Distribution Agreement

In presenting this thesis or dissertation as a partial fulfillment of the requirements for an advanced degree from Emory University, I hereby grant to Emory University and its agents the non-exclusive license to archive, make accessible, and display my thesis or dissertation in whole or in part in all forms of media, now or hereafter known, including display on the world wide web. I understand that I may select some access restrictions as part of the online submission of this thesis or dissertation. I retain all ownership rights to the copyright of the thesis or dissertation. I also retain the right to use in future works (such as articles or books) all or part of this thesis or dissertation.

Signature:

_____ _____

Emily Diane Lemon Date

“Now I am a mother…and I feel like a mother and I’m not a girl anymore”: Pathways to Early Motherhood among Kaqchikel Young Women in Sololá, Guatemala

By

Emily Diane Lemon

Master of Public Health

Hubert Department of Global Health

_____

Monique Hennink

Committee Chair

“Now I am a mother … and I feel like a mother and I’m not a girl anymore”: Pathways to Early Motherhood among Kaqchikel Young Women in Sololá, Guatemala

By

Emily D. Lemon

Bachelor of Arts

University of the South

2010

Thesis Committee Chair: Monique Hennink, PhD

An abstract of

A thesis submitted to the Faculty of the

Rollins School of Public Health of Emory University

in partial fulfillment of the requirements for the degree of

Master of Public Health

in Hubert Department of Global Health

2015

ABSTRACT

"Now I am a mother…and I feel like a mother and I'm not a girl anymore": Pathways to Early Motherhood among Kaqchikel Young Women in Sololá, Guatemala

By Emily D. Lemon

Guatemala has the third highest adolescent pregnancy rate in the Western Hemisphere at 101 per 1,000 live births among young women ages 15 to 19. Guatemala's reproductive health indicators lag behind other developing countries in Latin America and demonstrate significant disparities by ethnicity, socioeconomic status, and region especially in the area of maternal mortality, total fertility, and adolescent fertility. To date, research has focused on the factors that affect high rates of maternal mortality among indigenous women in Guatemala and have sought to understand contraceptive utilization. In recent years, the Ministry of Health in Guatemala has increased efforts to reduce adolescent pregnancy as a contributing factor of maternal mortality in Guatemala. However, there has been limited research on pregnancy among adolescents or the causes of a disparate burden of pregnancy among rural, indigenous young women. Therefore, our study sought to explore the sociocultural influences of adolescent pregnancy among indigenous young women by focusing on one indigenous ethnic group where adolescent pregnancy is high. We used a qualitative approach comprising 19 in-depth interviews with Kaqchikel young women in Sololá, Guatemala in order to explore the phenomenon of adolescent pregnancy from the lived experiences of young mothers. Data analyses were guided by grounded theory and narrative analysis. We identified four distinct pathways to early motherhood that are influenced by strong gender expectations, limited communication about sex, and stigma around sex. Our findings are consistent with evidence of adolescent sexual behavior and its ties to gender, limited intergenerational communication about sex and the stigmatization of sex across multiple country contexts. This study reveals the processes in which these sociocultural influences operate and show the variation of adolescent pregnancy experiences among young mothers in the context of the Kaqchikel communities. By identifying four pathways to early motherhood, we discover possible opportunities to interrupt these pathways through public health programs and policies that reach young women in Sololá, Guatemala.

“Now I am a mother … and I feel like a mother and I’m not a girl anymore”: Pathways to Early Motherhood among Kaqchikel Young Women in Sololá, Guatemala

By

Emily D. Lemon

Bachelor of Arts

University of the South

2010

Thesis Committee Chair: Monique Hennink, PhD

A thesis submitted to the Faculty of the

Rollins School of Public Health of Emory University

in partial fulfillment of the requirements for the degree of

Master of Public Health

in Hubert Department of Global Health

2015

ACKNOWLEDGEMENTS

I am very grateful for the Universidad del Valle de Guatemala, Campus Altiplano for inviting me to conduct research in this topic, for the use and coordination of facilities and for providing me the mentorship and support of Lic. Nely Amparo Can and Lic. Tereso Joj.

I also thank my colleagues Olga Mercedes Xoquic and Juana Bixcul for their support in data collection and for Trini Zuniga's support in preparing us for data collection phase.

I must also thank my mentors at Emory University, Dr. Stanley Foster and Dr. Monique Hennink for their time, advice, and support throughout the process. In addition, I thank my partner Joshua Mullinax for his continual support, encouragement and artistic vision.

Most of all I thank the young women of Sololá for trusting their very personal stories with me, and without them this research would not be possible.

Lastly, a special thanks to community partners who supported our research, among them:

- Municipality of San José Chacayá
- Municipality of Sololá
- Municipality of Concepción
- Municipality of San Antonio Palopó
- Municipality of Sta. Catarina Palopó
- Municipality of San Andrés Semetabaj
- Municipality of Panajachel
- Municipality of San Marcos
- Municipality of Santa Cruz
- Municipality of San Lucas Tolimán
- Comisión Departamental de la Mujer, Niñez y Adolescencia
- Secretaria Presidencial de la Mujer
- Vivamos Mejor
- APRODESA
- ADEMKAN
- SESAN
- Casa de Salud Santiago
- Ministerio de Salud Pública y Asistencia Social de Sololá

Table of Contents

I. INTRODUCTION

In Guatemala, nearly 1 in every 5 children is born to an adolescent mother (MSPAS, 2013). Adolescent pregnancy poses an increased risk for the mother and her child (Ganchimeg et al., 2013; Ganchimeg et al., 2014; Organization, 2014) especially in Guatemala where maternal mortality is dangerously high compared to the most of Latin America (The World Bank, 2012c). In addition, adolescent pregnancy in Guatemala perpetuates a cycle of poverty and affects national economic development (Buvinic, 1998). Although adolescent fertility is an important reproductive health matter, the focus of reproductive health research in Guatemala has focused on maternal mortality, perinatal care, and family planning (Barden-O'Fallon, Speizer, & White, 2008; Figueroa, Lopez, Remez, Prada, & Drescher, 2006; MSPAS, 2010at; Prada, Remez, Figueroa, Lopez, & Drescher, 2006; Singh, Prada, & Kestler, 2006). Through national reproductive health surveys, descriptive statistics and national estimates have provided evidence of a very slow decline in adolescent fertility in the past 50 years. (MSPAS, 2010a) However this decline is much slower than in neighboring countries, decreases slower than total fertility, and is not proportional to the increase of contraceptive knowledge (Figueroa et al., 2006; MSPAS, 2010a; Samandari & Speizer, 2010). National reproductive health survey data also demonstrate significant disparities in adolescent reproductive health among poor, rural, and indigenous ethnic groups (Figueroa et al., 2006; MSPAS, 2010a). In this context, there is a need for research that explores the social and cultural factors that influence adolescent pregnancy among rural, indigenous populations in Guatemala. Research that provides an in-depth focus on adolescent narratives within a specific ethnic group can closely assess the influences from the adolescents' perspective and therefore inform policies and programs that seek to reduce adolescent pregnancy. Therefore, our study explores the sociocultural influences of adolescent pregnancy among Kaqchikel young women in Sololá, Guatemala.

II. COMPREHENSIVE REVIEW OF THE LITERATURE

Introduction

Guatemala has the third highest adolescent fertility rate (101 per 1,000 live births among girls 15 to 19) in the Western Hemisphere (The World Bank, 2012c). Adolescent fertility is among many sexual and reproductive health indicators in Guatemala that have lagged behind the majority of Latin America. The limited research on adolescent sexual and reproductive health in Guatemala demonstrates high rates of unintended pregnancy and abortion among adolescents, and reveals disparities among rural and indigenous girls in sexual health knowledge, contraceptive use, adolescent pregnancy and early marriage.

Adolescent Fertility in Central America

It is important to study adolescent fertility in Central America because the rates of adolescent fertility are higher among Central American countries compared to the rest of the Americas and contribute to a cycle of poverty and underdevelopment (Buvinic, 1998; MSPAS, 2010a; Samandari & Speizer, 2010).

Adolescent fertility has been declining worldwide, with steep declines in the Western Hemisphere as a whole over the past four decades. However, in Central America, the rates of adolescent fertility have seen a much slower decline in adolescent fertility.(The World Bank, 2012a). Nicaragua, Guatemala and Honduras have the highest rates of adolescent fertility across Central America. Across Nicaragua, Guatemala and Honduras, distinctive changes in sexual knowledge and behavior have occurred but the decrease adolescent fertility continues to occur slowly. In Guatemala, in particular, adolescent fertility is declining slower than total fertility. Even as contraceptive use has increased across these three countries, it has not affected the rate of adolescent pregnancy (Samandari & Speizer, 2010).

Many of the pregnancies that occur among adolescents in Central America are within a union and are unplanned, but this varies by country. In Nicaragua and Guatemala, for example a greater number of births are unplanned than in Honduras and El Salvador. Nearly 80% of young women ages 15 to 24 who are in a union report that they want to delay pregnancy, however contraceptive use is low. Many unsafe abortions occur in Central America, as a means to terminate an unwanted pregnancy despite the criminalization of abortion. Nearly half of abortions (44%) documented in Latin America occur in adolescents and young women ages 15 to 24. The high rates of unintended pregnancy in Central America have been explained by social and economic disparities, wherein gender inequality and poverty contribute to the high rates of adolescent fertility in the region (Lisa Remez, Prada, Singh, Bixby, & Bankole, 2008).

Within Nicaragua, Guatemala, Honduras and El Salvador, adolescent girls who have primary or secondary education and medium or high SES are more likely to delay sexual debut or enter into a union when compared to adolescent girls who have no primary or secondary education and low SES (Samandari & Speizer, 2010). In addition, early childbearing can also lead to lower education, lower earnings, and higher fertility among adolescents in the region even when controlling for social or economic status, thus perpetuating a cycle of poverty and underdevelopment within those countries where adolescent fertility persists at a high rate (Buvinic, 1998).

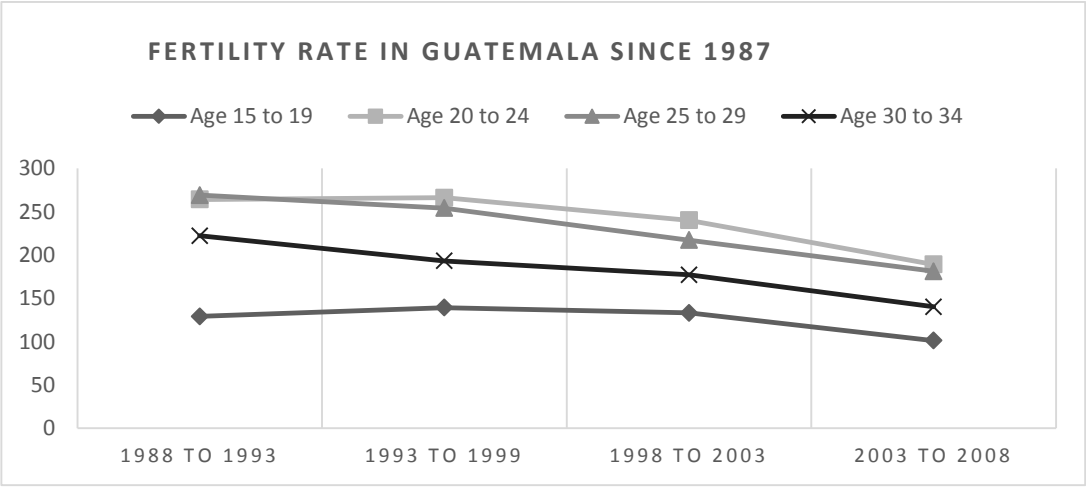
In addition to the overall social and economic causes and consequences of adolescent pregnancy, there is also many adverse health outcomes attributed to adolescent pregnancy. Among such outcomes are high risks for pregnancy-induced hypertension, preterm labor and delivery, hemorrhaging, low birth weight, and puerperium, many of which are preventable and/or treatable but can lead to maternal and infant mortality (Conde-Agudelo, Belizán, & Lammers, 2005;

Ganchimeg et al., 2014; Scholl, Hediger, & Belsky, 1994; WHO, 2011). This is particularly relevant in the context of Guatemala, which is the most populous country in Central America, where maternal mortality (140 per 100,000 live births) is the highest in the region and where sexual and reproductive health disparities are pervasive (Figueroa et al., 2006; The World Bank, 2012c).

Adolescent Fertility in Guatemala

It is estimated that in Guatemala, 1 in every 5 children is born to an adolescent mother (MSPAS, 2013). On average, Guatemalan women have their first child at 20 years of age (MSPAS, 2010a). However, this varies significantly according to ethnicity, level of education, and socioeconomic status (MSPAS, 2010a). Most pregnancies in adolescence occur between ages 13 and 17, and less than 1% occur in girls younger than 13 (UNICEF, 2006). Research in Guatemala shows that pregnancy during adolescence increases the young woman's totally fertility, nationally averaged at 3.84 births per woman, the highest total fertility rate in Central America. (Buvinic, 1998; MSPAS, 2010a) It also increases risk for maternal and infant morbidity and mortality (Conde-Agudelo et al., 2005; Ganchimeg et al., 2014). The regionally high rates of fertility and maternal mortality in Guatemala have been the subject of national research, programs and policies to reduce both fertility and maternal mortality, the successful decline of which is shown in Figure 1.

