

Health Beliefs and Contraception Use in Leogane, Haiti: A Qualitative Study

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Thesis submitted in partial fulfillment of
the requirements for the degree of
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ABSTRACT

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Abstract

Uncontrolled birth spacing is associated with higher rates of maternal and neonatal morbidity and mortality in low resource countries^[14]. The use of modern contraception (MC) is a strategy shown to be successful in controlling birth spacing in the United States but is frequently unsuccessful in Haiti^[15].

This study is intended to investigate women's health beliefs about MC in Leogane, Haiti. The Extended Health Belief Model from behavioral science is employed as a framework for data collection on three domains: perceived threats of unintended pregnancy, perceived barriers of contraception use, and modifying factors. In-depth interviews of 16 reproductive age women conducted from June to July 2012 were transcribed and translated for analysis in QSR Nvivo. Seven themes are identified from the conversations. The results demonstrated that all the 16 women interviewed perceive unintended pregnancy as a threat that may potentially affect a woman's life. Their perceptions of barriers during MC seeking include the fear of side effects and financial unaffordability. Modifying factors influencing their contraception use consist of competing traditional contraception methods, peer advice/experience, and religion. These findings suggest that future health education program should focus on contraception side effects knowledge dissemination and ways to supplement traditional

methods with modern contraception through peer education that will ameliorate unmet family planning needs in Leogane, Haiti.

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1. Introduction and Background

1.1 Literature Review

One of the 1990 United Nation's Millennium Development Goals was to reduce maternal and neonatal mortality by 75% by 2015. Although not much progress has been made in Haiti, this continues to be an important goal because, at 670 maternal deaths / 100,000 live births (2007), Haiti has one of the highest reported rates of maternal mortality in the western hemisphere^[3].

1.1.1 Contraception use and its importance

Contraception use is widely known to be an effective approach to family planning through birth spacing^[1]. Research has also demonstrated that modern contraceptive use improves women's health and reduces maternal mortality by reducing the cumulative risk of mortality during a woman's childbearing ages especially in developing countries reducing the risk of complications from elective pregnancy terminations, reducing the incidence of ectopic pregnancy, reducing the incidence of endometrial and ovarian cancer, reducing iron deficiency anemia, improving bone density and decreasing the risk of pelvic inflammatory disease. Contraception use also contributes to the achievement of MDG by reducing the child mortality by preventing infants malnutrition and improving breastfeeding through birth spacing.

Appropriate use of contraception can prevent unintended pregnancy and thus prevent the resultant adverse outcome such as the complications due to illegal abortions,

which women in Leogane report are available and relatively common. Previous research demonstrated that illegal abortions may result in a higher incidence of injury to pelvic organs and septic abortion. Several highly cost-effective contraceptive methods have been put into practice as the field of contraceptive methods enjoys the prosperity of new biomedical technology development during recent years. Modern contraceptive methods comprise of both terminal methods including female sterilization and male sterilization, and spacing or temporary methods including the contraceptive pill, the intrauterine device (IUD), injectable, implants, the female condom, the male condom, emergency contraception, the diaphragm, and foam/jelly ^[2].

Despite the availability of various contraceptive methods for women to choose from, the prevalence of contraceptive methods use remains relatively low in developing countries. Low prevalence of contraception use, high rate of unintended pregnancy and high rate of induced abortion all indicate that there is still an urgent unmet family planning need and underutilization of modern contraceptive methods.

In an attempt to increase contraceptive prevalence rate, various education programs have been launched around the world and research has been done to investigate the association between utilization of contraceptives and a series variables such as social economic status (SES), women's characteristics, and knowledge. In order to understand women's health seeking behavior from an individual level as well as the mechanisms of their decision making process for contraceptive use, qualitative methods

and descriptive data are needed. The Health Belief Model framework from behavioral science helps define a set of factors specifically suitable to local health beliefs and behaviors.

Faced with the challenge of improving contraceptive prevalence, researchers began investigating the factors associate with the utilization of contraceptive methods.

1.1.2 Contraception use and its affecting factors

Previous studies mainly focus on a variety of factors statistically associated with the utilization of contraception, using quantitative methods, and collecting data through surveys or questionnaires. The regression model has been widely employed among these studies with regard to method-specific utilization and contraceptive utilization among specific groups with P-value and confidence level used to assess the association.

Women's knowledge of specific contraceptive methods is the focus of many studies. In Smith et al.'s longitudinal study, women's knowledge of emergency contraception is investigated in an urban cohort and a rural cohort in the UK, using a self-administered questionnaire. The questionnaire consists of questions regarding how to use/ access emergency contraceptives^[5]. After one year, comparable cohorts were re-surveyed to test the improvement in population's knowledge. That study concluded providing women with leaflets about taking the contraceptive pill correctly and about emergency contraception appears to significantly improve their extent of such knowledge and further reduce the number of unplanned pregnancies in the UK by

increasing the knowledge on contraception. A similar study was conducted in mainland China to test migrant workers' knowledge and attitudes using the Contraceptive Knowledge Scale and the Contraceptive Attitudes Scale as instruments to help quantify and also compared the results with study result on knowledge and utilization data taken in Taiwan^[6]. It was concluded that young Chinese migrant workers surveyed are found to be at higher sexual risk, when compared to the adolescents in Taiwan and abortion-seeking women in Hong Kong. Hladky et al. also used quantitative method to survey knowledge and attitudes, particularly about intrauterine contraception among reproductive-aged women in the area of Saint Louis, Missouri^[7]. They found that previous history of using intrauterine contraceptive associated with knowledge of this contraceptive method.

