Africa [McKenna, 2014; FAO & ADB, 2013; World Bank, 2009]. Moreover, stakeholders in the current research suggested that chicken and goat rearing would be preferred by young mothers. Much as nutrition education and food production has been reported to help in improving good nutrition practices and health [Benzer et al 2011; Ruel et al., 2013; Bushamuka et al 2005; Berti et al., 2010; World Vision/CIDA, 2006; Nabugoomu et al., 2015a; Nabugoomu et al., 2015b; Nabugoomu & Hanning, 2015; Henry et al., 2015; Shefner-Rogers, 2014; Mulualem et al., 2016], additional strategies such as microcredit skills and cellphone motivation have also been found successful [Flax et al., 2014]. It seems likely that a combination of capacity-building strategies at the economic, nutrition and health service environment levels, as categorized by the SCT framework used in this study, will be needed to improve the well-being of young mothers.

A self-participatory agriculture practice of intercropping crops such as peanut, pigeon pea, soya bean and maize, was integrated with nutrition education to improve food security and child nutritional status among small-scale farmers in a rural area in northern Malawi [Benzer et al 2011]. The micronutrients and health (MICAH) program implemented by World Vision in Africa from 1996-2005, used a number of approaches including training of mothers and their communities on the importance and use of supplementation, fortification, rearing of fowls and rabbits and establishment of vegetable and fruit tree gardens, and was successful in improving prenatal

maternal health [Berti et al 2010, World Vision/CIDA 2006]. The MICAH program also facilitated prevention and control of malaria through provision of anti-malarial drugs and distribution of insecticide ITNs to pregnant women [Berti et al., 2010]. In addition, a recent review by Ruel et al (2013) also indicated that improvement of maternal and child nutritional status is more likely when agriculture interventions include women's empowerment activities and skills to increase their incomes from the sale of commodities

Other projects used nutrition education and financial empowerment. In Bangladesh, a home gardening program and counselling not only improved food security but also gave families economic returns and increased the women's decision-making power [Bushamuka et al., 2005]. Flax and colleagues (2014) added nutrition education, the use of peer groups and cell-phone messages to an existing microcredit skills initiative and improved breastfeeding practices among women in Nigeria.

Building on recommendations of multi-stakeholder participants in the current study and successes from relevant programs in the literature, it appears that comprehensive supports can enhance maternal/ child nutrition and health for vulnerable adolescents in Busoga region and their infants. Such programs might encompass food production and animal rearing; nutrition and health education; encouragements and monitoring through peer groups and home visits by community-based counsellors; financial support and training. In the case of community support of young mothers, most stakeholders suggested building on capacity within adult VHTs. Due to their resilience and trust from community members, VHTs could be agents of change, e.g., of the poor attitudes of family and community members towards young mothers. NGOs like TASO, World

Vision or Soul Foundation have potential to help in training of VHTs in food preparation skills and adolescent friendly health services [TASO Jinja, 2015; Ononge et al., 2016; Soul Foundation, 2017], developing community-level programs and supporting resources like videos concerning adolescent maternal/child nutrition and health in the local language.

Agency-focused approaches (including individuals' actions) need to be married with structure-focused approaches (e.g., changes in higher-level factors such as government policies, organizational/community practices) [Clifton et al., 2013; Abel et al., 2012] while attempting to address determinants and reduce social inequalities [Clifton et al., 2013; Abel et al., 2012; Anaf et al., 2013; Bungay et al., 2011; Rütten & Gelius, 2011] for successful adolescent maternal/child nutrition and health in rural Uganda. As individuals (agencies), support and service stakeholders of adolescent maternal/child nutrition and health improvement seem to be constrained by external factors (structure) some of which are macro-level policy aspects, such as supply and availability of medical items, change in salary structures, employing more medical staff, accepting young mothers to stay in school, and provision of land to young mothers.

The government of Uganda has put up feminist-supportive policies to benefit women/girls although these may need to be strengthened through improved monitoring and evaluation for young mothers to benefit. Examples of these gender and/or women-supportive policies are the Uganda National Gender Policy (2007) [Uganda, 2007; UNDP/Uganda, 2016] and Uganda's National Action Plan on Women (NAPW) [UN/Uganda, 2018; UNDP/Uganda, 2016]. NAPW in particular aims at improving maternal health and education of girls while the Uganda National Gender Policy emphasizes economic empowerment, good health, women's rights, education and

peace. Interventions that for improved adolescent maternal/child nutrition and health in rural Uganda could be funded by international organizations such as Canada's Feminist International Assistance Policy [Government of Canada, 2017], Food and Agriculture Organization (FAO) [FAO, 2018], Bill Melinda Gates Foundation [Bill Melinda Gates Foundation, 2018] and the Nestlé Foundation for the Study of Problems of Nutrition in the World, Lausanne, Switzerland [Nestlé Foundation, 2018]. The government of Uganda could put in place policies that aim at the improvement of adolescent maternal/child nutrition and health in Uganda.

6.5 CONCLUSION

Stakeholders' recommendations and avenues of capacity building could help improve the welfare of young mothers at individual, social, economic, nutrition and health service levels in rural Uganda. Family and community support, community collective responsibility, improving of economic status of young mothers through hands-on practical skills, adequate support and facilitation of the health service sector, putting up nutrition/health education facilities that are tailored to the needs of young mothers and training of service providers of health and education for capacity building were suggested. Lessons that could be borrowed for future projects from past studies include community-based strategies that were answerable to the different stakeholders. All the recommendations and areas of capacity building point towards specialized adolescent maternal/child friendly services that, if taken up, could improve the social, health and economic well-being of young mothers and their infants. Guided by SCT and ideas borrowed from the social ecological framework, recommendations and avenues of capacity building at individual and environmental levels identified through this study point to the need for changes in behaviors or practices on the part of individuals, families, community, society and government to better support

these very vulnerable young women and their babies. Findings of this study may help to direct future interventions for improvement of maternal/child nutrition and health.

Figure 6.1: Social cognitive theory framework of perceived recommendations and areas of capacity building for the improvement of the welfare of young mothers and services

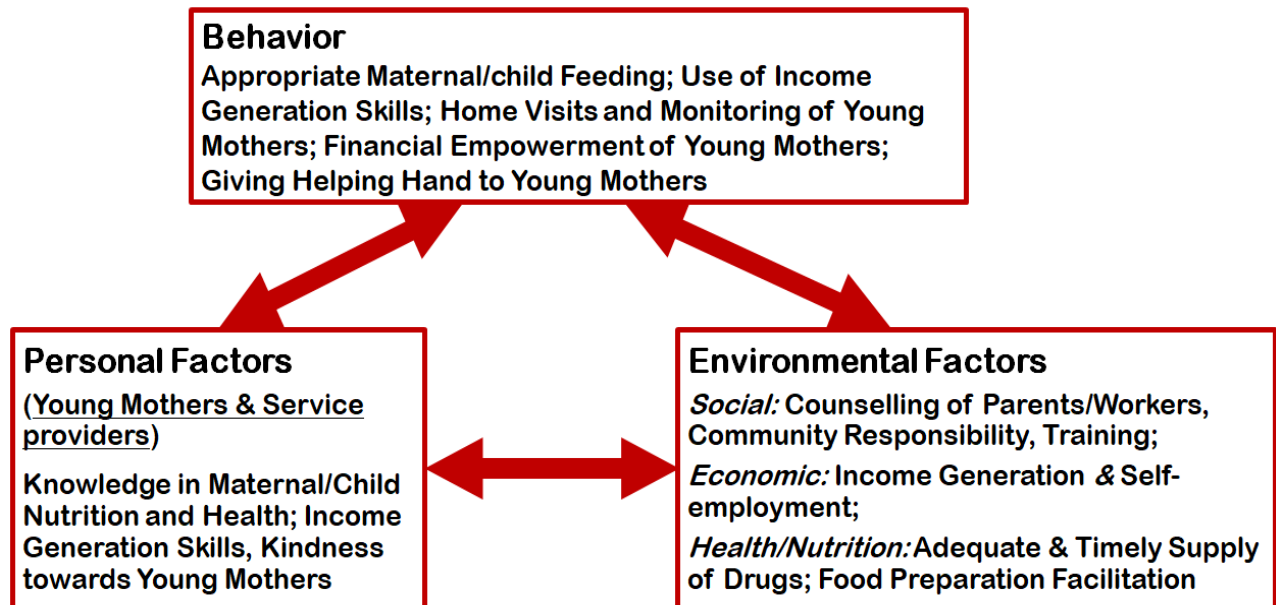
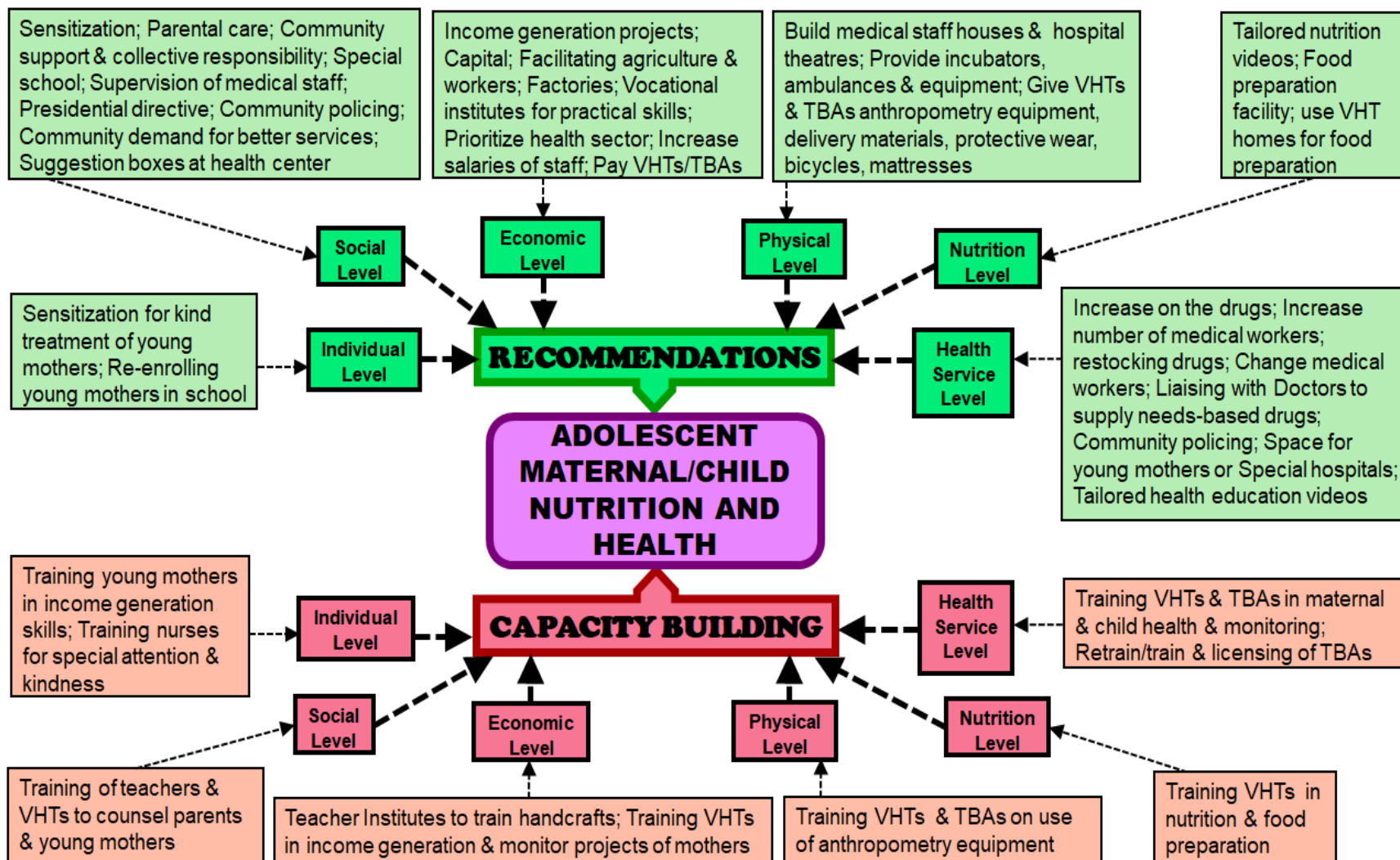


Figure 6.2: Thematic network of perceived recommendations and areas of capacity building for the improvement of the welfare of young mothers and services



Adapted from: Attride-Stirling J. Thematic networks: an analytic tool for qualitative research. Commission for Health Improvement, England. Qualitative Research. *SAGE Publications* (London, Thousand Oaks, CA and New Delhi). 2001;1(3):385-405.

Table 6.1: Demographic characteristics of study respondents (N=101)

Participants and Variables		Frequency (%)
Adolescent Mothers		N=25
Age of Mother	12-15 years	28.0%(7)
	16-19 years	72.0%(18)
Pregnant/Lactating	Pregnant	44.0%(11)
	Lactating	56.0%(14)
Years of Residence in Study Area	>3<5 years	32.0%(8)
	5-10 years	0.0%(0)
	>10 years	68.0%(17)
Dropped out of School	Yes	96.0%(24)
	No	1.0%(1)
Employed	Yes	0.0%(0)
	No	100%(25)
Married	Yes	0.0%(0)
	No	100%(25)
Family Members of Young Mothers		N=11
Sex	Male	0.0%(0)
	Female	100%(11)
Years of Residence in Study Area	5-10 years	9.1%(1)
	>10<20 years	18.2%(2)
	20+ years	72.7%(8)
Health-related Personnel		N=19
Sex	Male	21.1%(4)
	Female	78.9%(15)
Working Experience in Study Area	>3<5 years	10.5%(2)
	5-10 years	26.3%(5)
	>10<20 years	26.3%(5)
	20+ years	36.9%(7)
Community Workers		N=06
Sex	Male	100%(6)
	Female	0.0%(0)
Working Experience in Study Area	>3<5 years	16.7%(1)
	5-10 years	0.0%(0)
	>10<20years	16.7%(1)
	20+ years	66.6%(4)

Educators		N=16
Sex	Male	56.3%(9)
	Female	43.7%(7)
Working Experience in Study Area	>3<5 years	0.0%(0)
	5-10 years	18.8%(3)
	>10<20 years	68.7%(11)
	20+ years	12.5%(2)
Area Leaders		N=19
Sex	Male	68.4%(13)
	Female	31.6%(6)
Working Experience in Study Area	>3<5 years	0.0%(0)
	5-10 years	42.1%(8)
	>10<20 years	47.4%(9)
	20+ years	10.5%(2)
NGO Staff		N=05
Sex	Male	60%(3)
	Female	40%(2)
Working Experience in Study Area	>3<5 years	80%(4)
	>5<10 years	0.0%(0)
	>10<20 years	20%(1)
	20+ years	0.0%(0)

7.0 GENERAL DISCUSSION

The strong and consistent message from this study is that the well-being of adolescent mothers in rural Uganda needs improvement, and should be given special attention by families, communities and the nation. This study set out to explore, from the perspectives of those most closely concerned with the issues, the broad needs and barriers of young mothers in relation to nutrition and health; existing opportunities; challenges in acting on those opportunities; and recommendations for action and capacity building moving forward. The social cognitive theory (SCT), along with elements of the social ecological framework (SEF), was selected to organize and examine the large volume of data collected (101 interviews yielding more than 850 pages of transcripts) into individual and environmental determinants, as a way to better understand maternal/child nutrition and health within this context, and point to feasible interventions to shift behavior or overcome obstacles towards improving the wellbeing of these girls. Strategies used by organizations in the study area or other districts in rural Uganda were also identified that could be taken up for improved adolescent maternal/child nutrition and health.

I began this thesis research journey with a dream of how I could help in improving adolescent maternal/child nutrition and nutrition in rural Uganda through strategies such as agriculture, handcraft making, nutrition education, health education and monitoring using peer groups and cellphone reminders. However, to do this, I had to first find out what young mothers and stakeholders thought, hence this formative study. As a high school teacher, I have been able to witness the vulnerability of young mothers especially in the rural areas of Uganda, hence this research's focus on adolescent mothers. However, being that I taught in one of the affluent and

religious-founded secondary schools, I must say that what I found on the ground as I conducted my data collection was deeper and more grievous than what I had thought.

Much as I used *a priori* main themes constructed along the SCT leading to a more closed coding of themes and subthemes, there are some aspects that came up which I believe would stand out if I had used an open coding. These include *gender imbalances* since females seem to bear the burden of sexuality and parenthood. There was also an *imbalance of power* where for example of the district administrators, local political leaders, school principals, heads of health centers were mainly males. Respondents also had a lot of faith and trust in the office of the president (President Museveni) whom from observations and informal conversations seemed to be a preferred President by the community members, to solve their problems.

Some of the aspects raised by participants of this study reinforced expectations based on the literature and previous experience of the researcher, others were new. I was impressed that constructive community-based and macro-level recommendations and avenues for capacity building were raised by the study participants, some of which relate to national and international policies on gender and women, as discussed in the last paragraph of section 7.0. Future interventions based on such community-led recommendations have a high chance of acceptance by the community members. Issues such as refusing pregnant girls to continue with their schooling was not a surprise to me because that has been the tradition. Future political and opinion leaders will have to tread carefully to navigate changes that favor girls' education in the face of traditional restrictions

I was surprised and yet saddened by the appalling sleeping and feeding conditions of the young mothers that was exacerbated by the high poverty among their parents and community members. Most of the young mothers also lacked life skills such as self-esteem and assertiveness. Some felt they had no other way of paying back favors except through sex as they were not working. One of the girls explained:

“A boy gives you money to buy eats at school or take a hired bike (boda-boda), buys you a cellphone and clothes like underwears, sanitary towels, buys you eats like chapatti, how else can you pay him back when you do not have money from which you can earn money to give him? The only thing I have is what I can use to pay him back. So I just put [the reproductive organ] and he pays himself! After all, the reproductive organ won’t get finished by having sex, it will remain with me.”

Girls and boys need to be educated and empowered from early life ages to make choices free from bribery and other forms of intimidation and coercion. Much as it is the girls that bear the burden of pregnancy and childcare, the boys/men who impregnate the girls also live in fear of the law and are always on the run and in hiding. So both the girl and boy child are affected at the end of the day. Some other aspects that were heart breaking for me have been recounted below.

One of the girls I spoke to in Kibibi parish, who was actually the youngest of them all, haunts me to date. I recall sitting on a mat made out of banana leaf midribs which the young mother told me was her bedding. She was sleeping on this and a nylon bag using her mother’s old rugged gomesi (one of the womens’ traditional wears in eastern Uganda) dressing that was hanging on a string above this bedding area. This shy yet frightened girl told me that her parents only accepted her to sleep in this part of the house as their house was so small with only two rooms. The parents actually told me that they had chased her away, but the VHT went and talked to them which made them change their attitude and accept her to sleep in their house moreover just at a corner near the door.

Still in Kibibi parish, another girl had an infant aged 8 months who had been sick for 4 days, and she said they had no money to take the baby for medical attention. So before interviewing her, I wrote a note to the nurse and the grandmother of the sick infant volunteered to take her to the health center in the company of the VHT. The grandmother volunteered to do this so that I and the young mother could go on with the interview. I gave the grandmother 10,000= Ugandan shillings (UGX) (an equivalent of \$2.8 U.S. Dollars) for medical bills.

In another parish of Buwagi, a lactating mother of a two month old infant, who was being interviewed, seemed very uncomfortable just about 10 minutes into the said interview. The first sign of discomfort was when the interviewee was not able to sit on a chair and together with me, we sat on an old nylon bag. The interviewee explained that she had painful vaginal tears and wounds since the stitching threads had not been removed. The midwife had told her that the threads would break up after 2 weeks and it was now 2 months. I asked her and the mother if the threads used were not the absorbable sutures and was shocked to be told that they were asked to go with their own cloth sewing threads! I could not confirm this but if it was true, many questions and the unimaginable pain still flow through my heart. I wanted to stop the interview, explaining that the young mother would still get the honorarium (10,000= UGX) given to all interviewees, but she refused, saying that she had lived with the pain and had adjusted by using different body postures to relieve the pain. After the interview, I gave the lactating mother an extra 10,000 UGX to go for a medical check and treatment at Budondo Health Center IV to remove the threads which had been used to stitch up her vaginal tears. I followed up with the midwife and VHT and it was confirmed that the young mother was indeed attended to and had recovered well.

These two instances point to the significant, immediate needs facing these young mothers. I felt not only compelled to help them, but to do what I could to ensure that the future could be better, if not for these specific girls, then, for others like them.

Most of the young mothers I spoke to were so frightened and so before speaking to them on voice recording, I had to first build their confidence and trust that I meant no harm. The stigmatization and abuse that they have gone through makes them fear anyone that would want to speak about their conditions. A young mother in Lukolo parish openly told me

“I have only accepted to speak to you because you look like a mother and seem kind but we are tired of being blamed and harassed for our mistakes as is the habit of those that come by. Some people who come here have good advice like telling us to attend medical care and eat well but we can’t keep listening to that all the time. Eating well is good but we can only eat what our parents give us. Going for medical care is also good but what is the use when we go there but there are no drugs and the medical staff are also harsh to us? The nurses leave by 4:00pm and they do not come on weekends and so when you fall sick at such times, the security guard at the health center can give you some drugs when available. When I went to deliver this baby, I was in so much pain and when I asked the midwife to give me some pain killer drugs, she told me to go and ask for it from President Museveni whom we are always voting into power yet he can’t pay them well or send drugs on time.”

Another adolescent mother in Ivunamba also added,

“The VHT came home thrice pleading for me to speak to you. I am always in the house, my parents fear what the neighbors will say. My mother however asked about you and your work and the people you had spoken to told her that you are respectful and you dress decently not in short clothes like those town women that come here to show off to us and do not help us at all. So I told the VHT that I will speak to you in her home. What disappoints me most is that no one cares about us, organizations take care of old people adult women and young children. So even when they call for us together with the other people, we don’t go there. Why waste time to go to those meetings when you will not benefit and the adults look at you in a bad way? They judge us all the time instead of listening to our pains and counsel or teach us.”

The challenges recounted by the service providers especially in the health care sector were not only surprising but also daunting especially those that I was able to observe. The lack of housing meant late arrival to work especially during rainy seasons. The poor salaries and low/no supply of medical supplies leaves our healthcare system in Uganda limping if not broken. Reports of lack of water, electricity, sterilizing equipment, incubators, operating theaters is so saddening. Recently on the 6th of November 2017, medical workers through their organization of the Uganda Medical Association (UMA) went on a nationwide industrial “lay-down-tools” strike of protest after making arrangements where a few of them were left to handle emergency cases such as pediatric, accident and emergency obstetrics like operating on pregnant women that were having deliveries by caesarian section. Other patients had to seek medical attention from costly private health centers or wait for the strike to end; some may have even died still waiting.

At one of the health centers, one of the head asked me to stay longer so that I could witness the whole process of delivery of medical supplies. A truck packed with boxes soon arrived. Community members especially women and children soon came running, clapping in jubilation saying Museveni had sent them drugs but were worried that the medical personnel would steal the drugs. After packing the drugs in stores, the health center head picked a sample of similar boxes and on opening them, I was faced with the truth that these boxes contained anti-malarials (coartem), paracetamol (pain killer) and male condoms, but not the medications, like syrups for infants, that had been requested and were so desperately needed.

All these views of young mothers and service providers and observations reveal devastating situations. Much as there are some organizations/projects in the study area such as PEFO Uganda,

SOUL Foundation, BRAC Uganda, and NAADS that are involved in maternal/child health and/or economic improvement, young mothers are still left out. I do believe, however, that there is hope; the well-being of young mothers can be improved with community collective responsibility and once the conditions around service providers are improved, then better services should follow. The needs and barriers young mothers face are not only unfortunate but also loud, saddening and heart breaking. For the young mothers who participated in the current study, I feel like I am letting them down. While I could not promise any help to them personally, in expressing their needs to me I am sure they thought I could somehow find the support, such as financial support or start-up businesses for self-employment that they so greatly need. It is painful to imagine that my work might be of little help, apart from blowing the whistle through disseminating and publishing the study findings. I hope that the efforts to engage decision makers through this process will mean that the results, when provided to them, can form the seeds of action. I hope that I can use the skills developed through my research and training to pull the threads of this formative research and find a way to make a difference through an intervention study.

Detailed analysis of the perspectives multiple stakeholders of needs and barriers (Chapter 4), opportunities and challenges (Chapter 5) and recommendations for action and capacity building (Chapter 6) is presented and discussed in the individual chapters. The participants in this research made recommendations and suggested opportunities for change that can be used to address the barriers to meeting the needs of young mothers or the challenges faced by service-providers. For example, VHTs, trained with the support of NGOs, could be teachers of young mothers and agents of change about the social exclusion of these young mothers through counselling and sensitization of families and community members. NGOs, potentially in collaboration with leaders, could help

to provide income generating resources and support that families, even if willing, cannot provide for young girls due to the poverty they face.

The resilience of young mothers must be commended and supported because they have not given up on life but rather are willing to make ends meet to better their lives. The resilience is impressive since it rises out of a system of structural violence that victimizes them. Structural violence is a systematic and indirect exertion of oppression and violence on those at the low end of the social classes by the ones in higher or influential positions [Farmer, 2004; Farmer, 2009; Page-Reeves et al., 2013; Basnyat, 2017; Roberts, 2009; Montesanti & Thurston, 2015; Montesanti, 2015; Lewis & Russell, 2013]. Individuals who are victims of structural violence are usually poor, marginalized and live in several types of inequalities [Farmer, 2004; Page-Reeves et al., 2013; Roberts, 2009; Montesanti & Thurston, 2015; Montesanti, 2015; Lewis & Russell, 2013]. Individuals who undergo such violence and oppression experience lots of suffering that is exasperated by aspects such as culture, low socioeconomic status, and gender that are discriminatory [Farmer, 2009; Montesanti & Thurston, 2015; Montesanti, 2015]. In the case of this study, structural violence experienced by young mothers from family and community members leads to a displacement of frustrations where, for example, a mother who is blamed for her daughter's pregnancy by her husband as a form of gender bias takes it out on adolescent mother. Medical staff faced with negative attitudes from community members who call them drug thieves, low pay, heavy workloads, poor or no medical supplies, lack of staff housing and poor working conditions also seem to place their burden and disappointment of unmet needs onto the young mothers who seem to be the easier target than government. The harsh treatments of young mothers from parents and medical personnel may not, therefore, be due to the fact that these stakeholders do not know about

kind treatment, but rather a blow-up of frustrations brought about by poverty and poor working conditions. The silent cultural aspect of “disciplining” young mothers as a lesson for the rest of their siblings or peers or students to avoid the mistake of getting pregnant, is the main reason behind stigmatization from family, community or schools. This stigmatization may demoralize adolescent mothers so much that they could easily give up on continuing their education. For example, much as stakeholders told me that some young mothers go back to school and successfully complete, only one of the 14 lactating mothers I spoke to had reenrolled into school. The rest were either not sure when this would happen or had completely given up the idea. The gender biases that are promoted by cultures also complicate matters further as these are historical processes and forces conspire to cause lots of suffering [Farmer, 2009; Montesanti & Thurston, 2015; Montesanti, 2015]. For example: only boys inherit land and not girls, and once evidently pregnant, the young mothers can’t share rooms/houses with parents as they are taken to represent the families of the fathers of their children. All these forms of structural violence and painful social processes bring suffering and could easily keep the young mothers broadly lacking in power. Much as the young mothers may have different personal and psychological attributes, they do share the suffering and pains caused by social exclusion given their occupancy of the bottom level at the social hierarchy in their communities [Farmer, 2009]. The choices that the young mothers have are structured by not only cultural violence but also the unending poverty that they go through [Farmer, 2009].

It would be important to note that for any intervention that may succeed, agency-focused approaches (that emphasize individuals’ actions whether young women, family members and other service providers) need to be reconciled with structure-focused approaches (that emphasize

changes in higher-level factors such as government policies, organizational practices, societal resources, norms and beliefs, etc.). The structure-agency issue has recently been used to address issues of human sciences and reduce social inequalities [Clifton et al., 2013; Abel et al., 2012; Rütten & Gelius, 2011]. Rütten and Gelius (2011) built up a multi-level model which integrated structure and agency in line with the Ottawa Charter (1986) principles of improving public policy, living environments, community activities, and individual skills [Rütten & Gelius, 2011]. Their multi-level model is therefore an integration of the individuals' agency (e.g., their skills) and structures such as their living environments and policies. As individuals (agencies), stakeholders of adolescent maternal/child nutrition and health improvement in rural Uganda to some extent have the power to make decisions for their well-being but this seems to be constrained by external factors (structure). Decisions such as attendance of medical care or good feeding or engaging in income-generating work are to some extent controlled by external factors. Examples of such external factors, some of which are macro-level policy aspects, include supply and availability of medical items, change in salary structures by the government, employing more medical staff, accepting young mothers to stay in school, employment opportunities for young mothers and their parents, and provision of land to young mothers. There is therefore a need to marry the two approaches of agency and structure [Clifton et al., 2013; Abel et al., 2012; Anaf et al., 2013; Bungay et al., 2011] for the improved well-being of young mothers. With the two approaches of agency and structure in mind, I give my recommendations for improved maternal/child nutrition and health in rural Uganda in the next paragraphs.

Lamenting over the poor conditions and suffering of young mothers may not help much. I therefore recommend the following, at the different levels of the SCT: counselling, sensitization, skill

development and peer group intervention could be used to encourage, support and strengthen positive attitudes young mothers and service providers, or mitigate the negative attitudes, and support positive behaviors/ practices related to environmental. For example, since young mothers were involved in family agriculture, they could learn agriculture skills to dig (labor) for community members for a pay. Alternative personal projects would be possible like making handcrafts to earn money or having personal home-based employment such as making snacks for sale. A desire to stay or reenroll school by the young mothers could be exploited by sensitizing families, schools and community members to support the girls and uphold the interest by providing school dues, revision (studying) space at home, and a comforting environment at school. Young mothers' positive decisions of using modern medical services such as hospital delivery, adhering to medical advice given by health-related personnel such as attending ANC, taking drugs given, and practicing TIBF and EBF could also be encouraged through optimizing supports to overcome barriers. These are points of strength and resilience of young mothers that could be strengthened and used to improve their well-being.

The strengths and resilience of service providers could be used as building blocks for behavioral change through counselling. Since community-based health-related workers e.g., TBAs and VHTs, were trusted by community members as reported in this study and others [Turinawe et al., 2017; Anastasi et al., 2015], it could be easy for them to be used as agents [TASO Jinja, 2015] to support young mothers. These agents could help change the community's negative attitudes, and gender and cultural biases. Such gender and culture biases are embedded in traditional practices such as failure of young mothers to acquire land, since, as daughters, they were not allowed to inherit

family land unlike sons; failure of young mothers to share houses with their parents as they were taken to be ‘in law’s having had sex; and treating pregnant girls harshly but not their baby’s fathers.

At the social level, information sharing with families, local community members, district administrators, civil society organizations and policy makers could help build community collective support for young mothers in home, school, and health center environments. Families needed to love and care for their daughters and give them a place to belong at such a challenging time of their young age instead of harassing and chasing them away. Sensitization of service providers would also enable kind treatment of young mothers. Training of service providers in income generation skills so that they could in turn train the mothers is an area that could be facilitated by local NGOs such as Phoebe Education Fund for Orphans & vulnerable children (PEFO) Uganda [PEFO Uganda, 2017] and SOUL Foundation [SOUL Foundation, 2017]. Taking on such extra programs by the named NGOs may call for extra funds which could be lobbied for from the government and international bodies. Universal access to education is a right, as emphasized in the UN sustainable development goals. One hopes that, like the resilient young mothers in the current study who returned to school, girls and families can be empowered to advocate for this right

It can be possible for young mothers to acquire hands-on or vocational skill training and seed grants in form of money, seeds and animals, for their economic well-being with partnerships and financial help from Uganda government programs like NAADS (National Agricultural Advisory Services) and area NGOs e.g., PEFO Uganda [PEFO Uganda, 2017], SOUL Foundation [SOUL Foundation, 2017], and BRAC Uganda [BRAC, 2017]. Improvement of economic well-being of

young mothers in rural Uganda cannot be left to their families because of the high poverty rates in rural Uganda [UNDP, 2014; World Bank Group, 2016], and the study's reported barriers and challenges may not permit meaningful economic related interventions at a family level. Training of young mothers, e.g., in making attractive handcrafts such as jewelry, beaded bags, decorative bags and baskets, could also engage area NGOs. Since the young mothers lack profitable markets for their handcrafts, NGOs could use their stature to advocate for local, national and international markets for economic empowerment of the young mothers. Training in modern agriculture skills in crop growing and animal rearing, and vocational skills such as carpentry, hair dressing, tailoring and mechanics could also be supported in the same way. The MDIs (microfinance deposit-taking institutions) such as BRAC Uganda [BRAC Uganda, 2017], Pride Microfinance Ltd [Pride Microfinance Ltd, 2017], Finca Uganda Ltd [Finca Uganda Ltd, 2017], and Opportunity Bank [Opportunity Bank, 2014] could be lobbied to train young mothers in credit savings and then give them microcredits as start-up capital to invest in small businesses. Monitoring of economic projects of young mothers could be taken up by trained VHTs. Improving the situation of low or no payments for medical staff and community workers that is causing demotivation of these service providers could be helped by lobbying district and national authorities [Oketcho et al., 2015] and international bodies [Agaba, 2009] for financial support.

At the physical environment level, provision of land to young mothers through inheritance or by family joint land ownership would help in giving adolescent mothers/infants a place to enable personal agriculture projects such as crop growing, and chicken and goat rearing. For further improvement of service delivery, lobbying for physical infrastructure like improvement such as building medical staff houses or building and equipping operation theatres, services like clean

water, supplies, like delivery materials and equipment like anthropometry scales, also needs lobbying at district, national and international levels.

At the nutrition level, production of food through crop growing and bird/animal rearing would make nutrition education to young mothers meaningful [Berti et al., 2010; World Vision/CIDA 2006; Nabugoomu et al., 2015a; Nabugoomu et al., 2015b; Nabugoomu & Hanning, 2015; Shefner-Rogers, 2014] since healthy food choices and food preparation practices network around availability of foods. Trained VHTs to train young mothers in practical food preparation skills would further support this avenue for maternal/child nutrition improvement.

At the health level, district and national authorities might aid in training medical staff in adolescent friendly services. With such training, these medical staff could have an attitude and behavior change shift towards kind treatment of young mothers and tailored services and knowledge translation VHTs and TBAs, especially if trained through NGO support, might take on some of these roles locally where service is needed.

For Uganda, as a nation, and internationally, young mothers could benefit from gender and/or women-supportive policies. The Uganda National Gender Policy (2007), whose main objective is to mainstream gender aspects in national agendas to address gender inequality helped to increase attention to the involvement of and benefits to both women and men at in different sectors of service delivery [Uganda, 2007; UNDP/Uganda, 2016]. For example, equal employment and empowerment for women was advocated for. In addition, Uganda's National Action Plan on Women (NAPW) of 1999 prioritises five major areas including: poverty, income generation and

economic empowerment; reproductive health and rights; legal framework and decision making; the girl child and education; and violence against females and peace building [UN/Uganda, 2018; UNDP/Uganda, 2016]. Some of the main outcomes of government's implementation of the NAPW include: creation of universal primary education (UPE) that saw the high increase in enrolments for girls in primary schools from 1,420,883 in 1996 to 3,372,881 in 2001; reduction of people living in absolute poverty from 56% in 1992 to 35% in 2000; affirmative action that increased the proportion of women in Parliament (from 18% in 1995 to 24% in 2003) and for Local Council leaders (from 6% in the early 1990s to 44% in 2003); elimination of incidences of measles and polio in Uganda through massive immunisation campaigns and now door-to-door polio immunization; and reduction of HIV/AIDS prevalence among pregnant women in Uganda from 13% in 1989 to 5% in 2000 in rural areas and from 31% in 1990 to 11% in 2000 in urban areas [UN/Uganda, 2018]. Much as these are good achievements, challenges do exist. There is need for improved funding for the implementation, monitoring, and evaluation of these policies. There is also need for continued capacity building through training for the policy implementers [UN/Uganda, 2018]. Much as young mothers could benefit from these gender/women related policies in Uganda, there is need for a policy to specifically handle and empower the young mothers as a special group. The Universal Primary Education (UPE) program in 1997, awarding of 1.5 points to females applying for public universities, promoting the National Strategy for Girls' Education (NSGE), rolling out the Promotion of Girls' Education (PGE) scheme and the Equity in the Classroom (EIC) program has in a way helped in equal participation of girls and boys in the classroom but there is no clear strategy to deal with teenage pregnancy in schools that is accounting for high school drop-out rates [UNICEF, 2014]. Much as in 2009, the ministry of education of Uganda gave a directive that pregnant girls be allowed back in schools to undertake final

examinations at primary, lower secondary and upper secondary levels, more needs to be done as regards having these girls keep in school until they give birth so as not to miss out on school from the time they are expelled when found pregnant hence being ill prepared for the said final examinations [UNICEF 2014].

At the international level, young mothers could benefit from policies that support gender equity such as that of Canada (the Feminist International Assistance Policy) [Government of Canada, 2017], Food and Agriculture Organization (FAO) [FAO, 2018], Bill Melinda Gates Foundation [Bill Melinda Gates Foundation, 2018] and the Nestlé Foundation for the Study of Problems of Nutrition in the World, Lausanne, Switzerland [Nestlé Foundation, 2018]. Through the Feminist International Assistance Policy Canada joined other countries like Australia, Sweden, and Norway who already have explicit feminist foreign policies, and adopted this policy to advance gender equality and empower women and girls so as to reduce poverty and to build a more inclusive, peaceful and prosperous world [Government of Canada, 2017]. Canada's International Feminist Assistance Policy has 6 key areas of action [Government of Canada, 2017] including: 1). Gender equality and empowerment of women and girls by addressing sexual and gender based violence, financially supporting women and women organizations, and improving in capacity building in institutions. 2). Upholding human dignity of the poor and vulnerable persons in developing countries through emergency humanitarian aid, provision of healthcare, safe water and nutritious foods, and quality education. 3). Supporting growth and includes everyone through supporting women and girls in skill acquisition, accessibility of power positions, access to finances by women. 4). Helping women adapt to climate change and mitigate its effects and supporting them to increase the capacity of recovery of their crops, their access to water and in the making of environmental

protections decisions. 5). Support of inclusive governance through investing in the rights of women and their participation in politics, the legal factor and civil society activities. 6). Peace and security advancement for stability and development of women by encouraging women to participate in peace building. Future interventions that are geared towards the improvement of adolescent maternal/child nutrition and health could take advantage of such international feminist openings. Support through Feminist Policy, if adopted by Uganda, would signify the political will needed to shift support for women and girls at all levels.

This section has not only helped to reveal personal reflections from the PI, but also the individual, social and other environmental factors identified through this research that can be integrated to facilitate some feasible steps towards positive nutrition and health behaviors. By understanding the needs, barriers and supports of young mothers, challenges of service providers and suggested solutions that this study has revealed, it may be possible to consider interventions to shift behavior or overcome obstacles. Given more chances and with collective responsibility at family, community, national and internal level, adolescent mothers in rural Uganda could have a good quality life.

Strengths of the Study

The study involved a large, diverse sample of participants hence captured a broad perspective of views. The study used a qualitative approach to data collection which supported in-depth conversations. Conducting interviews in homes or places of work helped to make use of observations and extra information from non-participants for triangulation of information.

Translating consent letters in addition to conducting interviews in a language that the participants were comfortable with helped to keep participants comfortable with the study. Combining the use of theory and the broad-based participation of those most affected by the issue through this research was an approach, recommended in the literature, to lead to effective avenues for intervention (Contento, 2008).

Limitations of the Study

This was a qualitative study on a small sample of participants and so results cannot be generalized to regional levels. The study did not capture views of fathers of the babies of young mothers and married teenage mothers.

8.0 GENERAL CONCLUSION

Using the social cognitive theory and the social ecological framework, the study identified a range of needs and barriers faced by adolescent mothers in rural Uganda making them vulnerable to poor maternal/child health and hence a call for action, including behavior change on the part of individuals, families, community, society and government to better support to young mothers and their babies. Participants also identified feasible steps to addressing the needs, barriers and challenges of service providers by building on available opportunities at the family and community levels to enhance health and well-being. Lessons taken for area organizations, suggest that a combination of strategies and broad community participation, could improve the well-being of young. Findings of this study may help to direct future interventions that are culturally feasible and acceptable to support positive adolescent maternal/child nutrition and health behaviors in rural Eastern Uganda. Young mothers in eastern Uganda should be viewed with dignity in light of their

resilience in the face of extreme conditions. These young mothers and their babies deserve a future that supports their health and wellbeing in the fullest sense.

Competing Interests

The author declares that she has no competing interests.

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REFERENCES

- Abel T, Frohlich KL. Capitals and capabilities: linking structure and agency to reduce health inequalities. *Soc Sci Med.* 2012;74(2):236-244. Doi: 10.1016/j.socscimed.2011.10.028.
- Adeyinka DA, Oladimeji O, Adekanbi TI, Adeyinka FE, Falope Y, Aimakhu C. Outcome of adolescent pregnancies in southwestern Nigeria: a case-control study. *J Mater Fetal Neonatal Med.* 2010;23(8):785-789.
- Agaba E. Funding the promise: monitoring Uganda's health sector financing from an HIV/AIDS perspective. *Afr Health Sci.* 2009;9 Suppl 2:S81-85.
- Ahluwalia IB, Robinson D, Vallely L, Giesecker KE, Kabakama A. Sustainability of community-capacity to promote safer motherhood in northwestern Tanzania: what remains? *Glob Health Promot.* 2010;17(1):39-49.
- Akter SM, Roy SK, Thakur SK, Sultana M, Khatun W, Rahman R, Saliheen SS, Alam N. Effects of third trimester counseling on pregnancy weight gain, birthweight, and breastfeeding among urban poor women in Bangladesh. *Food Nutr Bull.* 2012;33(3):194-201.
- Alberga AS, Sigal RJ, Goldfield G, Prud'homme D, Kenny GP. Overweight and obese teenagers: why is adolescence a critical period? *Pediatric Obesity.* 2012;7(4):261-273.
- Althabe F, Moore JL, Gibbons L, Berrueta M, Goudar SS, Chomba E, Derman RJ, Patel A, Saleem S, Pasha O, Esamai F, Garces A, Liechty EA, Hambidge K, Krebs NF, Hibberd PL, Goldenberg RL, Koso-Thomas M, Carlo WA, Cafferata ML, Buekens P, McClure EM. Adverse maternal and perinatal outcomes in adolescent pregnancies: The Global Network's Maternal Newborn Health Registry study. *Reprod Health.* 2015;12 Suppl 2:S8. Doi: 10.1186/1742-4755-12-S2-S8.