Figure 1: Fertility Rate in Guatemala since 1987 by Age Group (per 100,000)



Source: Ministry of Public Health National Survey of Maternal and Infant Health (ENSMI)

In addition to programs and policies to improve maternal and child health, and recent adolescent health programs, the Ministry of Health in Guatemala rigorously tracks national sexual and reproductive health data every five years. The National Survey of Maternal and Infant Health (ENSMI) survey data provides nationally representative fertility trends as well as sexual health knowledge and behaviors among women of reproductive age (15 to 49). The 2008/2009 ENSMI report shows improvements in sexual and reproductive health since the last report in 2002, however not enough to drop its ranking as the country with the highest in fertility rate, adolescent fertility, and abortion rate in the region (MSPAS, 2010a; Singh et al., 2006).

The reports from these surveys have served as evidence for national policies and priorities through the Ministry of Health (MSPAS), among which is the current action plan to reduce maternal and infant mortality in Guatemala for 2010 to 2015 (MSPAS, 2010at, 2013). In this plan, MSPAS aims to increase knowledge of sexual and reproductive health for adolescents, specifically emphasizing adolescent pregnancy prevention (MSPAS, 2010at). Reports from the ENSMI survey also reveal persistent health inequities experienced by Guatemala's poorest, least educated, and most marginalized groups (MSPAS, 2010a).

Disparities in Adolescent Fertility Burden in Guatemala

Guatemala is unique in the makeup of its population in comparison to the other countries of Central America, because nearly half of the population is indigenous and belongs to one of 23 Mayan ethnic groups (Colom et al., 2005; Umaña, 2012). However, the majority, ruling population is the *ladino* (mestizo) population, which has exerted social and political force over the indigenous population for centuries up until a civil armed conflict that ended in the Peace Accords of 1996 (Colom et al., 2005; Figueroa et al., 2006; Umaña, 2012). As a result of such history, social and economic inequities persist and show through in the health disparities experienced by the rural,

indigenous population (Figueroa et al., 2006; Umaña, 2012). Because women do not have the same social status as men in Guatemala, indigenous women face the greatest inequalities and poorest health outcomes. Indigenous women from rural regions are disproportionately affected by poverty (83.1%), extreme poverty (34.8%), limited access to education and illiteracy (Colom et al., 2005; Figueroa et al., 2006; MSPAS, 2010a; Prada et al., 2006; Lisa Remez, Prada, Figueroa, Lopez, & Drescher, 2007; UNICEF, 2006). Indigenous women more often experience early marriage, adolescent pregnancy, and high fertility (MSPAS, 2010a). Indigenous women in rural Guatemala are also more likely to die in childbirth than non-indigenous women (MSPAS, 2010a; Prada et al., 2006).

Given the recent national priorities to reduce adolescent pregnancies as a means to reduce maternal mortality, it is important to consider adolescent fertility within the social and historical context because adolescent fertility is highest among indigenous girls in rural regions of Guatemala. The explanation for disparities are not sufficiently researched, however evidence shows that indigenous women in rural regions also have lower levels of sexual and reproductive health knowledge, low utilization of contraceptive methods, more commonly marry in adolescence, and more often experience unintended pregnancy and abortion (MSPAS, 2010a). By exploring what is known of these sexual and reproductive health outcomes nationally and among indigenous girls in particular, it becomes clear that there is need for further research on the social and cultural context of adolescent pregnancy among rural, indigenous girls.

Sexual and Reproductive Health in Guatemala

Sexual health knowledge among Adolescents

In 2005, Guatemala decreed that sexual health education is a human right and instituted a policy of sexual health education in primary and secondary schools. This policy, the Law of

Universal and Equitable Access to Family Planning Services and its Integration into Reproductive Health Program (the Family Planning Law) articulated that the integration of sexual health education in schools aimed to reduce adolescent pregnancy and unintended pregnancy as contributing factors of maternal and infant morbidity and mortality (Centro Nacional de Analysís y Documentación Judicial, 2005). All public schools were mandated to provide primary and secondary level sexual health education that includes rights and responsibilities, health promotion, self-care, sexuality, and pregnancy. However, this law is not implemented universally and continues to be a source of debate considering differing political and social opinions on sexual health education. While the law became enforceable in 2009, it is rarely enforced and many school-going youth in Guatemala continue to go without formal sexual health education (McDonald, Papadopoulos, & Sunderland, 2012). In addition, youth who do not attend public schools due to the high cost of supplies, uniforms, and transportation or because they are encouraged to marry or take care of the home, are not receiving formal sexual health education where it is provided (Colom et al., 2005).

Opportunities for sexual health education are less available for women, particularly indigenous women, because the majority do not receive opportunities for secondary level education. Among all youth in Guatemala, 1 in 4 do not attend school. However, it is more common that girls abandon school earlier than boys and that non-indigenous youth complete school. School enrollment records show that 35% of indigenous girls ages 10 to 17 do not attend school, far above the national average (UNICEF, 2006). Lower educational attainment may be due to economic and cultural factors that encourage youth to leave school in order to work for the family and also due to early marriage and pregnancy among girls (Colom et al., 2005; UNICEF, 2006). Research among K'iche and Kaqchikel indigenous girls found that perceived gender roles often create a barrier to

school completion. A qualitative study found K'iche and Kaqchikel indigenous girls do not receive support to continue their education because parents believe that it is not necessary for girls, since they will become married or pregnant and need to care for their husbands and children (Colom et al., 2005). As a result, K'iche and Kaqchikel indigenous girls often take on household chores, childcare responsibilities and/or additional unpaid labor instead of continuing school. As a result, opportunities to receive formal sexual education are less available for indigenous girls in rural Guatemala (Colom et al., 2005).

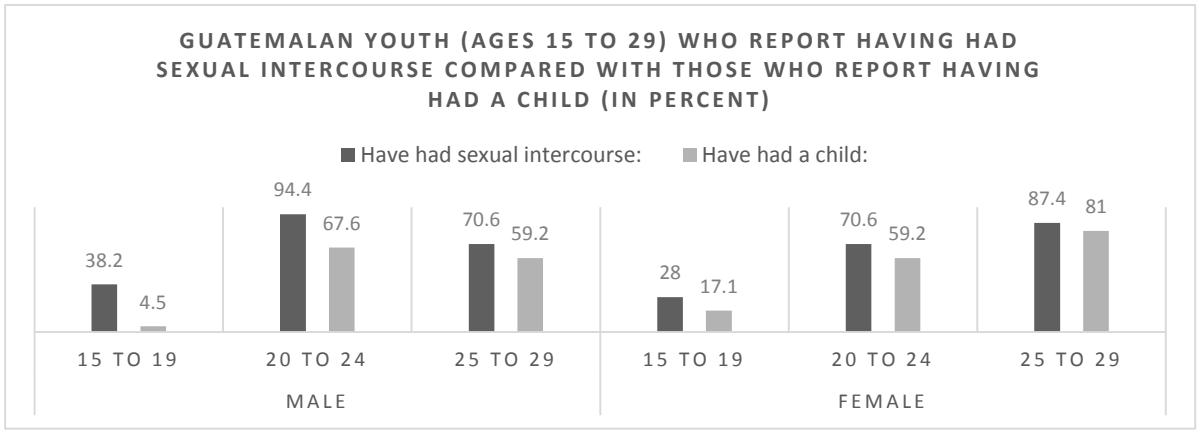
Nearly half of young women 15 to 24 have attended a sexual education class. However, this varies substantially by age, income, region, ethnic group and level of education. The greatest differences are demonstrated by education and income. Among young women who have not attended school, only 3.5% have attended a sexual education class compared to 34% of those who attended elementary school, and 92% of those who attended secondary school. Among young women in the lowest economic quintile, only 24.0% have attended a sexual education class. About half of all young women have heard about menstruation, pregnancy, sexual intercourse, STIs, and contraception through sexual education classes, but this also varies most by level of education, age, economic status, and ethnicity. In addition, much of the awareness on sexual health topics reported among the majority of adolescents is fairly superficial knowledge and does not demonstrate a deep understanding of sexual risks. (MSPAS, 2010a, 2010at; Lisa Remez et al., 2007) Although formal sexual education may not be equally accessible for all youth in Guatemala, many young girls report awareness about contraceptive methods, STIs and HIV and nearly 1 in 2 girls report their first sexual experience occurs between the ages of 15 an. 17 (MSPAS, 2010a).

Sexual Debut among Adolescents

Sexual debut typically occurs later for adolescent girls than for adolescent boys in Guatemala and most often begins between the ages of 15 and 19 with a husband or boyfriend who is between the ages of 18 and 24. Sexual debut among adolescent girls in Guatemala varies by region, ethnicity, socioeconomic status and education and differs from the sexual knowledge and experience of adolescent boys. (Berganza, Peyre, & Aguilar, 1989; Lisa Remez et al., 2007). In the regions where the population is primarily rural and indigenous, more than half of young women report they had their first sexual experience between the ages of 15 and 17. Among young women who have not attended school, 1 in 4 have reported sexual debut before the age of 15. Most young women who initiated sexual activity before the age of 20 had partners who were older than her, with on average 40% of the first partners being between the ages of 20 and 24 and 14.7% of first partners being older than 25 years of age. Compared to young men in Guatemala, young women have less sexual experience and knowledge and fewer sexual partners. (Berganza et al., 1989; UNICEF, 2006). Young women report different reasons for sexual activity than adolescent boys wherein boys are more likely to engage in sex for recreation, with less intention to marry their sexual partners. However, nearly all young women reported they were more inclined toward affection for their partner as a motive for sexual relationship and they also more often reported intent to marry their sexual partner (Berganza et al., 1989). Cultural expectations of virginity until marriage influence sexual behavior of young women, and sexual activity among unmarried adolescent girls is often stigmatized (Figueroa et al., 2006; Lisa Remez et al., 2007; UNICEF, 2006). However, some qualitative studies have concluded that while Guatemalan youth may perceive that an ideal young women should not engage in sexual activity and maintain her virginity, they also the perceive that the ideal is not attainable (Colom et al., 2005; UNICEF, 2006). As a

result of the discrepancy in the ideal cultural standard and the lived experiences of youth , the sexual activity and age of sexual debut of young women may be underreported (Lisa Remez et al., 2007). For young girls, early sexual activity is often related with adolescent pregnancy. Girls who begin sexual activity younger may be more likely to experience adolescent pregnancy than girls who delay. When comparing adolescent boys and adolescent girls, it is evident that sexual activity is not linked to reproduction for adolescent boys in the same way as it is for adolescent girls. *Figure 2* compares men and women and their sexual activity as it compares to having had a child (UNDP, 2014).

Figure 2: Sexual Activity and Reproduction among Guatemalan Youth



Source: Ministry of Public Health National Survey of Maternal and Infant Health (ENSMI)

Sexual Coercion and Gender-based Violence among Women and Girls

Sexual coercion and sexual violence against women is a leading contributor to adolescent pregnancies worldwide (Marston & King; WHO, 2011). The context of sexual coercion and gender-based violence in Guatemala is often explained by a culture of gender inequality and machismo that affects women and girls (Berglund, Liljestrand, De María Marín, Salgado, & Zelaya, 1997; Lisa Remez et al., 2008). The male-dominant culture in Guatemala is characterized by reduced

autonomy, mobility, and decision-making among women and can lead to sexual coercion and gender-based violence (MSPAS, 2010a; UNICEF, 2006). In Guatemala, the belief that men have control over household decisions and that a wife must obey her husband often even when she disagrees, is prevalent among women across the country (MSPAS, 2010a). However, such beliefs vary most by education, with 80% of women with no education holding these beliefs while less than a quarter of women with postsecondary education hold this belief (MSPAS, 2010a). However, while it is common for many women in Guatemala to believe that a wife must be obedient, much fewer women agree that women must have sexual intercourse with a man when he wants (25%) and fewer still agree that there are situations in which a man has a right to hit his partner/wife (6.7%) (MSPAS, 2010a). However, the belief that women must have sexual intercourse with their husband when he wants is more common among women with no education (44.7%) and elementary education (29.9%) (MSPAS, 2010a). 34.4% of indigenous women also hold this belief and 8.6% believe that there are situations in which a man has the right to hit his partner/wife (MSPAS, 2010a). These beliefs do not vary by age and are equally prevalent among adolescents today as older women (MSPAS, 2010a).