Besides knowledge, women's characteristics have also been taken into account in study on the affecting factors of contraception utilization. Most of the studies are based on the data extracted from Demographic Health Surveys (DHS) and analysis is typically performed by statistics packages. Economic status, education, empowerment of women and physical accessibility of the services are also coded as covariates in the regression model to test their association with the utilization of contraceptive methods. Gage et al. used DHS's data to investigate the effect of the physical accessibility of maternal health services on their use in rural Haiti and concluded that there would be improvement in utilization if the services were more physically accessible^[8,9].

Although these studies provide a valuable resource for factors suspected of understanding factors related to the utilization of contraception, they are not sufficient for researchers to understand or gain an in-depth insight into health seeking behavior. This limitation partly results from the over-simplification of health seeking behaviors. Information of people's perceptions and attitudes can be easily lost when it is coded as numeral indicators. As a result, in order to gain a deeper understanding of the utilization of a certain health service, descriptive data of individual-level attitudes and perceptions towards a health service generated from qualitative study is needed.

1.1.3 Health belief in Haiti and the Extended Health Belief Model

During a previous quantitative stage of the project on birth spacing and contraceptive use among women in Leogane, survey administrators discovered by survey administrators that there were some unfounded myths about contraceptive use. During the survey administrators' conversations with women in study site, question was raised, "if you do not use contraception now, would you in the future?" Respondents would say, yes after they have a baby because contraceptive use might cause infertility. The source of this misconception is unclear. How this misbelief interacts with women's contraception utilization behavior also calls for in-depth investigation using qualitative methods.

Open-ended questions regarding individual-level health seeking behavior such as, "What do women in Leogane do to protect themselves from unintended pregnancy?",

can eliminate potential erroneous assumptions from researchers and be evaluated by a health behavior framework known as the Health Belief Model, or the updated version Extended Health Belief Module. The framers of this Model applied the theories and methods of behavioral science to understanding and predicting health behavior, especially preventive medicine seeking behavior. In this model, health seeking behaviors are viewed as the result of an interaction of three building blocks: individual perceptions, mediating/modifying factors, and likelihood of action. In each building block, there are sub-category components affecting people's decision making process, as shown in the following chart ^[10].

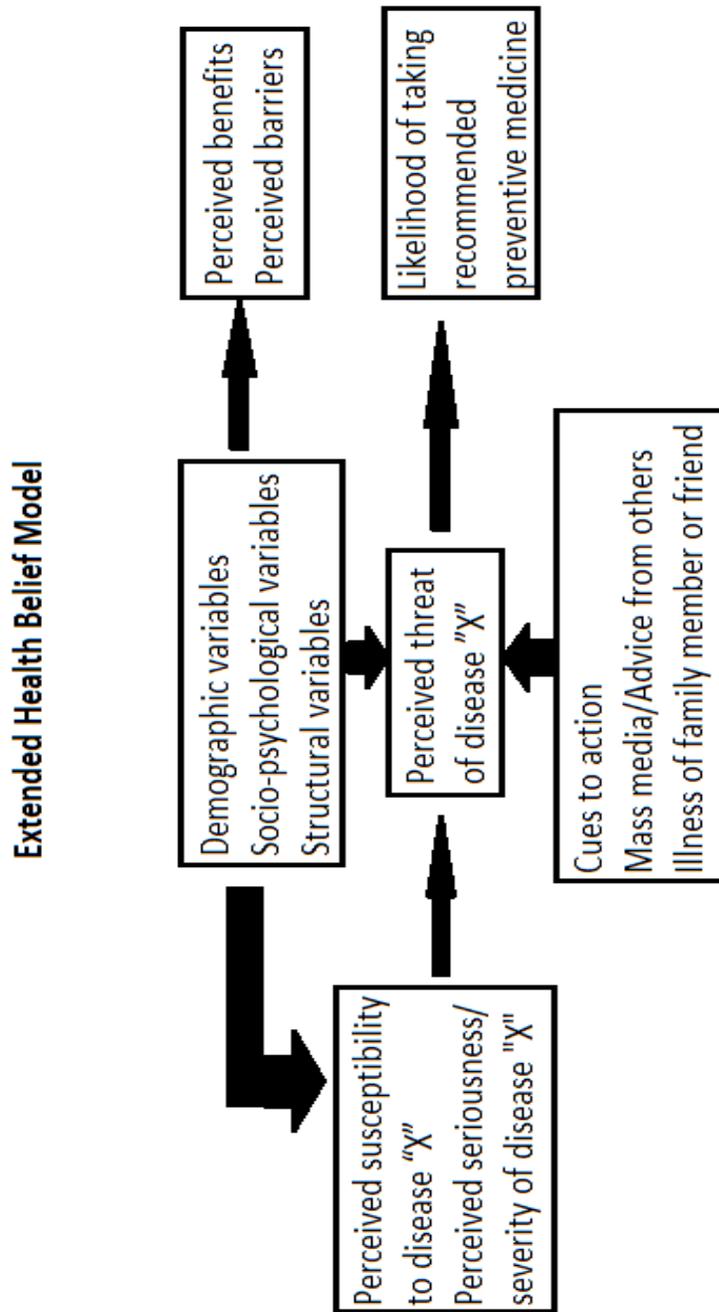


Figure 1: Extended Health Belief Model

1.2 Previous research on contraception in Leogane

In 2011, supported by the same research team, Dr. Nahida Chakhtoura conducted quantitative research in Leogane, Haiti. The association between birth spacing, contraceptive use and factors such as age, number of people in the household, marital status, employment status and type of housing was investigated ^[14].