- Anaf J, Baum F, Newman L, Ziersch A, Jolley G. The interplay between structure and agency in shaping the mental health consequences of job loss. *BMC Public Health*. 2013;13:110. Doi: 10.1186/1471-2458-13-110.
- Anastasi E, Borchert M, Campbell OM, Sondorp E, Kaducu F, Hill O, Okeng D, Odong VN, Lange IL. Losing women along the path to safe motherhood: why is there such a gap between women's use of antenatal care and skilled birth attendance? A mixed methods study in northern Uganda. *BMC Pregnancy Childbirth*. 2015;15:287. Doi: 10.1186/s12884-015-0695-9.
- Anderson-Bill ES, Winett RA, Wojcik JR. Social cognitive determinants of nutrition and physical activity among web-health users enrolling in an online intervention: the influence of social support, self-efficacy, outcome expectations, and self-regulation. *J Med Internet Res*. 2011;13(1):e28. Doi: 10.2196/jmir.1551.
- Atiku J. Fertility reduction programmes should accompany land reforms. *Afr Women Health*. 1994;2(3):16-20.
- Attride-Stirling J. Thematic networks: an analytic tool for qualitative research. Commission for Health Improvement, England. Qualitative Research. *SAGE Publications* (London, Thousand Oaks, CA and New Delhi). 2001;1(3):385-405. <http://utsc.utoronto.ca/~kmacd/IDSC10/Readings/Readings/text%20analysis/themes.pdf>. Accessed 18 September 2017.
- Atuyambe L, Mirembe F, Annika J, Kirumira EK, Faxelid E. Seeking safety and empathy: adolescent health seeking behavior during pregnancy and early motherhood in central Uganda. *J Adolesc*. 2009;32(4): 781-796.

- Atuyambe L, Mirembe F, Johansson A, Kirumira EK, Faxelid E. Experiences of pregnant adolescents - voices from Wakiso district, Uganda. *African Health Sciences*. 2005;5(4):304-309.
- Atuyambe L, Mirembe F, Tumwesigye NM, Annika J, Kirumira EK, Faxelid E. Adolescent and adult first time mothers' health seeking practices during pregnancy and early motherhood in Wakiso district, central Uganda. *Reprod Health*. 2008;5:13.
- Ayiasi MR, Van Royen K, Verstraeten R, Atuyambe L, Criel B, Garimoi CO, Kolsteren P. Exploring the focus of prenatal information offered to pregnant mothers regarding newborn care in rural Uganda. *BMC Pregnancy Childbirth*. 2013;13:176. Doi: 10.1186/1471-2393-13-176.
- Babirye JN, Rutebemberwa E, Kiguli J, Wamani H, Nuwaha F, Engebretsen IM. More support for mothers: a qualitative study on factors affecting immunisation behaviour in Kampala, Uganda. *BMC Public Health*. 2011;11:723. Doi: 10.1186/1471-2458-11-723.
- Bandura A. Health promotion by social cognitive means. *Health Educ Behav*. 2004;31(2):143-164.
- Basit T. Manual or electronic? The role of coding in qualitative data analysis. *Educ Res*. 2003;45:2:143-154, Doi: 10.1080/0013188032000133548.
- Bearinger LH, Sieving RE, Ferguson J, Sharma V. Global perspectives on the sexual and reproductive health of adolescents: patterns, prevention, and potential. *Lancet*. 2007;369(9568):1220-1231.
- Berger J, Thanh HT, Cavalli-Sforza T, Smitasiri S, Khan NC, Milani S, Hoa PT, Quang ND, Viteri F. Community mobilization and social marketing to promote weekly iron-folic acid

- supplementation in women of reproductive age in Vietnam: impact on anemia and iron status. *Nutr Rev.* 2005;63(12 Pt 2):S95-108.
- Berti PR, Mildon A, Siekmans K, Main B, Macdonald C. An adequacy evaluation of a 10-year, four-country nutrition and health programme. *Int J Epidemiol.* 2010;39(2):613-629.
- Bezner KR, Berti PR, Shumba L. Effects of a participatory agriculture and nutrition education project on child growth in northern Malawi. *Public Health Nutr.* 2011;14(8):1466-1472.
- Bhutta ZA, Das JK, Rizvi A, Gaffey MF, Walker N, Horton S, Webb P, Lartey A, Black RE; Lancet Nutrition Interventions Review Group; Maternal and Child Nutrition Study Group. Evidence-based interventions for improvement of maternal and child nutrition: what can be done and at what cost? *Lancet.* 2013;382(9890):452-477.
- Bill Melinda Gates Foundation. 2018. <https://www.gatesfoundation.org/>. Accessed 20 January 2018.
- Bisman J. Postpositivism and accounting research. A (personal) primer on critical realism. *AAFBJ.* 2010;4(4):1-25.
<http://ro.uow.edu.au/cgi/viewcontent.cgi?article=1105&context=aabfj>. Accessed 18 September 2017.
- BRAC Health. Health, Nutrition and Population. 2017. <http://www.brac.net/health>. Accessed 30 October 2017.
- BRAC Uganda. 2017. <http://www.brac.net/uganda?view=page>. Accessed 09 October 2017.
- Braun KL, Tsark JU, Santos L, Aitaoto N, Chong C. Building Native Hawaiian capacity in cancer research and programming. A legacy of 'Imi Hale. *Cancer.* 2006;107(8 Suppl):2082-2090.

- Braun V, Clarke V. Using thematic analysis in psychology. *Qualitative Research in Psychology*. 2006;3(2). pp. 77-101. ISSN 1478-0887. Electronic version.
http://eprints.uwe.ac.uk/11735/2/thematic_analysis_revised. Accessed 17 September 2017.
- Britto RP, Florêncio TM, Benedito Silva AA, Sesso R, Cavalcante JC, Sawaya AL. Influence of maternal height and weight on low birth weight: a cross-sectional study in poor communities of northeastern Brazil. *PLoS One*. 2013;8(11):e80159. Doi: 10.1371/journal.pone.0080159.
- Bungay V, Halpin M, Atchison C, Johnston C. Structure and agency: reflections from an exploratory study of Vancouver indoor sex workers. *Cult Health Sex*. 2011;13(1):15-29. Doi: 10.1080/13691058.2010.517324.
- Bushamuka VN, de Pee S, Talukder A, Kiess L, Panagides D, Taher A, Bloem M. Impact of a homestead gardening program on household food security and empowerment of women in Bangladesh. *Food Nutr Bull*. 2005;26(1):17-25.
- Carter N, Bryant-Lukosius D, DiCenso A, Blythe J, Neville AJ. The use of triangulation in qualitative research. *Oncol Nurs Forum*. 2014;41(5):545-547. Doi: 10.1188/14.ONF.545-547.
- Casanueva E, Jiménez J, Meza-Camacho C, Mares M, Simon L. Prevalence of nutritional deficiencies in Mexican adolescent women with early and late prenatal care. *Arch Latinoam Nutr*. 2003;53(1):35-38.
- Ceesay SM, Prentice AM, Cole TJ, Foord F, Weaver LT, Whitehead RG. Effects on birthweight and perinatal mortality of maternal dietary supplements in rural Gambia: 5 year randomised controlled trial. *BMJ*. 1997;315(7111):786-790.

- CEHURD (Center for Health, Human Rights and Development). Facing Uganda's law on abortion experiences from women & service providers. 2016. Pp 23.
<https://www.reproductiverights.org/sites/crr.civicactions.net/files/documents/Uganda-Abortion-Law-Experiences.pdf>. Accessed 07 December 2017.
- Chi PC, Bulage P, Urdal H, Sundby J. A qualitative study exploring the determinants of maternal health service uptake in post-conflict Burundi and Northern Uganda. *BMC Pregnancy Childbirth*. 2015;15:18. Doi: 10.1186/s12884-015-0449-8.
- Clark AM. The qualitative-quantitative debate: moving from positivism and confrontation to post-positivism and reconciliation. *J Adv Nurs*. 1998;27(6):1242-1249.
- Clifton A, Repper J, Banks D, Remnant J. Co-producing social inclusion: the structure/agency conundrum. *J Psychiatr Ment Health Nurs. Sci Med*. 2013;20(6):514-524. Doi: 10.1111/j.1365-2850.2012.01953.
- Collier D, Mahoney J. Research Note: Insights and Pitfalls: Selection Bias in Qualitative Research. *World Politics*. 1996;49(1):56-91.
http://siteresources.worldbank.org/INTAFRSumESSD/Resources/1729402-1150389437293/COLLIER_Mahoney_World_Politics_96.pdf. Accessed 17 November 2017.
- Contento IR. Nutrition education: linking research, theory, and practice. *Asia Pac J Clin Nutr*. 2008;17(Suppl 1):176-179.
- Creswell JW. Research design: qualitative, quantitative, and mixed approaches. 2014. Thousand Oaks, CA: SAGE Publications, Inc. ISBN 9781452226101. Forth Edition. Pp6-8.
- Crossan F. Research philosophy: towards an understanding. *Nurse Res*. 2003;11(1):46-55.

- Davies W. Ugandan leaders stall bill to decriminalize abortions as unsafe procedures continue. *The World Post*. 2016. https://www.huffingtonpost.com/entry/ugandan-leaders-stall-abortion-bill_us_57f6ba11e4b00885f2c6ba6d?slideshow=true. Accessed 07 December 2017.
- Davison CM, Ndumbe-Eyoh S, Clement C. Critical examination of knowledge to action models and implications for promoting health equity. *Int J Equity Health*. 2015;14:49. Doi: 10.1186/s12939-015-0178-7.
- Devxchange. Pelletier Teenage Mothers Foundation (PTMOF). <http://devxchange.org/campaigns/pelletier-teenage-mothers-foundation/>. Accessed 09 October 2017.
- Doerksen SE, McAuley E. Social cognitive determinants dietary behaviour change in university employes. *Front Public Health*. 2014;2:23. Doi: 10.3389/fpubh.2014.00023.
- Draper A, Swift JA. Qualitative research in nutrition and dietetics: data collection issues. *J Hum Nutr Diet*. 2011;24(1):3-12.
- El Shafei AM, Labib JR. Determinants of exclusive breastfeeding and introduction of complementary foods in rural Egyptian communities. *Glob J Health Sci*. 2014;6(4):236-244.
- Elhassan ME, Abbaker OA, Haggaz DA, Abubaker SM, Adam I. Anaemia and low birth weight in Medani, Hospital Sudan. *BMC Res Notes*. 2010;3:181. Doi: 10.1186/1756-0500-3-181.
- Engebretsen IM, Moland KM, Nankunda J, Karamagi CA, Tylleskär T, Tumwine JK. Gendered perceptions on infant feeding in Eastern Uganda: continued need for exclusive breastfeeding support. *Int Breastfeed J*. 2010;5:13. Doi: 10.1186/1746-4358-5-13.

- Ensor T, Cooper S. Overcoming barriers to health service access: influencing the demand side. *Health Policy Plan.* 2004;19(2):69-79.
- Erlandson DA, Harris EL, Skipper BL, Allen SD. Doing Naturalistic inquiry, a guide to methods. Chapter 2 & 7: Doing naturalistic inquiry: a guide to methods. *Sage publications, Inc.* London. 1993. pp 20-41, 131-162.
- Family Support. BC Association of Family Resource Programs.
http://www.frpbc.ca/media/uploads/files/FAMILY_SUPPORT_-_definition_REVISIED_March_12.pdf. Accessed 16 October 2017.
- FAO. Food and Agriculture Organization of the United Nations. 2018.
<http://www.fao.org/home/en/>. Accessed 20 January 2018.
- FAO. Improving bioavailability of iron in Indian diets through food-based approaches for the control of iron deficiency anemia. FAO 2003.
<ftp://ftp.fao.org/docrep/fao/005/y8346m/y8346m06.pdf>. Accessed 14 October 2017.
- FAO & ADB. Gender Equality and Food Security: Women's Empowerment as a Tool against Hunger. 2013. ISBN 978-92-9254-172-9 (PDF). Pp 114.
<http://www.fao.org/wairdocs/ar259e/ar259e.pdf>. Accessed 09 October 2017.
- FAO/WHO/UNU. Food and Nutrition Technical Report Series 1. Human energy requirements: Report of a Joint FAO/WHO/UNU Expert Consultation. Rome, 17–24 October 2001.
<http://www.fao.org/docrep/007/y5686e/y5686e0a.html>. Accessed 14 October 2017.
- Farmer P. An Anthropology of Structural Violence. *Current Anthropology.* 2004;45(3):305-325.
<http://www.jstor.org/stable/pdf/10.1086/382250.pdf>. Accessed 18 November 2017.
- Farmer P. On Suffering and Structural Violence: A View from Below. *Race/Ethnicity.* 2009;3(1):11-28. <http://www2.kobe->

- u.ac.jp/~alexroni/IPDreadings%202017/IPD%202017_10/On%20suffering%20and%20str
uctural%20violence.pdf. Accessed 18 November 2017.
- Finca Uganda Ltd. 2017. <http://www.finca.ug/>. Accessed 09 October 2017.
- Flax VL , Negerie M, Ibrahim AU, Leatherman S, Daza EJ, Bentley ME. Integrating group counseling, cell phone messaging, and participant-generated songs and dramas into a microcredit program increases Nigerian women's adherence to international breastfeeding recommendations. *J Nutr.* 2014;144(7):1120-1124.
- Flax VL, Yourkavitch J, Okello ES, Kadzandira J, Katahoire AR, Munthali AC. "If my husband leaves me, I will go home and suffer, so better cling to him and hide this thing": The influence of gender on Option B+ prevention of mother-to-child transmission participation in Malawi and Uganda. *PLoS One.* 2017;12(6):e0178298. Doi: 10.1371/journal.pone.0178298.
- Ganchimeg T, Ota E, Morisaki N, Laopaiboon M, Lumbiganon P, Zhang J, Yamdamsuren B, Temmerman M, Say L, Tunçalp Ö, Vogel JP, Souza JP, Mori R; WHO Multicountry Survey on Maternal Newborn Health Research Network. Pregnancy and childbirth outcomes among adolescent mothers: a World Health Organization multicountry study. *BJOG.* 2014;121 Suppl 1:40-8. Doi: 10.1111/1471-0528.12630.
- Garba I, Adewale TM, Ayyuba R, Abubakar IS. Obstetric outcome of teenage pregnancy at Aminu Kano Teaching Hospital: A 3-year review. *J Med Trop.* 2016;18(1)43-46
- Gill P, Stewart K, Treasure E, Chadwick B. Methods of data collection in qualitative research: interviews and focus groups. *British Dental Journal.* 2008;204: 291-295.

- Girard AW, Olude O. Nutrition education and counselling provided during pregnancy: effects on maternal, neonatal and child health outcomes. *Paediatr Perinat Epidemiol.* 2012;26 Suppl 1:191-204.
- Glanz K. Behavioural and social sciences research: social and behavioral theories. e-Source. 2017. Pp 40.
http://www.esourceresearch.org/Portals/0/Uploads/Documents/Public/Glanz_FullChapter.pdf. Accessed 07 December 2017.
- Glanz K, Rimer BK, Viswanath K. Health behavior and health education: Theory, research, and practice. 2008. *Jossey-Bass*. Fourth Edition. Pp 42, 169, 170, 273, 274. ISBN 978-0-7879-9614-7. <http://riskybusiness.web.unc.edu/files/2015/01/Health-Behavior-and-Health-Education.pdf>. Accessed 07 December 2017.
- Government of Canada. Canada's feminist international assistance policy. 2017.
<http://www.international.gc.ca/gac-amc/campaign-campagne/iap-pai/index.aspx?lang=eng>. Accessed 18 January 2018.
- Green J, Willis K, Hughes E, Small R, Welch N, Gibbs L, and Daly J. Generating best evidence from qualitative research: the role of data analysis. *Aust N Z J Public Health.* 2007;13(6):545-550.
- Grogger J, Bronars S. The socioeconomic consequences of teenage childbearing: findings from a natural experiment. *Fam Plann Perspect.* 1993;25(4):156-161, 174.
- Grote NK, Bridge JA, Gavin AR, Melville JL, Iyengar S, Katon WJ. A meta-analysis of depression during pregnancy and the risk of preterm birth, low birth weight, and intrauterine growth restriction. *Arch Gen Psychiatry.* 2010;67(10):1012-1024.

- Guldan GS, Fan HC, Ma X, Ni ZZ, Xiang X, Tang MZ. Culturally appropriate nutrition education improves infant feeding and growth in rural Sichuan, China. *J Nutr.* 2000;130(5):1204-1211.
- Habimana L, Twite KE, Wallemacq P, et al. Iodine and iron status of pregnant women in Lubumbashi, Democratic Republic of Congo. *Public Health Nutr.* 2013;16(8):1362-1370.
- Hacker K, Tendulkar SA, Rideout C, Bhuiya N, Trinh-Shevrin C, Savage CP, Grullon M, Strelnick H, Leung C, DiGirolamo A. Community capacity building and sustainability: outcomes of community-based participatory research. *Prog Community Health Partnersh.* 2012;6(3):349-360.
- Hackett KM, Mukta US, Jalal CS, Sellen DW. A qualitative study exploring perceived barriers to infant feeding and caregiving among adolescent girls and young women in rural Bangladesh. *BMC Public Health.* 2015;15(1):771. Doi: 10.1186/s12889-015-2115-5.
- Hadley C, Lindstrom D, Belachew T, Tessema F. Ethiopian adolescents' attitudes and expectations deviate from current infant and young child feeding recommendations. *J Adolesc Health.* 2008;43(3):253-259.
- Hall E, Chai W, Koszewski W, Albrecht J. Development and validation of a social cognitive theory-based survey for elementary nutrition education program. *Int J Behav Nutr Phys Act.* 2015;12(1):47. Doi: 10.1186/s12966-015-0206-4.
- Hambidge KM, Krebs NF, Westcott JE, et al. Preconception maternal nutrition: a multi-site randomized controlled trial. *BMC Pregnancy Childbirth.* 2014;14:111.
- Hanstad T, Friedman R, Scalise E, Ledger D. Improving Women's and Girls' Land Rights: Illustrative Interventions from India and Uganda. Rural Development Institute (RDI). 2010. Pp 20.

- <https://siteresources.worldbank.org/INTARD/Resources/335807.../hanstad.doc>. Accessed October 16, 2017.
- Hawe P, Noort M, King L, Jordens C. Multiplying health gains: the critical role of capacity-building within health promotion programs. *Health Policy*. 1997;39(1):29-42.
- Hawkins SS, Stern AD, Baum CF, Gillman MW. Evaluating the impact of the Baby-Friendly Hospital Initiative on breast-feeding rates: a multi-state analysis. *Public Health Nutr*. 2015;18(2):189-197. Doi: 10.1017/S1368980014000238.
- Henry CJ, Whiting SJ, Regassa N. Complementary Feeding Practices among Infant and Young Children in Southern Ethiopia: Review of the Findings from a Canada-Ethiopia Project. *J Agric Sci*. 2015;7(10):29-30.
- Heron J, O'Connor TG, Evans J, Golding J, Glover V, ALSPAC Study Team. The course of anxiety and depression through pregnancy and the postpartum in a community sample. *J Affect Disord*. 2004;80(1):65-73.
- Hutton E. An examination of postpositivism and postmodernism. 2009.
<http://ericahutton.blogspot.ca/2009/03/examination-of-postpositivism.html>. Accessed 18 September 2017.
- Huybregts LF, Roberfroid DA, Kolsteren PW, Van Camp JH. Dietary behaviour, food and nutrient intake of pregnant women in a rural community in Burkina Faso. *Matern Child Nutr*. 2009;5(3):211-222.
- ICRW. Child marriage, facts and figures. International Center for Research on Women. 2010.
<http://www.icrw.org/child-marriage-facts-and-figures>. Accessed 14 October 2017.
- Ilika A, Anthony I. Unintended pregnancy among unmarried adolescents and young women in Anambra State, South East Nigeria. *Afr J Reprod Health*. 2004;8:92-102.

- Izudi J, Epidu C, Katawera A, Kekitiinwa A. Quality Improvement Interventions for Nutritional Assessment among Pregnant Mothers in Northeastern Uganda. *Biom Res Int*. 2017;8036535. Doi: 10.1155/2017/8036535.
- Jahan K, Roy SK, Mhrshahi S, Sultana N, Khatoon S, Roy H, Datta LR, Roy A, Jahan S, Khatun W, Nahar N, Steele J. Short-term nutrition education reduces low birthweight and improves pregnancy outcomes among urban poor women in Bangladesh. *Food Nutr Bull*. 2014;35(4):414-421.
- Kabagenyi A, Habaasa G, Rutaremwa G. Low Contraceptive Use among Young Females in Uganda: Does Birth History and Age at Birth have an Influence? Analysis of 2011 Demographic and Health Survey. *J Contracept Stud*. 2016;1(1).
- Kaestel P, Michaelsen KF, Aaby P, Friis H. Effects of prenatal multimicronutrient supplements on birthweight and perinatal mortality: a randomised, controlled trial in Guinea-Bissau. *Eur J Clin Nutr*. 2005;59(9):1081-1089.
- Kanabahita C. A lifetime as TBA in Uganda. *Safe Mother*. 1993;(12):10.
- Kaye DK. Negotiating the transition from adolescence to motherhood: coping with prenatal and parenting stress in teenage mothers in Mulago hospital, Uganda. *BMC Public Health*. 2008;8:83. Doi: 10.1186/1471-2458-8-83.
- Keri L, Kaye D, Sibylle K. Referral practices and perceived barriers to timely obstetric care among Ugandan traditional birth attendants (TBA). *Afr Health Sci*. 2010;10(1):75-81.
- Keskinoglu P, Bilgic N, Picakciefe M, Giray H, Karakus N, Gunay T. Perinatal outcomes and risk factors of Turkish adolescent mothers. *J Pediatr Adolesc Gynecol*. 2007;20:19-24.
- Khan NC, Thanh HT, Berger J, Hoa PT, Quang ND, Smitasiri S, Cavalli-Sforza T. Community mobilization and social marketing to promote weekly iron-folic acid supplementation: a

- new approach toward controlling anemia among women of reproductive age in Vietnam. *Nutr Rev.* 2005;63(12 Pt 2):S87-94.
- Kim JM, Koh KW, Yu BC, Jeon MJ, Kim YJ, Kim YH. Assessment of community capacity building ability of health promotion workers in public health centers. *J Prev Med Public Health.* 2009;42(5):283-292.
- Kimani-Murage EW, Kyobutungi C, Ezeh AC, Wekesah F, Wanjohi M, Muriuki P, Musoke RN, Norris SA, Griffiths P, Madise NJ. Effectiveness of personalised, home-based nutritional counselling on infant feeding practices, morbidity and nutritional outcomes among infants in Nairobi slums: study protocol for a cluster randomised controlled trial. *Trials.* 2013;14:445. Doi: 10.1186/1745-6215-14-445.
- King JC. The risk of maternal nutritional depletion and poor outcomes increases in early or closely spaced pregnancies. *J Nutr.* 2003; 133(5Suppl 2):1732S-1736S.
- Kirkwood BR, Manu A, ten Asbroek AH, Soremekun S, Weobong B, Gyan T, Danso S, Amenga-Etego S, Tawiah-Agyemang C, Owusu-Agyei S, Hill Z. Effect of the Newhints home-visits intervention on neonatal mortality rate and care practices in Ghana: a cluster randomised controlled trial. *Lancet.* 2013;381(9884):2184-2192.
- Kirstenstoebenau. Getting Girls Back to School in Post-Conflict Uganda. 2015. <http://www.educationinnovations.org/blog/getting-girls-back-school-post-conflict-uganda> Accessed 5 October 2017.
- Koniak-Griffin D, Turner-Pluta C. Health risks and psychosocial outcomes of early childbearing: a review of the literature. *J Perinat Neonatal Nurs.* 2001;15(2):1-17.
- Kowaleski-Jones L, Mott FL. Sex, contraception and childbearing among high-risk youth: do different factors influence males and females? *Fam Plann Perspect.* 1998;30(4):163-169.

- Kwagala B. Birthing choices among the Sabinys of Uganda. *Cult Health Sex.* 2013;15 Suppl 3:S401-14. Doi: 10.1080/13691058.2013.799232.
- Kyomuhendo GB. Low use of rural maternity services in Uganda: impact of women's status, traditional beliefs and limited resources. *Reprod Health Matters.* 2003;11(21):16-26.
- Larsson S, Eliasson M, Allvin KM, Faxelid E, Atuyambe L, Fritzell S. The discourses on induced abortion in Ugandan daily newspapers: a discourse analysis. *Reprod Health.* 2015;12: 58. Doi: 10.1186/s12978-015-0049-0.
- Lawry L, Canteli C, Rabenzanahary T, Pramana W. A mixed methods assessment of barriers to maternal, newborn and child health in gogrial west, south Sudan. *Reprod Health.* 2017; 14: 12.
- Leerlooijer JN, Bos AE, Ruiter RA, van Reeuwijk MA, Rijdsdijk LE, Nshakira N, Kok G. Qualitative evaluation of the teenage mothers project in Uganda: a community-based empowerment intervention for unmarried teenage mothers. *BMC Public Health.* 2013;13:816.
- Leerlooijer JN, Kok G, Weyusya J, Bos AE, Ruiter RA, Rijdsdijk LE, Nshakira N, Bartholomew LK. Applying Intervention Mapping to develop a community-based intervention aimed at improved psychological and social well-being of unmarried teenage mothers in Uganda. *Health Educ Res.* 2014;29(4):598-610.
- Lenders CM, McElrath TF, Scholl TO. Nutrition in adolescent pregnancy. *Curr Opin Pediatr.* 2000;12:291–296.
- Levine R, Russ-Eft D, Burling A, Stephens J, Downey J. Evaluating health services research capacity building programs: implications for health services and human resource development. *Eval Program Plann.* 2013;37:1-11.

- Lewis S, Russell A. Young smokers' narratives: public health, disadvantage and structural violence. *Social Health Illn.* 2013;35(5):746-760. Doi: 10.1111/j.1467-9566.2012.01527.x.
- Lincetto O, Mothebesoane-Anoh S, Gomez P, Munjanja S. WHO. Antenatal care, Chapter 2 in Opportunities for Africa's Newborns. 2006.
http://www.who.int/pmnch/media/publications/aonsectionIII_2.pdf. Accessed October 15, 2017.
- Lutwama GW, Roos JH, Dolamo BL. A descriptive study on health workforce performance after decentralisation of health services in Uganda. *Hum Resour Health.* 2012;7(10):41. Doi: 10.1186/1478-4491-10-41.
- Malamitsi-Puchner A, Boutsikou T. Adolescent pregnancy and perinatal outcome. *Pediatr Endocrinol Rev.* 2006;3(1Suppl):170–171.
- Maly C, McClendon AK, Baumgartner NJ, Nakyanjo N, Ddaaki GW, Serwadda D, Nalugoda KF, Wawer JM, Bonnieve E, Wagman AJ. Perceptions of Adolescent Pregnancy among Teenage girls in Rakai, Uganda. *Glob Qual Nurs Res.* 2017;4:1-12. Doi: 10.1177/2333393617720555.
- Maternal & Child Nutrition Study Group, Group members, Black RE, Alderman H, Bhutta ZA, Gillespie S, Haddad L, Horton S, Lartey A, Mannar V, Ruel M, Victora CG, Walker SP, Webb P. Maternal and child nutrition: building momentum for impact. *Lancet.* 2013;382(9890):372-375. Doi: 10.1016/S0140-6736(13)60988-5.
- Matovu A, Kirunda B, Rugamba-Kabagambe G, Tumwesigye NM, Nuwaha F. Factors influencing adherence to exclusive breast feeding among HIV positive mothers in Kabarole district, Uganda. *East Afr Med J.* 2008;85(4):162-170.

- McKenna AN. The Role of Ugandan Women in Rural Agriculture and Food Security. 2014.
<http://digitalcommons.du.edu/cgi/viewcontent.cgi?article=1419&context=etd>. Accessed 09 October 2017.
- McKenzie JF, Smeltzer JL. Planning, implementing, and evaluating health promotion programs. 1997. *Allyn and Bacon*. Second Edition. ISBN: 0205200699. pp 96-114.
- Mehra B. Bias in Qualitative Research: Voices from an Online Classroom. *The Qualitative Report*. 2002;7(1). <http://www.nova.edu/ssss/QR/QR7-1/mehra.html>. Accessed 17 November 2017.
- Mersal FA, Esmat OM, Khalil GM. Effect of prenatal counselling on compliance and outcomes of teenage pregnancy. *East Mediterr Health J*. 2013;19(1):10-17.
- Mngadi PT, Zwane IT, Ahlberg BM, Ransjö-Arvidson AB. Family and community support to adolescent mothers in Swaziland. *J Adv Nurs*. 2003;43(2):137-144.
- MOH (Ministry of Health). National Adolescent Health Policy for Uganda. Republic of Uganda, Ministry of Health Reproductive Health Department. 2004. <http://www.youth-policy.com/Policies/UGAyouthpol2004.pdf>. Accessed 15 September 2017.
- MOH (Ministry of Health). National obstetric fistula strategy (2011/2012 –2015/2016) of the Ministry of Health, Government of Uganda. 2011.
http://www.fistulacare.org/.../Uganda_National_Obstetric_Fistula_Strategy.pdf. Accessed 14 September 2017.
- Montesanti SR. The role of structural and interpersonal violence in the lives of women: a conceptual shift in prevention of gender-based violence. *BMC Womens Health*. 2015;15:93. Doi: 10.1186/s12905-015-0247-5.

- Montesanti SR, Thurston WE. Mapping the role of structural and interpersonal violence in the lives of women: implications for public health interventions and policy. *BMC Womens Health*. 2015;15:100. Doi: 10.1186/s12905-015-0256-4.
- Muchomba FM. Women's Land Tenure Security and Household Human Capital: Evidence from Ethiopia's Land Certification. *World Dev*. 2017;98:310-324. Doi: 10.1016/j.worlddev.2017.04.034.
- Mukasa K. A call for legalisation of abortion in Uganda. International Humanist and Ethical Union. 2015. <http://iheu.org/a-call-for-legalisation-of-abortion-in-uganda/>. Accessed December 07, 2017.
- Mulualem D, Henry CJ, Whiting SJ. The effectiveness of nutrition education: Applying the Health Belief Model in child-feeding practices to use pulses for complementary feeding in Southern Ethiopia. *Ecol Food Nutr*. 2016;55(3):308-323. Doi: 10.1080/03670244.2016.1161617.
- Mutebi B. Maternal health. Stigma's Shadow on Teenage Mothers in Uganda. John Hopkins Bloomberg School of Public Health, Global Health Now. 2016. <https://www.globalhealthnow.org/2016-11/stigmas-shadow-teenage-mothers-uganda>. Accessed 03 December 2017.
- Nabiwemba EL, Atuyambe L, Criel B, Kolsteren P, Orach CG. Recognition and home care of low birth weight neonates: a qualitative study of knowledge, beliefs and practices of mothers in Iganga-Mayuge Health and Demographic Surveillance Site, Uganda. *BMC Public Health*. 2014;14:546. Doi: 10.1186/1471-2458-14-546.

- Nabugoomu J, Hanning RM. Nutrition of Adolescent Mothers in the Majority World: Challenges and Strategies. *Women's Health in the Majority World*. 2015. Editors: L. Elit and J. Chamberlain, *Nova Sciences Publishers*, Hauppauge, New York. Second edition.
- Nabugoomu J, Namutebi A, Kaaya AN, Nasinyama G. Nutrition education influences vitamin A-related knowledge, attitudes and practices of child caregivers towards the production of orange-fleshed sweet potato in Uganda. *J Food Nutri Sci*. 2015a;3(2):38-46.
- Nabugoomu J, Namutebi A, Kaaya AN, Nasinyama G. Nutrition education influences child feeding knowledge attitudes and practices of child caregivers in Uganda. *Am J Health Res*. 2015b;3(2):82-90.
- Neema S, Musisi N, Kibombo R. Adolescent sexual and reproductive health in Uganda: a synthesis of research evidence. Occasional Report No. 14. December, 2004.
<http://www.guttmacher.org/pubs/2004/12/20/or14.pdf?q=uganda>. Accessed 14 October 2017.
- Negash C, Whiting SJ, Henry CJ, Belachew T, Hailemariam TG. Association between Maternal and Child Nutritional Status in Hula, Rural Southern Ethiopia: A Cross Sectional Study. *PLoS One*. 2015;10(11):e0142301. Doi: 10.1371/journal.pone.0142301.
- Nestlé Foundation. Nestlé Foundation for the Study of Problems of Nutrition in the World, Lausanne, Switzerland. 2018. <http://www.nestlefoundation.org/e/>. Accessed 20 January 2018.
- Njie-Carr V, Kalengé S, Kelley J, Wilson A, Muliira JK, Nabirye RC, Glass N, Bollinger R, Alamo-Talisuna S, Chang LW. Research capacity-building program for clinicians and staff at a community-based HIV clinic in Uganda: A pre/post evaluation. *J Assoc Nurses AIDS Care*. 2012;23(5):431-441.

- Nnam NM. Improving maternal nutrition for better pregnancy outcomes. *Proc Nutr Soc.* 2015;74(4):454-459.
- Nwobodo EI, Panti A. Adolescent maternal mortality in North-west Nigeria. *West Afr J Med.* 2012;31(4):2244-2246.
- Nyambose J, Koski KG, Tucker KL. High intra/interindividual variance ratios for energy and nutrient intakes of pregnant women in rural Malawi show that many days are required to estimate usual intake. *J Nutr.* 2002; 132: 1313-1318.
- Nyqvist BM, Guariso A, Svensson J, Yanagizawa-Drott D. Reducing Child Mortality in the Last Mile: A Randomized Social Entrepreneurship Intervention in Uganda. 2017. Pp 45.
https://yanagizawadrott.com/wp-content/uploads/2017/08/livinggoods_april2017.pdf. Accessed 30 October 2017.
- Nyqvist BM, Svensson J, Yanagizawa-Drott D. Can Good Products Drive Out Bad? Evidence from Local Markets for Antimalarial Medicine in Uganda. 2016. Pp 49.
<https://yanagizawadrott.files.wordpress.com/2016/03/fakedrugs3.pdf>. Accessed 30 October 2017.
- Obermeyer CM, Schulein M, Hardon A, Sievert LL, Price K, Santiago AC, Lazcano O, Kirumira EK, Neuman M. Gender and medication use: an exploratory, multi-site study. *World Health.* 2004;39(4):57-73.
- Oguntona CR, Akinyele IO. Food and nutrient intakes by pregnant Nigerian adolescents during the third trimester. *Nutrition.* 2002; 18(7-8):673-679.
- Okereke CI. Assessing the prevalence and determinants of adolescents' unintended pregnancy and induced abortion in Owerri, Nigeria. *J Biosoc Sci.* 2010;42:619-632.

- Oketcho V, Ezati I, Odaga J, Foster AA, McMahan J, Muldavin L. 2015. Uganda on track for keeping human resources for health commitments.
http://www.who.int/workforcealliance/media/news/2015/HRH_Commitments_Uganda_Case_Study.pdf?ua=1. Accessed 24 October 2017.
- Onoh RC, Ezeonu PO, Anozie BO, Esike COU, Obuna JA, Egbuji C, Agwu UM, Agboeze J, Chukwudi IP. Outcome of Teenage Pregnancy at a Tertiary Hospital in Abakaliki Southeast Nigeria. *J Basic & Clin Rep Sc*. 2014;3:22-26.
- Ononge S, Okello SE, Mirembe F. Excessive bleeding is a normal cleansing process: a qualitative study of postpartum haemorrhage among rural Uganda women. *BMC Pregnancy Childbirth*. 2016;16:211. Doi: 10.1186/s12884-016-1014-9.
- Opportunity Bank. 2014.
http://www.opportunitybank.co.ug/index.php?option=com_content&view=article&id=80&Itemid=448. Accessed 09 October 2017.
- Page-Reeves J, Niforatos J, Mishra S, Regino L, Gingrich A, Bulten R. Health Disparity and Structural Violence: How Fear Undermines Health Among Immigrants at Risk for Diabetes. *J Health Dispar Res Pract*. 2013;6(2):30-47.
- Palacios-Lopez A, Christiaensen L, Kilic T. How much of the labor in African agriculture is provided by women? *Food Policy*. 2017;67:52-63. Doi: 10.1016/j.foodpol.2016.09.017.
- Paulus T, Woods M, Atkins PD, Macklin R. The discourse of QDAS: reporting practices of ATLAS.ti and NVivo users with implications for best practices. *Int J Soc Res Methodology*. 2017;20(1):35-37. Doi.org/10.1080/13645579.2015.1102454.
- PEFO (Phoebe Education Fund for Orphans & vulnerable children). 2017. <http://pefoug.org/>. Accessed 06 October 2017.

- Penfold S, Manzi F, Mkumbo E, Temu S, Jaribu J, Shamba DD, Mshinda H, Cousens S, Marchant T, Tanner M, Schellenberg D, Schellenberg JA. Effect of home-based counselling on newborn care practices in southern Tanzania one year after implementation: a cluster-randomised controlled trial. *BMC Pediatr.* 2014;14:187. Doi: 10.1186/1471-2431-14-187.
- Pride Microfinance Ltd. 2017. <https://www.pridemicrofinance.co.ug/>. Accessed 09 October 2017.
- PTMOF. The Pelletier Teenage Mothers Foundation, Uganda. 2015. <https://pelletierteenagemothersfoundationuganda.wordpress.com/about/>. Accessed 05 October 2017.
- Racher FE, Robin S. Are phenomenology and postpositivism strange bedfellows? *West J Nurs Res.* 2003;25(5):464-481.
- Raeburn J, Akerman M, Chuengsatiansup K, Mejia F, Oladepo O. Community capacity building and health promotion in a globalized world. *Health Promot Int.* 2006;21 Suppl 1:84-90.
- Rajendran NS. Dealing with biases in qualitative research. 2001. <http://nsrajendran.tripod.com/Papers/Qualconfe2001.pdf>. Accessed 17 November 2017.
- Ramakrishnan U, Imhoff-Kunsch B, Martorell R. Maternal nutrition interventions to improve maternal, newborn, and child health outcomes. *Nestle Nutr Inst Workshop Ser.* 2014;78:71-80.
- Rao Yajnik CS, Kanade A, Fall CH, Margetts BM, Jackson AA, Shier R, Joshi S, Rege S, Lubree H, Desai B. Intake of micronutrient rich foods in rural Indian mothers is associated with the size of their babies at birth: Pune Maternal Nutrition Study. *J Nutr.* 2001;1311217-1311224.

- Resnicow K. Appendix C: Models of Health Behavior Change Used in Health Education Programs. *Schools & Health*. 1997:360-364.
https://www.ncbi.nlm.nih.gov/books/NBK232691/pdf/Bookshelf_NBK232691.pdf.
Accessed 07 December 2017.
- Ricks N. The Strengths Perspective: Providing Opportunities for Teen Parents and their Families to Succeed. *J Fam Strengths*. 2016;15(11):1-20.
<http://digitalcommons.library.tmc.edu/cgi/viewcontent.cgi?article=1262&context=jfs>.
Accessed 24 October 2017.
- Ritchie L, Lewis L. Qualitative research practice: A guide for social science students and researchers. 2003. *SAGE Publications, Inc*. ISBN 0761971092. 1st Ed. Pp 336.
http://www.sxf.uevora.pt/wp-content/uploads/2013/03/Ritchie_2003.pdf. Accessed 18 September 2017.
- Roberts JH. Structural violence and emotional health: a message from Easington, a former mining community in northern England. *Anthropol Med*. 2009;16(1):37-48. Doi: 10.1080/13648470802425948.
- Roy SK, Fuchs GJ, Mahmud Z, Ara G, Islam S, Shafique S, Akter SS, Chakraborty B. Intensive nutrition education with or without supplementary feeding improves the nutritional status of moderately-malnourished children in Bangladesh. *J Health Popul Nutr*. 2005;23(4):320-330.
- Ruel MT, Alderman H; Maternal and Child Nutrition Study Group. Nutrition-sensitive interventions and programmes: how can they help to accelerate progress in improving maternal and child nutrition? *Lancet*. 2013;382(9891):536-551.

- Rudrum S. Traditional birth attendants in rural northern Uganda: policy, practice, and Ethics. *Health care for Women Int.* 2016;37(2):250-269. Doi:10.1080/07399332.2015.1020539.
- Rutaremwaga G. Factors Associated with Adolescent Pregnancy and Fertility in Uganda: Analysis of the 2011 Demographic and Health Survey Data. *Am J Soc Res.* 2013;3(2):30-35. Doi: 10.5923/j.sociology.20130302.03.
- Rütten A, Gelius P. The interplay of structure and agency in health promotion: integrating a concept of structural change and the policy dimension into a multi-level model and applying it to health promotion principles and practice. *Soc Sci Med.* 2011;73(7):953-959. Doi: 10.1016/j.socscimed.2011.07.010.
- Rwashana AS, Nakubulwa S, Nakakeeto-Kijjambu M, Adam T. Advancing the application of systems thinking in health: understanding the dynamics of neonatal mortality in Uganda. *Health Res Policy Syst.* 2014;12:36. Doi: 10.1186/1478-4505-12-36.
- Salam RA, Das JK, Bhutta ZA. Multiple micronutrient supplementation during pregnancy and lactation in low-to-middle-income developing country settings: impact on pregnancy outcomes. *Ann Nutr Metab.* 2014;65(1):4-12. Doi: 10.1159/000365792. Epub 2014 Sep 6.
- Shefner-Rogers C. Moving toward a social ecological communication for development approach for improving children's health in Viet Nam. UNICEF 2014. http://www.unicef.org/cbsc/files/VIETNAM_ChildHealth.pdf. Accessed 21 September 2017.
- Shenton AK. Strategies for ensuring trustworthiness in qualitative research projects. *Education for Information.* 2004; 22:63–75. <http://www.crec.co.uk/docs/Trustworthypaper.pdf>. Accessed 17, November 2017.

- Shetty P. Community-based approaches to address childhood undernutrition and obesity in developing countries. *Nestle Nutr Workshop Ser Pediatr Program*. 2009;63:227-54; discussion 254-7, 259-268. Doi: 10.1159/000209984.
- Sifuma E. Center for Educations Innovations: International Day of the Girl- New Hope for Teenage Mothers' Education. 2015.
<http://www.educationinnovations.org/blog/international-day-girl-new-hope-teenage-mothers-education>. Accessed 05 October 2017.
- Silverman D. Doing qualitative research. *Sage publications, Inc*. London. 2013. ISBN 978-1-4462-6015-9. 4th Ed. p264-265, 279-329.
- Simmons A, Reynolds RC, Swinburn B. Defining community capacity building: is it possible? *Prev Med*. 2011;52(3-4):193-199.
- Singh D, Lample M, Earnest J. The involvement of men in maternal health care: cross-sectional, pilot case studies from Maligita and Kibibi, Uganda. *Reprod Health*. 2014;11:68. Doi: 10.1186/1742-4755-11-68.
- Sitrin D, Guenther T, Waiswa P, Namutamba S, Namazzi G, Sharma S, Ashish KC, Rubayet S, Bhadra S, Ligowe R, Chimbalanga E, Sewell E, Kerber K, Moran A. Improving newborn care practices through home visits: lessons from Malawi, Nepal, Bangladesh, and Uganda. *Global Health Action*. 2015;31;8:23963. Doi: 10.3402/gha.v8.23963.
- Smith BJ, Tang KC, Nutbeam D. WHO Health Promotion Glossary: new terms. *Health Promot Int*. 2006 Dec;21(4):340-345.
- Smith J, Firth J. Qualitative data analysis: application of the framework approach. *Nurse Researcher*. 2011;18(2):52-62.
- SOUL Foundation. 2017. <http://www.souluganda.org/>. Accessed 06 October 2017.