Beyond the beliefs that sexual coercion and gender-based violence are appropriate under circumstances of marriage or union, domestic violence is prevalent in 1 in 3 households (MSPAS, 2010a). 33% of all women of reproductive age (15 to 49) in Guatemala report that they witnessed their father physically abuse or mistreat her mother and 31.5% reported they experienced physical abuse before the age of 15 (MSPAS, 2010a). The prevalence of domestic violence is highest among non-indigenous women in the Northeast, however domestic violence occurs across all groups and regions, ranging from 20 to 40 percent prevalence across all strata (MSPAS, 2010a). In addition, intimate partner violence is prevalent in Guatemala, particularly among central and southwestern

regions where more than half of women report having experienced one of three types of violence from their partner (physical, emotional, and/or sexual violence) (MSPAS, 2010a). Intimate partner violence does not vary significantly by level of education or socioeconomic status but does vary by region and follows similar patterns of prevalence as domestic violence (MSPAS, 2010a). Women who experience intimate partner violence in the form of physical or sexual violence reported that this occurred when he was intoxicated, when he had feelings of jealousy, when she disobeyed, when she talked back, when she refused sex, and/or when there were problems with money (MSPAS, 2010a).

Gender-based violence in the form of rape is reported by 5.8% of women of reproductive age. Reporting of rape is higher by women in the metropolitan area (8.6%) and by women over the age of 30 (7.8%) (MSPAS, 2010a). Less indigenous women of reproductive age report having experienced rape (4.4%) and fewer adolescents (age 15 to 19) report having experienced rape (3.0%) (MSPAS, 2010a). Among adolescent girls who reported having been raped, most of them reported that it was by someone they knew (89.4%), most commonly a friend, neighbor, father, step-father, partner, other family member, or ex-partner in that order (MSPAS, 2010a). 1 in 10 adolescent girls who reported having been raped said that they were raped by a stranger (MSPAS, 2010a).

Early Marriage among Adolescent Girls

In Guatemala, 1 in 5 adolescent girls is married or in a union (MSPAS, 2010a) and about half of all marriage are consensual unions rather than civil marriage (Lisa Remez et al., 2008). Early marriage occurs more frequently among rural, indigenous girls, among whom the average age of first marriage among is 17.6 years (MSPAS, 2010a; UNICEF, 2006). Among adolescent K'iche and Kaqchikel girls in rural communities, the ideal time of marriage is perceived as the early or

mid-twenties, yet in reality, many adolescent girls in these communities marry younger (Colom et al., 2005). Again, the difference of a perceived ideal reality for adolescents in Guatemala conflicts with the reality that adolescents live, as found in two separate qualitative studies among multiple ethnic groups in Guatemala (Colom et al., 2005; UNICEF, 2006). Age at first marriage often co-occurs with other significant transitions to adulthood like leaving or finishing school, leaving home, initiation of parenthood and entrance in the labor market (Quisumbing, Behrman, Maluccio, Murphy, & Yount, 2005). Furthermore, some adolescents perceive that early marriage often leads to leaving school or to early pregnancy and impedes a girl's goals of educational attainment (Colom et al., 2005; UNICEF, 2006). However, on average only 6.0% of young women (15 to 24) report that they stopped going to school due to marriage and 2.8% reported it was due to pregnancy (Hallman, Peracca, Catino, & Ruiz, 2006) In addition early marriage is not significantly associated with educational attainment for girls, rather poverty and whether or living in a rural region determines whether or not a girl is likely to complete school (Hallman et al., 2006).

There is not extensive research on early marriage in Guatemala. National household surveys reveal that there are disparities in the prevalence of early marriage among adolescents between indigenous and non-indigenous women and that indigenous girls are more likely to marry younger (MSPAS, 2010a; UNDP, 2014). However, there is limited research on what may contribute to early marriage in general, and among indigenous girls specifically. To understand if early marriage and/or early pregnancy is a result of cultural perceptions of adolescence, marriage and/or reproduction, further research on such cultural perspectives are necessary. Thus far, research has primarily focused on gender roles and decision making in marriage among indigenous women, health seeking behaviors and access to health, and perceptions and use of family planning among indigenous women.

However early marriage or its relationship to adolescent pregnancy among indigenous groups in Guatemala has not been a published area of research.

Utilization of Contraception among Women and Adolescent Girls

Contraception in Guatemala is widely known and available as a result of the aforementioned Family Planning Law which integrated universal access to contraceptive services through the public health sector (Centro Nacional de Analysís y Documentación Judicial, 2005). Although modern methods of contraception are widely available, a long history of religious, cultural, and political factors continue to influence the utilization of contraception in Guatemala. Among which, the political influence of the pronatalist Catholic church, leftwing opposition to family planning as impositions from U.S. led initiatives during the 1960s and 1970s, civil conflict that inhibited the reach of family planning services in rural Guatemala until the late 1990s, and lastly due to vast social cultural differences among ethnic groups that affect demand for contraception (Mathai, 2008). In this context, low contraceptive utilization and frequent contraceptive discontinuation often lead to a high level of unmet need for contraception and unintended pregnancies among women in Guatemala (Barden-O'Fallon et al., 2008; Prada et al., 2006; Singh et al., 2006). Awareness of contraception is high among young women (15 to 24) in Guatemala, among whom 92.6% know of at least one modern contraceptive method and most know about 5 modern methods (MSPAS, 2010a). As age increases from adolescence into adulthood, knowledge of one or more contraceptive methods also increases (MSPAS, 2010a). The majority of all adolescent girls report knowing at least one method regardless of ethnicity, age, marital status, socioeconomic status, or region (MSPAS, 2010a). The mostly commonly known methods include the injection, oral contraceptives, and condoms; this varies some with age and educational status (MSPAS, 2010a).

Utilization of contraception among adolescents has increased over the past 25 years, but remains low among indigenous girls and girls living in rural regions (MSPAS, 2010a). Only 12.5% of sexually active adolescent girls report using a contraceptive method; utilization is lowest among girls who are indigenous or have low levels of education (MSPAS, 2010a). Among adolescent girls who reported use of a contraceptive method in their first act of sexual intercourse, condoms were most often utilized and uses was most often determined by the partner or the couple together (MSPAS, 2010a). Among the most cited reasons for not using a method, young women said that they did not have any knowledge about contraceptive methods (37.5%) or that they desired having a child (25.9%) (MSPAS, 2010a).

Evidence suggests that social, cultural and economic factors contribute to the utilization of contraception among women in Guatemala (Lindstrom & Munoz-Franco, 2005; Singh et al., 2006). There is substantial research contraceptive utilization among multiple Mayan ethnic groups in relation to access to contraception, knowledge of contraceptive methods, cultural perceptions of contraction, and contraceptive discontinuation (Barden-O'Fallon et al., 2008; Lindstrom & Munoz-Franco, 2005; Seiber & Bertrand, 2002; Sinai, Lundgren, Arevalo, & Jennings, 2006; Singh et al., 2006). One potential contributing factor to the lower utilization of contraception among indigenous women may be explained by extreme poverty, experienced by 1 in 3 indigenous women of reproductive age (Barden-O'Fallon et al., 2008). Ability to travel to a health facility may not be affordable for women, and women oftentimes are not able to make decisions about household expenses including about their own health (Becker, Fonseca-Becker, & Schenck-Yglesias, 2006). However, one study suggests that proximity to a family planning services is not associated with contraceptive utilization, and in fact, more indigenous women in rural districts have more available

family planning services (Seiber & Bertrand, 2002) . This leaves room to question if the utilization is lower due to other social or cultural factors affecting the Guatemalan population at large.

One such social factor may be related to education, given that indigenous women have lower levels of educational attainment and higher levels of illiteracy, especially in rural regions (Singh et al., 2006). Efforts to increase birth spacing among rural indigenous women found that the greatest difficulty in implementation was the need for constant counseling on method utilization that is costly for programs to sustain (Bertrand et al., 1999; Sinai et al., 2006). In addition, cultural beliefs about modern methods of contraception have an influence over its utilization (Barden-O'Fallon et al., 2008; Ward, Bertrand, & Puac, 1992). Previous research among Mayan ethnic groups showed that modern methods are perceived to cause harm to women's health or even death (Ward et al., 1992). However, knowledge and perceptions of contraception have been shown to change with an increase in outbound migration from rural, indigenous communities (Lindstrom & Munoz-Franco, 2005). Given that indigenous communities are known to rely upon trusted friends and family networks to learn knowledge and information, migrant friends and family influence the knowledge and perception of modern contraception (Lindstrom & Munoz-Franco, 2005). Rural villages with high rates of outbound migration to urban centers or the United States demonstrate much higher use of contraception, suggesting that cultural perceptions about contraception are mutable and influenced by beliefs within the community (Lindstrom & Munoz-Franco, 2005).

Low levels of contraceptive utilization in Guatemala account for a high level of unintended pregnancies, including adolescent pregnancy (Barden-O'Fallon et al., 2008; Prada et al., 2006; Singh et al., 2006). In addition, discontinuation of contraceptive methods account for one in every six unwanted pregnancies and one in every five mistimed pregnancies (Ali, Cleland, & Shah, 2012). When discontinuation is not due to wanting to become pregnancy, the most common reason for

discontinuation is due to side effects and health concerns (Barden-O'Fallon et al., 2008). There is a need for improved counseling to increase utilization of contraception and reduce discontinuation, particularly among adolescents who are indigenous or with low levels of education who have the highest unmet need for contraception (Barden-O'Fallon et al., 2008; MSPAS, 2010a; Prada et al., 2006; UNDP, 2014).

Abortion among Women and Adolescent Girls

An estimated 1 in 3 pregnancies in Guatemala are unintended, and although induced abortion is criminalized except to save a woman's life, an estimated 36% of unwanted pregnancies end in abortion (Prada et al., 2006; Singh et al., 2006). It is estimated that 25% of abortions occur among adolescents (Umaña, 2012). The principal cause of abortion is the termination of an unwanted pregnancy an estimated 64,000 unsafe abortions occur each year (Prada et al., 2006). The majority of abortions are unsafe and are not facilitated by a skilled health worker (Prada et al., 2006). In 2010, unsafe abortion accounted for 10% of maternal deaths (Prada et al., 2006). Indigenous women in rural Guatemala are three times more likely to have an unsafe abortion without a skilled health provider when compared to non-indigenous urban women (Prada et al., 2006). Safe abortion methods is more common in urban centers and more likely to be provided by skilled health worker, but they cost 10 times more than a unskilled provider (Prada et al., 2006). The highest rates of abortions (20 per 100,000) occur in the urban center of Guatemala and the Western Highlands region (19 per 100,000) (Prada et al., 2006; Singh et al., 2006). The Western Highlands is rural, indigenous area comprised of several departments and the high rate of abortion in that region is thought to be related to the low use of contraception (Singh et al., 2006). However, due to the criminalization of abortion, there is limited research available on the incidence of

abortion in Guatemala or the reasons for the high level of unwanted pregnancies that lead to abortion (Prada et al., 2006).

Conclusions

The reduction of adolescent pregnancy in Guatemala is now part of a national plan to reduce maternal mortality (MSPAS, 2010a), however there is limited research that gives context to why adolescent fertility occurs or the reasons for higher fertility among rural and indigenous girls. Given that indigenous girls they live in a social, economic, cultural, and linguistic context distinct from non-indigenous girls living in urban centers (UNICEF, 2006), there is a great need to further understand the phenomenon of pregnancy within context. Since the indigenous population is made up of 23 distinct linguistically derived ethnic groups, who are often geographically separated into individual townships, municipalities, and departments, it is necessary to hone in regionally rather than apply a broad brush generalization to all indigenous young women. Focused qualitative research among adolescent girls in regions that face the highest rates of adolescent pregnancy is needed to provide context through the lived experiences of adolescent girls, thereby informing actions to reduce adolescent pregnancy where it occurs most frequently.

III. MANUSCRIPT

Contribution of Student

I worked with the Universidad del Valle de Guatemala Campus Altiplano to develop the research topic question and study protocol with the additional support of my advisor Dr. Stan Foster. I developed the research instruments with the support of key informants from the community where the data was being collected. I collected the data using in-depth interviews with the support of two research assistants who translated and transcribed Kaqchikel-language interviews. I analyzed the data with the guidance and mentorship of my thesis chair Dr. Monique Hennink.

"Now I am a mother … and I feel like a mother and I'm not a girl anymore": Pathways to Early Motherhood among Kaqchikel Young Women in Sololá, Guatemala

Abstract

Guatemala has the third highest adolescent pregnancy rate in the Western Hemisphere at 101 per 1,000 live births among young women ages 15 to 19. Guatemala's reproductive health indicators lag behind other developing countries in Latin America and demonstrate significant disparities by ethnicity, socioeconomic status, and region especially in the area of maternal mortality, total fertility, and adolescent fertility. To date, research has focused on the factors that affect high rates of maternal mortality among indigenous women in Guatemala and have sought to understand contraceptive utilization nationwide. In recent years, the Ministry of Health in Guatemala has increased efforts to reduce adolescent pregnancy as a contributing factor of maternal mortality in Guatemala. However, there has been limited research on pregnancy among adolescents or the causes of a disparate burden of pregnancy among rural, indigenous young women. Therefore, our study sought to explore the sociocultural influences of adolescent pregnancy among indigenous young women by focusing on one indigenous ethnic group where adolescent pregnancy is high. We used a qualitative approach comprising 19 in-depth interviews with Kaqchikel young women in Sololá, Guatemala in order to explore the phenomenon of adolescent pregnancy from the lived experiences of young mothers. Data analyses were guided by grounded theory and narrative analysis. We identified four distinct pathways to early motherhood that are influenced by strong gender expectations, limited communication about sex, and stigma around sex. Our findings are consistent with evidence of adolescent sexual behavior and its ties to gender, limited intergenerational communication about sex and the stigmatization of sex across multiple country contexts. This study reveals the processes in which these sociocultural influences operate and show

the variation of adolescent pregnancy experiences among young mothers in the context of the Kaqchikel communities. By identifying four pathways to early motherhood, we discover possible opportunities to interrupt these pathways through public health programs and policies that reach young women in Sololá, Guatemala.