552 women were surveyed in Chakhtoura's study, of which 44% had ever used modern contraception and 11.0% used traditional methods in Leogane, Haiti. The utilization of modern contraception is relatively low compared to the world average, which to some extent implies the risk of maternal and child health adverse outcomes.

In Dr. Chakhtoura's work, women mentioned their fear of side effects of available contraception use. Whether this fear prevents women from seeking contraception or not remains to be investigated. Although Dr. Chakhtoura's work uses a quantitative approach to the investigation of contraception use in Leogane, Haiti, it brought up potential elements underlying women's decision making process of contraception use. The traditional contraception methods' prevalence in Leogane, 11.0%, dramatically exceeds the country level prevalence which is 0.6% in 2008. Thus, these facts revealed that a qualitative approach is needed to investigate women's contraception seeking behaviors in Leogane. There is a strong need to understand what kind of elements are in this "black box", how they interact with each other, and how to improve modern contraception use in Leogane, Haiti ^[14].

1.3 Study Goals

Given the fact that condoms and various modern contraceptive methods are available in Leogane, yet the prevalence of contraception use remains low, this study focus switched from “increasing access to contraception” to “understanding how women make contraceptive decisions.” In this study we investigate how contraception seeking behaviors are formed and developed. The rationale is that understanding how women make decisions may lead to more effective strategies of increasing modern contraceptive use, result in more planned births and improve maternal and child health. Specifically, this study seeks to investigate the perceived needs for contraception, the barriers in contraception use, and the modifying factors involved in contraception seeking behavior. The goal is to better understand women’s decision making process of contraception use and its relations to health beliefs, cultural context, peer norms and other elements and help women in Leogane to space and plan the childbirths.

2. Methodology

2.1 Study Method

This study uses a qualitative method to approach the topic of women's contraception beliefs, practices and behaviors. Narrative data is collected from individuals through in-depth interviews. The choice of employing qualitative methods is based on the following three reasons:

First of all, Family Health Ministries does not know much about contraceptive practices in the Leogane area, and we have learned in the past that starting with quantitative methods sometimes introduces cultural biases that are misleading^[14]. Although scientists around the world have conducted a substantial amount of valuable work on factors that relate to the use of modern contraceptives, we wanted to start with an examination of the decision making process to try to gain a richer understanding of the factors involved in decision making.

Second, reproductive health related topics may require an attention to sensitivity and emotion. Contraception seeking behavior is interwoven with sexual behaviors and influenced by cultural and social norms. When investigating behaviors that may be considered taboo, qualitative methods may also be more revealing ^[13]. Previous research by Nahida Chaktoura in Leogane had revealed that abortions were not uncommon in the Leogane area, which could be linked to the contraceptive decision-making process^[14].

Third, qualitative methods enable public health researchers to absorb direct and vivid information from the field by hearing the voice of the individuals, the community and the population. Behavioral health research in a cross-cultural context can only be successful when researchers try to switch roles and think of the decision making occasion in the local context from an insiders' perspective. Local people's substantive involvement and input in qualitative study makes it possible to hear the voice from the field. Results generated from qualitative study are helpful and convincing to global health implementation designers. In this study, listening to women's descriptions of their needs and concerns during decision making behavior, is an essential preliminary step toward future policy or implementation recommendation.

In comparison with focus groups, these in-depth interviews enabled our fieldworkers to talk to individual participants on a one-on-one basis, which guaranteed more privacy and confidentiality. Participants were also allowed to be interviewed without exposing their identity or exposing their opinions to other people in the community.

2.2 Study Population and Site

This study is focused on the population in Leogane, Haiti.

Leogane is located about 18 miles away from Haiti's capital city, Port-au-Prince (**Figure 2**). It is geographically close to the epicenter of the earthquake that occurred on the 12th of January 2010. When the study started, many people were still living in tents

or temporary housing. Leogane is a suburban town of approximately 30,000 surrounded by sugarcane fields. Health facilities in Leogane include two hospitals: the Hôpital Sainte Croix, and the Mediciens San Frontier's Leogane branch, as well as a variety of small clinics and pharmacies providing medical consultation.