- Swift JA, Tischler V. Qualitative research in nutrition and dietetics: getting started. *J Hum Nutr Diet.* 2010;23(6):559-566.
- TASO Jinja. 2015. <http://www.tasouganda.org/index.php/services-programmes/taso-service-centers/taso-jinja>. Accessed 09 October 2017.
- Tongco MDC. Purposive sampling as a tool for informant selection. *Ethnobotany Research & Applications.* 2007;5:147-158.
- Turinawe EB, Rwemisisi JT, Musinguzi LK, de Groot M, Muhangi D, de Vries DH, Mafigiri DK, Katamba A, Parker N, Pool R. Traditional birth attendants (TBAs) as potential agents in promoting male involvement in maternity preparedness: insights from a rural community in Uganda. *Reprod Health.* 2016;13:24. Doi: 10.1186/s12978-016-0147-7.
- Tylee A, Haller DM, Graham T, Churchill R, Sanci LA. Youth-friendly primary-care services: how are we doing and what more needs to be done? *Lancet.* 2007;369(9572):1565-1573.
- Tylleskär T, Jackson D, Meda N, Engebretsen IM, Chopra M, Diallo AH, Doherty T, Ekström EC, Fadnes LT, Goga A, Kankasa C, Klungsøyr JI, Lombard C, Nankabirwa V, Nankunda JK, Van de Perre P, Sanders D, Shanmugam R, Sommerfelt H, Wamani H, Tumwine JK; PROMISE-EBF Study Group. Exclusive breastfeeding promotion by peer counsellors in sub-Saharan Africa (PROMISE-EBF): a cluster-randomised trial. *Lancet.* 2011;378(9789):420-427.
- UBOS (Uganda Bureau of Statistics) and ICF International Inc. 2016. Uganda Demographic and Health Survey 2016. Kampala, Uganda: UBOS and Calverton, Maryland: ICF International Inc.
- UBOS (Uganda Bureau of Statistics). Republic of Uganda: National population and housing census 2014. 2014. Pp 73.

- <http://www.ubos.org/onlinefiles/uploads/ubos/NPHC/NPHC%202014%20PROVISIONAL%20RESULTS%20REPORT.pdf>. Accessed 18 September 2017.
- UBOS (Uganda Bureau of Statistics)-Jinja district. Higher local government statistical abstract. 2009. Pp 98.
- http://www.ubos.org/onlinefiles/uploads/ubos/2009_HLG_%20Abstract_printed/jinja%20district%202009%20statistical%20abstract%20FINAL1.pdf. Accessed 18 September 2017.
- Uganda. Ministry of gender, labour and social development: The Uganda gender policy. 2007. Pp 20. <http://www.mglsd.go.ug/policies/Uganda-Gender-Policy.pdf>. Accessed 18 January 2018.
- Umans JG, Lindheimer MD. Antihypertensive therapy in pregnancy. *Curr Hypertens Rep*. 2001;3(5):392–399.
- UN/Uganda. Report on government of Uganda’s implementation of the Beijing platform for action (1995) and the outcome of the twenty-third special session of the general assembly (2000). Pp 13. <http://www.un.org/womenwatch/daw/Review/responses/UGANDA-English.pdf>. Accessed 18 January 2018.
- UNDP. Republic of Uganda Poverty status report 2014: structural change and poverty reduction in Uganda. 2014. Pp 156.
- http://planipolis.iiep.unesco.org/sites/planipolis/files/ressources/uganda_poverty_status_report_2014.pdf. Accessed 29 October 2017.
- UNDP/Uganda. Gender equality strategy, 2014-2017: investing in gender equality for Uganda’s socio-economic transformation. 2016. Pp 14.
- file:///C:/Users/jnabugoo/AppData/Local/Packages/Microsoft.MicrosoftEdge_8wekyb3d

- 8bbwe/TempState/Downloads/UNDPUG2016%20-
UNDP%20Uganda%20Gender%20Equality%20Strategy.pdf. Accessed 18 January 2018.
- UNFPA. The State of World Population 2013. Motherhood in childhood: facing the challenge of adolescent pregnancy. 2013. Pp 132. <http://www.unfpa.org/publications/state-world-population-2013>. Accessed 09 October 2017.
- UNICEF. A survey on re-entry of pregnant girls in primary and secondary schools in Uganda. PP 4. 2014. https://www.unicef.org/uganda/Re-entry_of_pregnant_girls_-_briefing_-_20_10_2014.pdf. Accessed 18 January 2018.
- United Nations. Sustainable development knowledge platform: sustainable development goals. 2015. <https://sustainabledevelopment.un.org/?menu=1300>. Accessed 18 November 2017.
- Upadhyay P, Liabsuetrakul T, Shrestha AB, Pradhan N. Influence of family members on utilization of maternal health care services among teen and adult pregnant women in Kathmandu, Nepal: a cross sectional study. *Reprod Health*. 2014;11:92. Doi: 10.1186/1742-4755-11-92.
- Varga CA. Pregnancy termination among South African adolescents. *Stud Fam Plann*. 2002;33(4):283–298.
- Vir SC, Singh N, Nigam AK, Jain R. Weekly iron and folic acid supplementation with counseling reduces anemia in adolescent girls: a large-scale effectiveness study in Uttar Pradesh, India. *Food Nutr Bull*. 2008;29(3):186-194.
- Waiswa P, Kallander K, Peterson S, Tomson G, Pariyo GW. Using the three delays model to understand why newborn babies die in eastern Uganda. *Trop Med Int Health*. 2010;15(8):964-972.

Wakisa Ministries. Helping teenage Mothers return to School.

<http://www.wakisaministries.com/updates/helping-teenage-mothers-return-school>.

Accessed 05 October 2017.

WHO/UNFPA. Adolescent pregnancy: a review of the evidence. New York. 2013. pp 58.

<http://www.unfpa.org/publications/adolescent-pregnancy>. Accessed 31 August 2017.

WHO. Adolescent pregnancy: Fact Sheet updated September 2014. 2017.

<http://www.who.int/mediacentre/factsheets/fs364/en/>. Accessed August 31, 2017.

WHO. Adolescent pregnancy: issues in adolescent health and development. WHO discussion papers on adolescence. Geneva, World Health Organization, 2004.

http://apps.who.int/iris/bitstream/10665/42903/1/9241591455_eng.pdf. Accessed October 10, 2017.

WHO. Adolescent pregnancy: unmet needs and undone deeds: a review of the literature and programmes. Issues in adolescent health and development. 2007. WHO discussion papers on adolescence.

http://apps.who.int/iris/bitstream/10665/43702/1/9789241595650_eng.pdf. Accessed 15 September 2017.

WHO. Health workforce: Achieving the health-related MDGs. It takes a workforce. 2015.

http://www.who.int/hrh/workforce_mdgs/en/. Accessed 16 October 2017.

WHO. Monitoring the building blocks of health systems. A handbook of indicators and their measurement strategies. 2010. Pp 110.

http://www.who.int/healthinfo/systems/WHO_MBHSS_2010_full_web.pdf. Accessed 16 October 2017.

- WHO. Putting women first: ethical and safety recommendations for research on domestic violence against women. 2001. <http://www.who.int/gender/violence/womenfirtseng.pdf>. Accessed January 18, 2018.
- WHO. Putting women first: ethical and safety recommendations for research on domestic violence against women. 2001. <http://www.who.int/gender/violence/womenfirtseng.pdf>. Accessed January 18, 2018.
- Wissart J, Parshad O, Kulkarni S. Prevalence of pre- and postpartum depression in Jamaican women. *BMC Pregnancy Childbirth*. 2005;5:15.
- World Bank. Gender and Economic Growth in Uganda. Unleashing the Power of Women. 2009. Pp106. http://siteresources.worldbank.org/INTAFRREGTOPGENDER/Resources/gender_econ_growth_ug.pdf. Accessed 16 October 2017.
- World Bank. Uganda National Education Profile 2014 Update. 2014. Pp 4. https://www.epdc.org/sites/default/files/documents/EPDC%20NEP_Uganda.pdf. Accessed 20 September 2017.
- World Bank Group. The Uganda poverty assessment report 2016. Farms cities and good fortune: assessing poverty reduction in Uganda form 2006 to 2013. Report No ACS18391. 2016. Pp 178. <http://pubdocs.worldbank.org/en/381951474255092375/pdf/Uganda-Poverty-Assessment-Report-2016.pdf>. Accessed 16 October 2017.
- World Vision/CIDA. Improving nutrition of women and children: the MICAHA program. A micronutrient and health program for Africa, Final Program Report: 2006. World Vision and Canada - the Canadian International Development Agency (CIDA).

<http://www.wvi.org/sites/default/files/MICAH-Final-Program-Report-2006.pdf>.

Accessed 09 October 2017.

Yassin SA, Sobhy SI, Ebrahim W. Factors affecting dietary practices among adolescent pregnant women in Alexandria. *J Egypt Public Health Assoc.* 2004;79(3-4):179-196

Yeatman HR, Nove T. Reorienting health services with capacity building: a case study of the Core Skills in Health Promotion Project. *Health Promot Int.* 2002;17(4):341-350.

Yego F, Stewart Williams J, Byles J, Nyongesa P, Aruasa W, D'Este C. A retrospective analysis of maternal and neonatal mortality at a teaching and referral hospital in Kenya. *Reprod Health.* 2013;10:13.

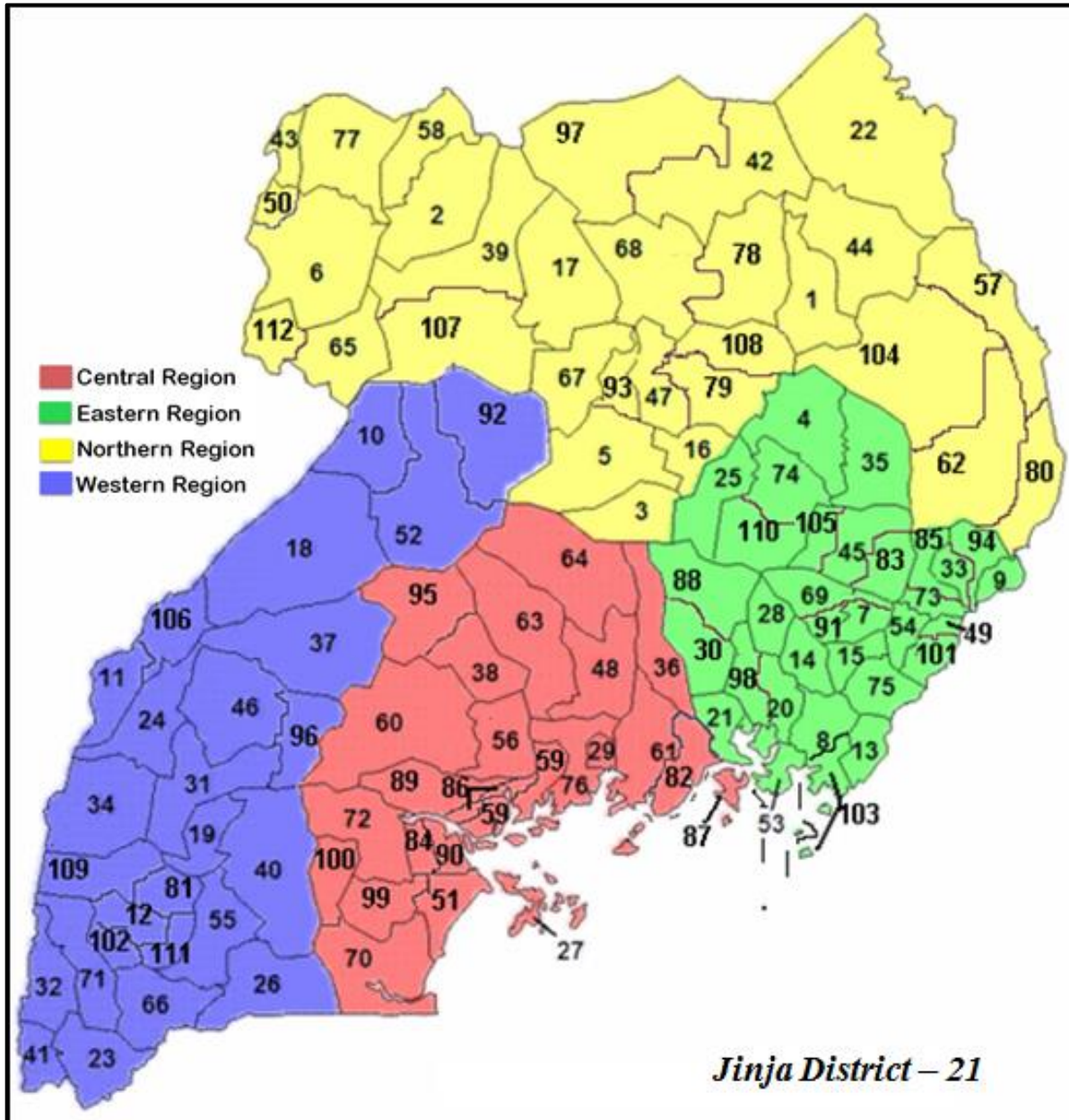
Yuan B, Målqvist M, Trygg N, Qian X, Ng N, Thomsen S. What interventions are effective on reducing inequalities in maternal and child health in low- and middle-income settings? A systematic review. *BMC Public Health.* 2014;14:634. Doi: 10.1186/1471-2458-14-634.

Zohdi V, Sutherland MR, Lim K, Gubhaju L, Zimanyi MA, Black MJ. Low birth weight due to intrauterine growth restriction and/or preterm birth: effects on nephron number and long-term renal health. *Int J Nephrol.* 2012; 2012: 136942.

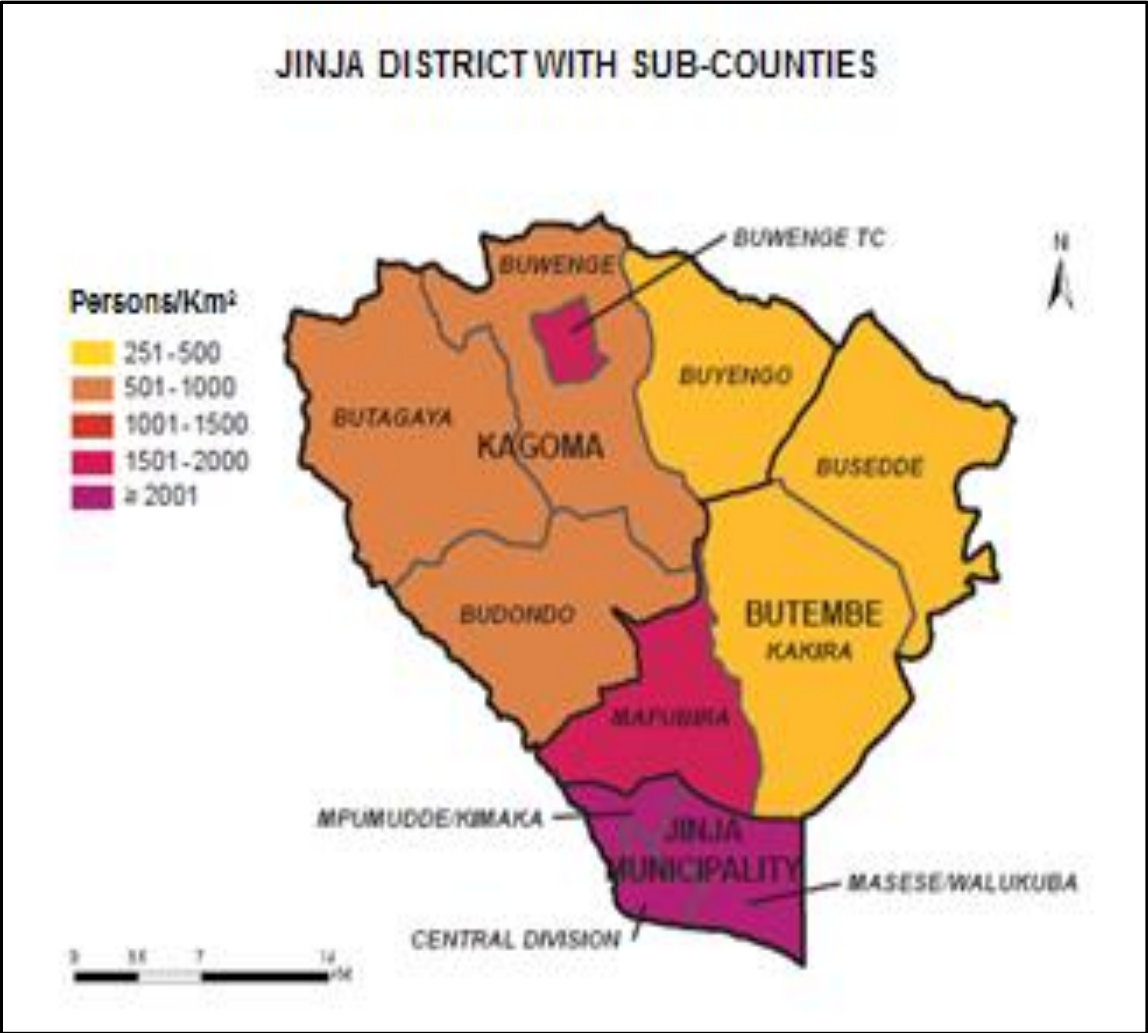
APPENDICES

APPENDIX I: Maps of Uganda and Jinja district

Map of Uganda showing Regions and their Districts



Source: www.google.ca. Accessed November 15, 2017.



Source: UBOS-Jinja district 2009. Accessed November 15, 2017.

UNIVERSITY OF WATERLOO
OFFICE OF RESEARCH ETHICS

Notification of Ethics Clearance of Application to Conduct Research with Human Participants

Principal/Co-Investigator: Rhona Hanning	Department: Health Studies & Gerontology
Principal/Co-Investigator: Kitty Corbett	Department: Health Studies & Gerontology
Principal/Co-Investigator: Sue Horton	Department: Health Studies & Gerontology
Principal/Co-Investigator: Susan Elliott	Department: Health Studies & Gerontology
Faculty Supervisor: Rhona Hanning	Department: Health Studies & Gerontology
Student Investigator: Josephine Nabugoomu	Department: Health Studies & Gerontology
Collaborator: Fabian Nabugoomu	Department: Uganda Christian University and Kyambogo University
Collaborator: Edward Kanyesigye	Department: Uganda Christian University
Collaborator: Jean Chamberlain Froese	Department: Uganda Christian University, McMaster University and University of Waterloo - SPHHS
Collaborator: Gloria Seruwagi	Department: Uganda Christian University

ORE File #: 20708

Project Title: Formative Evaluation of an Intervention to Enhance Nutrition and Health Status of Pregnant Adolescents in Eastern Uganda using Education, Cell-phone Communication, and Income Generation

This certificate provides confirmation the above project has been reviewed in accordance with the University of Waterloo's Guidelines for Research with Human Participants and the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans. This project has received ethics clearance through a University of Waterloo Research Ethics Committee.

Note 1: *This ethics clearance is valid for one year from the date shown on the certificate and is renewable annually. Renewal is through completion and ethics clearance of the Annual Progress Report for Continuing Research (ORE Form 105).*

Note 2: *This project must be conducted according to the application description and revised materials for which ethics clearance has been granted. All subsequent modifications to the project also must receive prior ethics clearance (i.e., Request for Ethics Clearance of a Modification, ORE Form 104) through a University of Waterloo Research Ethics Committee and must not begin until notification has been received by the investigators.*

Note 3: *Researchers must submit a Progress Report on Continuing Human Research Projects (ORE Form 105) annually for all ongoing research projects or on the completion of the project. The Office of Research Ethics sends the ORE Form 105 for a project to the Principal Investigator or Faculty Supervisor for completion. If ethics clearance of an ongoing project is not renewed and consequently expires, the Office of Research Ethics may be obliged to*

notify Research Finance for their action in accordance with university and funding agency regulations.

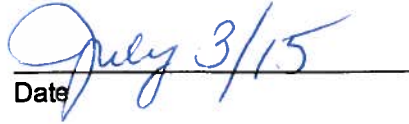
Note 4: *Any unanticipated event involving a participant that adversely affected the participant(s) must be reported immediately (i.e., within 1 business day of becoming aware of the event) to the ORE using ORE Form 106. Any unanticipated or unintentional changes which may impact the research protocol must be reported within seven days of the deviation to the ORE using ORE form 107.*



Maureen Nummelin, PhD
Chief Ethics Officer

OR
Julie Joza, MPH
Senior Manager, Research Ethics

OR
Sacha Geer, PhD
Manager, Research Ethics



Date

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9th February 2016

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Our Ref: TASOREC/04/16-UG-REC-009

Josephine Nabugoomu,
University of Waterloo
josephine.nabugoomu@uwaterloo.ca

Re: RESEARCH APPROVAL "ADOLESCENT MATERNAL NUTRITION AND HEALTH IN UGANDA: VOICES FROM THE COMMUNITY"

Thank you for submitting your responses to queries raised by TASO REC dated 1st February 2016 for the regular review research project.

TASO REC is content to give a favorable ethical opinion of the research and the annual approval has been granted, valid until 8th February 2017, after which you will be required to make a request for extension to the Chairperson, TASO REC in case of continuation with the research.

The review and approval includes the following:

Document Type	Date	Version
1. The study protocol.	9/02/ 2016	2.0
2. Informed consent forms.	9/02/2016	2.0
3. Data collection instruments.	21/11/2015	1.0
4. TASO REC Research Review Application and Declaration of Conflict of Interest form.	25/01/2016	2.0
5. Letter of Introduction from University of Waterloo	26/01/2016	

Amendments: All proposed changes to the study (including personnel, procedures, or documents) must be approved by the REC in advance through the amendment process.

Adverse Events/Unanticipated Problems: You must inform the REC of all unanticipated problems and adverse events that occur during your research study – these include, but are not limited to, events and/or information that may have physical, psychological, social, legal, or economic impact on the research participants or others.

It is a requirement by the TASO REC that you submit timely annual progress reports.

We recommend that you proceed with the registration of your study by the Uganda National Council of Science and Technology (UNCST).

Continuing Review application due date (60 days prior to expiration date).

Sincerely,




Mr. Bakanda Celestin,
Chairperson, TASO RESEARCH ETHICS COMMITTEE (REC)
CC: Executive Director, TASO (U) Limited



Uganda National Council for Science and Technology

(Established by Act of Parliament of the Republic of Uganda)

Our Ref: SS 4013

7th March 2016

Josephine Nabugoomu
Our Lady of Good Counsel Secondary School – Gayaza
Ministry of Education, Science, Technology and Sports
Kampala

Re: Research Approval: Adolescent Maternal Nutrition and Health in Uganda: Voices from the Community

I am pleased to inform you that on **17/02/2016**, the Uganda National Council for Science and Technology (UNCST) approved the above referenced research project. The Approval of the research project is for the period **17/02/2016** to **17/02/2018**.

Your research registration number with the UNCST is **SS 4013**. Please, cite this number in all your future correspondences with UNCST in respect of the above research project.

As Principal Investigator of the research project, you are responsible for fulfilling the following requirements of approval:

1. All co-investigators must be kept informed of the status of the research.
2. Changes, amendments, and addenda to the research protocol or the consent form (where applicable) must be submitted to the designated Research Ethics Committee (REC) or Lead Agency for re-review and approval **prior** to the activation of the changes. UNCST must be notified of the approved changes within five working days.
3. For clinical trials, all serious adverse events must be reported promptly to the designated local REC for review with copies to the National Drug Authority.
4. Unexpected events involving risks to research subjects/participants must be reported promptly to the UNCST. New information that becomes available which alters the risk/benefit ratio must be submitted promptly for UNCST review.
5. Only approved study procedures are to be implemented. The UNCST may conduct impromptu audits of all study records.
6. A progress report must be submitted electronically to UNCST within four weeks after every 12 months. Failure to do so may result in termination of the research project.

Below is a list of documents approved with this application:

	Document Title	Language	Version	Version Date
1.	Research proposal	English	2.0	February 2016
2.	Consent Form	English and Lusoga	N/A	March 2016
3.	Individual Interview Guide and Questions	English and Lusoga	N/A	April 2016
4.	Survey Questionnaires	English and Lusoga	N/A	N/A

Yours sincerely,

Hellen. N. Opolot

for: Executive Secretary

UGANDA NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY

cc. Chair, The AIDS Support Organization, Research Ethics Committee

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EMAIL: info@uncst.go.ug
WEBSITE: <http://www.uncst.go.ug>

TELEPHONE: General office
340874/231563/9
PS office: 340872

TELEFAX: 231584

TELEX: 61372 HEALTH UGA.

In ANY CORRESPONDENCE ON

THIS SUBJECT PLEASE QUOTE NO.272/275/01



MINISTRY OF HEALTH
P.O. Box 7272
KAMPALA,
UGANDA

18, May 2015

Josephine Nabugoomu
PhD Candidate
School of Public Health and Health Systems
Faculty of Applied Health Sciences
University of Waterloo
CANADA.

Dear Ms. Nabugoomu,

RE: LETTER OF RESEARCH SUPPORT

This is to inform you that the Ministry of Health supports your Pilot Study and Full Intervention Study titled "*Formative evaluation of an intervention to enhance nutrition and health status of pregnant adolescents in eastern Uganda using education, cell-phone communication, and income generation*" and "*Will an intervention using education, cell-phone communication, and income generation enhance nutrition and health status and pregnancy outcomes of pregnant adolescents in eastern Uganda?*" respectively.

Adolescent pregnancies are a major public health concern in Uganda. Eastern Uganda and Busoga region in particular has high rates of adolescent pregnancies and most of the rural communities have low socio-economic status which may perpetuate poor maternal and child health among the young mothers. The proposed study is therefore timely as it may help to address the adverse effects of the adolescent pregnancies and will contribute to the knowledge of effective nutrition interventions in Uganda consistent with the current Nutrition Action Plan for Uganda.

We wish you success.


Dr. Asuman Lukwago
PERMANENT SECRETARY



Telegram: "EDUCATION"

General Line: 234451/8

Fax: 234920

In any correspondence on
this subject please quote No **Adm.48/177/01**

Ministry of Education, Science ,

Technology & Sports

Embassy House

P.O. Box 7063

Kampala, Uganda

27th May 2015

Mrs. Nabugoomu Josephine,
PHD Candidate/Principal Investigator,
School of Public Health and Health Systems,
Faculty of Applied Health Sciences,
University of Waterloo,
CANADA.

Dear Madam,

Re: RESEARCH SUPPORT FOR PHD STUDIES AT THE SCHOOL OF PUBLIC HEALTH AND HEALTH SYSTEMS, UNIVERSITY OF WATERLOO- CANADA.

The Ministry of Education, Science, Technology and Sports supports your proposed PhD Pilot study and Full Intervention study entitled:

1. Formative evaluation of an intervention to enhance the nutritional status and health of pregnant adolescents in Eastern Uganda using nutrition and health education, cell-phone communication and income generation.
2. Will an intervention using nutrition and health education, cell-phone communication and income generation enhance nutrition and health status and pregnancy outcomes of pregnant adolescents in Eastern Uganda?

The Ministry acknowledges that this research will enhance knowledge and inform national policy on adolescent maternal health, education and care.

We do reconfirm your guarantee of employment after completion of your study in accordance with the regulations governing your employment.

The Ministry of Education, Science, Technology and Sports therefore wishes you successful undertaking of your Research.

S.Opio Okiror

For: PERMANENT SECRETARY



Uganda National Council for Science and Technology

(Established by Act of Parliament of the Republic of Uganda)

ADM/01

4th May 2015

Josephine Nabugoomu
School of Public Health and Health Systems
Faculty of Applied Health Sciences
University of Waterloo
CANADA

Dear Ms. Nabugoomu,

RE: LETTER OF SUPPORT

This is to inform you that Uganda National Council for Science and Technology (UNCST) is in support of your research study entitled, "Formative evaluation of an intervention to enhance nutrition and health status of pregnant adolescents in eastern Uganda using education, cell-phone communication and income generation". Improving women health, and in particular health of pregnant adolescents, is an important policy objective for our national development. The study, once funded, will go through the normal process of ethical review and approval by a local research ethics committee and UNCST.

We wish you success in your endeavour.

Yours sincerely,

Dr. Julius Ecuru

Ag. Deputy Executive Secretary

UGANDA NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY

LOCATION/CORRESPONDENCE

Plot 6 Kimera Road, Ntinda
P. O. Box 6884
KAMPALA, UGANDA

COMMUNICATION

TEL: (256) 414 705500
FAX: (256) 414-234579
EMAIL: info@uncst.go.ug



**UGANDA CHRISTIAN
UNIVERSITY**

A Centre of Excellence in the Heart of Africa

Tel: +256312350800 Ext. 823

Mob: +256794770839

Fax: +256414290800

P.O. Box 4, Mukono

Office of the Dean of Faculty of Health Sciences

24 April 2105

LETTER OF SUPPORT FOR JOSEPHINE NABUGOOMU

I am writing a letter of support for Josephine Nabugoomu who is a PhD candidate (Health Studies and Gerontology) at the School of Public Health and Health Sciences, Faculty of Applied Health and Health Systems, University of Waterloo (UW).

Josephine is a respectable, intelligent and hardworking scientist who was a member of my faculty prior to her admission into the PhD program at the UW. She was part of the team that developed the MSc Human Nutrition Program that my Faculty will soon launch in collaboration with Professor Rhona Hanning of UW. Her knowledge and teaching experience in the field of Nutrition makes her a worthy candidate for the PhD program and research study in question.

I wish to confirm that I, Dr. Edward Kanyesigye, Senior Lecturer and Dean of the Faculty of Health Sciences at Uganda Christian University am willing and available to host her research on the topic: *Formative Evaluation of an Intervention to Enhance Nutrition and Health Status of Pregnant Adolescents in Eastern Uganda using Education, Cell-phone Communication, and Income Generation.*

I further confirm that my office will provide working space to the candidate and a storage point for all materials and logistics employed in this study. My office will also take the necessary steps to ensure we obtain the necessary ethical and scientific clearance of this study from the Uganda National Council for Higher Education as required by the Ugandan laws.

The Uganda Christian University is heavily banking on Josephine as a potential and future lecturer in our newly formed Masters and Bachelors of Science in Nutrition programs due to begin this year and would like to solicit support from all concerned to enable her fulfill the requirements of her PhD program.

For further inquiries on this subject, my contact is +256772770839 and ekanyesigye@ucu.ac.ug

Anticipating your most positive response and thanking you in advance for it.

Dr. Edward Kanyesigye, MB ChB, DPH (Makerere), MPH(Adelaide)
Senior Lecturer and Dean of Faculty of Health Sciences

January 26, 2016

Dear Members of the TASO REC:

Re: Josephine Nabugoomu

Please be advised that Josephine Nabugoomu is a full-time PhD candidate at the University of Waterloo, Waterloo, Ontario Canada. Josephine began her PhD program within the School of Public Health and Health Systems, Faculty of Applied Health Sciences in September 2014. Since that time, she has completed all of her course requirements, her comprehensive (qualifying) exam and her thesis proposal. Her proposed research will explore, “Adolescent Maternal Nutrition and Health in Uganda: Voices from the Community” and is supported by a Pilot Grant from the Nestlé Foundation in Switzerland. She plans to begin her research once she has received ethics approval from your organization and the Uganda National Council for Science and Technology (UNCST). Please be informed that Josephine underwent training in Ethical Conduct for Research involving Humans Course on Research Ethics at the University of Waterloo, and that her proposed study has been cleared by the Office of Research Ethics of the University of Waterloo.

I am the PhD supervisor for Ms. Nabugoomu’s academic program and am a Full Professor in the School of Public Health and Health Systems and the Associate Dean of Graduate Studies for the Faculty of Applied Health Sciences, University of Waterloo.

I would be happy to provide any further information you require.

Yours sincerely,



Rhona Hanning PhD, RD, FDC
Professor
rhanning@uwaterloo.ca
1-519-888-4567 x 35685

**NASSUUTI L.C. 1 ZONE NTAAWO WARD
MUKONO CENTRAL DIVISION**

P.O BOX 4335 K'LA TEL: 0772-421603 / 0772-922746

Chairperson: Mrs. Lwandasa Florence

Secretary: M. Byekwaso

Sec. for Def: Mutebi I.

Sec. for Info. Kiberu E.

Sec. for Env.: Kabugo J.

Sec. for Women: Kagolo Jane

Sec. for P.W.D: Migadde Fred

Sec. for Finance: Nyonyintono D.

Your Ref: NA/HI/2016

Our Ref:

29th January 2016

To Whom It May Concern

RE: MRS. JOSEPHINE NABUGOOMU

I write to introduce to you Mrs. Josephine Nabugoomu (Passport Number B1210027), a Ugandan female aged 38 years.

Mrs. Nabugoomu has been a resident of Nassuuti LC 1 Zone, Ntawo Ward, Mukono Central Division, Mukono District since the year 2007, and is my neighbor. She has been married to Dr. Fabian Nabugoomu since 2007.

Josephine is a high school Teacher under the Ministry of Education at Our Lady of Good Counsel Senior Secondary School Gayaza but has been on a PhD study leave since August 2014. She is an International PhD Candidate at the University of Waterloo, Waterloo, Canada.

Any assistance rendered to her is highly appreciated.

Yours sincerely

Mrs. Lwandasa Florence
Chairperson
Nassuuti LC1 Zone.



JINJA DISTRICT LOCAL GOVERNMENT

Telephone: 256 - 43 - 120259
Fax: 256 - 43 - 120012
E-mail: ddhsjja@utl.co.ug.



Office of the Chief Administrative Officer,
Department of Health
Jinja District
P. O. Box 1551
JINJA

1st June, 2015.

Josephine Nabugoomu
PHD Candidate, University of Waterloo
Canada

Re: Research support letter to conduct study on nutrition and health status of pregnant adolescent in eastern Uganda.

Reference is made to your letter dated 18th may 2015 on the above subject. Jinja district health office and Jinja district local government has no objection in granting you permission to conduct the study in Jinja district.

As you may already know the study has to be cleared by the National Council for Science and Technology and the Uganda ministry of health among others. We shall need the clearance of the relevant authorities before you start implementing your study.

Yours faithfully,

A handwritten signature in black ink, appearing to read 'Dyogo', written over a blue ink stamp.



Dr. Peter Dyogo Nantamu
District Health Officer, Jinja



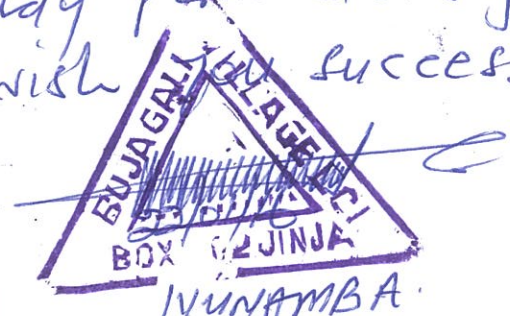
January 22, 2016

The Chairman Local Council I
Ivunamba Village.

Dear Sir;

RE: PERMISSION TO CARRY OUT RESEARCH

study permission granted.
I wish you success.



I write to kindly request for permission from your office to carry out a study among key individuals in the rural areas of Budondo Sub-county in Jinja District. This study will use interviews to find out how the health and wellbeing of rural pregnant and lactating adolescents can be improved by understanding their needs, barriers, opportunities, and supports. The study also seeks to identify challenges faced by service providers of adolescent maternal/child nutrition and health such as members of their families, and workers in the sectors of health, education, agriculture and religion. Results from this study will help to identify gaps in adolescent maternal/child nutrition and health, and also shape further research at planning and implementing interventions that promise to enhance maternal/child health in ways that are feasible, meaningful, acceptable, successful, and sustainable in Jinja District.

Title of Study: Adolescent maternal nutrition and health in Uganda: voices from the community.

Principal Investigator: Josephine Nabugoomu. International PhD Candidate. School of Public Health and Health Systems (SPHHS), University of Waterloo (UW), Waterloo, Ontario Canada. (0701700790; jnabugoomu@uwaterloo.ca).

Study Supervisors: Dr. Rhona Hanning, Professor and Associate Dean Graduate Studies, SPHHS, UW (519-888-4567 extension 35685; rhanning@uwaterloo.ca) and Dr. Gloria K. Seruwagi, Head of Department Public Health, Victoria University Uganda (0774700111; gkseruwagi@gmail.com).

I therefore write to kindly request your office to grant me permission to conduct this study in your village. I have applied for ethics clearance from the Uganda National Council for Science and Technology, which copy will be availed to your office before undertaking my study. If you have any questions about this study please contact me or my supervisors Professor Rhona Hanning and Dr. Gloria K. Seruwagi.

Thank you so much for the support.

Yours faithfully;

Nabugoomu

Josephine Nabugoomu

PhD Candidate (Public Health and Health Studies)

School of Public Health and Health Systems; Faculty of Applied Health Sciences

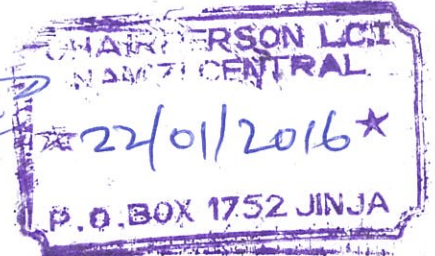
University of Waterloo



January 22, 2016

The Chairman Local Council I
Budondo Village.

*Permission granted and I wish
you success*



Dear Sir;

RE: PERMISSION TO CARRY OUT RESEARCH

I write to kindly request for permission from your office to carry out a study among key individuals in the rural areas of Budondo Sub-county in Jinja District. This study will use interviews to find out how the health and wellbeing of rural pregnant and lactating adolescents can be improved by understanding their needs, barriers, opportunities, and supports. The study also seeks to identify challenges faced by service providers of adolescent maternal/child nutrition and health such as members of their families, and workers in the sectors of health, education, agriculture and religion. Results from this study will help to identify gaps in adolescent maternal/child nutrition and health, and also shape further research at planning and implementing interventions that promise to enhance maternal/child health in ways that are feasible, meaningful, acceptable, successful, and sustainable in Jinja District.

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Thank you so much for the support.

Yours faithfully;

J Nabugoomu

Josephine Nabugoomu
PhD Candidate (Public Health and Health Studies)
School of Public Health and Health Systems; Faculty of Applied Health Sciences
University of Waterloo



January 22, 2016

The Chairman Local Council I
Lukolo Village.

Dear Sir;

RE: PERMISSION TO CARRY OUT RESEARCH

I write to kindly request for permission from your office to carry out a study among key individuals in the rural areas of Budondo Sub-county in Jinja District. This study will use interviews to find out how the health and wellbeing of rural pregnant and lactating adolescents can be improved by understanding their needs, barriers, opportunities, and supports. The study also seeks to identify challenges faced by service providers of adolescent maternal/child nutrition and health such as members of their families, and workers in the sectors of health, education, agriculture and religion. Results from this study will help to identify gaps in adolescent maternal/child nutrition and health, and also shape further research at planning and implementing interventions that promise to enhance maternal/child health in ways that are feasible, meaningful, acceptable, successful, and sustainable in Jinja District.

Title of Study: Adolescent maternal nutrition and health in Uganda: voices from the community.

Principal Investigator: Josephine Nabugoomu. International PhD Candidate. School of Public Health and Health Systems (SPHHS), University of Waterloo (UW), Waterloo, Ontario Canada. (0701700790; jnabugoomu@uwaterloo.ca).

Study Supervisors: Dr. Rhona Hanning, Professor and Associate Dean Graduate Studies, SPHHS, UW (519-888-4567 extension 35685; rhanning@uwaterloo.ca) and Dr. Gloria K. Seruwagi, Head of Department Public Health, Victoria University Uganda (0774700111; gkseruwagi@gmail.com).

I therefore write to kindly request your office to grant me permission to conduct this study in your village. I have applied for ethics clearance from the Uganda National Council for Science and Technology, which copy will be availed to your office before undertaking my study. If you have any questions about this study please contact me or my supervisors Professor Rhona Hanning and Dr. Gloria K. Seruwagi.

Thank you so much for the support.

Yours faithfully;

Nabugoomu.

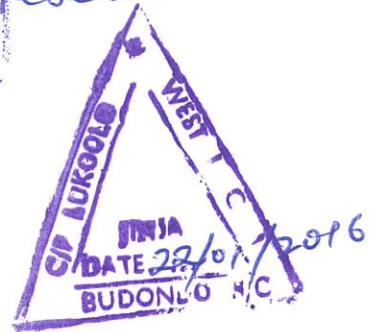
Josephine Nabugoomu

PhD Candidate (Public Health and Health Studies)

School of Public Health and Health Systems; Faculty of Applied Health Sciences

University of Waterloo

*You have been given permission
to carry out your research
by the person let
Lukolo West
Jinja*





January 22, 2016

Permission granted to carry
out your research.

The Chairman Local Council I
Nawangoma Village.



Dear Sir;

RE: PERMISSION TO CARRY OUT RESEARCH

I write to kindly request for permission from your office to carry out a study among key individuals in the rural areas of Budondo Sub-county in Jinja District. This study will use interviews to find out how the health and wellbeing of rural pregnant and lactating adolescents can be improved by understanding their needs, barriers, opportunities, and supports. The study also seeks to identify challenges faced by service providers of adolescent maternal/child nutrition and health such as members of their families, and workers in the sectors of health, education, agriculture and religion. Results from this study will help to identify gaps in adolescent maternal/child nutrition and health, and also shape further research at planning and implementing interventions that promise to enhance maternal/child health in ways that are feasible, meaningful, acceptable, successful, and sustainable in Jinja District.

Title of Study: Adolescent maternal nutrition and health in Uganda: voices from the community.

Principal Investigator: Josephine Nabugoomu. International PhD Candidate. School of Public Health and Health Systems (SPHHS), University of Waterloo (UW), Waterloo, Ontario Canada. (0701700790; jnabugoomu@uwaterloo.ca).

Study Supervisors: Dr. Rhona Hanning, Professor and Associate Dean Graduate Studies, SPHHS, UW (519-888-4567 extension 35685; rhanning@uwaterloo.ca) and Dr. Gloria K. Seruwagi, Head of Department Public Health, Victoria University Uganda (0774700111; gkseruwagi@gmail.com).

I therefore write to kindly request your office to grant me permission to conduct this study in your village. I have applied for ethics clearance from the Uganda National Council for Science and Technology, which copy will be availed to your office before undertaking my study. If you have any questions about this study please contact me or my supervisors Professor Rhona Hanning and Dr. Gloria K. Seruwagi.

Thank you so much for the support.