Introduction

In Guatemala, nearly 1 in every 5 children is born to an adolescent mother [8]. Adolescent pregnancy poses an increased risk for the mother and her child [9-11] especially in Guatemala where maternal mortality is dangerously high compared to the most of Latin America [12]. In addition, adolescent pregnancy in Guatemala perpetuates a cycle of poverty and affects national economic development [13]. Although adolescent fertility is an important reproductive health matter, the focus of reproductive health research in Guatemala has focused on maternal mortality, perinatal care, and family planning [2-5, 14]. Through national reproductive health surveys, descriptive statistics and national estimates have provided evidence of a very slow decline in adolescent fertility in the past 50 years. [15] However this decline is much slower than in neighboring countries, decreases slower than total fertility, and is not proportional to the increase of contraceptive knowledge [14-16]. National reproductive health survey data also demonstrate significant disparities in adolescent reproductive health among poor, rural, and indigenous ethnic groups [14, 15]. In this context, there is a need for research that explores the social and cultural factors that influence adolescent pregnancy among rural, indigenous populations in Guatemala. Research that provides an in-depth focus on adolescent narratives within a specific ethnic group can closely assess the influences from the adolescents' perspective and therefore inform policies and programs that seek to reduce adolescent pregnancy.

Methods

Preliminary Research

Prior to the study, some preliminary data were collected to inform the study design, understand the cultural context for the study and to identify ways to gain entrée into the study community. Preliminary data collection included a focus group discussion with key informants (e.g. educators, midwives, health workers, government officials, psychologists, and social workers) to inform participant recruitment, recommend culturally appropriate recruitment and entrée, and refine the scope of the topics covered in the in-depth interviews. We conducted four focus group discussions to develop the questions for the in-depth interview guide for the study with adolescent mothers. We conducted two of the four focus groups with adolescent girls ages 15 to 19 to discuss cultural norms surrounding dating, sexual health education, and teen pregnancy from the adolescent perspective to inform the wording of questions to account for linguistic variations across Kaqchikel communities and more commonly used terminology among adolescents; these focus grouped also helped refine the topics included in the in-depth interview guide. The other two focus groups were conducted with mothers of adolescent-age children to cover cultural norms of dating, sexual health education, and teen pregnancy from a mother´s perspective to provide context for the study and to develop questions for the interview guide. These preliminary data are not included in the data analysis for the study.

Study Location

This study took place in Sololá, Guatemala across ten municipalities where Kaqchikel is the dominant ethnic group, as demonstrated in *Figure 1*. The study was conducted in 2014 in collaboration with the Universidad del Valle de Guatemala (UVG), Campus Altiplano, who

contributed to the study design, hosted and supervised the research team, and facilitated connections to municipal government and community gatekeepers.

Sololá is a department in the Western Highland of Guatemala that is home to approximately 450,000 residents, with 3 out of 5 residents living in rural communities. The population of Sololá are young with an average age of 18 years that experiences one of the highest adolescent fertility rates in the country. The average age of first childbirth being 20.3 years old [15]. The population is 94% indigenous comprising three indigenous ethnic groups: Kaqchikel (37%), Quiche (43%), and Tzutujil (16%) [15]. These three ethnic groups are geographically divided within the 19 municipalities in Sololá, where the Quiche population resides in six municipalities in the mountainous region in the west of the department, the Tzutujil population primarily live in three municipalities on the southern coast of Lake Atitlan, and the Kaqchikel population resides in 10 municipalities along the eastern region of the department both along the lake and in the mountainous region. The dominant language in most municipalities is that of the primary ethnic group residing in that department, however in some municipalities Spanish is also prevalent.

This study focused on the Kaqchikel ethnic group because the highest incidence of births to adolescent mothers per year within the department of Sololá occur within the Kaqchikel ethnic groups. Data were collected from all 10 Kaqchikel municipalities to provide diversity of participants from different areas, in particular to include those from rural and urban municipalities and from the mountain and coastal regions. Prior to data collection, approval to carry out the study was provided by the Governor of Sololá and from the mayors of the ten participating municipalities. The Institutional Review Board at Emory University and the Comité Ética at UVG also reviewed and approved the study.

Data Collection

We collected data using semi-structured in-depth interviews, which provided a private setting for participants to share their personal experiences of adolescent pregnancy and to understand the individual and sociocultural influences on their pregnancy. For the comfort and privacy of the participants, we gender-matched the interviews and conducted them private settings such as participant homes or other private spaces provided by gatekeepers or participants.
We used a semi-structured interview guide and included the following topics: family life, relationship with the father of the child, knowledge of pregnancy and pregnancy prevention, reactions to the pregnancy, and recommendations for adolescent girls. Community gatekeepers reviewed the interview guide for cultural appropriateness and it was piloted with two mothers with characteristics similar to the study population. All interviews were 30 to 60 minutes long and conducted in the language preferred by participants, either Kaqchikel or Spanish. Local research assistants participated in data collection and received a one-week training in moderating focus group discussions, conducting in-depth interview and research ethics with the support of the Spanish-language PAHO Field Guide for Qualitative Research [17].

We obtained informed consent from participants aged 18 and older and parental consent and participant assent for participants age 17 and younger. Referral information for legal, social, and psychological support was provided orally to participants after the interview and was also listed in the consent form. We gave participants a small gift basket of food items after the interview was completed.

Data Analysis

We audio recorded all interviews, which were translated and transcribed from Kaqchikel into Spanish; all of the data remains in the Spanish language. All transcripts were reviewed for

accuracy and de-identified to protect participant identity. The de-identified interview data were entered into MAXQDA11 for analysis.

We applied grounded theory and narrative analysis of the data to explain the phenomenon of adolescent pregnancy through a theory derived from adolescent narratives and to explore the variations of the experiences across these narratives. For grounded theory analysis, we read and memoed the data to develop codes. Then we created a codebook using inductive and deductive codes and applied them to the data. We performed intercoder agreement to improve code development and application of codes to the data. We adjusted our codebook and recoded segments following the intercoder agreement exercise. Upon completion of coding the data, we analyzed coded segments for depth, breadth and nuance. We compared the coded data to assess variation by age of first pregnancy, marital status, age of male partner, pregnancy intent, and education level. Variation within codes and across narratives were conceptualized to construct a theoretical framework that explains the process of early motherhood. We then conducted narrative analysis by conducting within case analysis to explore individual experience and perspectives. We also assessed the application of the conceptual framework to the individual narratives and adjusted the framework according to the results of the narrative analysis.

Results

We present a framework for early motherhood based on four pathways that emerged from the data. Young women described steps that occurred along these pathways to motherhood. The description comes from a synthesis of participant narratives about their experiences leading to motherhood in adolescence and includes their perspectives, feelings, and characterizations of events. Prior to presenting these pathways, we provide the sociocultural context that young women

described when explaining their progression across the pathways. The evidence of the sociocultural context comes from our reflexive interpretation of the young women's narratives.

Sociocultural Context

Before becoming mothers, Kaqchikel young women received messages about their expected behavior as a young woman in preparation for becoming a wife and mother. Participants reported that their mothers and other elder figures encouraged them to delay marriage and motherhood until adulthood (age 20 and above), however they reveal influences that accelerate their paths to motherhood. Among these sociocultural influences are gender expectations, communication about sex, and stigma around sex that affected young women's knowledge, behavior, and choices.

Gender Expectations

Young women explained that their mothers taught them that life is about struggling to make a life for yourself and your children as a wife and caretaker. Young women recounted that they were expected to marry responsible men who could provide for her and her future children. Parents discourage their daughters from dating, especially dating men who are not perceived as respectful, responsible, or capable of economic contribution to the household. According to some participants, parents expressly forbid dating and marriage until an older age and verbally or physically reprimanded their daughters for leaving the home with a man. Some young women said their parents threatened to remove them from school if they dated men while others said that their parents permitted dating but refused to provide parental consent for marriage until meeting the partner and his family. Some young women expressed that their parents would discontinue her education after completing elementary school because it was too costly or not considered worth it for her to continue since her role was to become a wife and mother. Some young women who left school at

this stage assumed household chores and responsibilities, but the majority were expected to work to support the family until there were old enough to marry and find a man to provide for them.

Young women described two types of men: 1) The responsible man and 2) The deceitful man. Men were perceived as responsible if they fulfill their role as the economic provider for the woman and their children. An upstanding, responsible man is honest with the young woman and her family when courting her and he does not insist on a sexual relationship before marriage; however if he has sex with the young woman it is mutual and with a condom. In marriage, a man who exerts physical and verbal abuse on his family can still be a responsible man, so long as he provides for their basic needs. The deceitful man is dishonest with young women about his intentions, hides that he is already married with children, or he denies responsibility for a child he sired by claiming it is not his. The following quote makes the distinction between these two types of men:

> *She [my mom] would tell me to take care of myself because she didn't want me to go through the same thing she went through - that there are men who only take advantage of women and they leave her abandoned and more, and like people say they only deceive you. But that is why he was different, because he came and introduced himself to my family and I knew he didn't have a wife.*
>
> – Jesica[1] age 18 at pregnancy
> Pathway 2: Unplanned Parenthood

The deceitful man is also often described as *abusivo* which suggests that they take advantage of young women and they coerce or insist upon sex. A man can be both responsible and deceitful if he is fulfilling his role of provider to his wife and children while also beguiling a young girl. Young women said they were warned to protect themselves from deceitful men and are discouraged from dating and premarital sex. They were warned by family and friends that men are deceitful and that young women have to take care of themselves/protect themselves so that they do not get pregnant or contract a disease.

[1] All names presented are fictitious

Communication about Sex

The expectation that women should protect themselves from men, sex, and pregnancy reduced the transmission of knowledge about these issues until a girl married. The most common message that participants repeated about relationships, pregnancy and marriage was one of "*cuidarse"*. *Cuidarse* -take care of yourself - had multiple meanings in the context of relationships, sex and pregnancy. Depending on who was conveying the message (a parent, a partner, a friend, a neighbor, or a health provider) and in what context (before marriage, during marriage, before pregnancy, during pregnancy, etc.), the meaning and depth of detail changed. For girls who had not entered into a formal union, the message from parents was vague and typically reinforced the vulnerability of young women and the expectation that she should not get pregnant before marriage, especially to a man who was not responsible. For married women, the mother or mother-in-law provided more information about how one can take care of themselves to avoid pregnancy or prepare themselves for pregnancy.

However, within relationships some young women discussed *cuidarse*[2] as a means of contraceptive in greater detail with their partner and/or friends. This included discussion about condom use, periodic abstinence, or the availability or danger of contraceptives available at the health center. However, many times the *cuidarse* conversations were shrouded in mystique where there was limited knowledge transmitted due to the stigma around sex which make it a taboo topic of conversation.

[2] *Cuidarse* is defined by the *Real Academia Española Spanish Dictionary* as to look after your health or give yourself a good life (prnl: *Mirar por la propia salud, darse buena vida*). In Guatemala, in context of sex, *cuidarse* can mean to prevent pregnancy or protect oneself from a sexually transmitted infection. However, this varies by the context and level of knowledge of the person using the term which can affect how vague or specific the meaning.

Stigma around Sex

The intersection of gender roles and sexual behavior brought about a tension between knowledge, fear and stigma wherein participants who had limited knowledge about sex experience discussed fear around the issue of sex, contraception, and pregnancy. Due to the stigma around sex, the topic was not often discussed, especially among unmarried young women who feared the stigma associated with their sexual activity. This led unmarried young women to conceal relationships, rape and pregnancy out of fear that they may be punished, isolated or judged. The fear and silence they explained with stories they hear or saw in their communities such as girls being abandoned by friends and family, girls being kicked out or physically abused by parents, and girls being forced to leave school as a result of an unexpected adolescent pregnancy. The following quote demonstrates such fears:

> ***P:*** *I was scared of my parents that they would kick me out of the house and of my friends that they would tell everyone so I don't know that is what I thought and so I stayed quiet, didn't say anything.*
> ***I:*** *Uh huh and in the end what happened? Did they kick you out?*
> ***P:*** *My dad was going to, yeah but my mom didn't let him.*
>
> - Marcela, age 15 at first pregnancy
> Pathway 4: Forced Single Motherhood

Ideal Time for Motherhood

Family, friends, and acquaintances advise young women to delay motherhood until a certain age or level of maturity. Young women recounted that their mothers counsel them to first finish school or to wait until they are in their early 20s to marry and become a mother. They also hear that if they take an alternate route than what their mothers expect, such as pregnancy outside marriage, leaving school too early, or marrying a man who is not responsible, they will suffer. Young women who had a mother that experienced early or single motherhood often heard personal experiences and advice from their mothers who told them not follow in her footsteps. The data showed a

cultural tie between marriage and motherhood, so advice is predicated on the relationship between marriage and motherhood. Therefore, friends, family and acquaintances told young women to wait to date or marry to delay the responsibility of motherhood. The reasons participants cited for delaying dating, marriage and motherhood include that a young woman is not old enough, not mature enough, not physically able to bear a child, and not able to make a coherent decision.