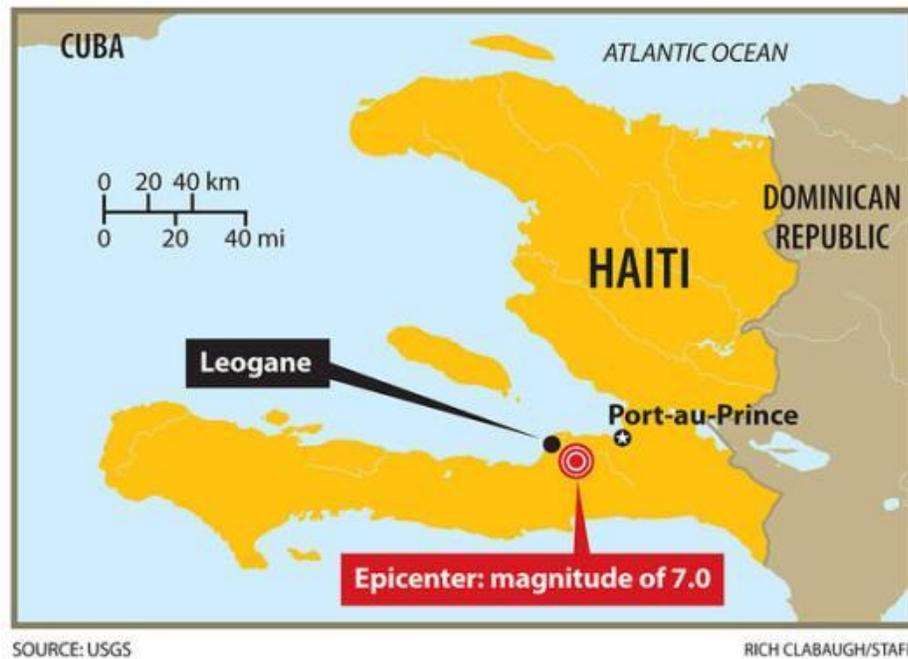


Figure 2. Map of Leogane, Haiti. Source: U.S. Geological Survey

Leogane was chosen as the study site because Family Health Ministries has been supporting healthcare-related research in the community for 20 years, and is in the process of expanding this work by building a local preventative medicine health, education and research center.

Women of reproductive age (18 to 49 years old) living in Leogane were chosen as the target population of this study, because they represented the population most

likely to be making family planning decisions. Women were excluded from participation if they were pregnant or had had a hysterectomy to eliminate women that were not actively facing family planning issues.

Participants were selected through convenience sampling from different areas of Leogane, and from a wide variety of housing situations including concrete houses, “tikay” (temporary houses) and tents. Women of different ages were selected in order to capture the contraception seeking experiences across all age groups.

2.3 Data collection development

Prior to the data collection, this study was approved by the US Institutional Review Board at Duke University and a Haitian Institutional Review Board, Misyon Sante Fanmi Ayisyen, which is registered with the US Department of Health and Human Services (IRB 6585/FWA 13290).

Interview questions were all translated to Haitian Creole and back translated to English by an English native speaker fluent in Haitian Creole in North Carolina to verify translation accuracy. A female interviewer whose native language is Haitian Creole was selected to conduct all the in depth interviews. This interviewer has worked with previous Family Health Ministries projects as an interpreter and is familiar with reproductive health issues. Before the interviews started, the interviewer received two days of supplemental training on conducting these interviews. Besides lecture on the methodology and tips, two mock interviews were done for practice.

The Haitian study interviewer conducted additional two mock interviews with two Haitian women as an evaluation of cultural sensitivity. Instead of giving answers to the questions, they were asked to evaluate the acceptability and the clarification the questions. Advice offered by them included avoiding the subject of HIV/AIDS in the community, to change of some wording and to add specific examples to improve clarity. The questions were then revised to incorporate their suggestions.

Besides the interviewer, the investigator was present to record the interviews, to take notes and provide additional assistance if needed.

Potential participants were approached and introduced to the research project by the interviewer and the researcher. People who were eligible and interested in participating in the research were enrolled. Before the interview, the interviewer read the informed consent form for the participants in Haitian Creole. Both English and Haitian Creole informed consent forms were handed to and signed by the participants. After the informed consent forms were signed by the participant, the interviewer and the investigator, they were kept in envelopes in a locked record room in the guesthouse and later delivered to Family Health Ministries research headquarter in North Carolina.

For each participant, demographic information form was recorded in order to track the sample's representativeness of the population of interest. This information includes age, education, marital status, occupation, monthly income, and housing status. See **Appendix 2**.

During the interview, open-ended questions were asked to the participants and they were encouraged to actively share their stories, life experience and perceptions about contraceptive issues. An example of a question asked about the perception of threat by unintended pregnancy is “What comes to your mind when you hear the word unintended pregnancy?” An example of the question asked about their life experience is “Did you experience any life events during the past 5 years that has affected your sexual behavior?” There is no right answer or wrong answer. Instead, the participants encouraged to express their own thoughts and feelings regarding specific topics. After the 16th interview, the key information relevant to the themes of interest in this study had been repeated and the data saturation was reached.

All 16 interviews were audio recorded for future analysis purposes after the permission of participants was granted. The audio tapes are kept confidential with password only accessible to the investigator and the research team. The audio tapes will be deleted after one year when the data is fully analyzed.

2.4 Data Analysis

After each interview, the audio tapes were transcribed by the interviewer word for word. The transcribing was finished by the interviewer on an ongoing basis in order to make sure the data in text form truly reflects the participants’ narratives. Also, transcribing on an ongoing basis limits the possibility of recall-bias and thus ensures the rigor of the data.

Translating was done in two phases. In the first phase, eight interview transcriptions were translated by a Haitian Creole native speaker who is fluent in American English. After signing the confidentiality agreement, the translator literally translated the interview transcription in Haiti from July to August in 2012. In the second phase of translating, the investigator who speaks Haitian Creole and English translated the other eight interview transcriptions with the assistance of Google translate and under the guidance of a Haitian Creole native speaker who teaches Haitian Creole at Duke University, from October 2012 to February 2013.

Demographic data was tabulated in Microsoft Excel 2010 and the mean value of age was calculated with the standard variation using the function AVERAGE and STDEV. Education is categorized into three levels: primary school or less, secondary school, post-secondary school and higher, with regards to Haiti's education system (**see Table 2**). Interview data was analyzed in QSR Nvivo 10. First, all the interviews already translated into English were imported and read in Nvivo. Nodes were coded according to the elements in Extended Health Belief Model with regards to the factors used in Chakhtoura's previous research.

2.5 Study Limitations

Limitations in this study include both researcher and respondent bias.