Yours faithfully;

Josephine Nabugoomu

PhD Candidate (Public Health and Health Studies)

School of Public Health and Health Systems; Faculty of Applied Health Sciences

University of Waterloo



January 22, 2016

*you have granted permission
 to carry out your
 study.*

The Chairman Local Council I
 Kyomya Village.

Dear Sir;

*CHAIRMAN SERVICE
 KYOMYA CENTRAL
 BUDONDO
 DATE: 22nd / 01 / 2016*

RE: PERMISSION TO CARRY OUT RESEARCH

I write to kindly request for permission from your office to carry out a study among key individuals in the rural areas of Budondo Sub-county in Jinja District. This study will use interviews to find out how the health and wellbeing of rural pregnant and lactating adolescents can be improved by understanding their needs, barriers, opportunities, and supports. The study also seeks to identify challenges faced by service providers of adolescent maternal/child nutrition and health such as members of their families, and workers in the sectors of health, education, agriculture and religion. Results from this study will help to identify gaps in adolescent maternal/child nutrition and health, and also shape further research at planning and implementing interventions that promise to enhance maternal/child health in ways that are feasible, meaningful, acceptable, successful, and sustainable in Jinja District.

Title of Study: Adolescent maternal nutrition and health in Uganda: voices from the community.

Principal Investigator: Josephine Nabugoomu. International PhD Candidate. School of Public Health and Health Systems (SPHHS), University of Waterloo (UW), Waterloo, Ontario Canada. (0701700790; jnabugoomu@uwaterloo.ca).

Study Supervisors: Dr. Rhona Hanning, Professor and Associate Dean Graduate Studies, SPHHS, UW (519-888-4567 extension 35685; rhanning@uwaterloo.ca) and Dr. Gloria K. Seruwagi, Head of Department Public Health, Victoria University Uganda (0774700111; gkseruwagi@gmail.com).

I therefore write to kindly request your office to grant me permission to conduct this study in your village. I have applied for ethics clearance from the Uganda National Council for Science and Technology, which copy will be availed to your office before undertaking my study. If you have any questions about this study please contact me or my supervisors Professor Rhona Hanning and Dr. Gloria K. Seruwagi.

Thank you so much for the support.

Yours faithfully;

Nabugoomu.

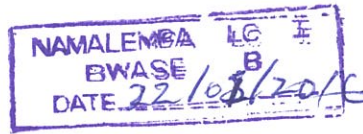
Josephine Nabugoomu
 PhD Candidate (Public Health and Health Studies)
 School of Public Health and Health Systems; Faculty of Applied Health Sciences
 University of Waterloo



January 22, 2016

Research permission
given.

The Chairman Local Council I
Kibibi Village.



Dear Sir;

RE: PERMISSION TO CARRY OUT RESEARCH

I write to kindly request for permission from your office to carry out a study among key individuals in the rural areas of Budondo Sub-county in Jinja District. This study will use interviews to find out how the health and wellbeing of rural pregnant and lactating adolescents can be improved by understanding their needs, barriers, opportunities, and supports. The study also seeks to identify challenges faced by service providers of adolescent maternal/child nutrition and health such as members of their families, and workers in the sectors of health, education, agriculture and religion. Results from this study will help to identify gaps in adolescent maternal/child nutrition and health, and also shape further research at planning and implementing interventions that promise to enhance maternal/child health in ways that are feasible, meaningful, acceptable, successful, and sustainable in Jinja District.

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I therefore write to kindly request your office to grant me permission to conduct this study in your village. I have applied for ethics clearance from the Uganda National Council for Science and Technology, which copy will be availed to your office before undertaking my study. If you have any questions about this study please contact me or my supervisors Professor Rhona Hanning and Dr. Gloria K. Seruwagi.

Thank you so much for the support.

Yours faithfully;

Nabugoomu.

Josephine Nabugoomu

PhD Candidate (Public Health and Health Studies)

School of Public Health and Health Systems; Faculty of Applied Health Sciences

University of Waterloo



January 22, 2016

The District Education Officer
Jinja District.

Permission granted to carry out your intended research in the sub county specified.
DISTRICT EDUCATION OFFICER
JINJA DISTRICT
22nd/01/2016

Dear Sir/Madam;

RE: PERMISSION TO CARRY OUT RESEARCH

I write to kindly request for permission from your office to carry out a study among key individuals in the rural areas of Budondo Sub-county in Jinja District. This study seeks to find out how the health and wellbeing of rural pregnant adolescents can be improved by understanding their needs, barriers, opportunities, and supports. The study also seeks to identify challenges faced by service providers of adolescent maternal/child nutrition and health. Results from this study will help to identify gaps in adolescent maternal/child nutrition and health, and also shape further research at planning and implementing interventions that promise to enhance maternal/child health in ways that are feasible, meaningful, acceptable, successful, and sustainable in Jinja District.

Title of Study: Adolescent maternal nutrition and health in Uganda: voices from the community.

Principal Investigator: Josephine Nabugoomu. International PhD Candidate. School of Public Health and Health Systems (SPHHS), University of Waterloo (UW), Waterloo, Ontario Canada. (+256-701700790; jnabugoomu@uwaterloo.ca).

Study Supervisors: Dr. Rhona Hanning, Professor and Associate Dean Graduate Studies, SPHHS, UW (519-888-4567 extension 35685; rhanning@uwaterloo.ca) and Dr. Gloria K. Seruwagi, Head of Department Public Health, Victoria University Uganda (+256-774700111; gkseruwagi@gmail.com).

Study Participants: The study will take place in the rural communities using individual interviews and survey questionnaires to key individuals such as pregnant and lactating adolescent girls, their parents and grandparents, school teachers, local council leaders, and religious and opinion leaders. Health providers such as heads of antenatal/postnatal services, heads of maternity and midwifery, and village health teams; and income generation experts e.g., agricultural officers, leaders of handcraft and food preparation groups will also give their perceptions about adolescent maternal/child nutrition and health.

I therefore write to kindly request your office to grant me permission to conduct this study in your District. I have applied for ethics clearance from the Uganda National Council for Science and Technology, which copy will be availed to your office before undertaking my study. If you have any questions about this study please contact me or my supervisors Professor Rhona Hanning and Dr. Gloria K. Seruwagi.

Thank you so much for the support.

Yours faithfully;

Nabugoomu.

Josephine Nabugoomu

PhD Candidate (Public Health and Health Studies)

School of Public Health and Health Systems; Faculty of Applied Health Sciences

University of Waterloo; Email: jnabugoomu@uwaterloo.ca

JINJA DISTRICT LOCAL GOVERNMENT

TELEPHONE: 256 . 0434-120259
E-Mail: ddhsjinja@health.go.ug

Fax: 256 0 43-120012



DISTRICT HEALTH OFFICE
JINJA DISTRICT

P.O. BOX 1551

Date 1st February 2016

Ms. Nabugoomu Josephine
PhD Candidate
School of Public Health and Health Systems
Faculty of Applied Health Sciences

RE: RESEARCH

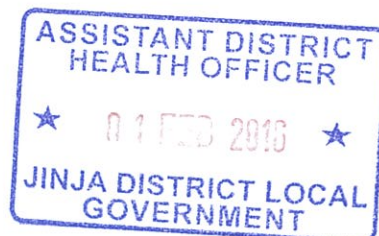
This is to inform you that you have been permitted to conduct your research in Budondo Sub-county on a topic entitled “**Adolescent maternal nutrition and health in Uganda: voices from the community**”.

You can work with the Village Health Teams through the office of the Health Assistant of Budondo Health Centre IV, to reach your study participants who must consent to your study. You are also requested to avail this office with a copy of the ethics clearance from Uganda National Council for Science and Technology once you receive it. In addition, you should avail a copy of your study results to this office.

I wish you success in your endeavors.

Yours sincerely;


SR. MIREMBE JEAN
ASSISTANT DISTRICT HEALTH OFFICER, JINJA DISTRICT



cc: The Dean, Faculty of Applied Health Sciences
cc: Sub-county Chief, Budondo
cc: Medical Superintendent of Budondo Health Centre IV
cc: Health Assistant of Budondo Health Centre IV

PHONE NO.0704915351



OFFICE OF THE

**CHIEF ADMINISTRATIVE OFFICER
JINJA DISTRICT LOCAL GOVERNMENT
P.O. BOX 1551
JINJA**

OUR REF: CR/220/1

YOUR REF:

28th January, 2016

The District Health Officer,
Jinja District Local Government.

RE: RESEARCH.

This is to introduce to you Ms.Nabugoomu Josephine, a PhD Candidate at the University of Waterloo (Faculty of Applied Health Sciences). She wishes to carry out a research to a topic titled **“Adolescent maternal nutrition and health in Uganda: voices from the community”**.

This is therefore to inform you that she has been permitted to undertake this research in our district in your department.

Please render her the necessary assistance.

A handwritten signature in blue ink, appearing to read 'M. Moses'.



**MAGEMESO MOSES
FOR: CHIEF ADMINISTRATIVE OFFICER/JINJA.**

c.c. The Dean, School of Public Health and Health Systems
University of Waterloo

Nestlé Foundation

for the study of problems of nutrition in the world



Mrs Nabugoomu Josephine
School of Public Health and Health
Systems
University of Waterloo
200 University Avenue, BMH 2319
Waterloo, Ontario, Canada N2L 3G1

Lausanne, September 28th, 2015

Formative evaluation of an intervention to enhance nutrition and health status of pregnant adolescents in eastern Uganda using education, cell-phone communication, and income generation

Dear Mrs Josephine Nabugoomu,

Your research grant application was discussed by the Foundation's Council at their meeting of 02.09.2015, and we are pleased to inform you of their decision to fund this study with a research grant covering actual, documented, direct project costs up to an amount of:

USD 20,000

You may let us know, how you would like us to make this grant available to you, preferably by giving us the number of an institutional bank account to which it can be transferred. If you wish us to make payments in advance, please let us know in how many instalments and at which points in time you would like us to do so.

We would like to receive from you a progress report and a listing of project expenses up to that time, before each subsequent instalment become due, and a final report after the end of the project. These reports should be written using the downloadable form which is available on our website (www.nestlefoundation.org).

Equipment purchased for the study, if any, will remain property of the Foundation till the end of the project, when its future use will be decided upon.

In any publication resulting from this grant, the Foundation has to be acknowledged as follows :
Supported by a grant from the Nestlé Foundation for the study of problems of nutrition in the world, Lausanne, Switzerland.

We hope that these terms are acceptable to you and wish you and your colleagues success in this endeavor.

Prof. Susanne Suter
President

Prof. Paolo Suter
Director

APPENDIX IV: CONSENT LETTERS



UNIVERSITY OF WATERLOO
FACULTY OF APPLIED HEALTH SCIENCES

School of Public Health and Health Systems
519-888-4567, Fax: 519-746-6776
Uwaterloo.ca/public-health-and-health-systems

March 3, 2016

Dear Adolescent Mother carrying first pregnancy or having first child below 6 months / >6-12 months

RE: INVITATION TO PARTICIPATE IN A FACE-TO-FACE INTERVIEW

I am a second year PhD student at the University of Waterloo in Canada conducting research under the supervision of Professor Rhona Hanning and Dr. Gloria Seruwagi through Uganda Christian University. I am carrying out a study into the determinants of adolescent maternal and child health, in Jinja District, Eastern Uganda. As a resident of Jinja, your input is important to make this study successful. I would appreciate the opportunity to speak with you about this topic through a face-to-face interview. I hope to conduct this interview with you using a voice recorder between the hours of 9 am and 5 pm, and expect to be in your community from March to May, 2016. However, I would be happy to arrange another time preferred by you.

Participation in this study is voluntary and would involve a forty five (45) minute face-to-face interview in your home or alternate convenient location and time. There are no known or anticipated risks to your participation in this study. The questions are quite general (for example, what are the needs of pregnant adolescent girls in your district?). You may decline answering any questions you feel you do not wish to answer. All information you provide will be considered confidential and grouped with responses from other participants. I will not share any information given in this interview. Further, you will not be identified by name in my thesis or in any conversation, report or publication resulting from this study. The records collected through this study will be kept for a period of 5 years in my supervisor's office at the University of Waterloo. To thank you for your time and participation in this study, you will receive 20,000/= (Uganda shillings).

If after receiving this letter, you have any questions about this study, or would like additional information to assist you in reaching a decision about participation, please feel free to contact Professor Rhona Hanning at rhanning@uwaterloo.ca (1-519-888-4567, Extension 35685) or Dr. Gloria Seruwagi at gkseruwagi@gmail.com (0774700111).

I would like to assure you that this study has been reviewed and received ethics clearance through TASO Research Ethics Committee, Uganda National Council for Science and Technology, and University of Waterloo Research Ethics Committee. However, the final decision about participation is yours. Should you have comments or concerns resulting from your participation in this study, please contact Mr. Bakanda Celestin of TASO REC at 0752 774178; Dr. Julius Ecuru of Uganda National Council for Science and Technology at 0414-70550; or Dr. Maureen Nummelin in the University of Waterloo Office of Research Ethics at Maureen.nummelin@uwaterloo.ca (1-519-888-4567, Extension 36005).

Thank you for your assistance with this project.

Yours sincerely,

Josephine Nabugoomu

PhD Candidate (Public Health)

Telephone: 0701-700790; email: jnabugoomu@uwaterloo.ca

CONSENT FORM

I agree to participate in a face-to-face interview being conducted by Josephine Nabugoomu of the School of Public Health and Health Systems at the University of Waterloo under the supervision of Professors Rhona Hanning and Gloria Seruwagi. I have made this decision based on the information I have received in the Information Letter and have had the opportunity to receive any additional details I wanted about the study. As a participant in this study, I realize that I will be asked to take part in a forty five minute interview and that I may decline answering any of the questions, if I so choose. All information which I provide will be held in confidence and I will not be identified in any presentation, thesis, report or publication resulting from this work. I understand that I may withdraw this consent at any time by asking that the interview be stopped or that my contribution be removed.

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By agreeing to take part in this study and signing this consent form, you are not waiving your legal rights or releasing the investigator(s) or involved institutions from their legal and professional responsibilities.

Participant's Name: _____

Participant's Signature: _____

If Parent/Grandparent/Husband cannot read or write, they can write the letter X on the line below and the Researcher checks to box to indicate consent was given verbally

Verbal consent obtained from Parent/Grandparent/Husband

Date: _____

Name of Researcher: _____

Signature of Researcher: _____

Date: _____

APPENDIX IV: EMBALUWA Y'OBWIKIRIZO/OKWIKIRIZISA



UNIVERSITY OF WATERLOO
FACULTY OF APPLIED HEALTH SCIENCES

School of Public Health and Health Systems
519-888-4567, Fax: 519-746-6776
Uwaterloo.ca/public-health-and-health-systems

Mulyaiva 3, 2016

Omughala omuguna ali enda esooka, oba omuguna ayonsa nga ali n'omwana omuberi ow'emezi 1-6, oba omuguna ayonsa ali n'omwana omuberi nga wa myezi 7-12 gy'obukulu

MUTWE: OKWETEBWA MU KWETABA MU KUBUUZIBWA/KAFUBO MAISO-KU-MAISO

Ndi musomi wa PhD wa mwaka gwa kubiri ku Yunivasite ya Waterloo mu Canada nga ndi n'okunoonereza kwendi kukola era nga okunoonereza kuno kulungamizibwa ba Kakensa Polofeesa Rhona Hanning owa University ya Waterloo ni Dr. Gloria Seruwagi owa Uganda Christian University. Ndi kunoonereza ku byesigamo by'obulamu bwa abaguna abazaire n'abaana, mu kiketezi kya Jinja, mu buvandhuba bwa Uganda. Iwe nga omutyamye wa Jinja/Idhindha, ebidhuubo byo bikulu inho okufuula okunoonereza kuno okwomuganhulo. Ndida kusiima inho omukisa gw'okwogeraku niwe ku nsonga eno nga ndi mu kafubo niwe maiso-ku-maiso. Ndhuuba okweyambisa akawunga amaloboozi nga ndi mu kafubo niwe ghagati gha saawa 3 dh'enkyo n'esaawa 11 dh'eigulo, era nsuubira okuba mu kyallo kyo okuva Mulyaiva / Maakyi okutusa Namatu/May 2016. Ayenga, ndi musanhufu okukutegekera ebiseera ebindi iwe mwene by'oyenda/byosobola okubawo.

Okwetaba mu kunoonereza kuno kwa bwanakyegha era kwidha kumala bwa daakika (45) anaana naitano edhakafubo maiso-ku-maiso mu amaka oba ekifo n'ekiseera ekindi ekikusanhusa iwe mwene. Ezira byekango/bitisa bimanhiibwa oba ebisuubirwa mu kwetabakwo mu kunoonereza kuno. Ebikubuzibwa bya buliidhobuliidho (okugeza nga abaghala abaguna abali amabunda / abalinda okuzaala bali na byetaago kika ki mu kiketezo kyo?). Oyinza okweghala okwiramu ekibuuzo kyonakyoona kyoghulira mule nga tiwandiyenze kukiiramu. Ebidhuubo byonnaagha byonabyona biidha kutwalibwa nga bya kyaama era biidha kubungibwa ghalala n'okwiramu kwa abaneetabamu abandi. Tiidha kulaalaisa / kugabana ku bilomboodho byennafuna okuva mu kafubo kano niwe. Okwongera kw'ekyo, toidha kumanhiibwa na liina mu bighandiiko byange oba mu kughaya kwonakwona, lipooti oba ebighandiiko ebinaava mu musomo guno. Ebidhuubo ebinaasolozebwa mu musomo guno biidha kukuumbwa okumala entangama ya myaka 5 (etaamu) mu yafeesi ya Supavaiza wange mu Yunavasite ya Waterloo. Okukwebaza olw'ebiseera byo n'okwetaba mu musomo guno, oidha kufunayo 10,000/= (silingi dha Uganda).

Singa bw'omala okufuna embaluwa eno, obaaku n'ebibuuzo ku kunoonereza kuno, oba oyenda kumanha ebisingagho okukuyamba okusalagho ku ky'okwetabamu, oli waidembe okutuukirira Polofeesa Rhona Hanning ku rhanning@uwaterloo.ca (1-519-888-4567, Oluyungiro 35685) oba Dr. Gloria Seruwagi ku gkseruwagi@gmail.com (0774700111).

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Weebale obuyambi bwo mu kunoonereza kuno.

Ninze mwene,

Josephine Nabugoomu (Omusomi wa PhD mubyo Bulamu bwa Lukale).

Isimu: 0701-700790; email: jnabugoomu@uwaterloo.ca

AKAIKILIZO / OKWIKIRIZA

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Ndhikiriza nti okunoonereza kuno kufunie olukusa okuva mu Kakiiko k'ebiyokunoonereza aka Yunivasite ya Waterloo mu Canada era nti nsobola okusaba mulala ku banoonereza okungemagania n'omulala / owundi ali ku kakiiko singa mba ne ebyokukoba oba ebinsaala ku kwetaba kwange mu kunoonereza kuno.

Okwikiriza okwetaba mu kunoonereza kuno n'okuta omukono gwange ku kaikilizo kano /okwikiriza kuno, tili kughaayo bweghe bwange mu mateeka oba okudembula abali kunoonereza oba amatedekero agakilimu olw'obuvunaazibwa bwaibwe mu mateeka n'obwobukugu.

LIINA LY'OYO ALI KWETABAMU: _____

Mukono gw'oyo ali kwetabamu: _____

Singa muzaire/dhaadha/Muka tasobola kusoma oba kughandiika, basobola okukozesa nukuta X ku lukoloboze luno ghaifo era Omunoonereza yalamba mu kabokisi eifo okulaga ati okwikiriza kwakolebwa mu kwogera

Okwikira kwa yogerwa Muzaire/Dhaadha/Muka

Lunaku: _____

Liina lya Munoonereza: _____

Mukono gwa Munoonereza: _____

Lunaku: _____

*Translated by Cornelius Wambi Gulere; Lusoga Language Consultant; P.O Box 116
Busembatia / Makerere University Department of Literature P.O. box 7062 Kampala.
Telephone: 0776530512; email: gulerefoundation@gmail.com*



March 3, 2016

Dear Mother or Grandmother of an Adolescent Mother

RE: INVITATION TO PARTICIPATE IN A FACE-TO-FACE INTERVIEW

I am a second year PhD student at the University of Waterloo in Canada conducting research under the supervision of Professor Rhona Hanning and Dr. Gloria Seruwagi through Uganda Christian University. I am carrying out a study into the determinants of adolescent maternal and child health, in Jinja District, Eastern Uganda. As a resident of Jinja, your input is important to make this study successful. I would appreciate the opportunity to speak with you about this topic through a face-to-face interview. I hope to conduct this interview with you using a voice recorder between the hours of 9 am and 5 pm, and expect to be in your community from March to May, 2016. However, I would be happy to arrange another time preferred by you.

Participation in this study is voluntary and would involve a ninety (90) minute face-to-face interview in your office, home or alternate convenient location and time. There are no known or anticipated risks to your participation in this study. The questions are quite general (for example, what are the needs of pregnant adolescent girls in your district?). You may decline answering any questions you feel you do not wish to answer. All information you provide will be considered confidential and grouped with responses from other participants. I will not share any information given in this interview. Further, you will not be identified by name in my thesis or in any conversation, report or publication resulting from this study. The records collected through this study will be kept for a period of 5 years in my supervisor's office at the University of Waterloo. To thank you for your time and participation in this study, you will receive 10,000/= (Uganda shillings).

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Thank you for your assistance with this project.

Yours sincerely,

Josephine Nabugoomu

PhD Candidate (Public Health)

Telephone: 0701-700790; email: jnabugoomu@uwaterloo.ca

CONSENT FORM

I agree to participate in a face-to-face interview being conducted by Josephine Nabugoomu of the School of Public Health and Health Systems at the University of Waterloo under the supervision of Professors Rhona Hanning and Gloria Seruwagi. I have made this decision based on the information I have received in the Information Letter and have had the opportunity to receive any additional details I wanted about the study. As a participant in this study, I realize that I will be asked to take part in a ninety minute interview and that I may decline answering any of the questions, if I so choose. All information which I provide will be held in confidence and I will not be identified in any presentation, thesis, report or publication resulting from this work. I understand that I may withdraw this consent at any time by asking that the interview be stopped or that my contribution be removed.

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Participant's Name: _____

Participant's Signature: _____

If Parent/Grandparent/Husband cannot read or write, they can write the letter X on the line below and the Researcher checks to box to indicate consent was given verbally

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Name of Researcher: _____

Signature of Researcher: _____

Date: _____

APPENDIX IV: EMBALUWA Y'OBWIKIRIZO/OKWIKIRIZISA



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Mulyaiva 3, 2016

Omuzaire oba dhaadha w' omuzaire omuto

MUTWE: OKWETEBWA MU KWETABA MU KUBUUZIBWA/KAFUBO MAISO-KU-MAISO

Ndi musomi wa PhD wa mwaka gwa kubiri ku Yunivasite ya Waterloo mu Canada nga ndi n'okunoonereza kwendi kukola era nga okunoonereza kuno kulungamizibwa ba Kakensa Polofeesa Rhona Hanning owa University ya Waterloo ni Dr. Gloria Seruwagi owa Uganda Christian University. Ndi kunoonereza ku byesigamo by'obulamu bwa abaguna abazaire n'abaana, mu kiketezi kya Jinja, mu buvandhuba bwa Uganda. Iwe nga omutyamye wa Jinja/Idhindha, ebidhuubo byo bikulu inho okufuula okunoonereza kuno okwomuganhulo. Ndida kusiima inho omukisa gw'okwogeraku niiwe ku nsonga eno nga ndi mu kafubo niiwe maiso-ku-maiso. Ndhuuba okweyambisa akawunga amaloboozi nga ndi mu kafubo niiwe ghagati gha saawa 3 dh'enkyo n'esaawa 11 dh'eigulo, era nsuubira okuba mu kyalo kyo okuva Mulyaiva / Maakyi okutusa Namatu/May 2016. Ayenga, ndi musanhufu okukutegekerera ebiseera ebindi iwe mwene by'oyenda/byosobola okubawo.

Okwetaba mu kunoonereza kuno kwa bwanakyegha era kwidha kumala bwa daakika (90) kyenda edhakafubo maiso-ku-maiso mu yafeesi eyiyo, amaka oba ekifo n'ekiseera ekindi ekikusanhusa iwe mwene. Ezira byekango/bitisa bimanhiibwa oba ebisuubirwa mu kwetabakwo mu kunoonereza kuno. Ebikubuzibwa bya buliidhobuliidho (okugeza nga abaghala abaguna abali amabunda / abalinda okuzaala bali na byetaago kika ki mu kiketezo kyo?). Oyinza okweghala okwiramu ekibuuzo kyonakyoona kyoghulira mule nga tiwandiyenze kukiiramu. Ebidhuubo byonnaagha byonabyona biidha kutwalibwa nga bya kyaama era biidha kubungibwa ghalala n'okwiramu kwa abaneetabamu abandi. Tiidha kulaalaisa / kugabana ku bilomboodho byennafuna okuva mu kafubo kano niiwe. Okwongera kw'ekyo, toidha kumanhiibwa na liina mu bighandiiko byange oba mu kughaya kwonakwona, lipooti oba ebighandiiko ebinaava mu musomo guno. Ebidhuubo ebinaasolozebwa mu musomo guno biidha kukuumbwa okumala entangama ya myaka 5 (etaamu) mu yafeesi ya Supavaiza wange mu Yunavasite ya Waterloo. Okukwebaza olw'ebiseera byo n'okwetaba mu musomo guno, oidha kufunayo 10,000/= (silingi dha Uganda).

Singa bw'omala okufuna embaluwa eno, obaaku n'ebibuuzo ku kunoonereza kuno, oba oyenda kumanha ebisingagho okukuyamba okusalagho ku ky'okwetabamu, oli waidembe okutuukirira Polofeesa Rhona Hanning ku rhanning@uwaterloo.ca (1-519-888-4567, Oluyungiro 35685) oba Dr. Gloria Seruwagi ku gkseruwagi@gmail.com (0774700111).

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Okwikiriza okwetaba mu kunoonereza kuno n'okuta omukono gwange ku kaikilizo kano /okwikiriza kuno, tili kughaayo bweghe bwange mu mateeka oba okudembula abali kunoonereza oba amatedekero agakilimu olw'obuvunaazibwa bwaibwe mu mateeka n'obwobukugu.

LIINA LY'OYO ALI KWETABAMU: _____

Mukono gw'oyo ali kwetabamu: _____

Singa muzaire/dhaadha/Muka tasobola kusoma oba kughandiika, basobola okukozesa nukuta X ku lukoloboze luno ghaifo era Omunoonereza yalamba mu kabokisi eifo okulaga ati okwikiriza kwakolebwa mu kwogera

Okwikira kwa yogerwa Muzaire/Dhaadha/Muka

Lunaku: _____

Liina lya Munoonereza: _____

Mukono gwa Munoonereza: _____

Lunaku: _____

Translated by Cornelius Wambi Gulere; Lusoga Language Consultant; P.O Box 116 Busembatia / Makerere University Department of Literature P.O. box 7062 Kampala. Telephone: 0776530512; email: gulerefoundation@gmail.com



March 3, 2016

Dear Midwife, Village Health Team member, TBA, Teacher, Chairman Local Council I, Religious leader, Agricultural officer, Staff member of a Community based organization

RE: INVITATION TO PARTICIPATE IN A FACE-TO-FACE INTERVIEW

I am a second year PhD student at the University of Waterloo in Canada conducting research under the supervision of Professor Rhona Hanning and Dr. Gloria Seruwagi through Uganda Christian University. I am carrying out a study into the determinants of adolescent maternal and child health, in Jinja District, Eastern Uganda. As a resident of Jinja, your input is important to make this study successful. I would appreciate the opportunity to speak with you about this topic through a face-to-face interview. I hope to conduct this interview with you using a voice recorder between the hours of 9 am and 5 pm, and expect to be in your community from March to May, 2016. However, I would be happy to arrange another time preferred by you.

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If Parent/Grandparent/Husband cannot read or write, they can write the letter X on the line below and the Researcher checks to box to indicate consent was given verbally

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Date: _____

Name of Researcher: _____

Signature of Researcher: _____

Date: _____

APPENDIX IV: EMBALUWA Y'OBWIKIRIZO/OKWIKIRIZISA



School of Public Health and Health Systems
519-888-4567, Fax: 519-746-6776
Uwaterloo.ca/public-health-and-health-systems

Mulyaiva 3, 2016

Muzaalisa, Nakyewa owebyobulamu owokukyalo, Mulerwa, Omusomesa, Kyeyamaani we kyalo Omukulu w'eidiini, Omulimisa, Mukozi we ekibiina ky'obwanakyegha

MUTWE: OKWETEBWA MU KWETABA MU KUBUUZIBWA/KAFUBO MAISO-KU-MAISO

Ndi musomi wa PhD wa mwaka gwa kubiri ku Yunivasite ya Waterloo mu Canada nga ndi n'okunoonereza kwendi kukola era nga okunoonereza kuno kulungamizibwa ba Kakensa Polofeesa Rhona Hanning owa University ya Waterloo ni Dr. Gloria Seruwagi owa Uganda Christian University. Ndi kunoonereza ku byesigamo by'obulamu bwa abaguna abazaire n'abaana, mu kiketezi kya Jinja, mu buvandhuba bwa Uganda. Iwe nga omutyamywe wa Jinja/Idhindha, ebidhuubo byo bikulu inho okufuula okunoonereza kuno okwomuganhulo. Ndida kusiima inho omukisa gw'okwogeraku niiwe ku nsonga eno nga ndi mu kafubo niiwe maiso-ku-maiso. Ndhuuba okweyambisa akawunga amaloboozi nga ndi mu kafubo niiwe ghagati gha saawa 3 dh'enkyo n'esaawa 11 dh'eigulo, era nsuubira okuba mu kyalo kyo okuva Mulyaiva / Maakyi okutusa Namatu/May 2016. Ayenga, ndi musanhufu okukutegekera ebiseera ebindi iwe mwene by'oyenda/byosobola okubawo.

Okwetaba mu kunoonereza kuno kwa bwanakyegha era kwidha kumala bwa daakika (90) kyenda edhakafubo maiso-ku-maiso mu yafeesi eyiyo, amaka oba ekifo n'ekiseera ekindi ekikusanhusa iwe mwene. Ezira byekango/bitisa bimanhiibwa oba ebisuubirwa mu kwetabakwo mu kunoonereza kuno. Ebikubuzibwa bya buliidhobuliidho (okugeza nga abaghala abaguna abali amabunda / abalinda okuzaala bali na byetaago kika ki mu kiketezo kyo?). Oyinza okweghala okwiramu ekibuuzo kyonakyoona kyoghulira mule nga tiwandiyenze kukiiramu. Ebidhuubo byonnaagha byonabyona biidha kutwalibwa nga bya kyaama era biidha kubungibwa ghalala n'okwiramu kwa abaneetabamu abandi. Tiidha kulaalaisa / kugabana ku bilomboodho byennafuna okuva mu kafubo kano niiwe. Okwongera kw'ekyo, toidha kumanhiibwa na liina mu bighandiiko byange oba mu kughaya kwonakwona, lipooti oba ebighandiiko ebinaava mu musomo guno. Ebidhuubo ebinaasolozebwa mu musomo guno biidha kukuumbwa okumala entangama ya myaka 5 (etaamu) mu yafeesi ya Supavaiza wange mu Yunavasite ya Waterloo. Okukwebaza olw'ebiseera byo n'okwetaba mu musomo guno, oidha kufunayo 10,000/= (silingi dha Uganda).

Singa bw'omala okufuna embaluwa eno, obaaku n'ebibuuzo ku kunoonereza kuno, oba oyenda kumanha ebisingagho okukuyamba okusalagho ku ky'okwetabamu, oli waidembe okutuukirira Polofeesa Rhona Hanning ku rhanning@uwaterloo.ca (1-519-888-4567, Oluyungiro 35685) oba Dr. Gloria Seruwagi ku gkseruwagi@gmail.com (0774700111).

Ndi kwenda okukukakasa nti okunoonereza kuno kulingiibwamu era kumaze okukakasibwa mu mpisa enkalamu okwabitira mu kakiiko k'empisa y'okunoonereza aka TASO, Kanso ya Uganda eya Sayansi ni Tekinologiya, na Kakiiko k'empisa y'okunoonereza aka Yunavasite ya Waterloo. Wairenga kili kityo, okusalagho okwetabamu kukwo. Bw'obaamu ni by'okoba oba ebikusaala ebiviriire mu kwetabakwo mu kunoonereza kuno, oli waidembe okutuukirira Mr. Bakanda Celestin owa Kakiiko ka TASO ku 0752 774178; Dr. Julius Ecuru owa Kanso ya Uganda eya Sayansi ni Tekinologiya ku 0414-70550; oba Dr. Maureen Nummelin mu Yafesi ya Yunavasite ya Waterloo ekola ku by'empisa dh'okunoonereza aliku Maureen.nummelin@uwaterloo.ca (1-519-888-4567, Oluyungiro 36005).

Weebale obuyambi bwo mu kunoonereza kuno.

Ninze mwene,

Josephine Nabugoomu (Omusomi wa PhD mubyo Bulamu bwa Lukale).

Isimu: 0701-700790; email: jnabugoomu@uwaterloo.ca

AKAIKILIZO / OKWIKIRIZA

Nze ndikiriza okwetaba mu kafubo maiso-ku-maiso akali kukolebwa Josephine Nabugoomu owomu Isomero lyo bulamu bwa Lukale ne Nkola dho Bulamu ku Yunavasite ya Waterloo nga alungamizibwa ba Kakensa Polofeesa Rhona Hanning ni Gloria Seruwagi. Nze nsazegho nga nsinziira ku kumanhisibwa kwenfunie mu mbaluwa eitootola era mbaire n'omukisa okufuna okutegeezebwa okusingakugho kwennhenze ku kunoonereza kuno. Nga eyetaba mu kunoonereza kuno, nkitegeera nti ndidha kusuubirwa okwetaba mu kafubo ka daakika 90 era nti ndi waidembe obutairamu/obutayanhukula kibuzo kyonakyoona, singa mba nsazegho ntyo. Ebidhuubo byonabyona byennagha biidha kuumibwa mu bwesigwa/kyama era tiidha kumanhikibwa mu ngeri yo okwitootolwa, okulalaisa, lipooti oba ebyapa ebiva mu mulimo guno. Nkitegeera nti ndi waidembe okuva mu kunoonereza kuno / okutoolayo okwikira kwange ekiseera kyonakyoona nga nsaba nti akafubo keemerezebwe oba nti okuyogera kwange kutoolebwemu.

Ndhikiriza nti okunoonereza kuno kufunie olukusa okuva mu Kakiiko k'ebiyokunoonereza aka Yunivasite ya Waterloo mu Canada era nti nsobola okusaba mulala ku banoonereza okungemagania n'omulala / owundi ali ku kakiiko singa mba ne ebyokukoba oba ebinsaala ku kwetaba kwange mu kunoonereza kuno.

Okwikiriza okwetaba mu kunoonereza kuno n'okuta omukono gwange ku kaikilizo kano /okwikiriza kuno, tili kughaayo bweghe bwange mu mateeka oba okudembula abali kunoonereza oba amatedekero agakilimu olw'obuvunaazibwa bwaibwe mu mateeka n'obwobukugu.

LIINA LY'OYO ALI KWETABAMU: _____

Mukono gw'oyo ali kwetabamu: _____

Singa muzaire/dhaadha/Muka tasobola kusoma oba kughandiika, basobola okukozesa nukuta X ku lukoloboze luno ghaifo era Omunoonereza yalamba mu kabokisi eifo okulaga ati okwikiriza kwakolebwa mu kwogera

Okwikira kwa yogerwa Muzaire/Dhaadha/Muka

Lunaku: _____

Liina lya Munoonereza: _____

Mukono gwa Munoonereza: _____

Lunaku: _____

*Translated by Cornelius Wambi Gulere; Lusoga Language Consultant; P.O Box 116
Busembatia / Makerere University Department of Literature P.O. box 7062 Kampala.
Telephone: 0776530512; email: gulerefoundation@gmail.com*

APPENDIX V: INTERVIEW GUIDES



UNIVERSITY OF WATERLOO
FACULTY OF APPLIED HEALTH SCIENCES

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Uwaterloo.ca/public-health-and-health-systems

INDIVIDUAL INTERVIEW GUIDE AND QUESTIONS FOR PREGNANT ADOLESCENT MOTHERS

Anticipated Start Date: April, 2016

Facilitator's Welcome: My name is Josephine Nabugoomu and I am the facilitator of our discussion today. As you may have heard or read from the information provided, I am carrying out a study into the determinants of adolescent maternal and child health, in your community. Welcome and thank you for volunteering to take part in this interview. You have been asked to participate because your opinions are important.

Introduction: This interview is designed to gain insight into how we can improve the health and wellbeing of adolescent mothers by understanding their needs, barriers, opportunities, and supports. The interview will take no more than 45 minutes.

Confidential: I would like to assure you all that this discussion will be confidential. The recorded tapes will be kept in a locked facility at the study office in Mukono until they are transcribed word-for-word (with the exception of personal identifiers), then they will be destroyed. So the transcribed notes of this interview will not contain any personal identifiers that would link you to the statements being made. You should try to answer and comment as accurately and truthfully as possible. If there are any questions or discussions that you do not wish to answer or participate in, you do not have to do so.

May I turn on the tape recorder as we continue with our discussion?

Ground Rules

- ✓ There are no right or wrong answers
- ✓ You do not have to speak in any particular order
- ✓ Do you have any questions?
- ✓ OK, let's begin

Introduction of Informant:

First, I would like us all to introduce ourselves. As I said earlier, my name is Josephine and I'll let my colleague here [a Recording Assistant] introduce herself.

- Can you please tell us your name and age?
- Also please kindly tell me your highest education qualification?
- Please let me know the name of this village, county and district?
- Please tell me how long you have stayed in this place?
- Please tell me what number of pregnancy is this for you and how old is it?
- Please kindly inform me if you are married or not (*If yes, is she staying with husband or other relatives? Let her specify please*).

Topical Guide Questions:

Needs of Adolescent Mothers

1. Where do you get health or medical care? Why?
 - a) *What is easy and difficult about getting that health care?*
 - b) *Do you attend ANC? If not, why?*
 - c) *Who escorts you to Hospital?*
 - d) *What barriers do you face in trying to ANC services?*
 - e) *Who decides for you to attend ANC services?*
 - f) *What services are you offered in your health facility during antenatal visits? (refer to questionnaire and ask for explanations).*
 - g) *Have you ever been visited at your home by a medical staff or teachers during this time of pregnancy? If YES, when and what are the visits about?*
2. What are the general attitudes on (married or unmarried) pregnant adolescent girls in this area?
Probe: how they are treated, supported, mistreated, etc.
 - a) *Are you provided with food by your family members? Please explain more about.....*
 - b) *Do you have a job? Are you given financial help by your husband or family members?*
 - c) *Whom do you depend on?*
 - d) *Do you have any vocational skills you are using to for economic gains?*
 - e) *What barriers do you face in trying to enhance your economic wellbeing?*
3. Where would you prefer to deliver your baby? Why? Who decides on this?
4. What foods are mostly eating now that you are pregnant? Explain...
5. Please tell me about the positive aspects about your health centre and schools and the staff members in how they handle pregnant or lactating adolescent mothers?

Health Indicators, Measurement, and Translation

6. What measurements and tests do the medical personnel carry out on you as you are pregnant?
(refer to questionnaire and ask for explanations).

Education Needs of Adolescent Mothers

7. Are you in school?
Probes: What is easy/difficult about staying or not in school when pregnant?
How do other students treat you? Do you plan to go back to school later? (what is your plan?)
8. Can you please let me know of another young mother who is pregnant and may be willing to share with me their views? *Is there anything else you would like to share with me as regards the interview we have had?*

Conclusion by Facilitator

- Thank you for participating.
- Your opinions will be a valuable asset to the study.
- I hope you have found the discussion interesting.
- In summary, our discussion involved..... (fill in after interview).
- If you have any feedback regarding your participation in this interview, please contact me or supervisors, Professor Rhona Hanning and Dr. Gloria Seruwagi.
- I would like to remind you that all discussions we have had today will be confidential.
- Please sign for some money to compensate for your time.
- Thank you so much for taking part in this interview.

LUYUNGIO V: OKULUNGAMYA KW'AKAFUBO



UNIVERSITY OF WATERLOO
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EBIBUZO BY'OKULUNGAMYA AKAFUBO N'ABAGHALA ABAGUNA ABALI AMABUNDA NGA ATE BAZAALAKU

Olunaku olusuubirwa okutandikibwaku: Apuli, 2016

Okusangaaza: Ninze Josephine Nabugoomu era ninze mulungama wa kafubo kano olwaleero. Nga bwe muyinza okuba omukiwuliire oba mukisomyeku mu bighandiiko ebibagheereibwa, Ndi kunoonenkereza ku biviriraku obulamu bwa abaguna abazaire n'abaana, mu kyalo kyo. Nkusangaliire era nkwebaza olwokweghayo okwetaba mu kafubo kano. Osabiibwa okwetabamu kubanga ebiloghoozo byo bya mugaso inho.

Okuyandha ensonga: Akafubo kano kategekebwa okufuna kutegeera ngeri ki yetusobola okugondhoolamu obulamu n'embeera ya abaghala abaguna abazaire nga tutegeera ebyetaago byaibwe, ebiziyizo, emikisa n'obughagizi bwe bali nabwo. Akafubo kaidha kumala daakiika edhitaswiika 45.

Nga bya kyama: Nnhenda kukugumya nti ebinayogerwaku byonabyona biidha kukuumibwa nga bya kyama. Obutambi obuliku amaloboozi bwidha kukuumibwa mu kisenge ekiigale mu yafesi yaife eye Mukono okutuusa bwe binaghanulwaku kigambo-ku-kigambo (okutoolaku ebyo ebikulaga iwe kyoli), oluvainhima obutambi bwidha kwokebwa. Kale obughandiike mu kafubo kano tibwidha kubaamu kilaga kiki iwe kyoli era ekisobola okukwekusaku waire. Oli n'okugezaku okwiramu mu ngeri entuufu era ematiza nga bw'osobola. Bw'eba eliyo ebibuuzo oba ekyokwogeraku kyo tayenda kwiramu oba kwetabamu, tolima kukikola.

Buti nteeku akatambi akawunga amaloboozi nga bwe tweyongera okughaya?

Enkola yetunaagiiraku

- ✓ Ghazira kwiramu kutuufu oba kutali kutuufu
- ✓ Tolina kwogera mu lugobo oba mungeri entegeke
- ✓ Oliku nibyeweebuza?
- ✓ Kale nini tutandiike

Okuyandha ensonga y'omuntu ali kwebuuzibwaku:

Okusooka, Nandiyenze tweyandhule. Nga bwe nakobyeku eira, ninze Josephine era nd'ha kuleka munange ono yeena yeyandhule [omuyambi ali kughandiika].