Some young women were motivated to accelerate the path to marriage or motherhood, while others experienced a series of circumstances outside their control. In general, several sociocultural forces pushed young women along a path of becoming mothers in adolescence. For some, it was the abrupt ending of their schooling at a young age that launches an earlier entry into motherhood. This transition is motivated by feeling a sense of readiness to enter adulthood with their partner or because they see in their partner a provider who can relieve them of their work environment. For others, the relationship is a way to escape complicated home life situations where they experience neglect and abuse. Among many of the young woman there was a sense of romance with their partner that led to an accelerated path toward forming a family. However, romance also leads to beguilement and unexpected single motherhood. Lastly, forced sex by men with greater power who take advantage of young women's trust gave some young women no option of waiting.

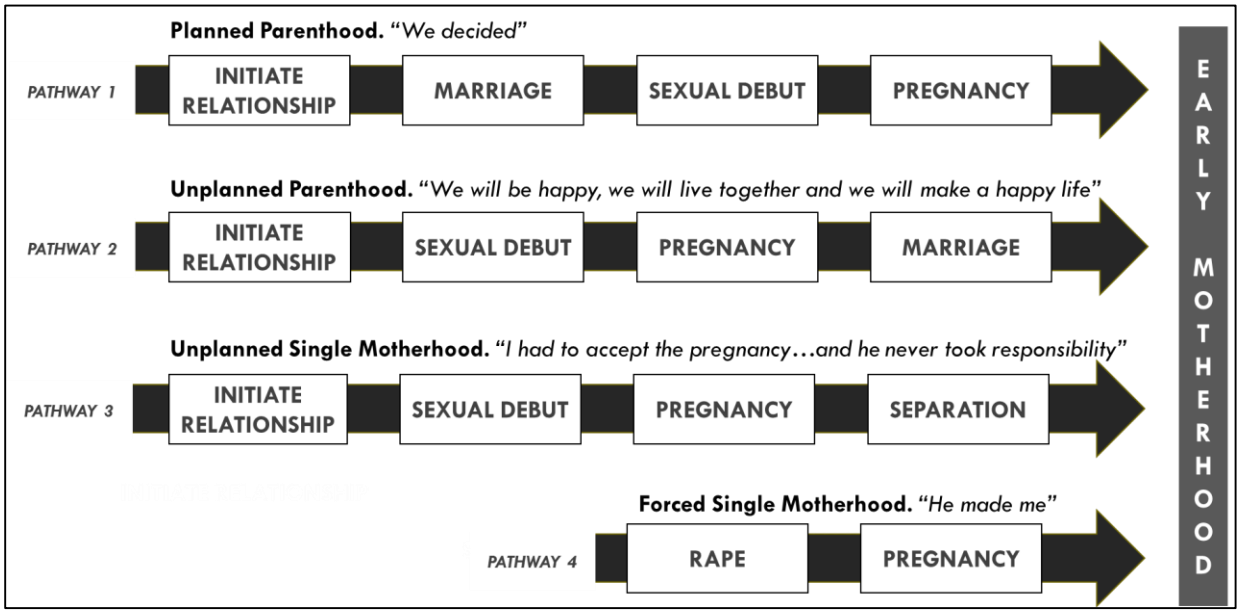
Four Pathways to Early Motherhood

The narratives of Kaqchikel young mothers revealed four clear pathways to adolescent motherhood: 1) Planned parenthood 2) Unplanned parenthood 3) Unplanned single motherhood and 4) Forced single motherhood (see figure 2). The trajectory of each pathway is marked by distinct events, which we call steps, and contexts.

These four pathways are derived from young women's narratives and each tell a different story of the context and influences on early motherhood. In addition, the way the stories are told

varies across the four pathways. Young women recount their relationship and pregnancy with feelings of happiness and joy if they belonged to Pathway 1 and Pathway 2. However, young women in Pathway 3 and 4, tell their story less chronologically and recount their experience with sadness, disappointment and grief. Young women in Pathway 3 and 4 also spend more time explaining the events that occurred, why they occurred and how they feel about it now. A summary of these narratives is shown in Figure 2, and each pathway is described in turn below.

Figure 2. Four Pathways to Early Motherhood among Kaqchikel Girls



Pathway 1: Planned parenthood

The first pathway to early motherhood comprises four steps: (1) initiation of the relationship (2) marriage (3) sexual debut, and (4) pregnancy. A young woman and her partner jointly share decision making in determining the timing and movement across the four steps. A case study of Pathway 1 is demonstrated in Figure 2 of the Appendix.

Initiate Relationship. In this pathway young women and her partner met and decided to begin dating, often with parental approval. For all young woman in this pathway of planned parenthood, this was their first relationship and they met their partner in a variety of social settings such as through friends or family member or a community event. These young women described feelings of love and attraction for their partner, who is typically a little older, in his early to mid-twenties. These young women are comfortable to show their relationship in public, and usually have their parents' approval and date their partner from two months to two years before deciding to marry. However, in some instances the participant was very young or still in school, whereby parents and friends disapproved of the relationship and told the young woman she was too young and immature to be in a serious relationship. **Marriage.** Young women and her partner decided to marry, but required parental consent when they were younger than 16. Young women stated they want to marry because of love for their partner and that they did not want to risk losing him. The step to marriage occurred more suddenly for younger women than those who were older than 16. Among those younger women, there was a tension between her partner and parents over the decision to marry, with parents discouraging marriage because of concern over her age, the character of the man she would marry, and her not completing school. Although young women are eager to marry their partner and are happy about the marriage, once they marry they felt a big change that ended their adolescence. Young women, especially younger women, described the increased responsibility, termination of friendships and reduced autonomy that characterized her marriage. Many young women described that after marrying, they felt lonely at home and that they looked forward to having a child to have a companion and sense of purpose. **Sexual Debut.** Upon marriage, young women entered a sexual relationship with their partner and typically decided against using contraception in order to conceive a child. The mothers or mothers-in-law of these

young woman provide information about sex and pregnancy, including a discussion about pregnancy prevention, but are taught to be cautious of contraceptive methods because of perceived dangers of cancer, illness or death. At this time they also talked to their partner about the desire to becoming parents. **Pregnancy.** Young women discussed wanting to have a child to progress their relationship or to have companionship and sense of purpose at home; however this step was discouraged by family and friends. Young women felt that the relationship with their partner will be strengthened by having a child together, and others feel like having children will fulfill personal desires. Most young women receive advice from family and friends that they are still too young to become pregnant. However, when the young woman finds out she is pregnant, her pregnancy is welcomed by her partner and family with joy.

Pathway 2: Unplanned parenthood

This pathway is similar to pathway 1, but the order of steps differs with sex preceding and triggering marriage: 1) initiation of relationship 2) sexual debut 3) pregnancy, and 4) marriage. The decision-making power in this pathway is shared by the young woman, her partner and her parents across the four steps. A case study of Pathway 2 is demonstrated in Figure 2 of the Appendix.

Initiate Relationship. Young women initiated the relationship with their partner willingly and most often sought their parent's approval of the relationship. Relationships typically begin after meeting a partner in a social setting such as school, work or church. The partner is usually a young man in his late teens or early 20s and offers to begin talking or dating and the young woman agrees. For most young women, this was their first relationship and they described it as being one of attraction, love, and respect wherein the partner is someone to talk to and share experiences with. About half of the young women in this pathway, sought parental approval and the partner visited and is welcomed in the family home, while among others the relationship is concealed from

parents. Where concealment of the relationship occurred, participants did not tell one or both parents because they feared that their parents would stop supporting their schooling. Most young women remained dating their partner for several months to a couple of years before becoming pregnant, with delayed pregnancy primarily due to later sexual initiation in the relationship rather than due to use of contraception. **Sexual Debut.** Young women initiated a sexual relationship with their partner after getting to know him and did not anticipate that the sexual relationship could lead to pregnancy. These young women did not spend much time discussing or characterizing their sexual relationship, even after developing a rapport and probing for more detail. They mentioned that sex was an aspect of their relationship not known to the young woman's parents. They discussed not having much knowledge about sex but having heard some things in school or from friends about pregnancy prevention. Some suggested this was a mutual aspect of their relationship and some young women discussed condom use with the partner. However most did not reveal much detail in regards to these discussions, except for that they did not know about how to take care of themselves or that they heard they could protect themselves with contraception, but that they heard contraception methods are harmful to the body. **Pregnancy.** For many women in this pathway, pregnancy was not immediately discovered and came as a surprise. When the pregnancy was discovered, young women experienced a tension between the desires of the partner and her parents. Young women discovered the pregnancy at varied points in gestation and felt a mixture of emotions upon finding out, including surprise, disappointment, fear, and happiness. When young women told the partner, he welcomed the news and said he would take responsibility, however young women worried about their own future, especially those still in school. They hesitated to tell parent(s) until they and their partner could make a decision about what action to take. When young women tell their parent(s), the parents(s) they express disappointment and anger, but the tension resolved upon

learning that the partner will take responsibility. Among some young women, discovery occurs in the second and third trimester, and is often is provoked by a health issue or symptom that led young women to seek a health provider with their parents. When discovery occurred in this setting, young women found out at the same time as their parents, resulting in tension and a heated argument. However, when the partner agreed to take responsibility, the tension was resolved. The participant's parent(s) as well as the partner's parents played a role at times in motivating the participant to continue the pregnancy even if she did not want to. Parents of both young women and their partners also encouraged marriage upon finding out about the pregnancy. **Marriage.** Young women progressed to this step after discovering pregnancy as a joint decision between her, her partner, and her parent(s). For young women in school at the time, they felt like this decision was out of their hands due to pressure from their parent(s), partner, and the community at large. These young women felt like they ended up on a path that they did not choose, in which they had to leave school and friendships behind to become a wife and mother. (i.e. "if it weren't for the pregnancy, I would not have married. I would still be home with my family and I would not be living here. I would be in school." - Daniela). When the baby came, participants describe a mix of emotions such as happiness, isolation (no longer sees friends, family), and disappointment; however they have full support of their partner and family when the baby arrives.

Pathway 3: Unplanned single motherhood

This pathway begins with the same initial steps as Pathway 1 and 2, however there is less power given to the participant to control her initiation and movement across the steps: 1) initiation of relationship 2) sexual debut 3) pregnancy, and 4) separation. In this pathway, the partner and the parent(s) of the participant control most of the decision-making or the decisions by the participant occur passively. A case study of Pathway 2 is demonstrated in Figure 2 of the Appendix.

Initiate Relationship. Relationships began at different paces for young women in this pathway, but all relationships were driven by the partner and without parental approval. The relationships were characterized by some form of deception by the partner about his age, relationships, or personal character. Relationships in this pathway began rapidly or slowly over time; participants reported they were in this step between 2 weeks to 2 years. The partner was usually much older than the young women and he initiated and led the relationship. The difference in age between the young women and her partner is usually 7 to 20 years and they recounted that their partner misled them by lying about his true age, his past or current partners, or existing marriage. These truths were not revealed to the young women until after pregnancy occurred. When describing why they pursued a relationship with their partner, young women described it as something that happened out of romance, upon insistence from the male, or because the man provided for them. Most of the young women concealed the relationship from family members, so there was limited room for parents to weigh in on the decision. Young women said they concealed the relationship from parents because they did not want to be verbally or physically reprimanded. When young women told their parents or the parents found out independently, the parents chided them and told them to 'take care of themselves'. **Sexual Debut.** For most young women in this pathway, sexual debut occurred after moving into the partner's home, despite disapproval from her family. Moving in with the partner differed from marriage that occurred in Pathway 1 and 2 in which there was a union recognized by both families and the young women moved into the partner's family home. Young women in this pathway moved into a home without the knowledge or support of friends and family and the home was usually a secondary home belonging to the man where young women stayed for only a few weeks to a few months before separation occurred. Some young women initiated a concealed sexual relationship with the partner without moving in

with him. Young women discussed their sexual debut as one of passive decision-making or inaction wherein they conceded to the man's sexual desires because they were taken away with romance, they were not thinking clearly at the time or they felt pressure or insistence from the man. They also felt like they could make a better life with his support as a provider when they had limited support at home. According to participants in this pathway, their partners encouraged them to "protect herself" from pregnancy, and were often the primary source of knowledge about sex, pregnancy and contraception during this step or once pregnancy occurred. However, many young women expressed not knowing how to prevent pregnancy or where to obtain contraception, or mentioned fear about utilization of contraception. Young women who had no schooling entered into the sexual relationship step much more rapidly with no knowledge about what it was or that pregnancy could result from sex. An example of this lack of knowledge is demonstrated by one adolescent mother of two children in a rural area of Sololá:

> *I didn't know what it was – how when one gets pregnant, how when someone has kids, no I didn't know any of that and I went one time I went to the doctor and he said "you are pregnant" --"but what is that?" I asked him because I don't know anything about it and I told him I said to him "what is a pregnancy?" And he explained to me the doctor at the health post "a pregnancy grows a little one inside and everything, he's born" – he explained everything to me but I didn't know anything about this. Nothing. Nothing. I didn't understand anything. One gets pregnant? I don't know anything about this I told the doctor. Later I asked the father of my son and he told me what it was."*
>
> - Teresa, age 17 at first pregnancy
> Pathway 3: Unplanned Single Motherhood

Pregnancy. Pregnancy was an unexpected and unwanted discovery for young women in this pathway, which triggered fear, parental involvement, and separation from the partner. When pregnancy occurred, discovery was delayed until the second or third trimester due to the limited knowledge about pregnancy or its symptoms. The pregnancy was not welcomed by these participants, the partner, or her family. Young women expressed feelings of fear about going

through pregnancy, telling their partner or parent(s) about the pregnancy, and getting an abortion; however they did not conceal their pregnancies often due to the nature or timing of the discovery. Partners encouraged young women in this pathway to have an abortion, yet young women feared abortion and consulted their mothers for advice about what to do. Mothers often told these young women not to abort the pregnancy, because the baby is not to be blamed or punished for the young woman's mistakes. The parents support the participant during and after the pregnancy, although sometimes the support is also mixed with continual reprimanding or physical or verbal abuse. Young women who were already facing difficult home life situations prior to initiating the relationship, received this mix of support and abuse. Young women in these difficult home life situations expressed that they did not have a right to the support of their parents due to the extramarital pregnancy and are often verbally or physically reprimanded during and after pregnancy. **Separation.** The pregnancy triggered separation from their partner for several reasons. One of the primary reasons for separation was that the partner did not want to take on the cost of supporting the young woman and the child. Most of the time, this was due to existing responsibility for a wife and children that the partner did not reveal pregnancy occurred. Partners did not want to formalize the relationship because of their existing marital status. However young women who were with an unmarried partner separated after receiving advice from parents to terminate the relationship because of the partner's abusive nature and he would not be a responsible provider.

Pathway 4: Forced motherhood

This pathway has only two steps: 1) rape 2) pregnancy that occur beyond the young woman's control. Among these three cases of forced single motherhood, participants were forced into an undesired sexual encounter and were forced to carry out the pregnancy because of the late

discovery or the influence of their mother. A case study of Pathway 4 is demonstrated in Figure 2 of the Appendix.

Rape. Young women who experienced this pathway had limited knowledge about sex or pregnancy at the time of rape and felt like they should conceal the occurrence due to shame and fear. The rape was by a man who was much older and who took advantage of the participant in a setting where she felt safe or trusting such as school, work, or within a perceived friendship. The participants expressed that at the time of the rape, they knew nothing about sex or pregnancy and that it was something that happened that they could not stop. Young women concealed the rape from friends and family due to feelings of fear and shame and felt responsible for what occurred as demonstrated in the quote below:

> *P: At six months [I found out] since I was studying and I was studying and my parents said when I went to [nearby city] to study ninth grade when teachers had made such an effort to bring high school here and so my parents were going to let me [study] here and I was leaving P.E. when the nurse saw me and she took me to the health center and she told me that I was pregnant and I came home and I didn't tell them anything*
> *I: Why didn't you want to tell your parents?*
> *P: Because I was scared […] On one hand I wanted to keep studying and because of what I did I don't know […] I didn't tell anyone until the baby was born…I was scared my parents would run me off and that my friends would tell everyone and I don't know that's what you think so you stay quiet and you don't say anything.*
>
> - Flor age 15 at first pregnancy
> Pathway 4: Forced singled motherhood

For some rape was not a single event and was repeated by the same perpetrator multiple times until the pregnancy occurs. Rape is not revealed to parents or family until pregnancy is discovered. **Pregnancy.** Young women who experienced rape discovered their pregnancy late in gestation and concealed it from friends and family; they described feeling fear and shame and did not seek help or consider terminating the pregnancy. For most of the young women, the pregnancy was not discovered until the third trimester and was recognized by a community nurse. The nurses who recognized the pregnancy encouraged young women to talk to their parents about the rape and

pregnancy. However, the young women continued to conceal it out of fear of being kicked out of the house or being forced to leave school. They did not seek medical attention or other forms of support because of the shame of the rape experience. These young women did not discuss seeking abortion. Most were afraid to tell the man that he got her pregnant, and did not do so unless motivated by their parents. Upon discovering the pregnancy, parents were angry with the young woman and some threatened to kick her out; however, in the end the family was supportive and often sought justice for the young woman.

Discussion

There are four distinct pathways to early motherhood among Kaqchikel young women that are influenced by gender expectations, communication about sex and the stigma around sex.

The multifaceted sociocultural influences on adolescent sexual behavior are well demonstrated in qualitative research in multiple settings worldwide [6]. In Guatemala, social and cultural factors are shown to contribute to adolescent pregnancy and early marriage [5, 14, 18-21]. This study reveals the processes in which these sociocultural influences operate and show the variation of adolescent pregnancy experiences among young mothers in the context of the Kaqchikel communities. In addition, the narratives provided by Kaqchikel women give an in-depth focus on the varied level of decision making in each path to early motherhood, and gives voice to indigenous adolescent mothers in Guatemala who have been largely silent on this topic across the literature.

Our research supports existing evidence that a young woman's sexual debut is influenced by gender expectations that also affect her experiences of sexual coercion and early marriage [7, 14]. In addition, the results are consistent with past findings of an increase in sexual debut during adolescence [5] and an increase of sexual debut outside marriage in Guatemala [15]. And, as our study found, sexual debut often occurs within the context of a romantic relationship for young

women in Guatemala, but occurs more frequently for recreation among young men in Guatemala [18, 21]. However, by finding distinct pathways that lead to adolescent pregnancy and early motherhood, it becomes clear that sex leading to pregnancy may occur within a romantic relationship among many young women but also may occur within the context of sexual coercion or rape. The context of sex affects the young woman's attitude about her pregnancy and whether or not she is motivated to continue the pregnancy.

Descriptive studies have thus far demonstrated a relationship between schooling and adolescent pregnancy and early marriage, and such research has suggested that school desertion and a lack of sex education contributes to adolescent pregnancy [4, 8, 15, 22]. Our research finds that there is a lack of knowledge about sex and pregnancy. We also see that in some pathways, school desertion does lead to early marriage and/or early motherhood, but that school desertion also occurs as a result of marriage or pregnancy among Kaqchikel young women regardless of pathway. In addition, we observe that any communication about sex or pregnancy, when it occurs, is primarily between the young woman, her mother and/or her partner regardless of her level of schooling; however discussion about this is often vague and only becomes more detailed within the context of marriage or once a pregnancy has occurred. This is consistent with previous evidence in multiple settings that find clear and direct communication across generations is limited [6]. However, as has been demonstrated in Guatemala and other country contexts, knowledge affects sexual behavior especially in regards to contraceptive utilization and unintended pregnancy [14, 23, 24], which is consistent with our findings. An increase of parent-child communication about sex has been shown to improve adolescent sexual behavior [25, 26].

Past research in Guatemala and in other settings shows that partners exert significant influence over adolescent sexual behavior and that men are often decision-makers about

contraceptive use [6, 27, 28]. Our findings conclude that the partners have varied roles in decision-making across the pathways and that the young woman and her parent(s) also participate in decision-making. Understanding the role of the parent in choosing a young woman's path and the influence they have over her decision-making is an important cornerstone for future research to see if parents are open to improving a dialogue about sex, contraception and pregnancy with their children.

Our findings support research across multiple country contexts that show sex to be stigmatized [6]. Our research is able to demonstrate how stigma around sex operates in this context. Religion has seen as a historical influence over family planning and sex education policy in Guatemala [29]. Interestingly, religious affiliations were rarely mentioned in the data and religious beliefs, particularly in the context of relationships, sex, pregnancy or abortion was not present in the data. Abortion emerged organically in the data and was often a consideration about young women who had an unintended pregnancy, which supports existing evidence about the high prevalence of abortion among indigenous women and adolescents despite the criminalization of abortion in Guatemala [2, 5]. This also suggests that missing from our study are young women who take a pathway that ends in abortion rather than motherhood. Further qualitative research that captures this voice of adolescent pregnancy among indigenous youth is necessary for more complete picture of adolescent pregnancy in Guatemala.

Strengths and Limitations

The four pathways that emerged from the data only include young women who are current mothers and do not represent all possible pathways for adolescent girls, including adolescent pregnancy that ends in abortion or among girls younger than 15, both constituting a crime in Guatemala [8]. In addition, the range of sociocultural influences that affect these pathways is

complex and the depth of all influences are not represented in the data. For example, the role of religion is sparsely mentioned and the influence of poverty is not explained thoroughly across the narratives. Language translation may alter meaning of some cultural concepts or nuances, particularly among participants who were not fluent speakers of Spanish. Retrospective recall may be inexact or affect the way participants discuss experiences leading up to pregnancy and motherhood. Gatekeepers may have excluded participants they considered more vulnerable and thus their narratives may not be included (participants who experienced rape or interfamily violence including sexual abuse).

Recognizing these limitations, we also acknowledge the importance of narrative in revealing a complex phenomenon such as early motherhood. Our sample of young women represent the variety among the Kaqchikel ethnic group by sampling from all Kaqchikel municipalities and seeking diversity in terms of education, pregnancy intent, home life, geography, and marital status. This variety allowed for comparison among groups and made possible the identification of four distinct pathways. As a result, we are able to provide an in-depth assessment of the sociocultural influences of adolescent pregnancy by analyzing narratives through grounded theory and narrative analysis.

Further research should investigate parental communication about sex and parent-child interest in opening up this dialogue. Research focusing on specific pathways or influences could further reveal sociocultural influences such as romance in young couples, sexual negotiation in young couples, early marriage, or school desertion. In addition, Guatemala is ethnically diverse and our findings may not be generalizable to other regions or ethnic groups in Guatemala.

In conclusion, this study among Kaqchikel young mothers reveals that adolescent pregnancy leading to early motherhood can occur in one of four pathways. Stigma around sex and gender

expectations of marriage and motherhood delay communication about sex and stigmatizes extramarital sexual activity among young women. In addition, young women are seen as vulnerable to young men and are discouraged from forming relationships with men during adolescence. These and other factors related to home life, schooling, work and relationships play a role in decision-making along the pathways.