From the researchers' perspective, the sixteen cases may not adequately represent the youngest age group of women. Women aged from 18 years old to 20 years old tended to still live with their parents or a relative. When we approached women from this age interval in the presence of their senior relatives, it was often the senior relative who made the decision that the young woman should not participate in this study since they are not supposed to know or use contraception due to their young age. Thus, it was more difficult to recruit the younger women. In the future, we may be able to address this issue by employing a peer referral strategy or seeking participation through social networks.

Respondent bias may also occur in this study, since contraception and birth spacing topics oftentimes involve sexual behaviors. Respondents may lie or provide inaccurate information in order to protect privacy. Another form of bias is that the questions in this study were only given to women. Since contraception decisions may be couple decisions rather than individual decisions, it will be important in the future to interview men and women in a relationship. It may be interesting to see if the answers are different if the men and women are interviewed separately and if either of their answers changes when they are interviewed together. Haiti is also an interesting place from the standpoint of autonomy. In some situations the male may have the ultimate control for decision making and in others, women have more autonomy, especially if they are the primary source of income from their work in the markets.

Due to budgetary and time limitations, the interview transcriptions were translated only once without further review by another native Haitian Creole speaker. Translation errors and subjectivity of the translator may exist, which render the data biased in favor of the translator's viewpoints. This bias could be addressed by having the interviews translated again in the future since they are recorded.

3. Results

3.1 Demographic Information

Age, education, occupation and income, geographic access to health care, health insurance status and marital status information was obtained before each interview started. According to the demographic information collected, the 16 interviewees are representative for the target population in the sense that they vary substantially in demographic indicators. Below is the result and illustration for each demographic indicator for the 16 respondents.

3.1.1 Age

Information on the ages of respondents are collected and presented in **Table 1**. The mean of the age among the 16 respondents is 30.5, with the standard deviation of 8.9. The age range among the 16 respondents is 18 to 49 years old. Comparing to the quantitative study results of Dr. Chakhtoura, of which the mean of age is 29 with standard deviation of 9, the age distribution of the respondents is eligible to represent a larger population in Leogane^[14].

Respondent Code	Respondents' Age
I0061201	45
I0061502	26
I0062201	28
I0062602	32
I0062801	33
I0062901	25
I0070301	49
I0070401	37
I0070402	36
I0070701	20
I0071001	36
I0071101	20
I0071102	19
I0071401	22
I0071601	34
I0071701	26

Table 1. Age of respondents

3.1.2 Education

In Haiti, the education system resembles the education system in France. Students aged from 6 or 7 to 17 or 18 years old finish 12 years of study before they enter post-secondary schools. Grade numbers count down from the 11th to 0. **Table 2** shows the rank of grades and their equivalent grades in the U.S..

In Leogane, people are used to referring to the specific grade they finished as their highest education instead of the degree they obtained. Thus, we categorize education into three categories: primary school or less, secondary school, and post-secondary school. For example, if a respondent finished her 5th grade, she is categorized into “secondary school” although she didn’t finish all the grades in secondary school. The justification for this typology is to make the education variation easy to observe.

Age	Abbreviation (Grade)	Equivalent to the U.S. Education System
6--7	the 11 th	Elementary School
7—8	the 10 th	
8—9	the 9 th	
9—10	the 8 th	
10—11	the 7 th	
11—12	the 6 th	Middle School
12—13	the 5 th	
13—14	the 4 th	
14—15	the 3 rd	
15—16	the 2 nd	High School
16—17	the 1 st	
17—18	0	

Table 2. Grading in Haitian Education System Compared to the Equivalent Grading in the U.S.

According to the typology used in this study, among the 16 respondents there are five respondents with primary education or less, ten respondents with secondary education and one respondent with post-secondary education. **Table 3** shows the education status of the 16 respondents in the study.

Education Level	Number	Percentage
Primary or less	5	31.3%
Secondary	10	62.5%
Post-secondary	1	6.3%

Table 3. Education level of respondents

Among the five respondents from the group “primary or less”, one respondent never received school education, while the other four respondents entered primary school. Compared to the education information data from Chakhtoura’s quantitative work where the group receiving primary school education or less accounts 38%,

secondary or higher 62%, the 16 respondents in this study is representative in terms of education received.

3.1.3 Occupation and Income

Among the 16 respondents in this study, only two were employed and regularly paid by their employer. Their monthly incomes from jobs are 1750 Gourdes and 2000 Gourdes respectively, equivalent to around 41 and 47 US dollars respectively. The other 14 respondents reported that it was difficult for them estimate their monthly income because oftentimes their income is unpredictable due to their occupation reasons.

The occupations of the 16 respondents range from small grocery stand business, babysitting, clothes washer, student to teacher. Income is hard to predict. They offered the estimation for each service or transaction but the frequency of business is not constant. Four of the 16 respondents reported that they were jobless and financially depended on their partners.

In summary, due to Leogane's local context, the demographic indicator monthly income for respondents was difficult to measure because the respondents when employed did not have a predictable income.

3.1.4 Access to health care

Access to health care is measured in two dimensions, financial affordability and geographic accessibility. Seven out of 16 respondents, accounting for 44%, reported that the nearest health facility is too far to reach for them. The other nine respondents,

accounting for 56%, reported that the nearest health facility is close to their living places and easy to reach if health service needed.

Information on health insurance was also collected to see if the person has financial protection in the event of severe health problems. Among the 16 respondents, only one had health insurance, accounting for 6% while the other 15 women accounting for 94% didn't have any form of health insurance.