- Bambi osobola okutukoberaku amaina n'emyaka gyo?
- Era bambi otumanhise obwegereze bwe wafuna obusinga kuba bwa ghaigulu? / Wafuna bwegereze ki obusinga kuba bwa ghaigulu?
- Mmanhisa /Nkobera ku liina lye kyalo, eisaza n'ekiketezo kino?
- Nkobera ku myaka gyomaze nga oli mu kisenge/kyalo kino?
- Bambi nkobera luno luzaalo lwo lwa kumeka era lwa myezi emeka?
- Bambi nkoberaku oba oli mufumbo oba mbe (*Bw'oba iyi, buuzo oba aba ghalala ni iba oba aba n'abenganda dhe abandi? Musabe akyatule*).

Ebibuuzo ebyokulungamya akafubo:

Ebyetaago bya Abaghala abaguna abazaire

9. Ofunagha obwidhaandhabi oba ebyobulamu? Lwaki?
- h) Kiki ekyangu oba ekizibu mu kufuna owiidhandhabi obwo?
 - i) Oja mu antenento? Bw'oba toja, lwaki?
 - j) Aani akugherekeraku okuja mu ilwaliro?
 - k) Biki ebikuziyiza nga oli kugezaku okutuukirira obwidhaandhabi bwa entenento?
 - l) Aani akusaliragho okuja mu entenento?
 - m) Ofuna kulabirirwa bwa ngeri ki mu ilwaliro nga ogiire ku entenento? (**linga ku lukalala lw'ebibuuzo era osabe okwinhonholwa**).
 - n) Abasawo oba abasomesa bakukyaliraku ghaka ewuwo mu biseera bino nga olinda? Bw'okoba IYI, baakukyalira li era okukyala kwali kugema ku ki?
10. Kiki ekiloghoozebwa ku abaghala abaguna abalinda abali mu kyalo kino (*bafumbo n'abatali bafumbo*)?
- Yongera okubuuliriza: ku ngeri yebabisibwamu, yebaghagirwa, yebatugumbulwa, n'ebindi.*
- f) Ab'omumaka go bakugha emere? Bambi yongera okunnhinhonhola ku.....
 - g) Oli n'omulimo? Obuyambi bwa sente obufuna ku balo oba ab'omumakaago?
 - h) Ani yewesigama ku?
 - i) Oliku n'obumanhirivu bwe ebyemikono by'ofunamu empiiya/ esente?
 - j) Biki ebikuziyiza nga ogezaku okweyamba mu mbeera ey'ebyenfuna?
11. Omwanawo wandiyenze kumuzaalirawa? Lwaki? Aani asalawo ku kino?
12. Oli kusinga kulya emere kika ki buti nga bw'oli amabunda? *Inhonhola...*
13. Bambi nkobera ebilungi ebifa ku ilwaliro lyo n'eisomero n'abakozi abalimu ku ngeri yebagemamu abaghala abaguna abazaire abalinda n'abayonsa?

Ebilaga obulamu, ebipimo n'ebivaamu

14. Bipimo na kukeberwa kwa ngeri ki abasawo kwe baakukolaku nga oli mabunda? (**linga ku lukalala lw'ebibuuzo era osabe okwinhonholwa**).

Ebyetaago by'obwegerese bwa Abaghala abaguna abazaire

15. Oli mu isomero?
- Yongera okubuuliriza: Kiki ekyangu/ekizibu ku kusigala oba okuja ku isomero nga oli mabunda? Abasomi abandi bakubisa batya? Otegeka owirayo ku isomero oluvainhuma? (entegekayo eli ki?)*
16. Nkoberaku mughala mwino owundi ali amabunda era ayinza okwikiria okughayaku ninze ku by'aloghooza? *Eliyo ekintu ekindi kye wandiyenze okwogeraku ninze ekigema ku kafubo kano ketuvamu?*

Okuwumbawumbaku okuva y'omulungamya

- Weebale kwetaba mu musomo guno.
- Ebiloghoozo byo biidha kuba bya mugaso inho mu kunoonereza kuno.
- Ndhuuba nti akafubo kano kakusanwisa.
- Mu bufunze, okwogera kusinze kugema ku (idhuzamu nga akafubo kawaire).
- Bw'oba oba oli ni kyokoba ku kwetaba mu kafubo kuno, bambi ntuukirira oba abalungamya, Professor Rhona Hanning ni Dr. Gloria Seruwagi.
- Nnhenda kukwidhukiza nti byetwogereku olwaleero byonabyona biidha kukuumbwa nga bya kyama.
- Bambi taaku ghano oMukono oikirize sente okulighira ebiseera byo.
- Weebale inho okwikiriza okwetaba mu kafubo kano.

Translated by Cornelius Wambi Gulere; 0776530512; gulerefoundation@gmail.com



INDIVIDUAL INTERVIEW GUIDE AND QUESTIONS FOR LACTATING ADOLESCENT MOTHERS OF INFANTS 1-6 MONTHS

Anticipated Start Date: April, 2016

Facilitator's Welcome: My name is Josephine Nabugoomu and I am the facilitator of our discussion today. As you may have heard or read from the information provided, I am carrying out a study into the determinants of adolescent maternal and child health, in your community.

Welcome and thank you for volunteering to take part in this interview. You have been asked to participate because your opinions are important.

Introduction: This interview is designed to gain insight into how we can improve the health and wellbeing of adolescent mothers and their infants, by understanding their needs, barriers, opportunities, and supports. The interview will take no more than 45 minutes.

Confidential: I would like to assure you all that this discussion will be confidential. The recorded tapes will be kept in a locked facility at the study office in Mukono until they are transcribed word-for-word (with the exception of personal identifiers), then they will be destroyed. So the transcribed notes of this interview will not contain any personal identifiers that would link you to the statements being made. You should try to answer and comment as accurately and truthfully as possible. If there are any questions or discussions that you do not wish to answer or participate in, you do not have to do so.

May I turn on the tape recorder as we continue with our discussion?

Ground Rules

- ✓ There are no right or wrong answers
- ✓ You do not have to speak in any particular order
- ✓ Do you have any questions?
- ✓ OK, let's begin

Introduction of Informant:

First, I would like us all to introduce ourselves. As I said earlier, my name is Josephine and I'll let my colleague here [a Recording Assistant] introduce herself.

- Can you please tell us your name and age?
- Also please kindly tell me your highest education qualification?
- Please let me know the name of this village, county and district?
- Please tell me how long you have stayed in this place?
- Please tell me the rank of this baby among any children you have and how old it is?
- Please kindly inform me if you are married or not (*If yes, is she staying with husband or other relatives? Let her specify please*).

Topical Guide Questions:

Needs of Adolescent Mothers

1. Where do you get health or medical care? Why?
 - a) *What is easy and difficult about getting that health care?*
 - b) *Do you attend postnatal care? If not, why?*
 - c) *Who escorts you to Hospital?*
 - d) *What barriers do you face in trying to postnatal care services?*
 - e) *What services are you offered in your health facility during postnatal visits? (refer to questionnaire and ask for explanations).*
 - f) *Have you ever been visited at your home by a medical staff or teachers after giving birth? If YES, when and what are the visits about.*
2. What are the general attitudes on (married or unmarried) pregnant adolescent girls in this area?
Probe: how they are treated, supported, mistreated, etc.
 - a) *Are you provided with food by your family members? Please explain more about.....*
 - b) *Do you have a job? Are you given financial help by your husband or family members?*
 - c) *Whom do you depend on?*
 - d) *Do you have any vocational skills you are using to for economic gains?*
 - e) *What barriers do you face in trying to enhance your economic wellbeing?*
3. Where did you deliver your baby? Why? Who decided on this?
4. What are your views about exclusive breastfeeding? *What do you prefer in line with exclusive breastfeeding? What problems do you find with practicing exclusive breastfeeding?*
5. What foods are mostly eating now after pregnancy? *Explain...*
6. Please tell me about the positive aspects about your health centre and schools and the staff members in how they handle pregnant or lactating adolescent mothers?

Health Indicators, Measurement, and Translation

7. What measurements and tests do the medical personnel carry out on you and your infant? (*refer to questionnaire and ask for explanations*)?

Education Needs of Adolescent Mothers

8. Are you in school?
*Probes: What is easy/difficult about staying or not in school after giving birth?
How do other students treat you? Do you plan to go back to school later? (what is your plan?)*
9. Can you please let me know of another young mother with a baby of 1-6 months who may be willing to share with me their views? *Is there anything else you would like to share with me as regards the interview we have had??*

Conclusion by Facilitator

- Thank you for participating.
- Your opinions will be a valuable asset to the study.
- I hope you have found the discussion interesting.
- In summary, our discussion involved..... (fill in after interview).
- If you have any feedback regarding your participation in this interview, please contact me or supervisors, Professor Rhona Hanning and Dr. Gloria Seruwagi.
- I would like to remind you that all discussions we have had today will be confidential.
- Please sign for some money to compensate for your time.
- Thank you so much for taking part in this interview.



**EBIBUZO BY'OKULUNGAMYA AKAFUBO N'ABAGHALA ABAGUNA
ABAZAIRE ABAYONSA ABAANA AB'EMYEZI 1 - 6**

Olunaku olusuubirwa okutandikibwaku: Apuli, 2016

Okusangaaza: Ninze Josephine Nabugoomu era ninze mulungamywa wa kafubo kano olwaleero. Nga bwe muyinza okuba omukiwuliire oba mukisomyeku mu bighandiiko ebibagheereibwa, Ndi kunoonenkereza ku biviriraku obulamu bwa abaguna abazaire n'abaana, mu kyalo kyo.. Nkusangaliire era nkwebaza olwokweghayo okwetaba mu kafubo kano. Osabiibwa okwetabamu kubanga ebiloghoozo byo bya mugaso inho

Okuyandha ensonga: Akafubo kano kategekebwa okufuna kutegeera ngeri ki yetusobola okugondhoolamu obulamu n'embeera ya abaghala abaguna abazaire n'abaana baibwe abaghere, nga tutegeera ebyetaago byaibwe, ebiziyizo, emikisa n'obughagizi bwe bali nabwo. Akafubo kaidha kumala daakiika edhitaswiika 45.

Nga bya kyama: Nnhenda kukugumya nti ebinayogerwaku byonabyona biidha kukuumbwa nga bya kyama. Obutambi obuliku amaloboozi bwidha kukuumbwa mu kisenge ekiigale mu yafesi yaife eye Mukono okutuusa bwe binaghanulwaku kigambo-ku-kigambo (nga otoireku ebimanhiso ebibyo iwe), memale byokyebwe. Kale obughandiike mu kafubo kano tibwidha kubaamu kilaga kiki iwe kyoli era ekisobola okukwekuusaku waire. Oli n'okugezaku kwiramu mu ngeri entuufu era ematiza nga bw'osobola. Bw'eba eliyo ebibuuzo oba ekyokwogeraku kyo tayenda kwiramu oba kwetabamu, tolina kukikola.

Buti nteeku akatambi akawunga amaloboozi nga bwe tweyongera okughaya?

Enkola yetunaagiraku

- ✓ Ghazira kwiramu kutuufu oba kutali kutuufu
- ✓ Tolina kwogera mu lugobo oba mungeri entegeke
- ✓ Oliku nibyewebuuza?
- ✓ Kale nini tutandiike

Okuyandha ensonga y'omuntu ali kwebuuzibwaku:

Okusooka, Nandiyanze tweyandhule. Nga bwe nakobyeku eira, ninze Josephine era nd'ha kuleka munange ono yeena yeyandhule [omuyambi ali kughandiika].

- Osobola okutukoberaku amaina n'emyaka gyo?
- Era bambi otumanhise obwegerese bwe wafuna obusinga kuba bwa ghaigulu?
- Mmanhisaku ku liina lye kyalo, eisaza n'ekiketezo kino?
- Nkoberaku emyaka gyomaze nga oba mu ksingai kino?
- Nkoberaku omwana ono wakumeka mu baana bo era wa myaka emeka?
- Bambi nkoberaku oba oli mufumbo oba mbe (*Bw'oba iyi, aba ghalala ni iba oba ab'enganda dhe abandi? Musabe akyatule*).

Ebibuuzo ebyokulungamya akafubo:

Ebyetaago bya Abaghala abaguna abazaire

10. Ofuna gha obwidhandhabi oba eby'obulamu? Lwaki?

g) *Kiki ekyangu oba ekizibu mu kufuna owiidhandhabi obwo?*

- h) Ojaku mu kulabirirwa nga omaze okuzaala? Bw'oba toja, lwaki?
 i) Aani akugherekeraku okuja mu ilwaliro?
 j) Biki ekubiziyiza nga ogezaku okuja mu ilwaliro kulabirirwa nga omaze okuzaala?
 k) Kulabirirwa bwa kika ki bw'ofuna mu ilwaliro mu kulabirirwa okwolvainhuma lw'okuzaala? (**linga ku lukalala lw'ebibuuzo era osabe okwinhonholwa**).
 l) Wakyalirwaku ghaka wo omusawo oba omusomesa oluvainhuma lw'okuzaala? Bw'okoba IYI, baakukyalira li era okukyala kwali kugema ku ki.
11. Kiki ekiloghoozebwa ku abaghala abaguna abalinda abali mu kyalo kino (*bafumbo n'abatali bafumbo*)?
 Yongera okubuuliriza: ku ngeri yebabisibwamu, yebaghagirwa, yebatugumbulwa, n'ebindi.
 f) Ab'omumaka go bakugha emere? Bambi yongera okunnhinhonhola ku.....
 g) Oli n'omulimo? Obuyambi bwa sente obufuna ku balo oba ab'omumakago?
 h) Ani yewesigama ku?
 i) Oliku nobumanhirivu bwe ebyemikono by'ofunamu empiiya/ esente?
 j) Biki ebikuziyiza nga ogezaku okweyamba mu mbeera ey'ebyenfunu?
12. Omwanawo wamuzaalira gha? Lwaki? Aani eyasalawo ku kino?
 13. Okwonsa kwonkakwonka okuloghozaku ki? Kiki kyoyendaku mu ky'okwonsa kwonkakwonka? Bizibu ki by'oba nabyo mu ky'okwonsa kwonkakwonka?
 14. Osinga kulya mmere ki nga omaze okuzaala? Inhonhola...
 15. Bambi nkobera ebilungi ebifa ku ilwaliro lyo n'eisomero n'abakozi abalimu ku ngeri yebagemamu abaghala abaguna abazaire abalinda n'abayonsa?

Ebilaga obulamu, ebipimo n'ebivaamu

16. Bipimo ki na kukeberwa kwa ngeri ki abasawo kwe bakukolaku iwe n'omwanawo? (*refer to questionnaire and ask for explanations*)?

Ebyetaago by'obwegerese bya Abaghala abaguna abazaire

17. Oli mu isomero?
 Yongera okubuuliriza: Kiki ekyangu/ekizibu ku kusigala oba mu isomero oluvainhuma lw'okuzaala?
 Abasomi abandi bakubisa batya? Otegeka owirayo ku isomero oluvainhuma?(entegekayo eli ki?)
18. Bambi oyinza okunkoberaku abaghala abazaire abandi abali n'abaana abali ne myezi 1 - 6 abayinza okuba abetegefu okugha ebiloghoozo byaibwe? Eliyo ekintu ekindi kye wandiyenze okuyogeraku ninze ekigema ku kafubo kano ketuvamu?

Okuwumbawumbaku okw'omulungamya

- Weebale okwetaba mu musomo guno.
- Ebiloghoozo byo biidha kuba bya mugaso inho mu kunoonereza kuno.
- Ndhuuba nti akafubo kano kakusanwisa.
- Mu bufunze, okwogera kusinze kugema ku (idhuzamu nga akafubo kawaire).
- Bw'oba oba oli ni kyokoba ku kwetaba mu kafubo kuno, bambi ntuukirira oba abalungamya, Professor Rhona Hanning ni Dr. Gloria Seruwagi.
- Nnhenda ku kwidhukiza nti byetwoegeireku olwaleero byonabyona biidha kukuumbwa nga bya kyama.
- Bambi taaku ghano oMukono oikirize sente okulighira ebiseera byo.
- Weebale inho okwikiriza okwetaba mu kafubo kano.

Translated by Cornelius Wambi Gulere; 0776530512; gulerefoundation@gmail.com



INDIVIDUAL INTERVIEW GUIDE AND QUESTIONS FOR LACTATING ADOLESCENT MOTHERS OF INFANTS >6-12 MONTHS

Anticipated Start Date: April, 2016

Facilitator's Welcome: My name is Josephine Nabugoomu and I am the facilitator of our discussion today. As you may have heard or read from the information provided, I am carrying out a study into the determinants of adolescent maternal and child health, in your community. Welcome and thank you for volunteering to take part in this interview. You have been asked to participate because your opinions are important.

Introduction: This interview is designed to gain insight into how we can improve the health and wellbeing of adolescent mothers and their infants, by understanding their needs, barriers, opportunities, and supports, and challenges faced in serving them. The interview will take no more than 45 minutes.

Confidential: I would like to assure you all that this discussion will be confidential. The recorded tapes will be kept in a locked facility at the study office in Mukono until they are transcribed word-for-word (with the exception of personal identifiers), then they will be destroyed. So the transcribed notes of this interview will not contain any personal identifiers that would link you to the statements being made. You should try to answer and comment as accurately and truthfully as possible. If there are any questions or discussions that you do not wish to answer or participate in, you do not have to do so.

May I turn on the tape recorder as we continue with our discussion?

Ground Rules

- ✓ There are no right or wrong answers
- ✓ You do not have to speak in any particular order
- ✓ Do you have any questions?
- ✓ OK, let's begin

Introduction of Informant:

First, I would like us all to introduce ourselves. As I said earlier, my name is Josephine and I'll let my colleague here [a Recording Assistant] introduce herself.

- Can you please tell us your name and age?
- Also please kindly tell me your highest education qualification?
- Please let me know the name of this village, county and district?
- Please tell me how long you have stayed in this place?
- Please tell me the rank of this baby among any children you have and how old it is?
- Please kindly inform me if you are married or not (*If yes, is she staying with husband or other relatives? Let her specify please*).

Topical Guide Questions:

Needs of Adolescent Mothers

1. Where do you get health or medical care? Why?
 - a) *What is easy and difficult about getting that health care?*
 - b) *Do you attend postnatal care? If not, why?*
 - c) *Who escorts you to Hospital?*
 - d) *What barriers do you face in trying to receive postnatal care services?*
 - e) *Who decides for you to attend these postnatal care services?*
 - f) *What services are you offered in your health facility during postnatal visits? (refer to questionnaire and ask for explanations).*
 - g) *Have you ever been visited at your home by a medical staff or teachers after giving birth? If YES, when and what are the visits about.*
2. What are the general attitudes on (married or unmarried) adolescent mothers in this area?
Probe: how they are treated, supported, mistreated, etc.
 - a) *Are you provided with food by your family members? Please explain more about.....*
 - b) *Do you have a job? Are you given financial help by their husbands or family members? Whom do you depend on?*
 - c) *Do you have any vocational skills they are using to for economic gains?*
 - d) *What barriers do you face in trying to enhance your economic wellbeing?*
3. Where did you deliver your baby? Why? Who decided on this?
4. Which foods to feed your baby at this age after 6 months? *Probe about consistency. Explain...*
5. Does the health facility provide young mothers with food preparation hands-on skills in the area of complementary feeding?
6. Please tell me about the positive aspects about your health centre and schools and the staff members in how they handle lactating adolescent mothers?

Health Indicators, Measurement, and Translation

7. What measurements and tests do the medical personnel carry out on you and your infant? (*refer to questionnaire and ask for explanations*).

Education Needs of Adolescent Mothers

8. Are you in school?
Probe: What is easy/difficult about staying or not in school when you have a baby?
How do other students treat you? Do you plan to go back to school later? (your plan?)
9. Can you please let me know of another young mother with a baby of >6-12 months who may be willing to share with me their views? *Is there anything else you would like to share with me as regards the interview we have had?*

Conclusion by Facilitator

- Thank you for participating.
- Your opinions will be a valuable asset to the study.
- I hope you have found the discussion interesting.
- In summary, our discussion involved..... (fill in after interview).
- If you have any feedback regarding your participation in this interview, please contact me or supervisors, Professor Rhona Hanning and Dr. Gloria Seruwagi.
- I would like to remind you that all discussions we have had today will be confidential.
- Please sign for some money to compensate for your time.
- Thank you so much for taking part in this interview.



**EBIBUZO BY'OKULUNGAMYA AKAFUBO N'ABAGUNA ABAZAIRE
ABAYONSA ABAANA AB'EMYAKA >6 - 12**

Olunaku olusuubirwa okutandikibwaku: Apuli, 2016

Okusangaaza: Ninze Josephine Nabugoomu era ninze mulungamywa wa kafubo kano olwaleero. Nga bwe muyinza okuba omukiwuliire oba mukisomyeku mu bighandiiko ebibagheereibwa, Ndi kunoonenkereza ku biviriraku obulamu bwa abaguna abazaire n'abaana, mu kyalo kyo. Nkusangaliire era nkwebaza olwokweghayo okwetaba mu kafubo kano. Osabiibwa okwetabamu kubanga ebiloghoozo byo bya mugaso inho

Okuyandha ensonga: Akafubo kano kategekebwa okufuna kutegeera ngeri ki yetusobola okugondhoolamu obulamu n'embeera ya abaghala abaguna abazaire n'abaana baibwe abaghere, nga tutegeera ebyetaago byaibwe, ebiziyizo, emikisa n'obughagizi bwe bali nabwo, n'obukalubo bwe bayagaana nga babagheereza. Akafubo tikaidha kuswika daakiika 45.

Nga bya kyama: Nnhenda kukugumya nti ebinayogerwaku byonabyona biidha kukuumbwa nga bya kyama. Obutambi obuliku amaloboozi bwidha kukuumbwa mu kisenge ekiigale mu yafesi yaife eye Mukono okutuusa bwe binaghanulwaku kigambo-ku-kigambo (nga otoireku ebimanhiso ebibyo iwe), memale byokyebwe. Kale obughandiike mu kafubo kano tibwidha kubaamu kilaga kiki iwe kyoli era ekisobola okukwekusaku waire. Oli n'okugezaku okwiramu mu ngeri entuufu era ematiza nga bw'osobola. Bw'eba eliyo ebibuuzo oba ekyokwogeraku kyo tayenda kwiramu oba kwetabamu, tolina kukikola.

Buti nteeku akatambi akawunga amaloboozi nga bwe tweyongera okughaya?

Enkola yetunaagiraku

- ✓ Ghazira kwiramu kutuufu oba kutali kutuufu
- ✓ Tolina kwogera mu lugobo oba mungeri entegeke
- ✓ Oliku nibyewebuuza?
- ✓ Kale nini tutandiike

Okuyandha ensonga y'omuntu ali kwebuuzibwaku:

Okusooka, Nandiyenze tweyandhule. Nga bwe nakobyeku eira, Ninze Josephine era nd'ha kuleka munange ono yeena yeyandhule [omuyambi ali kughandiika].

- Bambi osobola okutukoberaku amaina n'emyaka gyo?
- Era bambi otumanhise obwegerese bwe wafuna obusinga kuba bwa ghaigulu?
- Mmanhisa ku liina lye kyalo, eisaza n'ekiketezo kino?
- Nkoberaku emyaka gyomaze nga oba mu ksingai kino?
- Nkoberaku omwana ono wakumeka mu baana bo era wa myaka emeka?
- Bambi nkoberaku oba oli mufumbo oba mbe (*bw'aba akoba iyi, aba ghalala ni iba oba abenganda dhe abandi? Musabe akyatule*).

Ebibuuzo ebyokulungamya akafubo:

Ebyetaago bya Abaghala abaguna abazaire

10. Ofunagha obwidhaandhabi oba ebyobulamu? Lwaki?

- h) Kiki ekyangu oba ekizibu mu kufuna owiidhandhabi obwo?
 i) Ojaku mu ilwaliro okulabirirwa nga omaze okuzaala? Bw'oba toja, lwaki?
 j) Aani akugherekeraku okuja mu ilwaliro?
 k) Kiki ekikuziyiza nga ogezaku okufuna okulabirirwa kw'oluvainhuma lw'okuzaala?
 l) Aani akusaliragho ekokuja mu kulabirirwa kw'oluvainhuma lw'okuzaala?
 m) Kulabirirwa bwa kika ki kw'ofuna mu ilwaliro mu kulabirirwa okwolvainhuma lw'okuzaala? (**linga ku lukalala lw'ebibuuzo era osabe okwinhoholwa**).
 n) Omusawo oba omusomesa yakukyaliraku ghakawo oluvainhuma lw'okuzaala? Bw'okoba IYI, baakukyalira li era okukyala kwali kugema ku ki.
11. Kiki ekiloghoozebwa ku baghala abaguna abazaire (*abafumbo n'abatali bafumbo*) mu kyalo kino? *Yongera okubuuliriza: ku ngeri yebabisibwamu, yebaghagirwa, yebatugumbulwa, n'ebindi.*
 e) Ab'omumaka go bakugha emere? Bambi yongera okunnhinhohola ku.....
 f) Oli n'omulimo? Balo naakugha obuyambi oba ab'omumakago? Ani yewesigamaku?
 g) Oliku n'obumanhirivu bwe eby'emikono bye bafunamu esente dh'okwekulankulania?
 h) Biki ebikuziyiza nga ogezaku okweyamba mu mbeera ey'ebyenfuna?
12. Omwanawo wamuzaalira gha? *Lwaki? Aani eyasalawo ku kino?*
13. Omwanawo omughere omuliisa mmere kika ki poluvainhuma lw'emyezi 6? *Yongera okubuuliriza ku bulungamu bwa kyo. Inhohola...*
14. Eilwaliro ligha abaghala abato abazaire obumanhirivu ku by'entegeka y'emere mu ngeri y'okulongosamu endiisa?
15. Bambi nkobera ebilungi ebifa ku ilwaliro lyo n'eisomero n'abakozi abalimu mu mu ngeri yebagemamu abaghala abaguna abazaire abayonsa?

Ebilaga obulamu, ebipimo n'ebivaamu

16. Bipimo ki na kukeberwa kwa ngeri ki abasawo kwe baakukola iwe n'omwanawo? (*refer to questionnaire and ask for explanations*).

Ebyetaago by'obwegerese bwa Abaghala abaguna abazaire

17. Oli mu isomero?
Yongera okubuuliriza: Kiki ekyangu/ekizibu ku kusigala oba okuja ku isomero nga ozaire omwana?
Abasomi abandi bakubisa batya? Otegeka owirayo ku isomero oluvainhuma? (entegekayo eli ki?)
18. Bambi oyinza okunkoberaku abaghala abazaire abandi abali n'abaana ab'emyezi >6 - 12 abayinza okuba abeetegefu okumpa ku biloghoozo byaibwe? *Eliyo ekintu ekindi kye wandiyenze okwogeraku ninze ekigema ku kafubo kano ketuvamu?*

Okuwumbawumbaku okw'omulungamya

- Weebale okwetaba mu musomo guno.
- Ebiloghoozo byo biidha kuba bya mugaso inho mu kunoonereza kuno.
- Ndhuuba nti akafubo kano kakusanwisa.
- Mu bufunze, okwogera kusinze kugema ku (idhuzamu nga akafubo kawaire).
- Bw'oba oba oli ni kyokoba ku kwetaba mu kafubo kuno, bambi ntuukirira oba abalungamya, Professor Rhona Hanning ni Dr. Gloria Seruwagi.
- Nnhenda ku kwidhukiza nti byetwogeireku olwaleero byonabyona biidha kukuumbwa nga bya kyama.
- Bambi taaku ghano oMukono oikirize sente okulighira ebiseera byo.
- Weebale inho okwikiriza okwetaba mu kafubo kano.

Translated by Cornelius Wambi Gulere; 0776530512; gulerefoundation@gmail.com



INDIVIDUAL INTERVIEW GUIDE AND QUESTIONS FOR MOTHERS AND GRANDMOTHERS OF ADOLESCENT MOTHERS

Anticipated Start Date: April, 2016

Facilitator's Welcome: My name is Josephine Nabugoomu and I am the facilitator of our discussion today. As you may have heard or read from the information letter, I am carrying out a study into the determinants of adolescent maternal and child health, in your community. I know that families are very important to these young mothers.

Welcome and thank you for volunteering to take part in this interview. You have been asked to participate because your opinions are important. I realize you are busy and appreciate your time.

Introduction: This interview is designed to gain insight into how we can improve the health and wellbeing of adolescent mothers by understanding their needs, barriers, opportunities, and supports, and challenges faced in serving them. The interview will take no more than 90 minutes.

Confidential: I would like to assure you all that this discussion will be confidential. The recorded tapes will be kept in a locked facility at the study office in Mukono until they are transcribed word-for-word (with the exception of personal identifiers), then they will be destroyed. So the transcribed notes of this interview will not contain any personal identifiers that would link you to the statements being made. You should try to answer and comment as accurately and truthfully as possible. If there are any questions or discussions that you do not wish to answer or participate in, you do not have to do so.

May I turn on the tape recorder as we continue with our discussion?

Ground Rules

- ✓ There are no right or wrong answers
- ✓ You do not have to speak in any particular order
- ✓ Do you have any questions?
- ✓ OK, let's begin

Introduction of Informant:

First, I would like us all to introduce ourselves. As I said earlier, my name is Josephine and I'll let my colleague here [a Recording Assistant] introduce herself.

- Can you please tell us your name?
- Please let me know the name of this village, county and district?
- Please tell me how long you have stayed in this place?
- Please let me know if you have a pregnant or lactating daughter or granddaughter (*if lactating, ask for infant's age*)?

Topical Guide Questions:

Needs of Adolescent Mothers

1. What do you think are the needs of lactating adolescent girls in this Sub-county of?
 - a. What about in the area of nutrition/food? Are they provided with food/farming land by *their family members*? Please explain more about.....
 - b. What about in the area of finances, employment or income generation? *Do they have any vocational skills they are using to for economic gains? What is your views about financial support to the young mothers? What are the barriers that the young mothers face in trying to enhance their economic wellbeing?*
 - c. What about in the area of health education?
 - i. *Does your daughter attend ANC or postnatal clinics? If not, why? Do you escort her?*
 - ii. *What barriers does she face in trying to receive these services? Who makes the decisions for them to attend these health services?*
 - iii. *Who decides for her to attend these health services?*
 - iv. *Where would you prefer your daughter/granddaughter to deliver the baby? Why?*
 - d. *What are your thoughts about TIBF (including pre-lacteal/lacteal feeds), use of colostrum, EBF for 6 months, complementary feeding? Explain...*
 - e. Does the health facility in this areas provide young mothers with food preparation hands-on skills for feeding the mother or baby?
2. What are the general attitudes on (*married or unmarried*) lactating adolescent girls in this area? *Probe: how they are treated, supported, mistreated, etc.*
3. Please tell me about the positive aspects about your health centre and schools and the staff members in how they handle pregnant or lactating adolescent mothers?

Health Indicators, Measurement, and Translation

4. What measurements and tests do the medical personnel carry out on the mothers and their infants? (*refer to questionnaire and ask for explanations*).

Challenges met in Serving Adolescent Mothers

5. Tell me about any challenges that you as a husband (or parent/grandmother) face in providing services to adolescent mothers and their infants.
Probe: can you please explain.....?

Community Facilities to Support Adolescent Mothers

6. As a family, how have you helped your daughter or granddaughter in the following:
 - a. Economic skills education
 - b. Nutrition education
 - c. Health education
 - d. Food preparation and cookery skills
 - e. Continuation of education
 - f. Other services
Probe: There is no right or wrong answer, just your opinion, can you please explain.....?

Community workers to Support Adolescent Mothers

7. Are there any workers that you know in the community who can help with educating the young mothers in the following? *Please suggest and name these workers.*
- Nutrition education
 - Health education
 - Food preparation and cookery skills
 - Gardening for vegetables
 - Animal husbandry
 - Handcraft making

Probe: Do these workers need special training....?

Probe: Can you please explain what you mean by....?

Supporting Projects in the Area

8. Is there any other project or government program in your community that supports young mothers/and or their infants? *Please explain your answer.....*

Recommendations for Capacity Building

9. Please suggest what can be done so as to improve the health of young mothers and their infants in this Sub-county? *Please explain your answer.....*
10. Can you please let me know of another mother or grandmother in this Sub-county who may be willing to share with me their views? *Is there anything else you would like to share with me as regards the interview we have had?*

Conclusion by Facilitator

- Thank you for participating.
- Your opinions will be a valuable asset to the study.
- I hope you have found the discussion interesting.
- In summary, our discussion involved..... (fill in after interview).
- If you have any feedback regarding your participation in this interview, please contact me or supervisors, Professor Rhona Hanning and Dr. Gloria Seruwagi.
- I would like to remind you that all discussions we have had today will be confidential.
- Please sign for some money to compensate for your time.
- Thank you so much for taking part in this interview.



EBIBUZO BY'OKULUNGAMYA AKAFUBO NI BA MAAMA NI BA DHAADHA ABAKAZI BA ABAGHALA ABAGUNA NA'BAZAIRE

Olunaku olusuubirwa okutandikibwaku: Apuli, 2016

Okusangaaza: Ninze Josephine Nabugoomu era ninze mulungamywa wa kafubo kano olwaleero. As you may have heard or read from the information letter, Ndi kunoonenkereza ku biviiriraku obulamu bwa abaguna abazaire n'abaana, mu kyalo kyo.

Nkusangaliire era nkwebaza olwokweghayo okwetaba mu kafubo kano. Osabiibwa okwetabamu kubanga ebiloghoozo byo bya mugaso inho. Nkitegeera bukalamu nti oli n'ebintu bingi by'olinokukulaku era nkwebaza inho olw'ebiseera byompaire.

Okuyandha ensonga: Akafubo kano kategekebwa okufuna kutegeera ngeri ki yetusobola okugondhoolamu obulamu n'embeera ya abaghala abaguna abazaire nga tutegeera ebyetaago byaibwe, ebiziyizo, emikisa n'obughagizi bwe bali nabwo, n'obukalubo bwe bayagaana nga babagheereza. Akafubo kaidha kutwala daakiika edhitaswika 90.

Nga bya kyama: Nnhenda kukugumya nti ebinayogerwaku byonabyona biidha kuumibwa nga bya kyama. Obutambi obuliku amaloboozi bwidha kuumibwa mu kisenge ekiigale mu yafesi yaife eye Mukono okutuusa bwe binaghanulwaku kigambo-ku-kigambo (nga otoireku ebimanhiso ebibyo iwe), memale byokyebwe. Kale obughandiike mu kafubo kano tibwidha kubaamu kilaga kiki iwe kyoli era ekisobola okukwekusaku waire. Oli n'okugezaku okwiramu mu ngeri entuufu era ematiza nga bw'osobola. Bw'eba eliyo ebibuuzo oba ekyokwogeraku kyo tayenda kwiramu oba kwetabamu, tolina kukikola.

Buti nteeku akatambi akawunga amaloboozi nga bwe tweyongera okughaya?

Enkola yetunaagiraku

- ✓ Ghazira kwiramu kutuufu oba okutali kutuufu
- ✓ Tolina kwogera mu lugobo oba mungeri entegeke
- ✓ Oliku nibyewebuuza?
- ✓ Kale nini tutandiike

Okuyandha ensonga y'omuntu ali kwebuuzibwaku:

Okusooka, Nandiyenze tweyandhule. Nga bwe nakobyeku eira, ninze Josephine era nd'ha kuleka munange ono yeena yeyandhule [omuyambi ali kughandiika].

- Bambi osobola okutukoberaku amaina n'emyaka gyo?
- Mmanhisa ku liina lye kyalo, eisaza n'ekiketezo kino?
- Nkoberaku emyaka gy'omaze nga oba mu ksingai kino?
- Bambi mmanhisa bw'oba ni mughalawo oba mwidhukuluwo ali enda oba ayonsa (*bw'aba ayonsa buuza emyaka gy'omwana omughere*)?

Ebibuuzo ebyokulunganya akafubo:

Ebyetaago bya Abaghala abaguna abazaire

11. Biki by'ologhooza nga ne ebyetaago bya abaghala abaguna abayonsa abali mu igombolola
- Ate biki ebyetaagibwa mu ngeri ey'ebyendya? *Abamaka gaibwe* babawa emere / eitaka ly'okulimiraku? *Bambi yongerera okunnhinhonhola ku.....*
 - Ate ku by'empiiya, emilimo n'ebyokufunamu sente? *Baliku n'obumanhirivu mu by'emikono bye bafunamu esente dh'okwekulankulania? Kiki ky'ologhooza ku bughagizi mu by'empiiya obugheebwa abazaire abaguna abato? Biki ebiziyiza abazaire abaguna abato okugezaku okweyanga mu by'enkulankulana n'embeera enkalamu?*
 - Ate ku by'okwegeresebwa ku by'obulamu?
 - Mughalawo aja mu kulabirirwa kwa antenento n'okwoluvainhuma lw'okuzaala? Bw'oba toja, lwaki? Omugherekeraku?*
 - Bukaluubirivu bwa kika ki bwafuna nga agezaku okufuna okulabirirwa kuno? Aani asalawo eilwaliro lye babe bajemu okufuna okulabirirwa kuno?*
 - Aani asalawo bafune okulabirirwa kuno?*
 - Wandiyenze mughalawo oba mwidhukuluwo kuzaalira gha? Lwaki?*
 - Wandiyenze mughalawo oba mwidhukuluwo kuzaalira gha TIBF (nga mw'otaire ebyndya ebileetera amata), okukozesa amata agasooka amakwafu, EBF okumala emyezi 6, ebyokuliikiriza? Inhonhola...*
 - Eilwaliro ku kyalo kino lisomesa abaghala abato abazaire engeri y'okutegeka n'okulisamu omuzaire oba omwana?
12. Kiki ekiloghoozebwa (abafumbo n'abatali bafumbo) abaghala abaguna abayonsa mu kyalo kino?
Yongerera okubuuliriza: ku ngeri yebabisibwamu, yebaghagirwa, yebatugumbulwa, n'ebindi.
13. Bambi nkobera ebilungi ebifa ku ilwaliro lyo n'eisomero n'abakozi abalimu ku ngeri yebagemamu abaghala abaguna abazaire abalinda n'abayonsa?

Ebilaga obulamu, ebipimo n'ebivaamu

14. Bipimo ki na kukeberwa ki abasawo bye bakola ku bazaire n'abaana baibwe abaghere? (*refer to questionnaire and ask for explanations*).

Challenges met in Serving Abaghala abaguna abazaire

15. Nkoberaku ku bisiimoozo iwe nga omusaadha / balo (oba omuzaire oba dhaadha) by'ofuna mu kulabirirwa kwa abaghala abaguna abazaire n'abaana baibwe abaghere.

Yongerera okubuuliriza: bambi osobola inhonhola.....?

Entegeka y'ekyalo ey'okughagira Abaghala abaguna abazaire

16. Nga amaka, oyambye otya mughalawo oba mwidhukuluwo mu ngeri dhino:

- Okwegeresebwa mu bumanhirivu bw'ebyonkulankulana
- Okwegeresebwa mu by'endya
- Okwegeresebwa mu by'obulamu
- Obumanhirivu bw'okutegeka emere n'okufumba
- Okweyongerayo okusoma
- Okulabirirwa okwengeri edhindi

Yongerera okubuuliriza: Ghazira kwiramu kutuufu oba kutali kutuufu, kiba kiloghoozo kyo, bambi osobola okwinhonhola.....?

Abakozi mu byalo abagira Abaghala abaguna abazaire

17. Eliyo abakozi mu byalo boidhi abagira mu by'okusomesa / okwegeresabw abaghala abaguna abazaire in bino ghaifo? *Bambi koba ku bantu bano.*

- g) Okwegeresebwa mu by'endya
- h) Okwegeresebwa mu by'obulamu
- i) Obumanhirivu bw'okutegeka emere n'okufumba
- j) Okulima okusimba eiva
- k) Okwaya ebisolo
- l) Okuluka eby'emikono

Yongerabw okubuuliriza: Abakozi bino benda okusomesebw okwendhawulo....?

Yongerabw okubuuliriza: Bambi osobola okwinhohola ky'otegeza ni....?

Ebikolebwaku mu kifo ebiyamba

18. Eliyo ekikolebwaku ekindi oba ekya gavumenti ekili mu kyalo kyo ekyokughagira abaghala abaguna abazaire n'abaana baibwe? *Bambi inhohola okwiramuw kwo.....*

Ekiteeso kyo ku kuzimba obwamufu / amaani

19. Bambi teesa kiki ekisoboka okukolebwa okutereeza obulamu bw'abazaire n'abaana baibwe abaghere mu igombolola kino? *Bambi inhohola okwiramuw kwo.....*

20. Osobola bambi okummanisa ku ba maama ni ba dhaadha mu igombolola abayinza okwikiriza okughayaku ninze ku kye baloghooza? *Eliyo ekintu ekindi kye wandiyenze okwogeraku ninze ekigema ku kafubo kano ketuvamu?*

Okuwumbawumbaku okw'omulungamya

- Weebale okwetaba mu musomo guno.
- Ebiloghoozo byo biidha kuba bya mugaso inho mu kunoonereza kuno.
- Ndhuuba nti akafubo kano kakusanwisa.
- Mu bufunze, okwogera kusinze kugema ku (idhuzamu nga akafubo kawaire).
- Bw'oba oba oli ni kyokoba ku kwetaba mu kafubo kuno, bambi ntuukirira oba abalungamya, Professor Rhona Hanning ni Dr. Gloria Seruwagi.
- Nnhenda ku kwidhukiza nti byetwogeteireku olwaleero byonabyona biidha kukuumbwa nga bya kyama.
- Bambi taaku ghano omukono oikirize sente okulighira ebiseera byo.
- Weebale inho okwikiriza okwetaba mu kafubo kano.

Translated by Cornelius Wambi Gulere; Lusoga Language Consultant; P.O Box 116 Busembatia / Makerere University Department of Literature P.O. box 7062 Kampala.

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INDIVIDUAL INTERVIEW GUIDE AND QUESTIONS FOR MIDWIVES, VILLAGE HEALTH TEAMS, & TRADITIONAL BIRTH ATTENDANTS

Heads of Hospitals may be used as information gatekeepers.

Anticipated Start Date: April, 2016

Facilitator's Welcome: My name is Josephine Nabugoomu and I am the facilitator of our discussion today. As you know from the information letter, I am carrying out a study into the determinants of adolescent maternal and child health, in your community.

Welcome and thank you for volunteering to take part in this interview. You have been asked to participate because your opinions are important. I realize you are busy and I appreciate your time.

Introduction: This interview is designed to gain insight into how we can improve the health and wellbeing of adolescent mothers by understanding their needs, barriers, opportunities, and supports, and challenges faced in serving them. The interview will take no more than 90 minutes.

Confidential: I would like to assure you all that this discussion will be confidential. The recorded tapes will be kept in a locked facility at the study office in Mukono until they are transcribed word-for-word (with the exception of personal identifiers), then they will be destroyed. So the transcribed notes of this interview will not contain any personal identifiers that would link you to the statements being made. You should try to answer and comment as accurately and truthfully as possible. If there are any questions or discussions that you do not wish to answer or participate in, you do not have to do so.

May I turn on the tape recorder as we continue with our discussion?