References

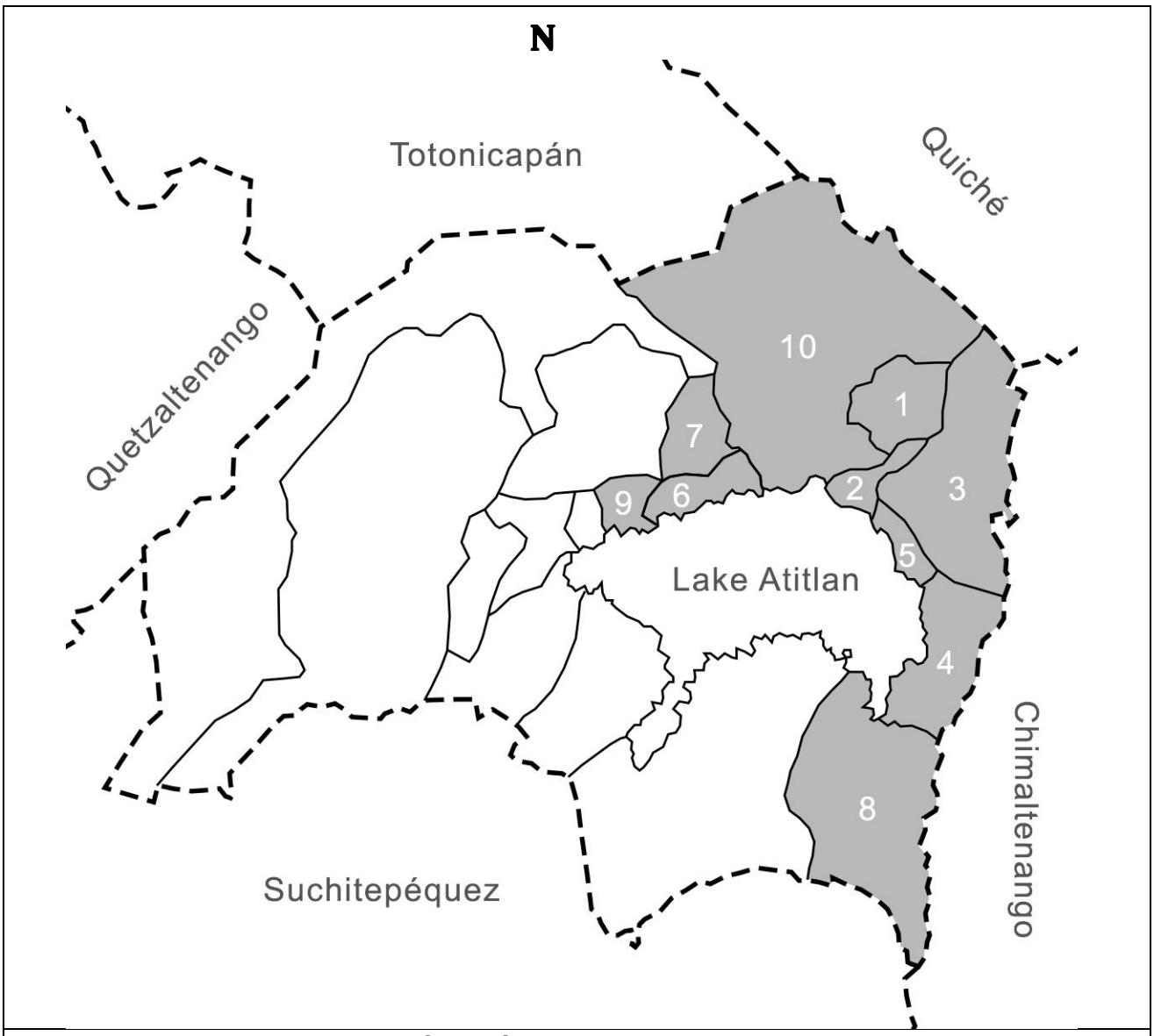
1. The World Bank, World Development Indicators, in Adolescent fertility rate (births per 1,000 women ages 15-19). 2012.
2. Singh, S., E. Prada, and E. Kestler, Induced abortion and unintended pregnancy in Guatemala. Int Fam Plan Perspect, 2006. 32(3): p. 136-45.
3. Barden-O'Fallon, J.L., I.S. Speizer, and J.S. White, Association between contraceptive discontinuation and pregnancy intentions in Guatemala. Rev Panam Salud Publica, 2008. 23(6): p. 410-7.
4. MSPAS, Plan de acción s para la reducción de la mortalidad materna neonatal y mejoramiento de la salud reproductiva. 2010, Ministerio de Salud Pública y Asistencia Social: Guatemala. p. 41.
5. Prada, E., et al., Embarazo no planeado y aborto inseguro en Guatemala: Causas y consecuencias. 2006, Guttmacher Institute: New York.
6. Marston, C. and E. King, Factors that shape young people's sexual behaviour: a systematic review. Lancet, 2006. 368(9547): p. 1581-6.
7. Bearinger, L.H., et al., Global perspectives on the sexual and reproductive health of adolescents: patterns, prevention, and potential. Lancet, 2007. 369(9568): p. 1220-31.
8. MSPAS, Analysís de la situación de embarazos en niñas y adolescentes en Guatemala 2011-2013. 2013, Procurador de los Derechos Humanos. p. 47.
9. Adolescent pregnancy. Maternal, Newborn, Child, and Adolescent Health. 2014. Cited 2014; Available from: http://www.who.int/maternal_child_adolescent/topics/maternal/adolescent_pregnancy/en/.
10. Ganchimeg, T., et al., Maternal and perinatal outcomes among nulliparous adolescents in low- and middle-income countries: A multi-country study. BJOG: An International Journal of Obstetrics and Gynaecology, 2013. 120(13): p. 1622-1630.

11. Ganchimeg, T., et al., Pregnancy and childbirth outcomes among adolescent mothers: a World Health Organization multicountry study. Bjog, 2014. 121 Suppl 1: p. 40-8.
12. The World Bank, World Development Indicators, in Maternal mortality ratio (modeled estimate, per 100,000 live births). 2012.
13. Buvinic, M., The costs of adolescent childbearing: evidence from Chile, Barbados, Guatemala, and Mexico. Stud Fam Plann, 1998. 29(2): p. 201-9.
14. Figueroa, W., et al., Early childbearing in Guatemala: a continuing challenge. Issues Brief (Alan Guttmacher Inst), 2006(5): p. 1-20.
15. MSPAS, Encuesta Nacional de Salud Materno Infantil. 2010, Ministerio de Salud Pública y Asistencia Social: Guatemala.
16. Samandari, G. and I.S. Speizer, Adolescent sexual behavior and reproductive outcomes in Central America: trends over the past two decades. Int Perspect Sex Reprod Health, 2010. 36(1): p. 26-35.
17. Ulin, P.R., E.T. Robinson, and E.E. Tolley, Qualitative Methods in Public Health: A Field Guide for Applied Research. 2004: Wiley.
18. Remez, L., et al., Protecting the sexual and reproductive health of Guatemalan Youth, in In Brief. 2007, Guttmacher Institute.
19. Remez, L., et al., Ensuring a Healthier Tomorrow in Central America: Protecting the Sexual and Reproductive Health of Today's Youth. 2008, Guttmacher Institute: New York.
20. UNICEF, Salud reproductiva en adolescentes en Guatemala. Un análisis cualitativo y cuantitativo. 2006, UNICEF: Guatemala City, Guatemala.
21. Berganza, C.E., C.A. Peyre, and G. Aguilar, Sexual attitudes and behavior of Guatemalan teenagers: considerations for prevention of adolescent pregnancy. Adolescence, 1989. 24(94): p. 327-37.
22. Colom, A., et al., Voices of vulnerable and underserved adolescents in Guatemala. 2005, Population Council: Guatemala City.

23. Che, Y., J.G. Cleland, and M.M. Ali, Periodic abstinence in developing countries: an assessment of failure rates and consequences. Contraception, 2004. 69(1): p. 15-21.
24. Lindstrom, D.P. and E. Munoz-Franco, Migration and the diffusion of modern contraceptive knowledge and use in rural Guatemala. Stud Fam Plann, 2005. 36(4): p. 277-88.
25. Campero, L., et al., First Steps Toward Successful Communication About Sexual Health Between Adolescents and Parents in Mexico. Qualitative Health Research, 2010. 20(8): p. 1142-1154.
26. Santa Maria, D., et al., Parent-based adolescent sexual health interventions and effect on communication outcomes: a systematic review and meta-analyses. Perspect Sex Reprod Health, 2015. 47(1): p. 37-50.
27. Becker, S., F. Fonseca-Becker, and C. Schenck-Yglesias, Husbands' and wives' reports of women's decision-making power in Western Guatemala and their effects on preventive health behaviors. Social Science & Medicine, 2006. 62(9): p. 2313-2326.
28. Carter, M., Husbands and maternal health matters in rural Guatemala: wives' reports on their spouses' involvement in pregnancy and birth. Social Science & Medicine, 2002. 55(3): p. 437-450.
29. Mathai, M., The global family planning revolution: three decades of population policies and programmes. Bulletin of the World Health Organization, 2008. 86(3): p. 238-239.

Appendix: Tables and Figures

Figure 1. Map of the Department of Sololá and its 19 municipalities



This map shows the department of Sololá, Guatemala and its 19 m unicipalities.
The numbered areas in grey show the 10 municipalities where the Kaqchikel is the dominant ethnic group; the study took place in these 10 municipalities: 1) Concepción **2)** Panajachel **3)** San Andrés Semetabaj **4)** San Antonio Palopó **5)** Santa Catarina Palopó **6)** Santa Cruz La Laguna **7)** San José Chacayá **8)** San Lucas Tolimán **9)** San Marcos La Laguna **10)** Sololá
Reference for creation of this map: Mapa de Solola. (2011). Retrieved from http://espanol.mapsofworld.com/continentes/norte-america/guatemala/departamentos/solola.html

Figure 2. Case Studies of Early Motherhood

Pathway 1: Planned Parenthood	**Pathway 2: Unplanned Parenthood**
Cintia met her partner at a rock concert in a nearby city. She was 15 years old and in school at the time. Her partner was 23 years old. They dated for 8 months and decided to marry. Because of her age, Cintia's mother had to consent and resisted at first, because she knew what it was like to be a single, adolescent mother and did not want her daughter to go through the same challenges or stop going to school. However, Cintia and her partner's family were able to convince Cintia's mother and they married. She left school in 9th grade and decided to have a baby to carry out a new stage of life with her partner. At 15, she got pregnant and delivered her baby preterm. She was happy but found it was difficult to be a mom so she wanted to delay her next pregnancy and go back to school. She took injectable contraceptives but they failed. She got pregnant again at 17 years old and although happy with her children, does not want any more. However, she is not able to undergo a sterilization procedure like she wants to because of her young age.	Jesica left school when she was about 15 years old so she could go work with her mom in her store. She had a single mother and as the eldest, she had to help to support her family. At work she meets a police officer who was at the time 23 or 24 year old. He told her that he wanted to start seeing her and she says yes but only if he meets his mother so that they do not carry out a relationship in secret. He meets her mother and family, and she meets his. She is attracted to his quiet, humble character and enjoys spending time talking with him or traveling around to sites he visits for work as an officer. They date for three years, and he was always respectful of her. He tells her that he wants to have a baby but she said she is not ready yet. After three and a half years of dating she gets pregnant. When she tells him, he is happy, but she is scared to tell her mother because she will be disappointed that she got pregnant before being married. She tells her mom that she got pregnant, but that it was something they wanted, but it just happened earlier than planned. The mom is glad the man will take responsibility but upset to lose support from her daughter. Jesica marries her partner and has her baby by C-Section so she is now using contraception to delay her next pregnancy until after her body heals.
Pathway 3: Unplanned Single Motherhood	**Pathway 4: Forced Single Motherhood**
Laura left school after sixth grade because her family could not afford to send her, which she says is because her father does not provide a good life for her because drinks too much and get violent and not provide for the family. At age 14, she left for the capital city to find work and stayed with different family members and hopped around to different jobs. She met a 35 year old man who worked security at the mall that she passed on her way to work every day. She knew him about twenty days and she moved in with him so she could have some stability and stop working so much. She saw the house where he offered her to stay where they could live together and work to make a living together, and she was under the impression he was not pregnant. One day at work she fell down some stairs because of headaches and dizziness. She went to the doctor and they told her she was several months pregnant. She told her aunt who told her to tell her partner so he could take responsibility and ask her parents for her hand. He said he would do so, and she returned home to her family to have the child. He never took responsibility of the child. She regrets that she left home to find a better life than what she had and that she did not follow her sister's advice, because her sister lived the same experience just a couple years before her.	Beatriz knew a man in his 30s who worked as a bus driver with her brother. Every day for a couple of years she would bring them lunch. When she was 15, he invited her out to get something to eat a couple of times and she went with him just as a friend. The third time she went out with him he forced her to have sex with him. She never told anyone because she felt bad for going out with a man against her parent's wishes and she was ashamed that she was not able to protect herself. Six months later, she found out she was pregnant after talking with her neighbor, a nurse. She concealed her pregnancy from her parents and friends for the next few weeks. She was afraid her parents would get angry or kick her out or make her quit school. She was scared her friends would encourage her to get an abortion or they would tell others. She told the man that she was pregnant with his child and he denied it was his and said he was infertile, but others said it was not true since he was already married and had children. When her parents found out she was nearly 8 months pregnant, they were angry that she did not tell them about the rape or pregnancy. However, they said they would support her. She had to drop out of 9th grade and now is living at home, raising her child.

IV. CONCLUSIONS

The study of adolescent pregnancy is an important area of research for public health and economic development, and impacts individual lives of young women who are launched into motherhood without preparation. Adolescent pregnancy poses a health risk to young women who may seek an unsafe, clandestine termination and poses risk of maternal and infant morbidity and mortality (Singh et al., 2006; WHO, 2011). The cyclical nature of early motherhood and poverty also poses a challenge to economic development, making it a national priority for a developing country such as Guatemala where young people make up the majority of the national population (Buvinic, 1998; Umaña, 2012) In order to identify opportunities to reduce adolescent pregnancy, nationally or regionally, it is important to understand the context in which it occurs and learn from the lived experiences of adolescents. By identifying four clear pathways to early motherhood, we discover areas where an interruption to this pathway is possible through public health programs and policies that can affect adolescent pregnancy in Sololá, Guatemala.

Public Health Implications

Our findings demonstrate that interventions to reduce adolescent pregnancy must distinguish between youth who choose a path to early motherhood and those who come to that path unexpectedly. We see that relationships determined by romance are different from those with older, coercive men. Therefore, interventions to reduce adolescent pregnancy or early motherhood should consider influencing the decision-making that is often shared by the young woman and her partner or parent by improving communication about sex and dispelling risk about contraceptive utilization.

Communication about Sex

Mothers play an important role in influencing young women and communicating gender expectations and knowledge about sex and pregnancy. It is important to design programs that

encourage open and clear communication with their mothers about sex and pregnancy during early adolescence. Such programs with parents have been demonstrated to be effective in a comparable context in Mexico, where sex is also considered a taboo topic of conversation and sexual debut in adolescence is discouraged (Campero, Walker, Rouvier, & Atienzo, 2010).