3.1.5 Living situation

Leogane is located about 2 hours' drive from Haiti's capital city Port-au-Prince and was damaged by the earthquake in 2010. About 80% to 90% of the buildings were destroyed by the earthquake and housing is still a problem. People are dislocated in tents or temporary housing built with wooden boards called "ti-kay".

Of the 16 respondents in this study, four respondents are living in tents, seven are living in temporary salvage living places made of wooden board or iron board. The other four are living in houses built with bricks, cement or concrete.

Overall, the living situation of respondents is very challenging.

3.2 Themes

According to the Extended Health Belief Model, we investigated themes in the following three main domains determining the decision making process of contraception use: 1. perceived threats of unintended pregnancy, 2. perceived barriers of

contraception use, 3. modifying factors such as cues to action, advice from others, family member or friends' experience.

3.2.1 Perceived threat of unintended pregnancy

Women interviewed in this study did perceive unintended pregnancy as a threat that would cause undesirable consequences to their family life. They believe that they will become pregnant if they have sex without using contraception. They reported a desire to use contraception to avoid unwanted pregnancy.

Theme 1: People can get pregnant by chance if they are not using any birth control.

Among the 16 respondents, all of them reported that they thought having sex without birth control would result in pregnancy. One respondent shared her own life story about unintended pregnancy, and explained that she perceives herself as susceptible to unintended pregnancy without the use of contraception.

While you're having sex a couple of times, without paying attention, without control, without control, you don't control yourself, you can have many kids. Because I thought I would not have any more babies, I would not have babies again. I asked God, God gave me four, and then I made the last one accidentally. I didn't use contraception as I told you.

One respondent confirmed that the likelihood of getting pregnant if not using birth control is high. She explained the necessity of contraception by pointing out two main benefits brought by contraception.

I think that when somebody is not using family planning method, she can be pregnant, because it's a protection. It protects you both not to get pregnant; secondly it protects you against disease.

Theme 2: If unintended pregnancy happens, it will have a negative effect on people's life.

One respondent reported she didn't know about unintended pregnancy. One respondent perceived it as unwanted but something to be accepted nevertheless. The rest of the respondents, 14 in total, reported the increased financial burden of life as an adverse outcome:

*I would always advise the young people to use this kind of method, because this method firstly help you not have kids, secondly, not get disease, thirdly maybe not get many kids. Because you can get a kid accidentally when you're together with him, we're both in love, you may not want to kill the kid (*do the abortion*), you want them to succeed. But they have to be careful of that to not to happen for the second time, the third time, and forever... .. Because several kids don't mean life, things are difficult. And there is no possibility for you to find a job easily. Sometimes when you get up you don't have money in your hands to do activity... .. I think that would probably be better for you to have the planning. For us to do our activity with the planning to not have more problem.*

In summary, most respondents recognized the threat of unintended pregnancy and the importance of birth control utilization. They mentioned getting pregnant

without planning is unpleasant and is something people should prevent from happening in life. In general, contraception needs widely exist in this community and women have a relatively comprehensive knowledge of the necessity for birth control use if pregnancy is not currently wanted.

3.2.2 Perceived barriers to modern contraception use

Despite the positive perceptions about the family planning needs among respondents, barriers during the contraception seeking process also occur. The most frequently mentioned barriers in the way of contraception seeking are the fear for infertility due to contraception use, the fear of side effects and the unaffordability of desirable birth control methods.

Theme 3: Fear of infertility caused by using contraception.

Knowledge has been shared among women that contraception use before childbirth is not a smart move. Amongst the 16 respondents, 15 had childbirth experience. The time interval between their sexual activity debut and their initial contraception use is relatively long. All of the 15 respondents who already had at least one childbirth experience reported they first began using a birth control method after at least one childbirth. It is widely recognized among the respondents that women are supposed to use birth control only after the first childbirth. Respondent said:

I always heard of planning by my colleagues. They always explain to me how I can do it. Secondly, I always learn it when I didn't have kids yet, you don't do planning.

This confirms the idea heard by Dr. Chakhtoura regarding contraception use before first childbirth. People tend to think that in general women without previous childbirth experience are not eligible for using birth control. This perception is oftentimes shared in horizontal direction instead of vertical direction, meaning that women are informed of this from their peer, colleagues, and friends, instead of their mothers or other senior female relative in the same household.

In 1993-1994, I can say I started to do it [use birth control] when I was about 27-28. Because I had kids when I was 26 that, means after I had the kid can I use birth control.

Most respondents mentioned that it is not a good thing to take birth control before the first childbirth, and that they started using birth control after they have at least one child even though they didn't plan on being pregnant or having a child. One respondent pointed out:

You are not supposed to do that..... you have to have kids first. You don't have kids, you do it ("do it" referring to "use contraceptive"), it is a sin.

In summary, contraception and family planning at early age between 18 years old to 24 years old may be an important priority for family planning community education programs in the future. Some women have already become sexually active by that time, but they are not planning on births or protected by any form of birth control, which results in unintended pregnancy. However, it will be important to get advice

from women's groups or maybe allow them to lead the educational efforts because there seemed to be a cultural concern from elders about talking about this subject with youth.

Theme 4: Fear of the side effects.

All of the 16 respondents repeatedly mentioned concerns about side effects of contraceptives as a barrier in their contraception decision-making process. The adverse health outcome brought by the use of contraception offsets the benefits mentioned in the previous section. Women experience bleeding, nausea, etc. from birth control pills, or hear of other people's unpleasant experiences with birth control side effects. This discourages them from actively seeking birth control.