Ground Rules

- ✓ There are no right or wrong answers
- ✓ You do not have to speak in any particular order
- ✓ Do you have any questions?
- ✓ OK, let's begin

Introduction of Informant:

First, I would like us all to introduce ourselves. As I said earlier, my name is Josephine and I'll let my colleague here [a Recording Assistant] introduce herself.

- i. Can you please tell us your name?
- ii. Also please kindly tell me your highest education qualification and professional background?
- iii. Please let me know the name of this Health facility, its level, village, county and district?
- iv. What is your position of leadership in this Health facility?
- v. Please tell me how long you have worked or stayed in this place?

Topical Guide Questions:

Needs Adolescent Mothers

1. What are the experiences of pregnant and lactating adolescents in this area?
Probe for any cases of them being supported, ostracized, etc.
2. What do you think are the needs of adolescent mothers in this Sub-county of?
 - a. Probes: what about in the area of attending ANC and postnatal clinics at the hospital?
 - i. *What services are offered in your health facility during antenatal and postnatal visits? (refer to questionnaire and ask for explanations).*
 - ii. *In a month, how many adolescent mothers attend ANC and postnatal clinics at this health center? Comparison to adult mothers?*
 - iii. *Who decides for the young mothers to attend these health services?*
 - iv. *What barriers do they find in attending these services?*
 - b. *In a month, how many adolescent mothers deliver at this facility?*
 - i. *Do the young mothers practice timely initiation of breastfeeding, use of colostrum, avoid of pre-lacteal and lacteal feeds, and also exclusive breastfeeding?*
 - ii. *Do they or their family members give the newborns any traditional liquids or concoctions before ant breastfeeding is done immediately after birth? Do they give any other liquids apart from medicines during the time when they are supposed to be practicing exclusive breastfeeding?*
 - iii. *Who decides for the young mothers on practicing of the said breastfeeding practices? What barriers do they face? Please explain.....*
 - iv. *Do the young mothers appropriately practice complementary feeding?*
 - v. *Do they know which foods and the consistency to complement their children's feeding, at given ages of the children?*
 - vi. *Who decides for the young mothers on foods to use for complementary feeds? Please explain.....*
 - vii. *Does this health facility provide young mothers with food preparation hands-on skills in the area of complementary feeding?*

Health Indicators, Measurement, Translation, and Monitoring

3. What measurements and tests do the medical personnel carry out on the mothers and their infants? *(refer to questionnaire and ask for explanations).*

Health Measurement Equipment

4. Which equipment for both mothers and babies do you for use the following measurements and tests in this health facility and others on this Sub-county? *(refer to questionnaire and ask for explanations).*

Comparison of Pregnancy and other Health Outcomes and Practices

5. When you compare adolescent mothers to adult mothers that receive services at this health facility, which category has the highest rates of *(refer to questionnaire and ask for explanations).*

Challenges met in Serving Adolescent Mothers

6. Tell me about any challenges that you as a health personnel face in providing services to adolescent mothers and their infants *Probe: can you please explain.....?*

7. Please tell me about the positive aspects in handling pregnant or lactating adolescent mothers?

Recommendations for Capacity Building

8. Please suggest what can be done so as to improve the health of young mothers and their infants in this Sub-county? *Please explain your answer.....*

9. Can you please let me know of another Health staff member in this Sub-county who may be willing to share with me their views? *Is there anything else you would like to share with me as regards the interview we have had?*

Conclusion by Facilitator

- Thank you for participating.
- Your opinions will be a valuable asset to the study.
- I hope you have found the discussion interesting.
- In summary, our discussion involved..... (fill in after interview).
- If you have any feedback regarding your participation in this interview, please contact me or supervisors Professor Rhona Hanning and Dr. Gloria Seruwagi.
- I would like to remind you that all discussions we have had today will be confidential.
- Please sign for some money to compensate for your time.
- Thank you so much for taking part in this interview.



INDIVIDUAL INTERVIEW GUIDE AND QUESTIONS FOR TEACHERS

Heads of Schools were asked about capacity building.

Date: April, 2016

Facilitator's Welcome: My name is Josephine Nabugoomu and I am the facilitator of our discussion today. As you may have read or heard from the information letter, I am carrying out a study into the determinants of adolescent maternal and child health, in your community.

Welcome and thank you for volunteering to take part in this interview. You have been asked to participate because your opinions are important. I realize you are busy and I appreciate your time.

Introduction: This interview is designed to gain insight into how we can improve the health and wellbeing of adolescent mothers by understanding their needs, barriers, opportunities, and supports, and challenges faced in serving them. The interview will take no more than 90 minutes.

Confidential: I would like to assure you all that this discussion will be confidential. The recorded tapes will be kept in a locked facility at the study office in Mukono until they are transcribed word-for-word (with the exception of personal identifiers), then they will be destroyed. So the transcribed notes of this interview will not contain any personal identifiers that would link you to the statements being made. You should try to answer and comment as accurately and truthfully as possible. If there are any questions or discussions that you do not wish to answer or participate in, you do not have to do so.

May I turn on the tape recorder as we continue with our discussion?

Ground Rules

- ✓ There are no right or wrong answers
- ✓ You do not have to speak in any particular order
- ✓ Do you have any questions?
- ✓ OK, let's begin

Introduction of Informant:

First, I would like us all to introduce ourselves. As I said earlier, my name is Josephine and I'll let my colleague here [a Recording Assistant] introduce herself.

- i. Can you please tell us your name?
- ii. Also please kindly tell me your highest education qualification and professional background?
- iii. Please let me know the name of your School, its level, village, county and district?
- iv. What is your position in this school?
- v. Please tell me how long you have worked or stayed in this place?

Topical Guide Questions:

Needs of Adolescent Mothers

1. What are the experiences of pregnant and lactating adolescents in this area?
Probe for any cases of them being supported, ostracized, etc.
2. What do you think are the needs of adolescent mothers in this Sub-county of?
 - a. Probe: what about in the area of nutrition/food?
 - i. *Are they provided with food by their family members? Please explain about.....*
 - ii. *Do they have access to land or shelter to rear animals or birds?*
 - iii. *Do they carry out farming and are they rearing any animals/birds?*
 - b. Probe: what about in the area of employment or income generation?
 - i. *Do they have jobs?*
 - ii. *Are they given financial help by their husbands or family members?*
 - iii. *Do they have any vocational skills they are using to for economic gains?*
 - c. *What are the barriers that the young mothers face in trying to enhance their economic wellbeing? Please explain....?*
 - d. Do you think the young mothers would be interested in gardening or animal husbandry or handcrafts as a means of food provision and income generation? Please explain.....
 - e. Probe: Is there anything else you would like to share with me?
3. As a School and teacher, please tell me the services you provide to adolescent mothers?
4. As a School, do you have a system in place that records the number and whereabouts of the pregnant students or pupils?
Probe: Please explain more about.....
Probe: Can you please estimate the number of pregnant adolescent girls in your school per month, term, or year?
Probe: Do these girls continue with education or drop out completely? Please elaborate...
Probe: What challenges do they get when they re-enroll in school?
Probe: Are these girls supported in any way by their husbands/families? Please elaborate...

Challenges met in Serving Adolescent Mothers

5. Tell me about any challenges that you as an educationist face in providing services to adolescent mothers and their infants. *Probe: can you please explain.....?*
6. Please tell me about the positive aspects in handling pregnant or lactating adolescent mothers?

Community Facilities to Support Adolescent Mothers

7. Tell me about the facilities you have in this school that support or can support the following:
 - a. Economic skills education
 - b. Nutrition education
 - c. Health education
 - d. Food preparation and cookery skills
 - e. Continuation of education: *how are they received and treated in schools?*
 - f. Other services
Probe: What barriers do the young mothers face in using the community services of.....?
Probe: There is no right or wrong answer, just your opinion, can you please explain.....?

Community Workers to Support Adolescent Mothers

8. Are there any workers that you know in the community who can help with educating these young mothers in these areas? *Please suggest and name these workers.*
- Nutrition education
 - Health education
 - Economic skills
 - Food preparation and cookery skills

Probe: Do these workers need special training....?

Probe: Can you please explain what you mean by....?

Supporting Projects in the Area

9. Is there any other project or government program in your community that supports young mothers/and or their infants? *Please explain your answer.....*

Recommendations for Capacity Building

10. Please suggest what can be done so as to improve the health of young mothers and their infants in this Sub-county? *Please explain your answer.....*

11. Can you please let me know of another Teacher in this Sub-county who may be willing to share with me their views? *Is there anything else you would like to share with me as regards the interview we have had?*

Conclusion by Facilitator

- Thank you for participating.
- Your opinions will be a valuable asset to the study.
- I hope you have found the discussion interesting.
- In summary, our discussion involved..... (fill in after interview).
- If you have any feedback regarding your participation in this interview, please contact me or supervisors Professor Rhona Hanning and Dr. Gloria Seruwagi.
- I would like to remind you that all discussions we have had today will be confidential.
- Please sign for some money to compensate for your time.
- Thank you so much for taking part in this interview.



INDIVIDUAL INTERVIEW GUIDE AND QUESTIONS FOR RELIGIOUS LEADERS AND CHAIRPERSONS OF LOCAL COUNCIL I

Date: April, 2016

Facilitator's Welcome: My name is Josephine Nabugoomu and I am the facilitator of our discussion today. As you may have read or heard from the information letter, I am carrying out a study into the determinants of adolescent maternal and child health, in your community.

Welcome and thank you for volunteering to take part in this interview. You have been asked to participate because your opinions are important. I realize you are busy and I appreciate your time.

Introduction: This interview is designed to gain insight into how we can improve the health and wellbeing of adolescent mothers by understanding their needs, barriers, opportunities, and supports, and challenges faced in serving them. The interview will take no more than 90 minutes.

Confidential: I would like to assure you all that this discussion will be confidential. The recorded tapes will be kept in a locked facility at the study office in Mukono until they are transcribed word-for-word (with the exception of personal identifiers), then they will be destroyed. So the transcribed notes of this interview will not contain any personal identifiers that would link you to the statements being made. You should try to answer and comment as accurately and truthfully as possible. If there are any questions or discussions that you do not wish to answer or participate in, you do not have to do so.

May I turn on the tape recorder as we continue with our discussion?

Ground Rules

- ✓ There are no right or wrong answers
- ✓ You do not have to speak in any particular order
- ✓ Do you have any questions?
- ✓ OK, let's begin

Introduction of Informant:

First, I would like us all to introduce ourselves. As I said earlier, my name is Josephine and I'll let my colleague here [a Recording Assistant] introduce herself.

- i. Can you please tell us your name?
- ii. Also please kindly tell me your highest education qualification and professional background?
- iii. Please let me know the name of your Cultural Institution or Community?
- iv. What is your position or level of leadership in this Institution or Community?
- v. Please tell me how long you have worked or stayed in this place?

Topical Guide Questions:

Needs of Adolescent Mothers

1. What are the experiences of pregnant and or lactating adolescents in this area?
Probe for any cases of them being supported, ostracized, etc.
2. What do you think are the needs of pregnant adolescent girls in this Sub-county of?
 - a. What about in the area of nutrition/food? *Do they have access to land or shelter to rear animals or birds? Do they carry out farming and are they rearing any animals/birds? Are they provided with food by their family members? Please explain more about... ..*
 - b. What about in the area of employment or income generation? *Do they have jobs? Are they given financial help by their husbands or family members? Do they have any vocational skills they are using to for economic gains? What are the barriers that the young mothers face in trying to enhance their economic wellbeing? Do you think the young mothers would be interested in gardening or animal husbandry or handcrafts as a means of food provision and income generation? Please explain..... Are there local experts of these skills? Where do you think this training can take place?*
 - c. Probe: Is there anything else you would like to share with me?
3. As an Institution or Community, do you have a system in place that records the number and whereabouts of the pregnant students or pupils?
Probe: Please explain more about.....
Probe: Can you please estimate the number of pregnant adolescent girls in your community per month, term, or year?
Probe: Do these girls continue with education or drop out completely? Please elaborate...
Probe: Are these girls supported in any way by their husbands/families? Please elaborate...

Challenges met in Serving Adolescent Mothers

4. As a community leader, please tell me the services you provide to adolescent mothers?
5. Tell me about any challenges that you as a community leader in providing services to adolescent mothers and their infants. *Probe: can you please explain.....?*
6. Please tell me about the positive aspects in handling pregnant or lactating adolescent mothers?

Community Facilities to Support Adolescent Mothers

7. Tell me about the facilities you have in this community that support or can support the following:
 - a. Economic skills education
 - b. Nutrition education
 - c. Health education
 - d. Food preparation and cookery skills
 - e. Continuation of education
 - f. Other services
Probe: What barriers do the young mothers face in using the community services of.....?
Probe: There is no right or wrong answer, just your opinion, can you please explain.....?

Community Workers to Support Adolescent Mothers

8. Are there any workers that you know in the community who can help with educating these young mothers in these areas? *Please suggest and name these workers.*

- a. Nutrition education
- b. Health education
- c. Economic skills
- d. Food preparation and cookery skills

Probe: Do these workers need special training....?

Probe: Can you please explain what you mean by....?

Supporting Projects in the Area

8. Is there any other project or government program in your community that supports young mothers/and or their infants? *Please explain your answer.....*

Recommendations for Capacity Building

9. Please suggest what can be done so as to improve the health of young mothers and their infants in this Sub-county? *Please explain your answer.....*
10. Can you please let me know of another religious/local leader in this Sub-county who may be willing to share with me their views? *Is there anything else you would like to share with me as regards the interview we have had?*

Conclusion by Facilitator

- Thank you for participating.
- Your opinions will be a valuable asset to the study.
- I hope you have found the discussion interesting.
- In summary, our discussion involved..... (fill in after interview).
- If you have any feedback regarding your participation in this interview, please contact me or supervisors Professor Rhona Hanning and Dr. Gloria Seruwagi.
- I would like to remind you that all discussions we have had today will be confidential.
- Please sign for some money to compensate for your time.
- Thank you so much for taking part in this interview.



INDIVIDUAL INTERVIEW GUIDE AND QUESTIONS FOR NGO STAFF

Date: April, 2016

Facilitator's Welcome: My name is Josephine Nabugoomu and I am the facilitator of our discussion today. As you may have read or heard from the information letter, I am carrying out a study into the determinants of adolescent maternal and child health, in your community.

Welcome and thank you for volunteering to take part in this interview. You have been asked to participate because your opinions are important. I realize you are busy and I appreciate your time.

Introduction: This interview is designed to gain insight into how we can improve the health and wellbeing of adolescent mothers by understanding their needs, barriers, opportunities, and supports, and challenges faced in serving them. The interview will take no more than 30 minutes.

Confidential: I would like to assure you all that this discussion will be confidential. The recorded tapes will be kept in a locked facility at the study office in Mukono until they are transcribed word-for-word (with the exception of personal identifiers), then they will be destroyed. So the transcribed notes of this interview will not contain any personal identifiers that would link you to the statements being made. You should try to answer and comment as accurately and truthfully as possible. If there are any questions or discussions that you do not wish to answer or participate in, you do not have to do so.

May I turn on the tape recorder as we continue with our discussion?

Ground Rules

- ✓ There are no right or wrong answers
- ✓ You do not have to speak in any particular order
- ✓ Do you have any questions?
- ✓ OK, let's begin

Introduction of Informant:

First, I would like us all to introduce ourselves. As I said earlier, my name is Josephine and I'll let my colleague here [a Recording Assistant] introduce herself.

- i. Can you please tell us your name?
- ii. Also please kindly tell me your highest education qualification and professional background?
- iii. Please let me know the name of your Cultural Institution or Community?
- iv. What is your position or level of leadership in this Institution or Community?
- v. Please tell me how long you have worked or stayed in this place?

vi. Topical Guide Questions:

Challenges met in Serving Adolescent Mothers

1. Tell me about any challenges that you as a community worker find in providing services to adolescent mothers and their infants. *Probe: can you please explain.....?*
2. Please tell me about the positive aspects in handling pregnant or lactating adolescent mothers?

Community Facilities to Support Adolescent Mothers

3. Tell me about the facilities you have in this community that support or can support the following:
 - a. Economic skills education
 - b. Nutrition education
 - c. Health education
 - d. Food preparation and cookery skills
 - e. Continuation of education
 - f. Other services

Probe: What barriers do the young mothers face in using the community services of.....?

Probe: There is no right or wrong answer, just your opinion, can you please explain.....?

Community Workers to Support Adolescent Mothers

4. Are there any workers that you know in the community who can help with educating these young mothers in these areas? *Please suggest and name these workers.*
 - a. Nutrition education
 - b. Health education
 - c. Economic skills
 - d. Food preparation and cookery skills

Probe: Do these workers need special training.....?

Probe: Can you please explain what you mean by.....?

Supporting Projects in the Area

8. Is there any other project or government program in your community that supports young mothers/and or their infants? *Please explain your answer.....*

Recommendations for Capacity Building

9. Please suggest what can be done so as to improve the health of young mothers and their infants in this Sub-county? *Please explain your answer.....*
10. Can you please let me know of another staff member of an NGO or CBO in Sub-county..... who may be willing to share with me their views? *Is there anything else you would like to share with me as regards the interview we have had?*

Conclusion by Facilitator

- Thank you for participating.
- Your opinions will be a valuable asset to the study.
- I hope you have found the discussion interesting.
- In summary, our discussion involved..... (fill in after interview).
- If you have any feedback regarding your participation in this interview, please contact me or supervisors Professor Rhona Hanning and Dr. Gloria Seruwagi.
- I would like to remind you that all discussions we have had today will be confidential.
- Please sign for some money to compensate for your time.
- Thank you so much for taking part in this interview.



INDIVIDUAL INTERVIEW GUIDE AND QUESTIONS FOR THE AGRICULTURAL OFFICER

Date: April, 2016

Facilitator's Welcome: My name is Josephine Nabugoomu and I am the facilitator of our discussion today. As you may have read or heard from the information letter, I am carrying out a study into the determinants of adolescent maternal and child health, in your community.

Welcome and thank you for volunteering to take part in this interview. You have been asked to participate because your opinions are important. I realize you are busy and I appreciate your time.

Introduction: This interview is designed to gain insight into how we can improve the health and wellbeing of adolescent mothers by understanding their needs, barriers, opportunities, and supports, and challenges faced in serving them. The interview will take no more than 90 minutes.

Confidential: I would like to assure you all that this discussion will be confidential. The recorded tapes will be kept in a locked facility at the study office in Mukono until they are transcribed word-for-word (with the exception of personal identifiers), then they will be destroyed. So the transcribed notes of this interview will not contain any personal identifiers that would link you to the statements being made. You should try to answer and comment as accurately and truthfully as possible. If there are any questions or discussions that you do not wish to answer or participate in, you do not have to do so.

May I turn on the tape recorder as we continue with our discussion?

Ground Rules

- ✓ There are no right or wrong answers
- ✓ You do not have to speak in any particular order
- ✓ Do you have any questions?
- ✓ OK, let's begin

Introduction of Informant:

First, I would like us all to introduce ourselves. As I said earlier, my name is Josephine and I'll let my colleague here [a Recording Assistant] introduce herself.

- i. Can you please tell us your name?
- ii. Also please kindly tell me your highest education qualification and professional background?
- iii. What is your position of occupation in this community?
- iv. Please tell me how long you have worked or stayed in this place?

Topical Guide Questions:

Needs of Adolescent Mothers

1. What are the experiences of pregnant and or lactating adolescents in this area?
Probe for any cases of them being supported, ostracized, etc.
2. What do you think are the needs of pregnant adolescent girls in this Sub-county of?
 - a. What about in the area of nutrition/food? *Do they have access to land or shelter to rear animals or birds? Do they carry out farming and are they rearing any animals/birds? Are they provided with food by their family members? Please explain more about.....*
 - b. What about in the area of employment or income generation? *Do they have jobs? Are they given financial help by their husbands or family members? Do they have any vocational skills they are using to for economic gains? What are the barriers that the young mothers face in trying to enhance their economic wellbeing? Do you think the young mothers would be interested in gardening or animal husbandry or handcrafts as a means of food provision and income generation? Please explain..... Are there local experts of these skills? Where do you think this training can take place?*
 - c. Probe: Is there anything else you would like to share with me?

Challenges met in Serving Adolescent Mothers

3. As an agricultural officer, please tell me the services you provide to adolescent mothers?
4. Tell me about any challenges that you as an agricultural officer in this community face while providing services to adolescent mothers and their infants. *Probe: can you please explain.....?*
5. Please tell me about the positive aspects in handling pregnant or lactating adolescent mothers?

Community Facilities to Support Adolescent Mothers

6. Tell me about the facilities you have in this community that support or can support the following:
 - a. Economic skills education
 - b. Nutrition education
 - c. Health education
 - d. Agriculture skills (*e.g., animal husbandry and gardening*)
 - e. Food preparation and cookery skills
 - f. Continuation of education
 - g. Other services

Probe: What barriers do the young mothers face in using the community services of.....?
Probe: There is no right or wrong answer, just your opinion, can you please explain.....?

Community Workers to Support Adolescent Mothers

7. Are there any workers that you know in the community who can help with educating these young mothers in these areas? *Please suggest and name these workers.*
 - a. Nutrition education
 - b. Health education
 - c. Agriculture skills (*e.g., animal husbandry and gardening*)
 - d. Economic skills
 - e. Food preparation and cookery skills

Probe: Do these workers need special training....?
Probe: Can you please explain what you mean by....?

Supporting Projects in the Area

8. Is there any other project or government program in your community that supports young mothers/and or their infants? *Please explain your answer.....*

Recommendations for Capacity Building

9. Please suggest what can be done so as to improve the health of young mothers and their infants in this Sub-county? *Please explain your answer.....*
10. Can you please let me know of another Agricultural officer in Sub-county..... who may be willing to share with me their views? *Is there anything else you would like to share with me as regards the interview we have had?*

Conclusion by Facilitator

- Thank you for participating.
- Your opinions will be a valuable asset to the study.
- I hope you have found the discussion interesting.
- In summary, our discussion involved..... (fill in after interview).
- If you have any feedback regarding your participation in this interview, please contact me or supervisors Professor Rhona Hanning and Dr. Gloria Seruwagi.
- I would like to remind you that all discussions we have had today will be confidential.
- Please sign for some money to compensate for your time.
- Thank you so much for taking part in this interview.

INDIVIDUAL INTERVIEW GUIDE AND QUESTIONS FOR SUB-COUNTY AND DISTRICT ADMINISTRATORS

Date: April, 2016

Facilitator's Welcome: My name is Josephine Nabugoomu and I am the facilitator of our discussion today. As you may have read or heard from the information letter, I am carrying out a study into the determinants of adolescent maternal and child health, in your community. Welcome and thank you for volunteering to take part in this interview. You have been asked to participate because your opinions are important. I realize you are busy and I appreciate your time.

Introduction: This interview is designed to gain insight into how we can improve the health and wellbeing of adolescent mothers by understanding their needs, barriers, opportunities, and supports, and challenges faced in serving them. The interview will take no more than 10 minutes.

Confidential: I would like to assure you all that this discussion will be confidential. The recorded tapes will be kept in a locked facility at the study office in Mukono until they are transcribed word-for-word (with the exception of personal identifiers), then they will be destroyed. So the transcribed notes of this interview will not contain any personal identifiers that would link you to the statements being made. You should try to answer and comment as accurately and truthfully as possible. If there are any questions or discussions that you do not wish to answer or participate in, you do not have to do so.

May I turn on the tape recorder as we continue with our discussion?

Ground Rules

- ✓ There are no right or wrong answers
- ✓ You do not have to speak in any particular order
- ✓ Do you have any questions?
- ✓ OK, let's begin

Introduction of Informant:

First, I would like us all to introduce ourselves. As I said earlier, my name is Josephine and I'll let my colleague here [a Recording Assistant] introduce herself.

- vii. Can you please tell us your name?
- viii. Also please kindly tell me your highest education qualification and professional background?
- ix. Please let me know the name of your Cultural Institution or Community?
- x. What is your position or level of leadership in this Institution or Community?
- xi. Please tell me how long you have worked or stayed in this place?

xii. Topical Guide Questions:

Challenges met in Serving Adolescent Mothers

5. Tell me about any challenges that you as a community worker find in providing services to adolescent mothers and their infants. *Probe: can you please explain.....?*
6. Please tell me about the positive aspects in handling pregnant or lactating adolescent mothers?

Recommendations for Capacity Building

11. Please suggest what can be done so as to improve the health of young mothers and their infants in this Sub-county? *Please explain your answer.....*

Conclusion by Facilitator

- Thank you for participating.
- Your opinions will be a valuable asset to the study.
- I hope you have found the discussion interesting.
- In summary, our discussion involved..... (fill in after interview).
- If you have any feedback regarding your participation in this interview, please contact me or supervisors Professor Rhona Hanning and Dr. Gloria Seruwagi.
- I would like to remind you that all discussions we have had today will be confidential.
- Please sign for some money to compensate for your time.
- Thank you so much for taking part in this interview.

APPENDIX V: QUESTIONNAIRES

SERVICES OFFERED AT ANTENATAL AND POSTNATAL CLINICS

Informant Category: _____ Informant code: _____

Service	Routinely done	Do the adolescent mothers follow advice?	Reason(s) or Notes for response
Folic acid/iron supplementation	Never, Rarely, Sometimes, Most of the times, Always	Never, Rarely, Sometimes, Most of the times, Always	
Medication for malaria	Never, Rarely, Sometimes, Most of the times, Always	Never, Rarely, Sometimes, Most of the times, Always	
Tetanus toxoid Immunization	Never, Rarely, Sometimes, Most of the times, Always	Never, Rarely, Sometimes, Most of the times, Always	
Early detection & management of obstetric complications	Never, Rarely, Sometimes, Most of the times, Always	Never, Rarely, Sometimes, Most of the times, Always	
Education on danger signs of pregnancy	Never, Rarely, Sometimes, Most of the times, Always	Never, Rarely, Sometimes, Most of the times, Always	
Breastfeeding education e.g. TIBF, EBF (Practically done?)	Never, Rarely, Sometimes, Most of the times, Always	Never, Rarely, Sometimes, Most of the times, Always	
Foods to eat during or after pregnancy	Never, Rarely, Sometimes, Most of the times, Always	Never, Rarely, Sometimes, Most of the times, Always	
HIV treatment and support. (& other STDs)	Never, Rarely, Sometimes, Most of the times, Always	Never, Rarely, Sometimes, Most of the times, Always	
Provision of free bed nets (ITNs)	Never, Rarely, Sometimes, Most of the times, Always	Never, Rarely, Sometimes, Most of the times, Always	
Kangaroo care for LBW	Never, Rarely, Sometimes, Most of the times, Always	Never, Rarely, Sometimes, Most of the times, Always	
Baby cord cleaning	Never, Rarely, Sometimes, Most of the times, Always	Never, Rarely, Sometimes, Most of the times, Always	
Keeping baby warm before & after bathing	Never, Rarely, Sometimes, Most of the times, Always	Never, Rarely, Sometimes, Most of the times, Always	
Complementary feeding education (Practically done?)	Never, Rarely, Sometimes, Most of the times, Always	Never, Rarely, Sometimes, Most of the times, Always	
Child spacing and family planning	Never, Rarely, Sometimes, Most of the times, Always	Never, Rarely, Sometimes, Most of the times, Always	
Birth control & use of contraceptives	Never, Rarely, Sometimes, Most of the times, Always	Never, Rarely, Sometimes, Most of the times, Always	
Child Immunization	Never, Rarely, Sometimes, Most of the times, Always	Never, Rarely, Sometimes, Most of the times, Always	
Child Vaccination	Never, Rarely, Sometimes, Most of the times, Always	Never, Rarely, Sometimes, Most of the times, Always	
Health visits at mothers' homes	Never, Rarely, Sometimes, Most of the times, Always	Never, Rarely, Sometimes, Most of the times, Always	

LUYUNGIO V: EBIBUZO BY'OKUNOONEREZAKU

**OKULABIRIRWA OKUGHEEBWA MU MALWALIRO MU KULINDA NKANI
ENTENENTO N'OLUVAINHUMA LW'OKUZAALA.**

Oluse lw'obubaka: _____ **Akamanhiso**
ak'obubaka: _____

Okulabirirwa	Kikolebwa buliidho	Abaghala abaguna abazaire bagoberera okuwabulwa?	Ensonga oba ebyokwiramu
Okweyongeresaku amakerenda ga ayani	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	
Obwidhandhabi bw'omusuudha	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	
Okukinga mulalama	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	
Okutegeera amangu n'okusobola ebizibu by'okusaala nga bukaali	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	
Okusomesebwa ku byelaga nti okulinda ti kulungi	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	
Okusomesebwa ku by'okuyonsa okugeza nga TIBF, EBF (ekyokuboneraku?)	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	
Ememre eyokulya mu kulinda n'oluvainhuma lw'okuzaala	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	
Okwidhandhaba SILIIMU n'obuyambi. (n'endwaire dh'obukaba edhindi)	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	
Okufuna obutimba obukinga emsiri obw'obwerere (ITNs)	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	
Okulabirirwa kwa LBW	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	
Okulongoosa olulera	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	
Okukuuma omughere nga abuguma nga akaali kunaazibwa n'era nga amaze okunaaba	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	
Ebyokuliikiriza education (Kikolebwa mu buligho?)	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	
Okutaaga abaana n'okwetegekera abaana	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	
Okuziyiza enzaalo n'okukozesa ebiziyiza okufuna enda	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	
Okukinga omwana omughere	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	

Okukingibwa kw'omwana	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	
Okukyala mu maka olw'obulamu bw'omwana	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	

Translated by Cornelius Wambi Gulere; 0776530512; gulerefoundation@gmail.com

HEALTH MONITORING AND TRANSLATION

Informant Category: _____ Informant code: _____

Measurement or Test	Routinely done	When done, is mother or caretaker told the result & meaning?	Reason(s) or Notes for response
Mother			
Weight gain in pregnancy	Never, Rarely, Sometimes, Most of the times, Always	Never, Rarely, Sometimes, Most of the times, Always	
Anemia	Never, Rarely, Sometimes, Most of the times, Always	Never, Rarely, Sometimes, Most of the times, Always	
Malaria infection	Never, Rarely, Sometimes, Most of the times, Always	Never, Rarely, Sometimes, Most of the times, Always	
HIV infection (& other STDs)	Never, Rarely, Sometimes, Most of the times, Always	Never, Rarely, Sometimes, Most of the times, Always	
TB infection	Never, Rarely, Sometimes, Most of the times, Always	Never, Rarely, Sometimes, Most of the times, Always	
Blood Pressure	Never, Rarely, Sometimes, Most of the times, Always	Never, Rarely, Sometimes, Most of the times, Always	
Infant at Birth			
Birth weight	Never, Rarely, Sometimes, Most of the times, Always	Never, Rarely, Sometimes, Most of the times, Always	
Birth length	Never, Rarely, Sometimes, Most of the times, Always	Never, Rarely, Sometimes, Most of the times, Always	
Head circumference	Never, Rarely, Sometimes, Most of the times, Always	Never, Rarely, Sometimes, Most of the times, Always	
Infant >1-12 Months			
Weight	Never, Rarely, Sometimes, Most of the times, Always	Never, Rarely, Sometimes, Most of the times, Always	
Length	Never, Rarely, Sometimes, Most of the times, Always	Never, Rarely, Sometimes, Most of the times, Always	
Infections e.g. malaria, diarrhea respiratory (flu/cough)	Never, Rarely, Sometimes, Most of the times, Always	Never, Rarely, Sometimes, Most of the times, Always	
<i>Are these measurements and tests recorded and are mothers followed up?</i>		<i>Yes/No</i>	<i>Reason?</i>

OKULONDOOLA EBYOBULAMU N'ENDHTOOTOLA

Oluse lw'obubaka: _____ **Akamanhiso**

ak'obubaka: _____

Okupimibwa n'okukeberwa	Kikolebwa buliidho	Kikolebwa li, omuzaire oba alabirira akoberwa ebiviiremu ni kye kitegeeza?	Ensonga oba ebyokwiramamu
Muzaire			
Okugeedha mu biseera by'okulinda	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	
Okukendeera omusaayi	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	
Okugemwa omusuudha	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	
Okugemya SILIIMU (n'endwaire dh'obukaba edhindi)	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	
Okugemya TB	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	
Entunnunsi y'omusaayi	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	
Omughere eyakazaalibwa			
Obuzito mu buzaale	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	
Entangama mu buzaale/nzaalo	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	
Obunene bw'omutwe	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	
Omughere ow'emyezi >1-12			
Obuzito	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	
Entangama	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	
okugemwa okugeza musuudha, kighaluko,	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	Waire, Lukooko, Lwisi, Ebiseera ebisinga, Buliidho	

kugheruko (senhiga/kogholo)			
<i>Ebipimo n'okukeberwa kuno kuli mu bwino era abazaire bagoborerwa?</i>	<i>Iyi/Mbe</i>	<i>Ensonga?</i>	

Translated by Cornelius Wambi Gulere; 0776530512; gulerefoundation@gmail.com

EQUIPMENT USED FOR HEALTH MONITORING AND TRANSLATION

Informant Category: _____ **Informant code:** _____

Measurement or Test	Equipment	Notes
Mother		
Weight gain in pregnancy		
Anemia		
Malaria infection		
HIV infection (& other STDs)		
TB infection		
Blood Pressure		
Infant at Birth		
Birth weight		
Birth length		
Head circumference		
Infant >1-12 Months		
Weight		
Length		

**COMPARISON OF PREGNANCY/HEALTH OUTCOMES, AND PRACTICES AMONG
ADOLESCENT AND ADULT MOTHERS (Use ticks for a YES)**

Informant Category: _____ **Informant code:** _____

Pregnancy Outcome	Adolescents	Adults	Reason(s) or Notes for response
Mother			
Appropriate Weight gain in pregnancy			
Anemia			
Malaria			
HIV infection			
TB infection			
High Blood Pressure			
Miscarriage			
Preterm Delivery			
Normal Delivery			
Caesarian/Assisted Delivery			
Still Birth			
Vaginal Tears			
Fistula			
Over bleeding after birth			
Maternal Mortality			
Depression during pregnancy			
Depression after pregnancy			
Infant at Birth			
Low birth weight			
Short babies at birth			
Death of Infants within 4 weeks after birth			
Infant >1-12 Months			
Small/thin babies			
Short babies			
Anemia			
Malaria infection			
HIV infection			
Respiratory infections like cough & flu			
Diarrhea			
Child Feeding Practices			
Practice of TIBF			
Practice of Exclusive Breastfeeding			
Practice of appropriate Complementary feeding			

APPENDIX VI

Table 4.2: Responses for perceived needs and barriers of adolescent maternal/child nutrition and health in the rural Jinja district of Uganda

	Pregnant Adolescents - 11	Lactating Adolescents (Infant 1-6 months) - 8	Lactating Adolescents (Infant 7-12 months) - 6	Mothers - 6	Grandmothers - 5	Doctors - 4	Midwives - 7	Traditional Birth Attendants (TBAs) - 3	Village Health Team Members (VHTs) - 3	Head teachers - 11	Teachers - 5	Agriculture officers - 3	Local Council Chairpersons (LCI) - 6	Religious Leaders - 3	NGO Staff - 5	Administrators (sub-county & district) - 13	Total of Responses - 101	Frequency (%)
NEEDS																		
Individual	17	14	13	11	6	0	2	2	9	0	10	2	4	1	0	0	91	14.2
Social Environment	21	18	19	11	10	0	10	8	14	7	13	9	13	12	0	0	165	25.8
Economic Environment	19	15	9	6	7	0	2	0	5	0	8	4	6	3	0	0	84	13.1
Physical Environment	20	12	12	11	5	0	6	3	15	0	9	3	10	7	0	0	113	17.7
Nutrition Environment	10	8	7	5	8	0	9	4	10	0	3	2	4	3	0	0	73	11.4
Health Service	15	10	16	10	11	2	10	4	10	1	5	3	8	5	4	0	114	17.8
																	640	100%
BARRIERS																		
Individual	10	6	4	5	4	0	3	1	3	0	2	3	4	2	0	0	47	8.6
Social Environment	15	7	12	8	8	2	4	1	5	1	5	2	8	4	0	0	82	15.0
Economic Environment	22	17	21	16	16	0	5	0	14	2	6	2	11	4	0	1	137	25.0
Physical Environment	5	3	2	2	6	0	3	0	3	0	1	0	4	0	0	0	29	5.3
Nutrition Environment	5	6	10	3	6	0	12	3	14	2	2	0	3	1	1	0	68	12.4
Health Service	30	14	18	15	14	2	15	5	20	4	4	6	26	9	3	0	185	33.7
TOTAL																	548	100%
GRAND TOTAL																	1188	100%

Table 4.3: Theme codebook of perceived needs and barriers of adolescent maternal/child nutrition and health based on participant responses, and respondent counts

Level	Theme Description	Number of Respondents	Frequency (%) of Respondents
1.0	Individual Level		
1.1	Needs at Individual Level	70	100
1.1.1	Money	25	35.7
1.1.2	Modern medication	16	22.9
1.1.3	Re-enrolling in school	5	7.1
1.1.4	Making handcrafts for sell	3	4.3
1.1.5	Practicing agriculture with parents	19	27.1
1.1.6	Selling home-made snacks	2	2.9
1.2	Barriers at Individual Level	45	100
1.2.1	Lack of knowledge to make handcrafts	24	53.3
1.2.2	Laziness to make handcrafts	5	11.1
1.2.3	Self-withdraw from school	16	35.6
2.0	Social Environment Level		
2.1	Needs at Social Environment Level	79	100
2.2.1	Belong to their families or babies' fathers	32	40.5
2.2.2	Marriage to the fathers of their babies	20	25.3
2.2.3	Love from family, community	12	15.2
2.2.4	Care family, community	11	13.9
2.2.5	Trust from parents	4	5.1
2.2	Barriers at Social Environment Level	70	100
2.2.1	Abuse (risk high blood pressure/depression)	34	48.6
2.2.2	Schools refusing pregnant girls back	25	35.7
2.2.3	Stigmatization from Peers	11	15.7
3.0	Economic Environment Level		
3.1	Needs at Economic Environment Level	65	100
3.1.1	Jobs	31	47.7
3.1.2	Capital for self-employment	12	18.5
3.1.3	Money to buy medicines, clothing, foods	22	33.8
3.2	Barriers at Economic Environment Level	80	100
3.2.1	Lack of academic qualifications	16	20.0
3.2.2	Lack of capital to start own business	13	16.2
3.2.3	Poverty of parents so no support	20	25.0
3.2.4	Burden of pregnancy or childcare	8	10.0
3.2.5	Lack of money to train income generation	11	13.8
3.2.6	Discriminative government programs	3	3.8
3.2.7	Lack of market for handcraft products	9	11.2
4.0	Physical Environment Level		
4.1	Needs at Physical Environment Level	62	100
4.1.1	Shelter/housing to sleep in	22	35.5
4.1.2	Comfortable beddings	10	16.1
4.1.3	Clothes (e.g., maternity dresses) & shoes	12	19.4
4.1.4	Baby clothes	6	9.7

4.1.5	Soap	4	6.5
4.1.6	Personal land	5	8.0
4.1.7	Personal animals for rearing	3	4.8
4.2	Barriers at Physical Environment Level	67	100
4.2.1	Cultural beliefs	13	19.3
4.2.2	Lack of Family Land due to selling it off	8	12.3
4.2.3	Finding Farmland to Rent	7	10.4
4.2.4	Growing of Sugarcane not food crops	9	13.3
4.2.5	Infertile Lands	2	3.0
4.2.6	Lack of appropriated wear to hospital	21	31.3
4.2.7	Long distances to the health centers	4	6.0
4.2.8	Slippery roads during rainy seasons	3	4.4
5.0	Nutrition Environment Level		
5.1	Needs at Nutrition Environment Level	65	100
5.1.1	Food in the right quality and quantities	33	50.8
5.1.2	Foods craved for	3	4.6
5.1.3	Breastmilk for infants	11	16.9
5.1.4	Foods for complementary feeds	14	21.5
5.1.5	Timely complementary feeds	4	6.2
5.2	Barriers at Nutrition Environment Level	62	100
5.2.1	Poor feeding risks anemia, low weight	14	22.6
5.2.2	Lack of practical nutrition education	9	14.5
5.2.3	Mother's non-adherence to EBF	15	24.2
5.2.4	Inappropriate complementary feeds	19	30.6
5.2.5	Untimely complementary feeds	5	8.1
6.0	Health Service Environment Level		
6.1	Needs at Health Service Environment Level	80	100
6.1.1	Medicine/Medical treatment	37	46.3
6.1.2	Delivery materials like "mama kit"	16	20.0
6.1.3	Follow-up home visits	14	17.5
6.1.4	Training in good newborn care practices	13	16.2
6.2	Barriers at Health Service Environment Level	87	100
6.2.1	Unavailability of medicines	24	27.6
6.2.2	Unavailability of delivery materials	9	10.3
6.2.3	Unavailability of practical health education	7	8.0
6.2.4	Lack of follow up home visits	11	12.7
6.2.5	Late reporting of medical personnel	8	9.2
6.2.6	Long waiting lines at the health centers	5	5.7
6.2.7	Harsh treatment from medical staff	11	12.7
6.2.8	Mixing adult & young mothers	8	9.2
6.2.9	Lack of health communication	4	4.6

**Respondent counts are presented without differentiating who the comment came from because the perspectives from stakeholders did not differ and so a bigger picture of what came from a whole range of respondents was preferred. A respondent may have given the same response more than once but he/she was counted as one person that gave the same comments.*

Table 4.4: Other selected quotes of perceived needs and barriers of adolescent maternal/child nutrition and health in the rural Jinja district of Uganda

Individual Level
Needs at Individual Level
<i>“She is good in farm work and making mats. We make mats sometimes and we sale and get some money for fuel.”</i> Family Member 2.
Barriers at Individual Level
<i>“No, I do not know how to make handcrafts unless when I just learn.”</i> Adolescent Mother 6.
<i>“They [young mothers] do not make handcrafts because others are lazy.”</i> Community Worker 3.
Social Environment Level
Needs at Social Environment Level
<i>“Nurses advised me to take my baby for immunization, I also decided for myself.”</i> Adolescent Mother 6.
<i>“Am not married and I stay with my parents.”</i> Adolescent Mother 5.
<i>“Am not married and I stay with my mother. My mother provides for my needs and cares about me, the man ran away after discovering that I was pregnant.”</i> Adolescent Mother 4.
<i>“They [parents of the father of baby] didn’t like me because they first denied that it was not their son that made me pregnant yet I was very sure about it and once he was sure that he is responsible for my pregnancy he ran away from this village.”</i> Adolescent Mother 9.
<i>“They [adolescent mothers] lack care since the boys who make them pregnant abandon them and when they stay home, parents do not take care of them as they tell them to go to the boys who made them pregnant to provide for their needs, so they feel stressed. The girls feel unloved and abandoned but with counseling, the parents change.”</i> Health-related Personnel 5.
<i>“Due to the abuses and harshness of the parents, some of the girls opt for abortions. I have just got information that one of our students is in critical conditions as she was trying to abort. But all this comes from the tough parents who sometimes threaten to kill them yet they have nowhere to go as they are not married to the men.”</i> Educator 3.
<i>“Fathers are usually bitter and chase them from their homes yet the boys also can’t take them in but I try to counsel them. The girls feel unloved and abandoned but with counseling, the parents change.”</i> Health-related Personnel 4.
<i>“They [parents of young mothers] hate, abandon and disrespect us like when I tell my mother that the baby is sick, she will tell me that ‘am I the one who told you to get a baby when you are still young, a young girl like you, what made you reach that point?’”</i> Adolescent Mother 10.
<i>“Of course they were disappointed because I had promised them that I will conceive when I am 25 years. They abused me and chased me away but I stayed.”</i> Adolescent Mother 10.
<i>“My siblings mistreat me and they hate me as they just abuse me that our mother invested in me money and I instead got pregnant and I should leave their home yet I have nowhere to go I do not know where the boy ran to.”</i> Adolescent Mother 11.
<i>“The problem with youths is that when they get a girl pregnant, they can’t marry her because they look at them as faded and picks other girls who look better than her.”</i> Family Member 3.
<i>“We [parents] behave that way [oppressive to young mothers] because we do not want the remaining children to get spoilt. After such treatment, the girls learn lessons and do not misbehave again.”</i> Family Member 3.