In addition to communicating about sex, it is paramount that the responsibility of marriage and motherhood is conveyed to young women. Most commonly participants made the recommendation that all young woman need to think through their decisions because becoming a wife and/or mother brings responsibility that they did not expect or feel prepared for regardless of pathway.

Contraceptive Utilization

In addition, we know that contraception is commonly known to most Guatemalan young women and that most young women know of at least one method to prevent adolescent pregnancy. However, there are strong cultural beliefs about contraception that perceive biomedical methods of pregnancy prevention including the pill, injection, implant and IUD can cause illness, cancer and/or death. This pervasive belief is perpetuated by family, friends, teachers, and health providers who also believe that adolescents are too young to utilize such methods. The fear of this method is only overcome by young women with perceived greater risk such as a repeat pregnancy after cesarean. This points to a need for increase in training for teachers or health providers who communicate these beliefs. In addition, an investigation into the quality of birth control methods available in health centers and over the counter pharmacies may be merited in order to be assured there is no truth to this belief and to dispel this belief using scientific evidence.

Policy Recommendations

Although the pathways we identified are not generalizable to the rest of Guatemala, however development and implementation of national policies that address early marriage, school desertion,

and sexual health access and education may help to reduce adolescent pregnancy among Kaqchikel young women in Sololá.

Address Early Marriage

Changes to national policies can reduce early motherhood among young women by delaying early marriage. Given that early marriage is one of the four pathways that emerged from Kaqchikel young women in Sololá, the marriage law should increase the legal age of marriage from 15 to 18. However, nearly half of marriages are consensual and not formalized through a civil marriage (Lisa Remez et al., 2008). Therefore, additional national policies must be considered.

Address School Desertion

Therefore, policies to incentivize parents to keep their daughters in school may reduce school desertion and the subsequent early marriage or motherhood. For example, conditional cash transfer programs that provide cash incentive for children to stay enrolled in school have been instituted in multiple countries in Latin America, including Guatemala as a means to reduce poverty and increase education. *Oportunidades* is one such cash transfer program in Mexico that has shown to have an indirect effect on reducing adolescent pregnancy (Darney et al., 2013). Guatemala implemented a similar model in 2008 called *Mi Familia Progresa* for designated households facing extreme poverty, but limited information is published on its reach and effectiveness (Benavides, 2013).

Monitor Existing Policy Implementation and Enforcement

The Ministry of Health and the Ministry of Education have focused efforts on adolescent pregnancy of youth friendly services and sexual health education that emphasizes sexual autonomy and gender equality (MSPAS, 2013; Valladares, 2012). In 2005 Universal Family Planning Law instituted sexual health education in schools as early as elementary school and to continue through

high school (MSPAS, 2013). Under this provision, the Ministry of Health and Ministry of Education have an agreement to design comprehensive youth friendly services and that all training in these sectors must include adolescent sexual and reproductive health and adolescent pregnancy as risk factors for maternal and infant mortality (MSPAS, 2010at, 2013). However religious opposition to this law from the Catholic church delayed the sexual health education implementation until 2009 (Valladares, 2012). Some schools have begun to convey the responsibility of pregnancy and motherhood through a pregnancy simulator and an electronic infant that cries at intervals (Valladares, 2012). Such programs should be evaluated for their effectiveness in delaying adolescent marriage, pregnancy and/or motherhood to continue to seek working efforts to increase adolescent knowledge in this area. However school desertion and parental influence suggests that knowledge should not be limited to prevention but also include sex negotiation and preparation for intended parenthood at an age that is safe and sustainable.

V. REFERENCES

Ali, M. M., Cleland, J., & Shah, I. H. (2012). Causes and consequences of contraceptive discontinuation: evidence from 60 demographic and health surveys. Geneva, Switzerland: World Health Organization.

Barden-O'Fallon, J. L., Speizer, I. S., & White, J. S. (2008). Association between contraceptive discontinuation and pregnancy intentions in Guatemala. *Rev Panam Salud Publica, 23*(6), 410-417.

Becker, S., Fonseca-Becker, F., & Schenck-Yglesias, C. (2006). Husbands' and wives' reports of women's decision-making power in Western Guatemala and their effects on preventive health behaviors. *Social Science & Medicine, 62*(9), 2313-2326. doi: http://dx.doi.org/10.1016/j.socscimed.2005.10.006

Benavides, J. (2013). Conditional Cash Transfers Program in Guatemala Policy Simulation and Cost Effectiveness Analysis *Strengthening Institutions to Improve Public Expenditure Accountability*: Global Development Network.

Berganza, C. E., Peyre, C. A., & Aguilar, G. (1989). Sexual attitudes and behavior of Guatemalan teenagers: considerations for prevention of adolescent pregnancy. *Adolescence, 24*(94), 327-337.

Berglund, S., Liljestrand, J., De María Marín, F., Salgado, N., & Zelaya, E. (1997). The background of adolescent pregnancies in Nicaragua: A qualitative approach. *Social Science & Medicine, 44*(1), 1-12. doi: http://dx.doi.org/10.1016/S0277-9536(96)00084-6

Bertrand, J., Salazar, S. G. d., Mazariegos, L., Salanic, V., Rice, J., & Sow, C. K. (1999). Promoting Birthspacing Among the Maya-Quiche of Guatemala. *Int Fam Plan Perspect, 25*(4), 160-167. doi: 10.2307/2991879

Buvinic, M. (1998). The costs of adolescent childbearing: evidence from Chile, Barbados, Guatemala, and Mexico. *Stud Fam Plann, 29*(2), 201-209.

Campero, L., Walker, D., Rouvier, M., & Atienzo, E. (2010). First Steps Toward Successful Communication About Sexual Health Between Adolescents and Parents in Mexico. *Qualitative Health Research, 20*(8), 1142-1154. doi: 10.1177/1049732310369915

Ley de Acceso Universal y Equitativo de Servicios de Planificación Familiar y su Integración en el Programa Nacional de Salud Reproductiva (2005).

Colom, A., Ruiz, M. J., Catino, J., Hallman, K., Peracca, S., & Shellenberg., K. M. (2005). Voices of vulnerable and underserved adolescents in Guatemala. Guatemala City: Population Council.

Conde-Agudelo, A., Belizán, J. M., & Lammers, C. (2005). Maternal-perinatal morbidity and mortality associated with adolescent pregnancy in Latin America: Cross-sectional study. *American Journal of Obstetrics and Gynecology, 192*(2), 342-349. doi: http://dx.doi.org/10.1016/j.ajog.2004.10.593

Darney, B. G., Weaver, M. R., Sosa-Rubi, S. G., Walker, D., Servan-Mori, E., Prager, S., & Gakidou, E. (2013). The Oportunidades conditional cash transfer program: effects on pregnancy and contraceptive use among young rural women in Mexico. *Int Perspect Sex Reprod Health, 39*(4), 205-214. doi: 10.1363/3920513

Figueroa, W., Lopez, F., Remez, L., Prada, E., & Drescher, J. (2006). Early childbearing in Guatemala: a continuing challenge. *Issues Brief (Alan Guttmacher Inst)*(5), 1-20.

Ganchimeg, T., Mori, R., Ota, E., Koyanagi, A., Gilmour, S., Shibuya, K., . . . Souza, J. P. (2013). Maternal and perinatal outcomes among nulliparous adolescents in low- and middle-income countries: A multi-country study. *BJOG: An International Journal of Obstetrics and Gynaecology, 120*(13), 1622-1630.

Ganchimeg, T., Ota, E., Morisaki, N., Laopaiboon, M., Lumbiganon, P., Zhang, J., . . . Mori, R. (2014). Pregnancy and childbirth outcomes among adolescent mothers: a World Health Organization multicountry study. *Bjog, 121 Suppl 1*, 40-48. doi: 10.1111/1471-0528.12630

Hallman, K., Peracca, S., Catino, J., & Ruiz, M. J. (2006). Working Papers Multiple Disadvantages of mayan Females: The Effects of Gender, Ethnicity, Poverty and Residence on Education in Guatemala *Policy Research Division*. New York: Population Council,.

Lindstrom, D. P., & Munoz-Franco, E. (2005). Migration and the diffusion of modern contraceptive knowledge and use in rural Guatemala. *Stud Fam Plann, 36*(4), 277-288.

Marston, C., & King, E. Factors that shape young people's sexual behaviour: a systematic review. *The Lancet, 368*(9547), 1581-1586. doi: http://dx.doi.org/10.1016/S0140-6736(06)69662-1

Mathai, M. (2008). The global family planning revolution: three decades of population policies and programmes. *Bulletin of the World Health Organization, 86*(3), 238-239. doi: 10.2471/BLT.07.045658

McDonald, K. A., Papadopoulos, A., & Sunderland, E. (2012). Advocacy Strategies for School-Based Sex Education in Guatemala: Applying the Transtheoretical Model to Results from an Impact Evaluation. *International Journal of Sexual Health, 24*(2), 124-136. doi: 10.1080/19317611.2011.640525

MSPAS. (2010a). Encuesta Nacional de Salud Materno Infantil. Guatemala: Ministerio de Salud Pública y Asistencia Social.

MSPAS. (2010at). Plan de acción s para la reducción de la mortalidad materna neonatal y mejoramiento de la salud reproductiva (pp. 41). Guatemala: Ministerio de Salud Pública y Asistencia Social.

MSPAS. (2013). Analysís de la situación de embarazos en niñas y adolescentes en Guatemala 2011-2013 (pp. 47): Procurador de los Derechos Humanos.

Organization, W. H. (2014). Adolescent pregnancy. *Maternal, Newborn, Child, and Adolescent Health.*, 2014, from http://www.who.int/maternal_child_adolescent/topics/maternal/adolescent_pregnancy/en/

Prada, E., Remez, L., Figueroa, W., Lopez, F., & Drescher, J. (2006). Embarazo no planeado y aborto inseguro en Guatemala: Causas y consecuencias. New York: Guttmacher Institute.

Quisumbing, A. R., Behrman, J. R., Maluccio, J. A., Murphy, A., & Yount, K. M. (2005). Levels, correlates, and differences in human, physical, and financial assets brought into marriages by young Guatemalan adults. *Food Nutr Bull, 26*(2 Suppl 1), S55-67.

Remez, L., Prada, E., Figueroa, W., Lopez, F., & Drescher, J. (2007). Protecting the sexual and reproductive health of Guatemalan Youth *In Brief*: Guttmacher Institute.

Remez, L., Prada, E., Singh, S., Bixby, L. R., & Bankole, A. (2008). Ensuring a Healthier Tomorrow in Central America: Protecting the Sexual and Reproductive Health of Today's Youth. New York: Guttmacher Institute.

Samandari, G., & Speizer, I. S. (2010). Adolescent sexual behavior and reproductive outcomes in Central America: trends over the past two decades. *Int Perspect Sex Reprod Health, 36*(1), 26-35. doi: 10.1363/ipsrh.36.026.10

Scholl, T. O., Hediger, M. L., & Belsky, D. H. (1994). Prenatal care and maternal health during adolescent pregnancy: a review and meta-analysis. *J Adolesc Health, 15*(6), 444-456.

Seiber, E. E., & Bertrand, J. T. (2002). Access as a factor in differential contraceptive use between Mayans and ladinos in Guatemala. *Health Policy Plan, 17*(2), 167-177.
Sinai, I., Lundgren, R., Arevalo, M., & Jennings, V. (2006). Fertility awareness-based methods of family planning: predictors of correct use. *Int Fam Plan Perspect, 32*(2), 94-100. doi: 10.1363/ifpp.32.094.06
Singh, S., Prada, E., & Kestler, E. (2006). Induced abortion and unintended pregnancy in Guatemala. *Int Fam Plan Perspect, 32*(3), 136-145. doi: 10.1363/ifpp.32.136.06
The World Bank. (2012a). *World Development Indicators*. Retrieved from: http://data.worldbank.org/indicator/SP.ADO.TFRT
The World Bank. (2012c). *World Development Indicators*. Retrieved from: http://data.worldbank.org/indicator/SP.ADO.TFRT
Umaña, I. A. (2012). *Guatemala: un país de oportunidades para la juventud?* Guatemala: PNUD.
UNDP. (2014). Guatemala: A Country with Opportunities for Youth? *Informe de Desarrollo Humano 2011/2012*. Guatemala City: UN Development Program.
UNICEF. (2006). Salud reproductiva en adolescentes en Guatemala. Un análisis cualitativo y cuantitativo. Guatemala City, Guatemala: UNICEF.
Valladares, D. (2012). Guatemala – Regional Leader in Teen Pregnancies. *Inter Press Service News Agency*. Retrieved from http://www.ipsnews.net/2012/04/guatemala-ndash-regional-leader-in-teen-pregnancies/
Ward, V. M., Bertrand, J. T., & Puac, F. (1992). Exploring Sociocultural Barriers to Family Planning Among Mayans in Guatemala. *Int Fam Plan Perspect, 18*(2), 59-65. doi: 10.2307/2133395
WHO. (2011). WHO Guidelines on Preventing Early Pregnancy and Poor Reproductive Outcomes Among Adolescents in Developing Countries. Geneva, Switzerland: WHO.