*I was trying to see how it was, I did a planning. I found out it was not good for me, because when I did the planning, after three months I have my period. But the period comes as something which is not going to finish. Do you understand what I'm saying? That made me uncomfortable. It didn't make me feel good. I returned to the hospital, I asked the doctor, she/he told me because I just started doing it, the planning was not used to my system, that's why. The way I see the method planning, I don't like this method, because I don't like to take pills. They always tell me *Brand name*, if you cannot take shots, you can take *Brand name* pills. But I cannot drink it. When I'm going to drink the pills, I feel nausea all the time. I took the shots for three months; I was like someone who had hemorrhage. I'm always losing blood almost every day when I'm bathing. I always feel a little blood. When I thought I was finished, when I get out, blood poured on my clothes, I realize I was like a slave, do you understand? I tried for the first*

time, I get back to the doctor, I explained, he/she gave a pill, for the bleeding to get better. The first day it makes me feel like fainting. Because I feel uncomfortable, when I lay down, I felt dizzy. When I put my head high on the pillow, I felt nausea; I was not feeling good at all. I stopped taking the pills. I did once and I say I won't continue any more. I want to have something comfortable for me.

Respondents also mention that the side effects are the reason why they choose not to use or continue the birth control. Among all the side effects mentioned by respondents, hemorrhage is the most frequently mentioned. One respondent said:

...the shot, I had an experience with it. I see it... I don't like the way it is with me because of the blood that always comes, the blood couldn't finish. I don't like.

After experiencing side effects of birth control, the majority of them opt out of birth control use. Some sought help from health facilities for treatment of side effects. One respondent said:

The planning, yes. It's now during the three months, because in July it'll be the third month, the planning will be over. Now, since I took, I have a hemorrhage. I went to the hospital they prescribe me a medicine, I bought it and drunk it. It did not help me, I stay.

Besides hemorrhage, dizziness and nausea are also commonly reported side effects.

*It makes you feel dizzy. Like that *Brand name* it can give you low abdominal pain...*

Among these side effects or the panic caused by side effects, some are preventive. The stress resulting from side effect experience can be eliminated if women are informed in advance of the potential side effects they may experience when being on a specific birth control method. Without the guidance and explanation from health professional before starting the birth control method, women tend to compare their experience with each other and evaluate the birth control method based on this peer comparison. One respondent said of birth control pills:

(When taking the pills).....It did not give me a good result, because there are some people who are in the planning, they always have their period but myself since I took the planning I never had my period.

In summary, side effect is the most frequently mentioned barrier in contraception seeking behavior. After recognizing the needs of family planning, women tend to seek contraception in various ways. They often stop use of birth control in fear for the side effects and the potential harm to their body caused by birth control.

Theme 5: Financial cost of contraception use or transportation.

Despite the easy access to contraception reported by other respondents, one of the 16 respondents also mentioned the financial access to contraception as the barrier in contraception use. The nearest NGO distributing free condoms is located far away from the living quarters in the downtown community.

I don't have money to take motorcycle go there. If I have money in my hand, I will buy food.

Corresponding to the low self-reported geographic access, this respondent said the distance between her living place and the birth control provider is a barrier in her contraception seeking process. The cost of transportation, motorcycle taxi usually, prevents the respondent from renewing her injection as it expires or getting condoms she wanted.

3.2.3 Modifying factors

Several modifying factors occur in the contraception seeking process. Sometimes they don't determine the choice of using or not using contraception directly. Nor are they necessarily the drive or the barriers in the health seeking behavior. However, their existence modifies the contraception seeking behavior. Here, this study discovered three main modifying factors in women's contraception seeking behavior in Leogane, Haiti, which are the religious views, competing traditional birth control methods and the influence of peer interactions.

Theme 6: religious views matter to family planning?

Haiti is a country where 80% of the population is Catholic and 16% Protestant^[17]. Religious views have their effect on people's ideology as well as their daily behaviors. This study revealed that religion beliefs were not a barrier for these women's contraception seeking process. Instead, being religious still allowed freedom in birth

spacing and contraception use and choice. In this study, one respondent reported that she doesn't have any religion belief although she went to Voodoo ceremony as well as church mass. The rest of the respondents reported they are either from Catholic or Protestant. One respondent mentioned:

I think about religion, they don't ask if you have husband for you not to do planning. Because, planning, you might have husband, you do planning just to prevent having too many kids. But you don't do planning for other things. Just not to have too many kids.

According to respondents in this study, women don't receive pressure from churches or their religious groups related to contraception use.

Not because I'm catholic to say I don't do it [use contraceptive]. You may be a catholic if you have a problem like if I'm pregnant I can't go to church but since I'm taking the planning I don't have any problems. They can't tell to not do it [use contraceptive].

Respondent mentioned that individual sometimes chooses not to use birth control methods as an act of the religion. However, this idea is not prevalent or well-recognized.

I heard a sister from the church talking about it..... By not using the planning, she has 7 kids. She delivered 3 days ago. They told her it's a sin, the Bible doesn't want that but I don't know why.

Besides that, religion appears frequently when women talk about their fertility preference or forecasting the time when they will conceive. They reply on God for the uncertainty in their life. One respondent mentioned:

I have a boy and a girl; I asked to God four, He gave me two. When you asked God four, He gave you one, when you ask him two, He gives you one. When you ask one He doesn't give you at all.