<p><i>“If she is on the side of the boy and lives with the mother of the boy, there will no love and comfort and most of the times they are over worked like going to the garden, doing domestic work and most of them are treated like laborers in those homes and so they do not get enough time to rest. They are fear to ask for some of the things that they do require and so they are not comforted well. Fathers are usually tough and show loss of hope in these girls and chase them away from home.”</i> Educator 4.</p>
<p><i>“They [village/community members] treat us [young mothers] badly still they just see us as being useless and failures.”</i> Adolescent Mother 12.</p>
<p><i>“They [village/community members] used to scorn me that ‘people who go to school instead get pregnant.’”</i> Adolescent Mother 13.</p>
<p><i>“When they heard that I was pregnant, they all [village members] hated me and started to talk evil about me like they used to wish for me to die in labor, some used to say that am bad mannered.”</i> Adolescent Mother 14.</p>
<p><i>“You know village members always badly talk if at all a girl get pregnant at an early age, they would always say ‘the girl is a prostitute’ and such things but you know some people talk because it’s not yet on their side.”</i> Health-related Personnel 4.</p>
<p><i>“They [village/community members] start despising them ‘that she has been proud saying that she is studying’ They are the first ones to tell you that your daughter is pregnant when you the parent of the daughter you don’t know.”</i> Health-related Personnel 5.</p>
<p><i>“They [young mothers] are looked at as outcasts because they take it that a girl who gets pregnant loses hope.”</i> Educator 4.</p>
<p>Barriers at Social Environment Level</p>
<p><i>“When teachers notice that there is a pregnant girl in the school they just expel her from school and when some other girls find out that they are pregnant they don’t go back to school because the classmates may laugh at them.”</i> Health-related Personnel 5.</p>
<p><i>“Because the school has a policy is that the school is for students and not mothers some of them may want to be pregnant like their fellows and also it is not really good to have someone pregnant they just look weird among all students that is why teachers are also given maternity leave so it’s better for them to just be home so they do it because they want to maintain the level of discipline in the schools.”</i> Community Worker 4.</p>
<p><i>“When a girl gets pregnant when they are still in school, they are discriminated among their fellows and seen as an outcast and they are isolated in her fellows and that can limit them to continue with their education because the situations she has been going through in school are not the ones that she is going through. For the teachers, they just send the children away from school, they are not allowed to continue with studies when pregnant.”</i> Community Worker 5.</p>
<p><i>“Their fellow school mates! The girls do not feel comfortable. When they get pregnant, they stop going to school until they deliver even if you take them back they will not really perform unless you change their school. But when you take them to that same school they feel ashamed and their fellow school mates tell them that they are old women, so they do not feel good and they cannot freely mix in the others as they used to before getting pregnant.”</i> Area Leader 4.</p>
<p><i>“When they get pregnant, they stop going to school until they deliver even if you take them back they will not really perform unless you change their school. But when you take them to that same school they feel ashamed and their fellow school mates tell them that they are old women, so they do not feel good and they cannot freely mix in the others as they used to before getting pregnant.”</i> Area Leader 5.</p>

<i>“If they get to know [that one has a baby], they will start to nick name them for example mama...and it makes some of the to withdraw from school and so we keep it as a secret so that their fellow students do not get to know about it because they can deter them to concentrate if they get to know that they have ever delivered before.” Educator 4.</i>
<i>“Fellow students laugh at you because you got pregnant, because you are just fading from home.” Adolescent Mother 14.</i>
<i>“They [school/classmates to young mothers] all laugh at me and do not want to be my friends.” Adolescent Mother 15.</i>
<i>“Parents give up on them [young mothers] saying they have other children to care for, these ones have spoilt their chances. Some homes generally do not have enough food to eat and can only give the little they have. The parents tell her ‘go to the man who you pregnant to care for you” or “money which was meant for taking care of you, is now going to be used to care for you other siblings because you thought getting pregnant is a good thing’. So they live under such circumstances of psychological torture.” Area Leader 6.</i>
<i>“We have not heard of any organization that cares for young mothers in particular.” Family Member 4.</i>
Economic Environment Level
Needs at Economic Environment Level
<i>“I need some money to buy clothes, medicines, and some foods I like but I do not have it, I just admire everything but cannot get it. Sometimes I need money to pay for transport” Adolescent Mother.</i>
<i>“I do not have any job.” Adolescent Mother 16.</i>
<i>“I want to get a job that can sustain me but I can’t get it.” Adolescent Mother 16.</i>
<i>“You may need like money to buy sugar but when you do not have it.” Adolescent Mother 17.</i>
<i>“These young mothers really want capital to for self-employment.” Educator 4.</i>
<i>“She has no job yet and she wants to work but no qualification.” Family Member 5.</i>
Barriers at Economic Environment Level
<i>“That thing of jobs, these days they say that “if you are uneducated, you cannot manage today’s Uganda and it is hard to get a job.” Most jobs need qualifications of which if you do not have papers, you just sit home and dig.” Community Worker 6.</i>
<i>“Sometimes they do not work well at jobs because they are heavily pregnant or have babies so it needs [to wait until] when their babies can be left at home.” Community Worker 7.</i>
<i>“I used to fetch for people water and they give me money but now days I do not have energy because I cannot carry a 20 Liter jerry can of water.” Adolescent Mother 18.</i>
<i>“Most of them do cultivate but they do not keep animals because most of them become weak when they get pregnant and they cannot even hold a hoe.” Community Worker 7.</i>
<i>“Now those children do not get jobs because they are weak and can’t do anything when pregnant. There is a girl on that iron sheet house there she went to be a house maid somewhere but she was found pregnant. She was very dizzy, she used to sleep all the time, and used not to do any domestic work as assigned to her by her boss because she slept the whole day and didn’t do anything so the girl was brought back here so they can work while pregnant.” Community Worker 8.</i>
<i>“Sometimes they are lazy and they want to learn to make expensive things and not cheap ones like mats.” Family Member 5.</i>
<i>“A few of them [young mothers] know handcrafts, not all of them know them and they do not make them because they do not know how to make them, while others are lazy. They also lack</i>

<i>money to buy the materials needed and they no longer get them free of charge, and even what they make does not have market because they are not so attractive.” Community Worker 8.</i>
<i>“Those who make them don’t have markets and those who have markets are cheated of the price.” Health-related Personnel 6.</i>
<i>“People are really so poor in these rural areas. Some NGOs like PEFO are available but you find it demanding for money like 200,000/= UGX ~\$55.6 USD for one to benefit from their services. Some of them young mothers stay so far and cannot easily access them.” Educator 4.</i>
<i>“Some of them [young mothers] come from very far and they do not have transport to reach PEFO or SOUL Uganda [to benefit from the income generation services of these NGOs].” Health-related Personnel 6.</i>
Physical Environment Level
Needs at Physical Environment Level
<i>“I lack clothes, shoes, medicines, soap, and some foods but I do not have it, I just admire everything but cannot get it.” Adolescent Mother 9.</i>
<i>“I don’t have baby clothes and its bedding and a good place for us to sleep at.” Adolescent Mother 10.</i>
<i>“My baby has no bed, mosquito net, bed sheets and blanket. This house that I stay in is for my brother, he is going to demolish it but I cannot sleep in my father’s house because am now an in law and we can’t share a roof.” Adolescent Mother 10.</i>
<i>“She [young mother] needs soap, vaseline, shoes, clothes for her and the baby to come, delivery materials needed at the health centre, and a comfortable place to sleep.” Family Member 6.</i>
<i>“She needs things like baby clothes, maternity dresses, good sleeping area, good feeding and sometimes it is costly and to care for them to generally good.” Family Member 7.</i>
<i>“We need a maternity dress, soap, baby clothes, soap, sugar and all those are required.” Adolescent Mother 9.</i>
<i>“After they become expectant they need things like mama kit, they also need things like baby clothes and their clothes because when they get pregnant their dresses stop to fit them so they need maternity dresses and sometimes the people who have made them pregnant are poor or they have told by their parents to run away from such responsibility and so she is left out in dilemma.” Educator 5.</i>
<i>“They lack clothes to wear decently, they use their teenage clothes which do not fit them anymore. They also lack where to sleep and we don’t have money to make their lives better.” Family Member 7.</i>
<i>“She sleeps under very poor conditions on banana fiber mats in thee sitting room where it is cold but we do not have money to buy her a mattress.” Family Member 6.</i>
<i>“She sleeps with her baby but she sleeps on a papyrus mat and it is not good for the baby. This makes her feel less loved but we do not have money to make her condition better.” Family Member 8.</i>
<i>“I don’t have animals on my own but the ones present belong to my parents.” Adolescent Mother 11.</i>
Barriers at Physical Environment Level
<i>“They have no clothes for themselves or their babies so that scares them off. You find pregnant ones wearing their uniforms or old T-shirts to hospital instead of maternity dresses.” Health-related Personnel 7.</i>

<i>“No, she [young mother] does not have her own land, she farms on our little piece of land. I and my husband used to have a lot of land but he sold all of it off saying I had given birth to only girls who could not be given land.”</i> Family Member 9.
<i>“We do not really have land we rent land when we have money and if we don’t get money to pay for rent, we do not participate in crop growing that season.”</i> Adolescent Mother 5.
<i>“She [young mother] has to walk long journeys to get to the hospital, it is tiresome. She does not have money for transport. Sometimes the nurses are so rude to her, they mix them with adult mothers who look at them with bad eyes, and the drugs are sometimes lacking.”</i> Family Member 7.
<i>“The problem is that there is quite a long journey to the health center and sometimes it rains and it is slippery and I also experience stomach aches and so I can’t move that long distance and I don’t have transport money.”</i> Adolescent Mother 4.
Nutrition Environment Level
Needs at Nutrition Environment Level
<i>“My baby is going to make 6 months and I need to supplement the breast milk but I don’t have the money to buy the foods.”</i> Adolescent Mother 10.
<i>“I lack sugar, milk and also those things like baby soya for my baby.”</i> Adolescent Mother 13.
<i>“You may want to eat say rice but when there is no money to buy it and when it is not the food cooked that time. You end up eating part of the food that is cooked at home.”</i> Adolescent Mother 13.
<i>“It [baby] eats food and takes black tea because it’s the only food available, we don’t have specific food for babies and adults.”</i> Adolescent Mother 13.
<i>“Our usual food here is posho and dodo [amaranthus].”</i> Adolescent Mother 13.
<i>“They may give me food but when it is not the one I want yet I have nothing to do.”</i> Adolescent Mother 10.
<i>“My pregnancy is fine and I don’t crave for many things but sometimes I want to change from the usual food but when I can’t find it.”</i> Adolescent Mother 11.
<i>“Yes! We give her food but sometimes we may give her what she does not want at that particular time.”</i> Family Member 10.
<i>“They [young mothers] lack good feeding.”</i> Health-related Personnel 7.
Barriers at Nutrition Environment Level
<i>“Sometimes the food is there and other times it is not there, you eat whatever is there. You may want to eat say rice but when there is no money to buy it and when it is not the food cooked that time. You end up eating part of the food that is cooked at home, usually posho and beans.”</i> Adolescent Mother 9.
<i>“Some young mothers do not have enough breast milk to breastfeed the infants exclusively due to poor feeding that is what makes them to give the babies things like milk. Others fear to breastfeeding or go to get jobs or go back to school early.”</i> Health-related Personnel 8.
<i>“The baby eats the family food and takes black tea it’s the only food available, we don’t have specific food for babies and adults. I mash it and put sauce and give it to it and it starts to eat.”</i> Adolescent Mother 13.
<i>“I give black tea and feed him on any food present [posho, potatoes, rice].”</i> Adolescent Mother 9.
<i>“A few of them [young mothers] practice exclusive breastfeeding but some of them come back here after a month when they have already fed the baby with cow milk and their stomachs have complications.”</i> Health-related Personnel 9.
<i>“EBF may be difficult because some of them [young mothers] do not have breast milk due to</i>

<i>poor feeding that is what makes them to give them (infants) things like milk. Others go to get jobs or go back to school early.” Health-related Personnel 7.</i>
<i>“They [young mothers] breastfeed them [infants] but sometimes they get milk for the baby to survive because these girls who deliver while they are still young sometimes fear to breastfeed saying their breasts will become lose like stockings.” Family Member 11.</i>
<i>“I don’t have enough breast milk, sometimes the nipples hurt me when it is breastfeeding.” Adolescent Mother 13.</i>
<i>“I (young mother) cook and we eat together. I mash it (the food) and put sauce and give it to it and it starts to eat.” Adolescent Mother 13.</i>
<i>“They [young mothers] smash on the ones they are eating for example if they are eating posh or potatoes, they smash it and give it to their babies.” Health-related Personnel 10.</i>
<i>“No [complementary foods are not made separately in a special way]! Because they do not have the right food to cook for their children and they also lack what to use while cooking that food and they grow up eating such foods like posho.” Health-related Personnel 11.</i>
Health Service Environment Level
Needs at Health Service Environment Level
<i>“We [young mother and her baby] both need medicine which do not have.” Adolescent Mother 11.</i>
<i>“The baby also needs medicine which it does not have.” Adolescent Mother 11.</i>
<i>“She also told me that a nurse asked her for gloves which she didn’t have and so they refused to check her. So if she does not have those hospital materials, she fears to go there.” Family Member. 8</i>
<i>“They can reach delivery time when they do not even have mama kit and gloves that will be used by medical workers to work on them during labor pains and delivery.” Community Worker 9.</i>
Barriers at Health Service Environment Level
<i>“The VHT’s tell us that we should go and seek medical services because the car has brought medicine but when you go you can’t get any medicine and they instead direct us to some specific drug shops to buy medicine.” Family Member 10.</i>
<i>“Sometimes they go for ANC but sometimes they go back when there are no medicines and they just prescribe for them the medicines to buy even when they go back on the dates that they were given to return. And the young mothers may not have the money to buy the medicines and so it hinders their treatment.” Community Worker 2.</i>
<i>“There is infrastructures like building but there are no medicines, did you know that medical workers reach at 10:00am but does your sickness start at 10am? And so when we get sick, we wait for 10am them we go for treatment isn’t that the service that you are talking about? Is it being offered there? When time for lunch reaches while they are working, they hurry up so that they go for lunch. They have also decided for us, maybe there are days they are told while in training that they should not work like weekends but sickness cannot wait for their time.” Community Worker 2.</i>
<i>“They [midwives/nurses] are so rude and they start abusing us when we reach late we should go to another health center to get medication You may take your baby when to the health center when it is very sick and they tell you to follow the line and you have to wait for them until they come late like at 10 am. They tell us to come very early in the morning yet the reach late for work and so we wait for them until they come and when they reach, they tell us that there are no medicines and yet we have no money. Sometimes I lack good clothes for me and my baby to visit the health center.” Adolescent Mother 7.</i>

“The medical workers start abusing them and telling them that ‘why did you get pregnant while still young and why have you come to disturb us’ others have their personal negative perceptions which is good.” Health-related Personnel 7.

“When we used to go for checkups they used to just touch us and told to go without being told how baby’s was in the womb or what was going on with us.” Adolescent Mother 8.

“They [medical staff] abused me because I delivered at an early age and they did not want us to enter the health center because we had mud on our feet because we would darted the hospital floor when it was raining. Every time my baby gets sick and when we go to the health facility, medical workers shout at us especially when at Kyomya health center. They abuse us because we had babies at an early age and when you go there, they only give you two tablets of Panadol and 3 pills of coartem.” Adolescent Mother 10.

“They [midwives/nurses] treat them very badly and they first work on others and later they work on them and they abuse them asking them why they got pregnant while still young, this makes them fear to go back for ANC.” Area Leader 7.

“Since they are still young they fear to be with the older mothers because they got pregnant by mistake, they were not prepared for it and so they fear to go there to get treatment. Because as I told you earlier on that they treat both older and young mothers the same way and the way they shout at the older mothers is the same way they shout at the young ones. They shout at them saying ‘that’s why you get pregnant when you are still young, those are manners of your parents’ and such things hate going to the medical center [cock crowing heard]. Secondly they may prescribe for them the medicine that is not available at health center they have no one to buy it for them. For example when she has gotten malaria and they just give them panadol or other drugs and so they reach home when the malaria is increasing and they fear to tell their parents to buy them drugs yet they do cooperate with the boy who made her pregnant.” Area Leader 7.

“They [medical staff] just do things but don’t explain to them [young mothers] and instead of telling them they just write in the medical book.” Family Member 7.

Table 5.2: Responses for perceived opportunities of adolescent mothers and challenges of service providers of maternal/child nutrition and health

	Pregnant Adolescents - 11	Lactating Adolescents (Infant 1-6 months) - 8	Lactating Adolescents (Infant 7-12 months) - 6	Mothers - 6	Grandmothers - 5	Doctors - 4	Midwives - 7	Traditional Birth Attendants (TBAs) - 3	Village Health Team Members (VHTs) - 3	Head teachers - 11	Teachers - 5	Agriculture officers - 3	Local Council Chairpersons (LCI) - 6	Religious Leaders - 3	NGO Staff - 5	Administrators (sub-county & district) - 13	Total of Responses - 101	Frequency (%)
OPPORTUNITIES																		
Individual	10	10	5	7	2	0	5	5	5	0	6	1	3	2	0	0	61	6.8
Social Environment	19	12	28	22	9	0	6	3	7	4	8	7	16	10	0	0	151	16.8
Economic Environment	15	11	18	16	10	0	5	3	15	3	4	8	10	5	3	2	128	14.2
Physical Environment	31	8	10	11	22	0	6	2	10	2	3	7	9	4	0	0	125	13.9
Nutrition Environment	24	8	4	12	12	0	6	7	19	4	6	13	10	4	1	1	131	14.5
Health Service	44	23	40	35	26	0	36	12	24	8	17	10	20	5	2	3	305	33.8
																	901	100%
CHALLENGES																		
Individual	4	5	3	5	4	3	7	3	6	0	2	4	5	4	0	0	55	18.8
Social Environment	7	4	5	4	2	0	2	2	2	2	1	1	2	2	0	0	36	12.3
Economic Environment	5	8	6	7	5	3	5	1	6	4	5	4	6	5	0	0	70	24.0
Physical Environment	4	2	4	2	2	2	6	2	4	1	2	2	4	2	0	3	42	14.4
Nutrition Environment	1	1	2	1	1	2	2	2	3	1	1	2	2	1	0	2	24	8.2
Health Service	5	6	8	0	0	6	15	5	13	0	0	3	0	0	0	4	65	22.3
TOTAL																	292	100%
GRAND TOTAL																	1193	100%

Table 5.3: Theme codebook of perceived opportunities of adolescent mothers and challenges of service providers of maternal/child nutrition and health, and respondent* counts

Level	Theme Description	Number of Respondents	Frequency (%) of Respondents
	Individual Level		
1.1	Opportunities at the Individual Level	58	100
1.1.1	Mothers' positive attitudes to health care	10	17.2
1.1.2	Mothers' positive choice of hospital delivery	8	13.8
1.1.3	Mothers practiced agriculture with families	12	20.7
1.1.4	Adolescent mothers labored for pay by digging	5	8.6
1.1.5	Mothers made handcrafts to make money	4	6.9
1.1.6	Mothers use medicines given by nurses	7	12.1
1.1.7	Mothers' taking up health related advice	3	5.2
1.1.8	Adolescent mothers' practicing TIBF and EBF	9	15.5
1.2	Challenges at the Individual Level	51	100
1.2.1	Failure to adhere to EBF	13	25.5
1.2.2	Poor attitude towards breastfeeding	7	13.7
1.2.3	No motivation (no/poor pay/working conditions)	17	33.3
1.2.4	No skill of adolescent maternal care	6	11.8
1.2.5	No persistence in acquiring economic skills	2	3.9
1.2.6	Lack of training in adolescent friendly service	3	5.9
1.2.7	Perception of poor pregnancy outcomes	3	5.9
2.0	Social Environment Level		
2.1	Opportunities at the Social Environment Level	79	100
1.2.1	Comfort from parents and community members	22	27.8
1.2.2	Decision on hospital attendance by families/VHTs	20	25.3
1.2.3	Advice on good health practices	18	22.8
1.2.4	Soliciting for Financial help for mothers/infants	4	5.1
1.2.5	Parents take advise & reenroll them back to school	4	5.1
1.2.6	TBAs' kind & caring attitude	7	8.8
1.2.7	Some nurses worked long hours	4	5.1
2.2	Challenges at the Social Environment Level	35	100
2.2.1	Mothers blamed for pregnancy of their daughters	2	5.7
2.2.2	Parents harsh to stakeholders who visited them	4	11.4
2.2.3	Community's negative attitude to medical staff	6	17.1
2.2.4	No organization supporting young mothers	13	37.2
2.2.5	Understaffing/heavy workload for medical staff	10	28.6
3.0	Economic Level		
3.1	Opportunities at the Economic Level	77	100
3.1.1	Money provision by family members	36	46.7
3.1.2	Imparting income generation skills to earn money	30	39.0
3.1.3	Free training in vocational skills by SOUL/PEFO	11	14.3
3.2	Challenges at the Economic Environment Level	70	100

3.2.1	Poor pay for medical staff	14	20.0
3.2.2	Poverty among parents	21	30.0
3.2.3	Poverty among community members	7	10.0
3.2.4	Lack of pay for VHTs, TBAs	6	8.6
3.2.5	Lack of materials for making handicrafts	10	14.3
3.2.6	High costs of agriculture items	2	2.9
3.2.7	Livestock diseases	2	2.9
3.2.8	Unprofitable markets	5	7.0
3.2.9	Inadequate government programs such as NAADS	3	4.3
4.0	Physical Environment Level		
4.1	Opportunities at the Physical Level	73	100
4.1.1	Sharing of food with family	30	41.1
4.1.2	Sharing shelter with family	21	28.8
4.1.3	Sharing land for cultivation with family	17	23.3
4.1.4	VHTs willing to offer their homes to train mothers	5	6.8
4.2	Challenges at the Physical Environment Level	40	100
4.2.1	Infertile Land	4	10.0
4.2.2	Lack of Land (sold off or used to grow sugarcane)	12	30.0
4.2.3	VHTs lacked umbrellas & protective footwear	6	15.0
4.2.4	Lack of transportation (bicycles) for VHTs	7	17.5
4.2.5	Long distances to health center for medical staff	4	10.0
4.2.6	Lack of staff housing for medical staff	4	10.0
4.2.7	Long distances to health centers/NGO for mothers	3	7.5
5.0	Nutrition Environment Level		
5.1	Opportunities at the Nutrition Level	97	100
5.1.1	Families shared with young mothers with food	58	59.8
5.1.2	VHTs theoretically trained mothers in nutrition	15	15.5
5.1.3	Support on TIBF by medical personnel	13	13.4
5.1.4	Encouragement on EBF by health personnel	11	11.3
5.2	Challenges at the Nutrition Environment Level	22	100
5.2.1	Unavailability of food	11	50.0
5.2.2	Lack of funds failed practical food preparation	5	22.8
5.2.3	Lack of facilities failed practical food preparation	3	13.6
5.2.4	Lack of personnel failed practical food preparation	3	13.6
6.0	Health Service Environment Level		
6.1	Opportunities at the Health Service Level	97	100
6.1.1	VHTs provide health education/services e.g., use of ANC, ITNs, HIV testing, safety in pregnancy	20	20.6
6.1.2	SOUL provide health education/services e.g., use of ANC, HIV testing, Cancer test, family planning	15	15.5
6.1.3	Accessible Health centers that were near	24	24.7
6.1.4	Available/friendly medical staff	4	4.1
6.1.5	Availability & accessibility of TBAs	8	8.2
6.1.6	ANC and PNC services at health centers	21	21.7
6.1.7	Free ITNs and delivery support materials	5	5.2

6.2	Challenges at the Health Service Level	57	100
6.2.1	Inadequate drugs/medical supplies	13	22.8
6.2.2	Lack of drugs/medical supplies	17	29.8
6.2.3	Lack of equipment at health centers	6	10.5
6.2.4	Inadequate equipment at health centers	4	7.0
6.2.5	Faulty equipment at health centers	2	3.5
6.2.6	Lack of electricity at health centers	4	7.0
6.2.7	Treatment of HIV/STDs not at health centers	6	10.5
6.2.8	Treatment of TB treatment not at health centers	5	8.9

**Respondent counts are presented without differentiating who the comment came from because the perspectives from stakeholders did not differ and so a bigger picture of what came from a whole range of respondents was preferred. A respondent may have given the same response more than once but he/she was counted as one person that gave the same comments.*

Table 5.4: Other quotes of stakeholder perceived opportunities of young mothers and challenges of service providers in the rural Jinja district of Uganda

Individual Level
Individual Opportunities
<i>I decided myself to deliver at the health center....Yes I am practicing EBF.</i> ” Adolescent Mother 11.
<i>“I was advised to abort but I refused because I feared to die and I know that it is a sin to do so.”</i> Adolescent Mother 1.
<i>“They had advised me to abort so that my daughter can continue with school but I refused because I feared that she would die while aborting and it is a sin before God. Suppose that is the only child she would ever have and I kill it?”</i> Family Member 2.
<i>“To me, mixing us with adult mothers during medical care is a good thing because there are some things I may not be knowing so I ask the older mothers and they tell me. Some are kind and take us as their children and are ready to help.”</i> Adolescent Mother 2.
<i>“Yes I practice agriculture, I grow beans, Sukuma wiki, dodo, egg plants, maize, potatoes and rear of animals like local chickens and goats for the family.”</i> Adolescent Mother 4.
<i>“She [young mother] used to go alone when pregnant [to the health center].....and the health workers could tell her everything.”</i> Family Member 10.
<i>“Yes, she does, she takes the baby to Kyomya and they told her that if you know that your baby will not finish the immunization dozes from here we will not immunize it. But she told them that she is a native of this village and she would be taking it for immunization.”</i> Family Member 10.
<i>“She sometimes she digs for people and gets like 5,000= Shs.”</i> Family Member 2.
<i>“When the pregnancy made 3 months she started going to for ANC on her own.”</i> Family Member 7.
<i>“She makes some mats, baskets as you know school things.”</i> Family Member 3.
<i>“We make mats sometimes and we sale and get some money for food.”</i> Family Member 1.
<i>“I assume they [young mothers] breastfeed exclusively for 6 months because we teach them to but past that it is the parents to follow it up.”</i> Health-related Personnel 12.
<i>“Most of these girls are hard workers because they look after animals and also cultivate.”</i> Educator 5.
<i>“Sometimes they go and work as house maids but the jobs are not well paying</i> Area Leader 7.
Individual Challenges
<i>“Some young mothers fear to breastfeed because they do not want their breasts to grow old and loose the firm shape.”</i> Health-related Personnel 11.
<i>“Some of the girls are brought to deliver then they leave without paying. They tell me I will bring the money later but do not. This demoralizes me and I feel bad.”</i> Health-related Personnel 12.
<i>“As LCI Chairpersons, we do not have allowances and we just do voluntary work but if you do it today and tomorrow without motivation, you get tired at some point.”</i> Area Leader 8.
<i>“We had an organization where all women were to train freely and make small bags using beads and gauze wires for someone who buys all the materials. They make six and the seventh is theirs and that is the one that they can sell and also start making their own. However many of them give up saying making 6 free bags for the project proprietor is a lot.”</i> Area Leader 8.
Social Environment Level

Social Environment Opportunities
<i>"Am not married and staying with my mother." Adolescent Mother 4.</i>
<i>"I stay with my mother and father." Adolescent Mother 5.</i>
<i>"My mother provides for my needs and cares about me though at the beginning she was rude and was chasing me away." Adolescent Mother 6.</i>
<i>My grandmother did not treat me badly but rather she treated me well and up to now she treats me well. 7 Adolescent Mother 6.</i>
<i>"I love her so much, she is my first granddaughter. People in the family treat her well. Some family members only get annoyed with her when she refuses to do work but they do not understand that she is heavy and weak". Family Member 4.</i>
<i>"We the VHTs encourage them to go for ANC while they are pregnant, test for HIV status, sleep under a mosquito net." Health-related Personnel 13.</i>
<i>"We sometimes counsel the parents and become good to the young mothers and even pick the interest of sending their children to school after delivery. They study and succeed in life and parents have come thank us. Area Leader 9.</i>
<i>"Medical workers are always on time and operate 24 hours a week/7. Nurses are ever around and work for long hours. There is an increased number of patient mothers who deliver from this health center. We are much better than we were before." Health-related Personnel 14.</i>
<i>"I care for them [young mothers] well with kindness and even give them some food. I am always available and not rude unlike the modern nurses." Health-related Personnel 14.</i>
<i>"Our duty is not that big, apart from encouraging them [young mothers] to go to health centers, counseling them not to lose hope, talking to their parents to not mistreat them, helping them to get some support from their men through meeting parents of both sides." Area Leader 10.</i>
<i>"I counsel them and tell them that the pregnancy came accidentally so do not lose hope and we also talk to their parents to not over stress their children because if you over stress them, they can commit suicide. Sometimes those girls want to abort once they discover that they are pregnant but we tell them not to abort the pregnancy because abortion is a sin according to the scriptures so we talk to them and tell them to accept and deliver the baby. And also respect their parents because if they respect their parents, they will take them back to school so I counsel them but basing on the scriptures. Community Worker 4.</i>
<i>"We do the following activities; the girl may come to you when she is pregnant but very helpless and so she tells me to go and talk to either of their parents and when I talk to them then sometimes provide of their needs. They sometime come to us when they want to take their babies to the health center when they don't have the money and if I have, I provide for them and it is their situation that makes me to give them money." Area Leader 11.</i>
<i>"When most of those girls get pregnant, they come to me crying telling me that they do not know what to do because they have gotten pregnant and parents are chasing them from home so they want me to help them abort. I tell them to not abort to wait and give birth and then continue with school because I do not know the herbs that help to abort and this is done because of the pressure put on them by their parents." Health-related Personnel 15.</i>
<i>It is only my former schoolmates that came, there are those others that brought me support. Adolescent Mother 10.</i>
<i>"It is only the VHT that has come to check on her and he advised her mother to take her to hospital before it is late." Family Member 5.</i>
<i>"I go visit and counsel them, tell them words like 'this is not the end of this world' and I</i>

<i>encourage parents to take them to school after they have delivered.” Educator 6.</i>
<i>“Others who sympathize will say like ‘she got pregnant at a very young age but let’s keep her in prayers so that they have a normal delivery’ and some of those people meet with those and they talk to them and also counsel them and also advise them on what to do like visiting health centers and others.” Community Worker 5.</i>
<i>“We usually help them get the boys who made them pregnant and we take them to police so as to help caring for the girls but some parents want to settle things amongst themselves after the parents of boys deceive them that they will take care of girls which they receive to do so. We also talk to the parents to wait for their daughters to give birth and then take them back to school and some of them take back the girls to school but some girls tend to run away with the boys and get married.” Area Leader 11.</i>
Social Environment Challenges
<i>“Sometimes their parents abuse me when I go to talk to them about their pregnant daughters saying I should leave them alone and mind my business.” Area Leader 12.</i>
<i>“Sometimes we get challenged when we want to take the boys to police who make girls pregnant yet the parents want to sort out issues amicably and not at police then later the boys do not own up to the understanding.” Area Leader 13.</i>
<i>“Patients do not know what drugs our health center is supposed to get but they keep complaining that we steal drugs and this is bad. We sell sealed drugs without labels of the government in our clinics but it is the negative mentality of the patients that we sell government drugs and there is nothing we can do about it. We have tried to explain to them but they do not accept this and until they wake up to the reality that government does not do everything they promise, they will keep on complaining.” Health-related Personnel 16.</i>
Economic Environment Level
Economic Environment Opportunities
<i>“We rear cattle and goats with my parents. I also grow maize and beans, groundnuts, soya and sometimes potatoes with them. My parents teach me those things.” Adolescent Mother 10.</i>
<i>“There are some people who teach poultry and farming. There are some saloons in Buyala where they teach hair dressing.” Health-related Personnel 17.</i>
<i>“Our [PEFO Uganda] main focus is the elderly, orphans and vulnerable children. In Busia, we have a special project of giving a goat to each teenage mother and also sensitize their families to support them because the rate of early pregnancy is so high there. Here in Jinja, we provide training in crop growing, bird and animal rearing, tailoring and hair dressing to all mothers not necessarily teenage mothers, at a fee of 200,000= UGX ~\$55.6 USD.” NGO Staff 2.</i>
Economic Environment Challenges
<i>“I have not yet finished buying her delivery items yet she will be delivering anytime but we can’t afford what she wants. We even can’t afford a good sleeping area for her.” Family Member 6.</i>
<i>“We do not teach handcrafts because they’re not examinable. We teach examinable subject only. We just tell pupils especially in primary four to bring materials for making brooms and mats. We can’t afford the materials and there is little time yet we want to complete the syllabus as this is the pressure from our parents and District bosses and parents. So making handcrafts is shown on the timetable but I want to tell you the truth we and other schools just put them there but we do not teach it all.” Educator 7.</i>

<p><i>“No, we don’t have a facility training in handcrafts. But there was a woman who had wanted to teach women on how to make sweaters but they did not give it time saying they could not make the first sweaters free of charge as that was the understanding that since they never had threads and money for tuition, she would provide threads and after they learnt, they had to make the first 2 or 3 sweaters for her free of charge then take the others and start from there, and so she went away. There was also a man who had started training people in tailoring but people did not take serious and it collapsed because people were to pay some money which they never had.”</i> Area Leader 13.</p>
<p><i>“Even if it is not giving them money but when you have a group and you want to teach them like to make mats we had a woman on this village who had brought a project of making sweaters she brought kneading machines but people did not get involved in these things so she took back her kneading machines and it was free of charge but women were required to come with their own materials like threads but people started to drop slowly and the woman got her machines and took them a way.”</i> Health-related Personnel 17.</p>
<p><i>“You may want to help such a girl but when she has no land to cultivate. You may invite them for seminars but they do not come because some of them want to be given money for motivation to attend.”</i> Community Worker 6.</p>
<p><i>“We are hardworking farmers but we do not have profitable market for our produce.....sometimes the businessmen take advantage of us when the produce is flooded on market making the prices to fluctuate and so we end up lowering the prices to avoid wastage of our produce hence making losses. This demoralizes the farmers to plant that same crop the next season. The next thing is that our land has lost its uhmm fertility you may find that we are supposed to use some artificial fertilizers which would help to improve on the lands fertility yet many farmers cannot afford these fertilizers so they just plant and harvest anything that comes up.”</i> Community Worker 7.</p>
<p><i>“I just hear of NAADS....My uncle at one time went to get maize seeds given out by NAADS at the sub-county but as an elder and leader in this village, I had not heard about that program at all. When they reached there, the seeds were only available for the NRM members and they did not receive any. Why? Because they do not support Museveni.....those are the problems.”</i> Area Leader 7.</p>
<p><i>“They (NAADS) give things to a few individuals and I last got a cow during those days and I have never gotten anything since then they give out maize and beans but they exclude the young girls so they give out to older people who they know.”</i> Health-related Personnel 7.</p>
<p><i>“NAADS does not give to young girls, they give to old people who get things like maize, beans, banana cuttings.”</i> Health-related Personnel.</p>
<p>Physical Environment Level</p>
<p>Physical Environment Opportunities</p>
<p><i>“They do not have on their own but they use their parent’s land to rear animals and grow crops.”</i> Health-related Personnel 17.</p>
<p>Physical Environment Opportunities</p>
<p><i>“Rain falls on us because we do not have umbrellas and gum boots. We also do not have transport and we just walk. Bicycles were given out long ago and the ones give to a few VHTs got spoilt. We should also be given some identifications like T-shirts to show that we are VHTs.”</i> Health-related Personnel 17.</p>
<p>Nutrition Environment Level</p>
<p>Nutrition Environment Opportunities</p>

It is only the VHTs who help with teaching about food and good health of the young mothers and their children. Family Member 7.

Health Service Environment Level

Health Service Environment Opportunities

“When I went there [health center] for ANC, they would give me iron tablets. They used to give me medicine and if it was not available they could tell me the date on which to come again. There is some time I went there when I had malaria so they gave the tablets and I got cured and that made me happy.” Adolescent Mother 15.

“Medicines were there and I reached on time and they [medical personnel] worked on me on time and they gave me drugs needed. They also told me that in case I get any problem on my body like sickness, I should inform them.” Adolescent Mother 16.

“I used to go to Budondo because at Budondo the medical workers are trained and they have medicines and machines that can check me properly which is not the case at Nawangoma.” Adolescent Mother 7.

“I delivered at Lukolo [health center III] where I go because it is closer to me and medical workers come on time. They did not treat me badly, they tell you what you are suffering from and give you drugs or prescribe for you if they do not have. They have never missed to immunize my baby and the man who immunizes children is a good man.” Adolescent Mother 17.

“The VHTs are our partners and they have got referral letters and in case of anything on the pregnant mothers, they just refer them to the health center. They write for them referral notes and with that they helped us a lot because we may not know what happens in the community and they know many people than we do.” Health-related Personnel 15.

“Concerning that we sensitize women to go for ANC when they are pregnant and how they supposed to be cared for when they are pregnant and we also advise them to deliver in places with trained medical people. “We teach them danger signs during pregnancy and after delivery” Health-related Personnel 14.

“One of the VHTs came. She came to advise me to sleep under a mosquito net, be clean at home and always to go for ANC.” Adolescent Mother 15.

“Lack of care from them [midwives/nurses] and the long waiting lines and failure to start working on patients early makes the young mothers to prefer delivering at TBAs who have had a long experience and have also delivered their mothers. I can tell you that many women deliver at TBAs and not those modern midwives.” Area Leader 14.

“The TBAs take good care of them, are kind, cheap, and do not keep them waiting, besides most of the mothers of these young girls delivered with TBAs so they just refer them there too.” Health-related Personnel 12.

Health Service Environment Challenges

“There is under staffing and we are therefore overloaded with work to do extra work and our bosses do not expect us to complain. Also we always ask for more pay in vain.” Health-related Personnel 16.

“Our working conditions are very bad, imagine if there is no power, we deliver babies on our cellphone lights.” Health-related Personnel 16.

“We do not have enough measuring equipment like weighing scales, head circumference tapes and MUAC tapes and infantometers are not there at all.” Health-related Personnel 8.

“Lack of medicines in the health centers is a complex issue. The salaries of the medical workers is little and it takes long to come so when they bring like ten boxes of medicine at

health center IV now medical workers there can also sell like three boxes before sending it down to the health center II like ours. And when it gets here, even the medical personnel will sell off some boxes which makes the medicines less and in a short time, they say the medicines are finished. The drugs first go to the district when they reach the sub-county, they send them to the health centers and all these routes have drug thefts which complicates the matter more. But government sends medicines like mainly coartem in large amounts but it also gets finished very quickly and we wonder and yet when you buy from the drug shops it is very expensive at 6,000= UGX shillings [an equivalent of \$1.68 U.S. Dollars] per dose which is a lot of money for such young mothers. The drug inspectors also no longer come to see what is happening hence the increased theft of drugs but I think they also lack transport. When the medicines are brought, medical workers at the health centers are only given a list to sign for deliveries without checking to confirm. So people may be angry at the medical workers for no reason at all.” Area Leader 2.

“We are only given one box of gloves and this box has to do all work that is required for example dressing wounds and working on patients and delivering mothers and so you find that it is not enough. A box has 144 gloves, to last 3 months.” Health-related Personnel 9.

“The whole sub-county does not have an operating theatre and an ambulance, and the electricity is unstable and some other places we use solar energy which is too weak to handle even refrigeration of vaccines or help in deliveries so midwives deliver babies using their cellphone lights at night. The sterilizing equipment are also not good at all and so we are in danger the way I see it.” Health-related Personnel 9.

“Imagine that there is no incubator in our health center and so once a mother gives birth to a premature, the baby is covered in several pieces of cloth for warmth then they have to rush it to Jinja hospital on a boda-boda not even ambulance!” Health-related Personnel 9.

I ask myself whether a person cannot fall sick on Sunday. In villages, there are days that health centers don't work for example grade III hospitals close at 5 pm and when someone falls sick after that, they are taken back home because the health center has closed so that is the problem but should sickness wait for weekdays and during day? The medical personnel seem to be so few and we do not even have theatres to carry out surgeries at all. Area Leader 15.

“However, in Budondo Health Centre IV and Lukolo Health Centre III, all mothers are taught how to cook using videos played in English instead of our local language which is a barrier to the young mothers.” Area Leader 6.

“Some people just bring their daughters and they do not come to find out how they are doing and they expect me to take care of the patient in everything like feeding them. Sometimes after they have delivered and it is me to transport them back to where ever they are coming from and you tell them to bring back you money for the services offered but they do not bring the money.” Health-related Personnel 19.

Table 6.2: Responses for recommendations and areas of capacity building for improvement of the welfare of young mothers and services in the rural Jinja district of Uganda

	Pregnant Adolescents - 11	Lactating Adolescents (Infant 1-6 months) - 8	Lactating Adolescents (Infant 7-12 months) - 6	Mothers - 6	Grandmothers - 5	Doctors - 4	Midwives - 7	Traditional Birth Attendants (TBAs) - 3	Village Health Team Members (VHTs) - 3	Head teachers - 11	Teachers - 5	Agriculture officers - 3	Local Council Chairpersons (LCI) - 6	Religious Leaders - 3	NGO Staff - 5	Administrators (sub-county & district) - 13	Total of Responses - 101	Frequency (%)
RECOMMENDATIONS																		
Individual	2	1	1	1	1	0	0	0	2	0	2	1	3	1	1	2	18	3.9
Social Environment	2	3	2	2	3	1	5	1	2	3	3	6	10	4	3	2	52	11.2
Economic Environment	22	20	12	8	10	3	5	4	10	14	9	8	17	4	3	8	157	33.8
Physical Environment	3	1	4	2	1	4	7	3	5	2	3	5	4	5	0	4	53	11.4
Nutrition Environment	3	10	4	4	1	2	6	2	10	2	4	4	8	4	2	3	69	14.8
Health Service	10	7	5	11	5	4	13	3	14	2	4	7	16	7	2	6	116	24.9
																	465	100%
CAPACITY BUILDING																		
Individual	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	4	4.8
Social Environment	0	0	0	0	0	0	0	1	2	3	1	0	0	0	0	1	8	9.8
Economic Environment	0	0	0	0	0	0	0	0	1	3	2	2	0	0	0	2	10	12.2
Physical Environment	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	1	5	6.1
Nutrition Environment	0	0	0	1	0	1	4	1	4	0	0	0	4	1	1	2	19	23.2
Health Service	0	2	1	3	0	2	4	3	2	2	1	2	7	2	2	3	36	43.9
TOTAL																	82	100%
GRAND TOTAL																	547	100%

Table 6.3: Theme codebook of recommendations and areas of capacity building for the improvement of the welfare of young mothers and services, with respondent* counts

Level	Theme Description	Number of Respondents	Frequency (%) of Respondents
1.0	Individual Level		
1.1	Recommendations at Individual Level	14	100
1.1.1	Sensitization for kind treatment of mothers	7	50.0
1.1.2	Sensitization for parental care	3	21.4
1.1.3	Keeping/reenrollment of mothers in school	4	28.6
1.1	Capacity Building at Individual Level	4	100
1.2.1	Training young mothers in handcraft skills	2	50
1.2.2	Re-train/train nurses	1	25
1.2.3	Train VHTs in income generation to train mothers	1	25
2.0	Social Environment Level		
2.1	Recommendations at Social Environment Level	49	100
2.1.1	Support for mothers to keep in parents' homes	4	8.2
2.1.2	Helping young mothers with childcare	2	4.1
2.1.3	Community collective responsibility to help	6	12.2
2.1.4	Putting up a special school for young mothers	3	6.1
2.1.5	Government to supervise medical staff	4	8.2
2.1.6	Community policing/monitoring of health services	7	14.3
2.1.7	Community demand for better services	2	4.1
2.1.8	Suggestion boxes at the health centers	1	2.0
2.1.9	Make use of VHTs as community workers	20	40.8
2.2	Capacity Building at Social Environment Level	5	100
2.2.1	Training VHTs to counsel community	3	60
2.2.2	Training of teachers to counsel community	2	40
3.0	Economic Environment Level		
3.1	Recommendations at Economic Level	90	100
3.1.1	Income generation projects	38	42.3
3.1.2	Provision of capital to young mothers	10	11.1
3.1.3	Provision of cheap agriculture equipment	2	2.2
3.1.4	Facilitating agriculture extension workers	2	2.2
3.1.5	Putting up factories to employ young mothers	4	4.4
3.1.6	Government to pay VHTs	8	8.9
3.1.7	Government to pay TBAs	2	2.2
3.1.8	Increase salaries of medical workers	22	24.5
3.1.9	Government to financially prioritize health sector	2	2.2
3.2	Capacity Building at Economic Level	19	100
3.2.1	Train VHTs to monitor projects of mothers	8	42.1
3.2.2	Teacher Training Institutes to train in handcrafts	3	15.8
3.2.3	Putting up vocational institutes	6	31.6
3.2.4	Teacher training Institutes to train in handcrafts	2	10.5
4.0	Physical Sector		

4.1	Recommendations at Physical Level	49	100
4.1.1	Support & facilitate work of VHTs	10	20.4
4.1.2	Support & facilitate work of TBAs	6	12.2
4.1.3	Government to build staff houses at health centers	21	42.9
4.1.4	Government to equip health centers	12	24.5
4.2	Capacity Building at Physical Level	5	100
4.2.1	Training VHTs in anthropometry equipment	3	60
4.2.2	Training TBAs in use of anthropometry equipment	2	40
5.0	Nutrition Environment Level		
5.1	Recommendations at Nutrition Level	60	100
5.1.1	Tailor-made nutrition education videos	26	43.3
5.1.2	Food preparation facility	24	40.0
5.1.3	Use VHTs' homes to train food preparation skills	10	16.7
5.2	Capacity Building at Nutrition Level	19	100
5.2.1	Train VHTs in food preparation & monitoring	15	78.9
5.2.2	Train VHTs in nutritional monitoring	4	21.1
6.0	Health Service Environment Level		
6.1	Recommendations at Health Service Level	84	100
6.1.1	Increase on drugs sent to health center	41	48.8
6.1.2	Increase number of medical workers	9	10.7
6.1.3	Drug restocking to involve Doctors	4	4.8
6.1.4	Change medical workers that do not work	6	7.1
6.1.5	Separating young mothers from adult mothers	17	20.2
6.1.6	Special health centers for young mothers	3	3.6
6.1.7	Tailor-made health education videos	4	4.8
6.2	Capacity Building at Health Service Level	30	100
6.2.1	Train VHTs in childcare	17	56.7
6.2.2	Train VHTs in monitoring of maternal/child health	9	30.0
6.2.3	Training & licensing of TBAs	4	13.3

**Respondent counts are presented without differentiating who the comment came from because the perspectives from stakeholders did not differ and so a bigger picture of what came from a whole range of respondents was preferred. A respondent may have given the same response more than once but he/she was counted as one person that gave the same comments.*

Table 6.4: Other selected quotes of stakeholder perceived recommendations and areas of capacity building for improvement of the welfare of young mothers and services in the rural Jinja district of Uganda

Individual Level
Recommendations at Individual Level
<i>“I want my parent to be providing for me whatever I want because I did not want to get pregnant yet they know it very well what happens to young girls. She should allow to take me back to school as she takes care of my baby” Adolescent Mother 10.</i>
<i>“Our parents should be advised not to lose hope in us, we are not useless. Much as we made mistakes, we can reform. They should love and care for us by giving us money to buy what we want and taking us back to school.” Adolescent Mother 11.</i>
<i>“Parents and Aunt’s should stop abusing their daughters who get pregnant because some do that all the time. For example I had plans of leaving this home because of my Aunt who was calling me a prostitute. They should trust us that we can become useful even after this mistake.” Adolescent Mother 12.</i>
<i>“They should be helping some of us who don’t have knowledge for handcrafts and teach us because after dropping from school, you may stay home for like a year when there is no other plans which may make you instead go for marriage.” Adolescent Mother 13.</i>
<i>“Medical workers should treat these young mothers with respect and should stop abusing and neglecting them.” Health-related Personnel 7.</i>
<i>“I feel happy when I go back to them when they are doing what I told them to do for example when I teach them about breastfeeding six months exclusively and they do it rightly, that makes me feel good.” Health-related Personnel 4.</i>
<i>“The teachers should accept these girls in case they want to go back to school again and once they suffer, the next time they tend to be very serious with their education.” Health-related Personnel 19.</i>
<i>“If it is possible, there should be schools for such girls or they should let them attend school freely even though they are pregnant.” Health-related Personnel 7.</i>
Capacity Building at Individual Level
<i>“What I ask of government is to give us some training concerning what we do because we do a great work in villages on their behalf and they should also get us licenses.” Health-related Personnel 4.</i>
<i>“VHTs should be on the payroll and they should put up seminars for training and also give us training.” Health-related Personnel 6.</i>
<i>“Also let these young mothers be trained in vocational skills and be given financial support.” Community Worker 4.</i>
<i>“I call upon people concerned with health, they should be well trained on how they should properly and kindly handle these young mothers because those girls are harassed in the health centers and so they feel out of place and have nowhere to run to yet whenever we go to the health center we hope to get peace from there. So the health workers should help us and handle these girls with care they should encourage them, give them enough treatment and also counsel them. The government should send us inspectors who are serious so that they make the medical workers to work well.” Community Worker 6.</i>
<i>“There is need for training of a special midwife/nurse at the health centers to handle them as</i>

<i>a special group.” Area Leader 4.</i>
<i>“The government should put up special medical workers at health centers to cater for young mothers only. Sometimes these girls are not given the delivery materials like the mama kits and these girls don’t know whether these things do exist.” Area Leader 17.</i>
<i>“All nurses should be retrained to help them understand how they can handle these girls as a special group with love and kindness.” Area Leader 17.</i>
<i>“They (medical personnel) should be well trained on how they should properly and kindly handle these young mothers because those girls are harassed in the health centers and so they feel out of place and have nowhere to run to yet whenever we go to the health center we hope to get peace from there.” Community Worker 7.</i>
Social Environment Level
Recommendations at Social Environment Level
<i>“These days there are no true friends in the community and no community responsibility. When your child gets problems, people become happy and if you are well off they become sad. You find that we ignore helping and giving advice because we may be arrested for interfering and so they leave the children.” Community Worker 4.</i>
<i>“After delivery, some girls want to go back to school but when they don’t have someone to care for their babies and so may be people should come up to help such girls who have delivered so that they can go back to school and also care for their babies.” Health-related Personnel 10.</i>
<i>“We want the drug inspectors to be coming abruptly and see what happens. I think the drug and health inspectors have where they sign after they have inspected and they should also be supervised. Hospitals should have all those lifesaving equipment like theatres, modern sterilizers and enough Doctors should be recruited because they complain of a lot of work. May be their salaries should be raised especially those who work in the villages so as to attract them and keep them at their jobs.” Area Leader 18.</i>
<i>“We need the top district Administrators to cooperate with the community when we do policing and report such workers because we need good services. I also advice that the community should not get tired of demanding for better services and should start monitoring the medical staff members and report those who do not do their work well.” Area Leader 18.</i>
<i>“In the medical area, the government gave a lot of freedom to the medical workers and with this, they reach at whatever time they want because they reach like at 9 am and start working on people like at 11am so government should work upon this issue by putting up supervision in government health centers. They should also put up suggestion boxes to help improve on the services offered. The government should give us theatres and increase on the medical personnel.” Area Leader 7.</i>
<i>“The government should have tight supervision and take the culprits to prison. The VHTs should also be well trained and paid some money for motivation.” Family Member 1.</i>
<i>“The government should supervise medical workers and medical workers should treat these young mothers with respect and should stop neglecting them.” Health-related Personnel 19.</i>
<i>“Though we do voluntary work, we should be motivated by giving us some monthly salary. We also need good training in child nutrition and health. A video about this should be made in our local language and not English like the one we have.” Health-related Personnel 7.</i>
<i>“They [organizations that may come up to support young mothers] should work with us the VHTs because we are the ones who are working on this things and we know how to operate in the village. They should work with us because we have the experience.” Health-related</i>

Personnel 7.
<i>“They [organizations that may come up to support young mothers] should put it in our village and use us the VHTs and other local people, we should be the ones to operate it and the people in charge of it should come to supervise it.”</i> Health-related Personnel 6.
<i>“Adult VHTs should be in-charge of such projects [of organizations that may come up to support young mothers] but only the genuine ones should be given this responsibility and be well trained beforehand. The young mothers and community leaders can tell you who the trustworthy VHTs are.”</i> Educator 8.
<i>“They [organizations that may come up to support young mothers] should link up with village heads and adult VHTs but mainly VHTs can do that work very well.”</i> Community Worker 5.
<i>“Now, it would need older women as they would be in a good position to talk to young mothers and their mothers because these are permanently staying in their homes and won’t shift like the young ones that are no stable. Besides the old ones are experienced.”</i> Area Leader 16.
<i>“When the young mothers are told something by older women, they take that issue very serious but when it is their age mates, they will despise each other and may not take that issue so serious.”</i> Community Worker 1.
<i>“I would think that older VHTs would work well because young children usually despise each other. Secondly, you may train a young girl for VHT and she gets taken away by a boy, so they will go with our knowledge to where ever the boy has taken them.”</i> Health-related Personnel 5.
<i>“It [organizations that may come up to support young mothers] should start very carefully because corruption in Uganda is like a disease, they may want to start up something but it gets hindered by corruption. It needs to be keenly observed because you can like maybe send money to someone and they use the money for some other things [cock crocking heard] or they do substandard things which is not right and so they need good supervision.”</i> Community Worker 1.
Capacity Building at Social Environment Level
<i>“VHTs if trained could help advice parents and children because they are close to the community.”</i> Health-related Personnel 4.
Economic Environment Level
Recommendations at Economic Environment Level
<i>“My view is that if they [government] bring to us factories like those which make juice or tomato paste so that the young mothers can get jobs.”</i> Health-related Personnel 5.
<i>“Government should put up for them [young mothers] vocational institutes so that they can go and learn practical skills to get them money.”</i> Educator 9.
<i>“Farming equipment’s should be available at sub-county levels or even at parish levels and they give them out at cheaper prices and with that government will succeed very fast. Government should facilitate the extension workers so that they supervise the activities on the ground. They [extension workers] should get out of their offices and come on the ground to advise us accordingly about our farming problems.”</i> Community Worker 3.
<i>“I would prefer handicrafts because it’s easy to master in the head and you cannot forget it but with crop growing, you can plant crops and they die out due to the weather conditions and with rearing animals they can be affected with dieses which can cause you great loss.”</i> Adolescent Mother 8.
<i>“Government should get us jobs or capital for self-employment so that we can provide for ourselves some other requirements like soap and body jelly.”</i> Adolescent Mother 18.
<i>“Broilers are easier. By the way local are also easy but as I told if someone wants something</i>

<i>they will do it, only space limits them.</i> ” Health-related Personnel 4.
<i>“They [young mothers] should be taught skills for example making bags, mats and jewelry for them to make money.”</i> Educator 10.
<i>“I would think that making handcrafts will be easy for them because they will need little money and they use little energy and they improve their skills.”</i> Community Worker 2.
<i>“I would choose for them looking after local chickens or goats and making handcrafts because they do not take a lot of money and the local animals easily sustain themselves unlike the cattle.”</i> Area Leader 15.
<i>“Crop growing is good but it needs some money. Handcrafts and keeping animals are somehow easy to manage. For example if they make their good baskets and put them along the road, they will get instant customers.”</i> Health-related Personnel 3.
<i>“The young mothers should be given special personal projects like rearing local chickens and making handcrafts to earn a living and these must be well supervised by VHTs who should be well trained earlier.”</i> Area Leader 18.
<i>“These need to be taught skills that can earn them some income for example making bags, mats and jewelry and rearing local or exotic chickens.”</i> Health-related Personnel 3.
<i>“For those who are already mothers as of now, we need partners who can help us train and give them some personal projects like rearing local chickens and making handcrafts to earn a living because the situation is hard.”</i> Area Leader 17.
<i>“Let government increase in the funding in that sector. Like those things of selling medicines, you reach a point and say that they are right to sell them for example they have not been paid for 5-6 months why don’t they sell the medicines so that they can survive. And they should also build for the medical workers houses I think I have handled the sectors that you have told me like education, agriculture and health.”</i> Community Worker 3.
<i>“VHTs over work yet not paid; they should at least get for them some money and that will motivate them to do the work very well.”</i> Health-related Personnel 2.
Capacity Building at Economic Environment Level
<i>“The young mothers need personal projects like rearing chickens to earn a living and VHTs should be trained in these so that they are the community-based resource personnel.”</i> Area Leader 12.
<i>“They should be taught skills for example making bags, mats and jewelry for them to make money. VHTs should be trained to teach and supervise them while we can do the same when they come back to school.”</i> Educator 11.
<i>“These need to be taught skills for income for example handcrafts like marking bags and jewelry and rearing chickens. Also VHTs should be trained and empowered to help these young mothers.”</i> Educator 12.
<i>“As a District, we need to demand that all teachers be retrained in skills of modern handcrafts and agriculture skills then look for funds to have these taught in schools so that all pupils and students but especially the girl child gains these skills to help her sustain herself because the truth is that many are getting pregnant and are really in a terrible situation.”</i> Area Leader 16.
<i>“All teacher training Institutions should emphasize skills of handcrafts and agriculture skills so that these taught in schools to pupils and students for self-sustainability even when they become pregnant.”</i> Educator 13.
Physical Environment Level
Recommendations at Physical Environment Level
<i>“Medical staff should have houses at the health center to they report to work early.”</i> Family

Member 7.
<i>"We should be given these items like mama kits and mosquito nets to give mothers, and weighing equipment."</i> Health-related Personnel 4.
<i>"VHTs should be given equipment's like boots and Umbrellas especially during rainy seasons. They are mostly faced with the challenge of transport if they can get for them bicycles they can enable them reach all places and they should be given monthly allowance to help them to buy like stationary to write like reports."</i> Community Worker 4.
<i>"I recommend government to give ambulances to village health centers because the major challenge is that people lack transport to seek medical services in cases of emergency situations."</i> Health-related Personnel 5.
<i>"Our health center of Budondo needs a good theatre. Staff houses should also be built so that they sleep at the health center."</i> Health-related Personnel 6.
<i>"The government should equip our health centers with modern equipment like incubators and a mini-theatre and also increase on the nurses because the patients are many."</i> Health-related Personnel 6.
<i>"The government should send us adequate drugs, more staff members and raise their pay, and modern equipment like incubators and a theatre."</i> Health-related Personnel 5.
<i>"Our health center of Budondo needs a good theatre, additional nurses and doctors who should be paid well because they complain of a lot of work and low pay, and adequate drugs brought on time. Staff houses should also be built so that they sleep at the health center. The work is actually a lot for the medical personnel and we as VHTs have to help them with the patients, so how can they even give special attention to the young mothers with such a high number of patents? Let the government just pay us and we work fully"</i> Health-related Personnel 8.
Capacity Building at Physical Environment Level
<i>"We should be trained how to use these weighing equipment and give information to the mothers in case their health is not good. The VHTs should also be given transport facilitation because we walk long distances."</i> Health-related Personnel 9.
Nutrition Environment Level
Recommendations at Nutrition Environment Level
<i>"We [young mothers] can be trained in cooking from Ivunamba at Sarah Mulongo's place our VHT."</i> Adolescent Mother 19.
Capacity Building at Nutrition Environment Level
<i>"We should also be trained well so that we can teach them [young mothers] about good feeding and how to bathe and wrap the baby."</i> Health-related Personnel 6.
<i>"VHT's should be well trained to give special attention to the young mothers especially on the foods to eat and feed their children."</i> Area Leader 11.
<i>"The VHTs should also be trained and facilitated to teach these young mothers on how to feed themselves and their babies."</i> Area Leader 7.
<i>"We need videos made in our local language about feeding of pregnant women and babies unlike those made in English as many mothers do not understand the language. More medical personnel should be recruited and drugs sent on time in adequate quantities to prevent people calling us thieves, it demoralizes us yet we are working under bad conditions."</i> Health-related Personnel 7.
Health Service Environment Level
Recommendations at Health Service Environment Level

<p><i>“Medicines should be brought on time and in the right quantities and more staff members should be recruited because the work is a lot patients are many. We try so hard to save lives but the conditions are not easy. You can imagine we do not even have an incubator and when we get a baby that needs one, we just wrap them up, get a boda-boda for the mother and quickly send them to Jinja referral hospital. So let the government provide us with such simple life saving equipment and materials otherwise the situation is bad. We should be upgraded to a modern hospital with a theatre because the patients are many.”</i> Health-related Personnel 7.</p>
<p><i>“Government should send the necessary requirements at our health center like medicines, mama kit, mosquito nets among others.”</i> Health-related Personnel 8.</p>
<p><i>“They should change for us medical workers and increase the amount of drugs in the hospitals and provide things like mama kit, mosquito nets.”</i> Adolescent Mother 4.</p>
<p><i>“Government should increase on the number of medical workers and they should stop mixing us together with older mothers as they made it for HIV patients who handled on a special day so we also need our special day.”</i> Adolescent Mother 19.</p>
<p><i>“The medical workers should be trust worthy and if things like mama kit comes, they give them to the people and that will make people go for ANC early.”</i> Adolescent Mother 2.</p>
<p><i>“The government should send enough drugs and build for the nurses houses so that they sleep at the hospital to take care of us, nurses should be trained to handle us with kindness instead of shouting at us.”</i> Adolescent Mother 20.</p>
<p><i>“Let government bring in new doctors if the old ones have failed to perform go their expectations. These should be well monitored by the community members and reported to the authorities who should also do the needful and not allow bribes.”</i> Area Leader 4.</p>
<p><i>“I ask government to give us enough medicines and send us more medical personnel because they complain of a high work load. I also recommend government to increase supervision on the medical workers because they get government salary and they should do what took them to school. There is need for a strict government for medical workers to do their work and these should be tightly inspected and monitored and if possible increase their pay because they have to be happy to care for us and save lives.”</i> Area Leader 5.</p>
<p><i>“Additional nurses and doctors who should be paid well because they complain of a lot of work and low pay, and adequate drugs brought on time. The work is actually a lot for the medical personnel and we as VHTs have to help them with the patients, so how can they even give special attention to the young mothers with such a high number of patents?”</i> Health-related Personnel 5.</p>
<p><i>“Another recommendation concerns medical workers if government can construct houses at every medical center it would help to solve that problem of late coming because they over complain about it Even health centers should be given enough drugs so that people do not reach there when there are medicines and then told to come back or buy from elsewhere. The government should provide some more training to the VHTs to improve their skills even getting them equipment’s like boots and Umbrellas especially during rainy seasons. They are mostly faced with the challenge of transport if they can get for them bicycles they can enable them reach all places and they should be giving them monthly allowance to help them to buy like stationary to write like reports.”</i> Community Worker 5.</p>
<p>Capacity Building at Health Service Environment Level</p>
<p><i>“As a District, we need all our health related videos to be played in our local language and I do believe that you people will work on this. The young mothers have a language barrier. For the communities that complain about theft of drugs, let them do community policing and guard</i></p>

their medicines and facilities.” Area Leader 19.

“VHTs should be trained and paid some money to help in this area and teach the young mothers good child care. We also need videos for this made in our local language made in English as many mothers do not understand the language. We need an increase in the staff, staff house, good pay for motivation, adequate drugs delivered on time, more incubators like 2, and modern equipment all repaired on time.” Area Leader 7.

“We TBAs help a lot. We should be trained in what the government wants and all of us who complete the training should be licensed.” Health-related Personnel 7.

APENDIX VII

Please note that the Tables in this Appendix (VII) are the same for Chapters 5 and 6. For Chapter 5, Tables 4.5, 4.6, 4.7 and 4.8 become Table 5.5, 5.6, 5.7 and 5.8 while for Chapter 6, Tables 4.5, 4.6, and 4.8 become 6.5, 6.6, 6.7 and 6.8 respectively.

Table 4.5: Allocation of study participants for interviews by parishes/villages around six health centers in Budondo sub-county

Parishes/Village	Namizi	Kibibi	Ivunamba	Nawangoma	Buwagi	Lukolo*	Total of Participants
Pregnant Adolescents - Females	2 ^F	2 ^F	2 ^F	2 ^F	2 ^F	1 ^F	11
Lactating Adolescents of Infants 1-6 months - Females	-	1 ^F	1 ^F	1 ^F	1 ^F	2 ^F	8
Lactating Adolescents of Infants 7-12 months - Females	-	2 ^F	1 ^F	2 ^F	1 ^F	1 ^F	6
Husbands to the Young Mothers - Males	-	-	-	-	-	-	0
Mothers - Females	1 ^F	1 ^F	1 ^F	1 ^F	1 ^F	1 ^F	6
Grandmothers - Females	1 ^F	1 ^F	2 ^F	-	-	1 ^F	5
Midwives - Females	1 ^F	1 ^F	1 ^F	2 ^F	1 ^F	1 ^F	7
Traditional Birth Attendants (TBAs) - Females	-	-	-	1 ^F	1 ^F	1 ^F	3
Village Health Teams (VHTs)- Females (4) and Male (1), final comments by all in last meeting	1 ^F	1 ^F	1 ^F	-	1 ^F	1 ^M	5
Local Council I Chairpersons - Males	1 ^M	1 ^M	1 ^M	1 ^M	1 ^M	1 ^M	6
Religious Leaders - Males	1 ^M	1 ^M	1 ^M				3
Teachers - Females	-	1 ^F	1 ^F	-	3 ^F	-	5
Agricultural Officers - Males	-	1 ^M	1 ^M	-	-	1 ^M	3
Head teachers – Males (9) and Females (2)	4 ^M	1 ^M	1 ^F	-	1 ^F ,1 ^M	1 ^M	11
Doctors in-Charge of Health Centers – Female (1) and Males (3)							4
Representatives of NGOs dealing with Youths, Education, Agriculture and Maternal Health: Females (2); Males (3)	Interviewed for 10-15 minutes and voices were recorded						5
Administrators of Jinja District and Budondo Sub-county (Health, Political, Education, and Agriculture) – Males (79) and Females (6)	Interviewed for 10-15 minutes but did not consent to voice recording						13
Total Number of Participants	Males = 35; Females = 66						101

* Lukolo is a Village within Nawangoma Parish and houses Lukolo Health Centre III hence had to be included as a research area;
M= Males and F = Females.

Table 4.6: Question guide for study participant categories

Question Category	Needs of Adolescent Mothers	Health Monitoring & Translation	Barriers of Adolescent Mothers	Supports (Facilities)*	Support (Workers)	Challenges of Service Providers	Projects in Area	Recommendations for Welfare of Adolescent Mother/child*	Capacity Building*	Observation of Supports & Environment by research team
Pregnant Adolescents	√	√	√	√	X	X	√	√	X	√
Lactating Adolescents of Infants 1-6 months	√	√	√	√	X	X	√	√	X	√
Lactating Adolescents of Infants 7-12 months	√	√	√	√	X	X	√	√	X	√
Mothers	√	X	√	√	√	√	√	√	√	√
Grandmothers	√	X	√	√	√	√	√	√	√	√
Midwives	√	√	X	X	X	√	X	√	√	√
TBAs	√	√	X	X	X	√	X	√	√	√
VHTs	√	√	X	X	X	√	X	√	√	√
Local Council I Chairpersons	√	X	√	√	√	√	√	√	√	√
Religious Leaders	√	X	√	√	√	√	√	√	√	√
Teachers	√	X	√	√	√	√	√	√	√	√
Agricultural Officers	√	X	√	√	√	√	√	√	√	√
Head teachers	X	X	X	√	√	√	√	√	√	√
Doctors in-charge of Health Centers	X	X	X	√	√	√	√	√	√	√
Representatives of NGOs dealing with Youths, Education, Agriculture and Maternal Health	X	X	X	√	√	√	√	√	√	√
Administrators of District, Sub-county (Health, Political, Education, and Agriculture)	X	X	X	√	√	√	√	√	√	√

√ = Question category present and X = Question category absent

For some Adolescent mothers, Mothers, and Grandmothers, questions on these categories were left out with no further probing once the respondents were not able to answer them.

Table 4.7: Interview schedule (with the participants who consented indicated)

Date	Parish	Participants/Study Workers visited	Total Number (Females/Males)	
16 th February, 2016	All 6 Parishes	Meeting all my 6 Study coordinators/VHTs to be given their job offers and terms and conditions. 1-Consented to Photographs: RMX-LC1-Kamw-25-March-2015	4 Females	2 Males
26 th February, 2016	Butagaya: Pretest area	Meeting with VHT in-charge of Pretest in Butagaya	1 Female	0 Males
19 th March, 2016	All 6 Parishes	Meeting with Study coordinators to collect their signed terms and conditions and Curriculum Vitae. To be given facilitation fee to move through to take invitation letters to participants	4 Females	2 Males
21 st March, 2016	All 6 Parishes	Meeting each Study Coordinator at their homes for a feedback on invitation of study participants	4 Females	2 Males
22 nd March, 2016	Butagaya: Kamila Village	Pretesting in Kamila Village of Kamila Parish (Butagaya Sub-county) with 1 Lactating Adolescent Mother (3 months), 1 Grandmother; 1 Midwife; 1 TBA; 1 VHT; and 1 Chairperson Local Council I (LCI).	5 Females	1 Male
25 th March, 2016	All 6 Parishes	Chairperson Local Council I (LCI). 1 per Parish	0 Females	6 Males
28 th March, 2016	Namizi	1 Pregnant Adolescent Mother, 1 Lactating Adolescent Mother (1-6 months), 1 Lactating Adolescent Mother (7-12 months), 1 Midwife	4 Females	0 Males
29 th March, 2016	Ivunamba	1 Lactating Adolescent Mother (7-12 months), 1 Mother, 1 Grandmother, 1 Midwife. 1-Consented to Photographs: RFX-Grandmother-Mulo-29-March-2016	4 Females	0 Males
30 th March, 2016	Kibibi	1 Teacher, 1 Midwife, 1 Mother, 1 Lactating Adolescent Mother (1-6 months). 2-Consented to Photographs: RFX-Adol-Lact(1-6)-Kago-30-March-2016, RFX-Mother-Naig-30-March-2016.	4 Females	0 Males
31 st March, 2016	Nawangoma	2 Pregnant Adolescent Mothers, 1 Mother, 1 TBA, 1 Midwife. 2-Consented to Photographs: RFX-Adol-Preg-Naig-31-March-2016, RFX-Adol-Preg-Nais-31-March-2016.	5 Females	0 Males
2 nd April, 2016	Buwagi	1 Lactating Adolescent Mother (1-6 months), 1 Mother, 1 Teacher, 1 Midwife, 1 TBA. 4-Consented to Photographs: RFX-Mother-Naka-02-April-2016, RFY-Teacher-Nang-02-April-2016, RFY-Midwife-Naki-02-April-2016, RFX-TBA-Naik-02-April-2016.	5 Females	0 Males
6 th April, 2016	Nawangoma (Lukolo*)	1 Lactating Adolescent Mother (1-6 months), 2 Lactating Adolescent Mothers (7-12 months), 1 Mother, 1 Grandmother, 1 Midwife. 1-Consented to Photographs: RFX-Adol-Lact(7-12)-Kiba-06-April-2016.	6 Females	0 Males
7 th April, 2016	Kibibi	2 Pregnant Adolescent Mothers, 2 Lactating Adolescent Mothers (7-12 months),	5 Females	0 Males

		1 Grandmother. 5-Consented to Photographs: RFX-Adol-Preg-Nabi-07-April-2016, RFX-Adol-Preg-Nama-07-April-2016, RFX-Adol-Lact(7-12)-Nabi-07-April-2016, RFX-Adol-Lact(7-12)-Nama-07-April-2016, RFX-Grandmother-Kige-07-April-2016.		
8 th April, 2016	Namizi	2 Pregnant Adolescent Mothers. 1-Consented to Photographs: RFX-Adol-Preg-Nabi-08-April-2016	2 Females	0 Males
9 th April, 2016	Ivunamba	2 Pregnant Adolescent Mothers, 1 Lactating Adolescent Mother (1-6 months), 1 Grandmother, 1 Teacher. 4-Consented to Photographs: RFX-Adol-Preg-Babi-09-April-2016, RFX-Adol-Preg-Naka-09-April-2016, RFX-Adol-Lact(1-6)-Namu-09-April-2016, RFX-Grandmother-Yang-09-April-2016.	5 Females	0 Males
12 th April, 2016	Nawangoma	2 Lactating Adolescent Mothers (1-6 months), 1 Lactating Adolescent Mother (7-12 months). 2-Consented to Photographs: RFX-Adol-Lact(1-6)-Naba-12-April-2016, RFX-Adol-Lact(1-6)-Naka-12-April-2016.	3 Females	0 Males
13 th April, 2016	Buwagi	2 Pregnant Adolescents, 1 Lactating Adolescents (7-12 months). <i>Non-Appointment Follow-up interviews with Head Teacher Kyomya P/S, LCI Kyomya Central, In-charge of Kyomya Health Center II, In-charge of Nawangoma Health Center II, In-charge of Kibibi Health Center II, In-charge of Lukolo Health Center III, Head Teacher Lukolo Church of Uganda P/S, & Head Teacher Buwagi P/S.</i>	4 Females	7 Males
14 th April, 2016	Nawangoma (Lukolo*)	1 Pregnant Adolescent Mother (2 nd pregnant mother left out, older than 19 years), 1 TBA, 2 Lactating Adolescent Mothers (1-6 months), <i>Non-Appointment Follow-up interviews with LCI Lukolo West and OC CID Police Station of Budondo Sub-county.</i>	4 Females	2 Males
15 th April, 2016	Namizi	1 Deputy Head Teacher, 1 Religious Leader. <i>Non-Appointment Follow-up interviews with Head Teacher Kyomya P/S, SOUL Uganda (Programs Manager of Maternal Health), 2 Male Staff from Soft Power Health & Education.</i>	1 Female	5 Males
16 th April, 2016	Ivunamba	Brief visit to get views from 2-3 Husbands of young mothers (7:45am -5:30pm)	0 Females	2-3 Males
18 th April, 2016	Namizi	Brief visit to get views from 2-3 Husbands of young mothers (7:45am -5:30pm)	0 Females	2-3 Males
19 th April, 2016	Kibibi	Brief visit to get views from 2-3 Husbands of young mothers (7:45am -5:30pm)	0 Females	2-3 Males
20 th April, 2016	Kibibi	1 Religious Leader and 1 Agricultural Officer. 2-Consented to Photographs: RMX-Agriculture-Dhey-20-April-2016, RMX-Religious-Bali-20-April-2016.	0 Females	2 Males
	Ivunamba	1 Agricultural Officer, 1 Religious Leader. 2-Consented to Photographs: RMX-Agriculture-Kafu-20-April-2016, RMX-Religious-Ngob-20-April-2016. <i>Non-Appointment Follow-up interviews with Midwife of Ivunamba Health center II.</i>	1 Female	2 Males

21 st April, 2016	Nawangoma (Lukolo*)	1 Agricultural Officer. <i>Non-Appointment Follow-up interviews with PEFO Programs Manager, Head Teacher East High School, Head Teacher King of Kings, Head Teacher Trinity College Buwagi, Head Teacher & Assistant Senior Woman Teacher of Buyala P/S, and 2nd Visit to LCI Chairperson of Budhagali.</i>	2 Females	5 Males
23 rd April, 2016	Buwagi	Brief visit to get views from 2-3 Husbands of young mothers (7:45am -5:30pm)	0 Females	2-3 Males
25 th April, 2016	Nawangoma	Brief visit to get views from 2-3 Husbands of young mothers (7:45am -5:30pm)	0 Females	2-3 Males
26 th April, 2016	Nawangoma (Lukolo*)	Brief visit to get views from 2-3 Husbands of young mothers (7:45am -5:30pm)	0 Females	2-3 Males
28 th April, 2016	Kibibi	1 VHT. 1-Consented to Photographs: RFX-VHT-Kasa-28-April-2016	1 Female	0 Males
	Namizi	1 VHT. 1-Consented to Photographs: RFX-VHT-Muge-28-April-2016	1 Female	0 Males
	Ivunamba	1 VHT. 1-Consented to Photographs: RFX-VHT-Mulo-28-April-2016 <i>Non-Appointment Follow-up interview with PISO of Buyala and PEFO Director.</i>	1 Female	2 Males
29 th April, 2016	Buwagi	1 VHT. 1-Consented to Photographs: RFX-VHT-Mpew-29-April-2016	1 Female	0 Males
	Nawangoma (Lukolo*)	1 VHT. 1-Consented to Photographs: RMX-VHT-Muso-29-April-2016 <i>Non-Appointment Follow-up interview with VHT Coordinator and Health Educator both of Budondo.</i>	2 Females	2 Males
	Nawangoma	1 VHT (Interview did not take place, he was ill)	0 Females	1 Male
2 nd May, 2016		<i>Non-Appointment Follow-up interview: 2nd Visit to LCI Chairperson of Namalembe (10:00am to 1:00pm. Spoke to DEO and Deputy RDC</i>	0 Females	3 Males
		<i>Non-Appointment Follow-up interview with an Inspector of Schools, DISO, RISO. Had last meeting/lunch with VHTs, and later spoke to the Deputy CAO and CAO</i>	7 Females	3 Males
		Total Participants who consented to photography is 32 (26 Females & 6 Males)		

LC: Local Council; **VHT:** Village Health Team Member; **PEFO:** Phoebe Education Fund for Orphans and Vulnerable Children; **RDC:** Resident District Commissioner; **DEO:** District Education Officer; **DISO:** District Inspectors of Schools; **RISO:** Regional Internal Security Officer; **PISO:** Parish Internal Security Officer; **CAO:** Chief Administrative Officer.

* Lukolo one of the Villages in Nawangoma Parish and houses Lukolo Health Centre III hence was included as a research area.

Table 4.8: Summary of demographic characteristics of study participants by parishes in Budondo sub-county

PARTICIPANT	NAMIZI	KIBIBI	IVUNAMBA	NAWANGOMA	BUWAGI	LUKOLO*	TOTAL
**Pregnant Adolescent Mother	17yrs of age; 5mo; 17yrs residence; Senior3	14yrs of age; 3mo pregnant; 14yrs of residence; Primary 6	15yrs of age; 7mo pregnant; 15 years of residence; Primary 6	17 years of age; 9mo pregnant; 4yrs of residence; Senior 1	15yrs of age; 6mo 3.5yrs residence; Primary 6	16yrs of age; 6mo; 16yrs residence; Primary 5	11 Females
	16yrs of age; 6mo; 16yrs residence; Primary 6	18yrs of age; 6mo pregnant; 4yrs of residence; Senior 2	17yrs of age; 3mo pregnant; 17yrs of residence; Senior 3	17yrs of age; 7mo pregnant; 4yrs of residence; Senior 1	15yrs of age; 3mo; 15yrs residence; Primary6		
**Lactating Adolescent Mother (1-6mo)	_____	Primary 7; 16yrs of age; 5mo baby; 10yrs residence	Primary 7; 17yrs of age; 3weeks baby; 17yrs residence	Senior 3; 16yrs of age; 6mo baby; 16yrs of residence	16yrs of age; 3mo baby; 16yrs residence; Primary7	16yrs of age; 1mo baby; 16yrs of residence; Senior 1	08 Females
				17yrs of age; 4mo baby; 17yrs residence; Primary6. <i>Attending school</i>		16yrs of age; 6mo baby; 16yrs residence; Primary 7	
						16yrs of age; 2mo baby; 16yrs residence; Primary 6	
**Lactating Adolescent Mother (7-12mo)	_____	16yrs of age; 7mo baby; 16yrs residence; Primary 6	15yrs of age; 11mo baby; 15yrs residence; Senior 2	18yrs of age; 12mo baby; 5yrs residence; Primary 7	14yrs of age; 12mo baby; 14yrs residence; Primary6	14yrs of age; 8mo baby; 5yrs residence; Primary7	06 Females
		Primary 6; 18yrs of age; 11mo baby; 6yrs residence					
Mothers	20yrs of residence	20yrs of residence	24yrs of residence	26yrs of residence	13yrs of residence	10yrs of residence	06 Females
Grandmothers	44yrs of residence	45yrs of residence	2-Grands;45yrs residence	_____	_____	16yrs of residence	05 Females
Midwives	Enrolled midwife, holds Certificate in midwifery, 20yr working	Enrolled midwife, holds Certificate in midwifery, 20yr working	Nursing Assistant, Certificate Registered Comprehensive Nursing, 15yr working	Nursing Assistant, Diploma in Registered Comprehensive Nursing, 4yr working	Enrolled midwife, Certificate in midwifery, 4yr working	Enrolled midwife, holds Certificate in midwifery, 20yr working	07 Females
				2 nd Nursing Assistant, Certificate Comprehensive Nursing, 16yr working			
Traditional Birth Attendants (TBAs)	_____	_____	_____	Un-educated; 40 years working experience; 56yrs of residence	Grade III Teacher; 16 years working; 55yrs of residence	Trained as TBA in Iganga; 15yrs work; 49yrs residence	03 Females
VHTs (Village Health Teams) 5/6 interviewed, one fell ill	Female; Senior 4 leaver; 10yrs working; 15yrs residence	Female; Senior 4 leaver; 14yrs working; 34yrs of residence	Female; Senior 4 leaver; 15yrs working; 20yrs of residence	_____	Female; Senior 4 leaver; 5yrs working; 35yrs of residence	Male; Senior 4 leaver; 18yrs working; 50yrs residence	05 1 Male, 4 Females

PARTICIPANT	NAMIZI	KIBIBI	IVUNAMBA	NAWANGOMA	BUWAGI	LUKOLO*	TOTAL
Local Council 1 Chairpersons <i>Follow-up interviews included in transcripts</i>	Senior 4 Leaver; 10yrs working experience; 30yrs residence;	Senior 4 Leaver; 14yrs working experience; 34yrs of residence	Senior 4 Leaver; 15yrs working; 20yrs of residence	Certificate in Engineering & Veterinary; 25yrs working; 45yrs residence	Senior 4 Leaver; 25yrs working experience; 48yrs of residence;	Senior 4 Leaver; 17yrs working experience; 60yrs of residence;	06 Males
Religious Leaders	Senior 4 Leaver; 21yrs working; 24yrs residence	Senior 4 Leaver; 25yrs working; 48yrs of residence	Senior 2; 13yrs working; 15yrs residence	—————	—————	—————	03 Males
Teachers	—————	Grade III Certificate; 22yrs working experience; 48yrs residence	Grade III Certificate; 28yrs residence; 29yrs working	—————	2 Teachers with Grade III Certificate; 12-14yrs work&residence. 3 rd Teacher with Grade III Certificate; 15yr work&residence	—————	05 Females
Agricultural Officers	—————	Senior 4 Leaver; Community Facilitator of Agriculture; 20yrs work; 54yrs residence	Senior 4 Leaver; 25yrs working; 53yrs residence	—————	—————	Diploma in Agriculture; Extension Officer-4yrs; 25yrs residence	03 Males
Head teachers	4 Males 6yrs work experience	1 Male 7yrs work experience	1 Female 14yrs work experience	—————	3 Males 13-15yrs work experience 1 Female 6yrs work experience	1 Male <6yrs work experience	11 9 Males, 2 Females
Doctors in-charge of Health Centers	1 Male 9yrs working	1 Male 8yrs work experience	—————	1 Female 6yrs working	—————	1 Male 6yrs work experience	03 Males, 01 Female
Representatives of NGOs	2 Male (Soft Power Uganda); 4yrs work of experience; 1 Female (Soul Foundation Uganda): 3.5yrs of work experience 1 Female (PEFO Uganda): 4yrs of work experience; 1 Male (PEFO Uganda): 13yrs of work experience						05 3 Males, 2 Females
District and Sub-county Administrators	07 Males 4-6yrs of working experience: Regional Internal Security Officer (RISO); Deputy RDC (Resident District Commissioner); Parish Internal Security Officer (PISO); OC for Ivnamba Police Station. 12yrs of working experience: District Inspector of Schools; District Education Officer (DEO); Head of VHTs. 06 Females 3-6yrs of working experience: Health Education Officer; Community Development Officer (CDO); Deputy CAO (Chief Administrative Officer). 10-15yrs of working experience: Assistant DHO (District Health Officer); Chief Administrative Officer (CAO); Inspector of Schools.						13 7 Males, 6 Females
TOTAL is 101 INTERVIEWEES: Males = 35; Females = 66							

* Lukolo is a Village in Nawangoma Parish, houses Lukolo Health Centre III hence was included as a research area.

**Adolescent mothers were all unmarried and unemployed. yrs=Years; mo= Months; NGO=Non-governmental Organization.