In summary, according to the interview conversation in this study, religion doesn't prevent women from seeking birth control when they have unmet family planning needs. However, it modifies the decision making process of contraception use by affecting women's fertility preference and the ideal number of children she wants to have. Therefore, potential birth spacing programs may want to have religious leaders' input so that it will more effectively reach people whose fertility preference is dependent on religious views.

Theme 7: traditional contraception is competing with modern contraception.

Traditional contraception methods are widely used in Leogane, Haiti. As an element in women's health seeking behavior for modern contraception, traditional methods play a role of competitor, rather than a barrier. Out of the 16 respondents in this study, 8 of them mentioned one of the following traditional or indigenous birth control methods: boiled parsley water (also known as parsley tea), ice water, ice beer, salty water, and lemon juice mixed with beer. The most frequently mentioned and well-

recognized traditional methods for birth control are drinking boiled parsley tea and drinking salty water.

There are some people who used to boil parsley tea. They wait until it boils and they drink it. (Interviewer asked: Is it a family planning method?) Yes, you have to be its slave every day. (Interviewer asks: Do you have to drink it every day?) Yes, salt also, salt with water. It's a family planning.

Sometimes, these three methods are being used together in order to reach the maximum of birth control effect.

... And cold water. The cold water it's when you are going to have sex, you put ice on the water and you let it really cold. When you finish having sex, you get [get cold water] suddenly, you take the cup and you drink it..

According to respondents, almost everyone in the community knows of these traditional birth control methods, and the belief in their effect is common within their community. However, one respondent suspected the validity of using such traditional birth control methods for family planning.

...after you finished to have sex. I don't believe this kind of things myself. Drink pills or drink parsley tea... I don't trust them.

In summary, traditional methods' utilization, though is well recognized, can be replaced by modern contraception use if health education programs are launched and

information is available regarding the effectiveness of traditional birth control methods, and compared to modern contraception.

Theme 8: Peer advice from the community counts.

In Leogane, Haiti, households are gathered in clusters, resulting in frequent communication and interaction between individuals. Community as a unit acts as the carrier and tunnel for information to transmit. Family planning knowledge is shared among community members. Six respondents mentioned their friends, neighbors or other peers' active role in the information exchange process on contraception use.

For myself, first time when I have heard people talking about planning, I have my colleagues, they always explain me the planning, you can have a baby and you do it to not get pregnant again. But if you don't have a kid yet, you can't do planning.

It is not in a seminar. It is not in school. It is during sitting with adult people. When people say I'll use birth control, you understand! When I asked what the timeline is, something to be taken for injection for not having more children. Afterwards, I got started on things.

Thus, a community based health education program will succeed in such an environment, and knowledge of family planning can be easily shared with the assistance of community health workers.

4. Discussion

4.1 Interpretation of results

Overall, respondents were positive about the use of modern contraception methods. Specific positive factors included enhancing women's autonomy, easy and free access to injections, and easy and positive communication in both vertical way (between generations) and horizontal way (among peers). Those facts observed and discovered all work as a positive drive for women's birth control seeking behavior.

Negative elements were also discovered. Women lacked accurate knowledge about the side effects of certain birth control methods prior to the first use. Most contraception knowledge is acquired in the community rather than from professional medical personnel or community health workers. Unreliable traditional methods of contraception are still prevalent. Despite the free birth control means provided by certain NGOs, financial problems are still an issue in women's perception of contraceptive choices.

4.2 Future Intervention recommendations

Health education that integrates well-organized women's groups and community health workers may be helpful in reducing women's fear for potential side effects, and to correct the misinformation about competing traditional methods such as parsley tea, ice water and etc.

Easy access to injections and the birth control pill should be provided under the guidance of community health workers and facilitated by women's groups.

Appendix

A. Interview questions guidelines

1. Individual perceptions

Are women likely to get pregnant if they don't use contraceptive methods? How likely?

How many children do you want to have with your partner?

How many children does your partner want you to have?

What comes to your mind when you hear the word "unintended pregnancy"?

2. Meditating/modifying factors

Tell me what you know about contraception use.

Is there any way for you to get information about contraceptive use if you want?

If you unintentionally got pregnant, who would you talk to? Could you seek help from them? How?

Do you have any friends/family living close? Do you spend time together/talk? How often? About what?

How do you feel about buying contraception?

Tell me what you think about permanent contraception.

Tell me what you think about emergency contraception.

Are you religious?

Does your religiosity affect you decision making?

Do you have unprotected sex?

Why/why not?

Did you experience any life events during the past 5 years that has affected your sexual behavior? E.g. death of family member/intimate friend/ anyone you think is important to you, unemployment, severe disease, divorce, marriage, child bearing, abortion

How old were you when you firstly started using contraceptives?

Do you think people should consistently use one contraceptive method? Why

Do you think women are able to take contraceptive pills daily?

When did you first learn about contraception? Where?

When did you first use contraceptive? Why start to use?

When did you stop using contraceptive? Why stop?

Risk profile/ personal health status?

Does it affect your contraceptive use?

Describe your relationship with sexual partner.

Does it affect your contraceptive use?

3. Likelihood of action

What are the benefits of using contraception?

Why do you not use contraception?

Are you able to use contraceptives? Consistently? Correctly?

Are you likely to change your contraception in the following three months? Why/Why not?

B. Demographic Information Form

1. Group Category:

2. Group #:

3. Participant Code:

4. Age:

5. Birthday (mm/yy):

6. Gender:

7. Monthly income:

8. Housing:

9. Education:

10. Occupation:

11. Access to health services

Geographic access: Yes No

Insurance status: Yes No

12. Marital status:

13. Name:

14. Phone #/ Email:

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