GIVING WOMEN A VOICE

PERCEPTIONS & EXPERIENCES WITH CONTRACEPTION & ABORTION IN RURAL ARMENIA

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ABSTRACT

Giving Women a Voice: Perceptions & Experiences with Contraception & Abortion in Rural Armenia

By: Ani Jilozian

Objectives: This study was conducted to investigate women's perceptions and experiences with contraception and abortion and elucidate the multifaceted factors that influence decision-making about contraception and abortion among women of reproductive age in Armenia.

Methods and materials: Convenience sampling was used to recruit women and health providers for the study. In-depth interviews were carried out with all participants and content analysis was employed to analyze the data.

Results: Natural methods of contraception were primarily used over modern means due to socio-economic barriers; familial and peer influence; and negative perceptions. The use of abortion was primarily due to socio-economic conditions; a desire for birth spacing; and a desire to limit family size. Reasons for son preference were tied to socio-economic conditions and the Armenian mentality regarding relative value of gender. The misuse of medical abortion was tied to socio-economic conditions; fear of surgical abortion; and misperceptions.

Conclusion: Initiatives to reduce the unmet need for family planning should focus on education; expanding availability and accessibility of contraceptives; and empowerment of women. To prevent unsafe abortion, initiatives should focus on health provider training and monitoring; making Cytotec prescription only; and lowering the price of medical abortion at hospitals. Concerning sex selection, policy changes should be implemented to empower women and advance socio-economic well-being.

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Research questions

1. What perceptions and experiences do women of reproductive age have in regards to contraception and induced abortion?
2. What are the various factors that affect family planning utilization and abortion seeking behavior?

Specific aims

1a. To explore women's perceptions & experiences with various contraceptive methods

1b. To explore women's perceptions & experiences with methods of induced abortion

2a. To examine familial, socio-cultural and other factors that influence family planning utilization

2b. To examine familial, socio-cultural and other factors that influence abortion seeking behavior

BACKGROUND

Historic use of abortion in Armenia

Abortion had been the principal method of birth control in Armenia for decades under the Soviet Union (Westoff 2005). Induced abortion was legalized in 1920, banned in 1936, and then reinstated in 1955 (NSS 2006). Modern contraception was not readily available due to cost; low availability and quality of domestic goods; resistance by the medical profession to oral contraceptives and sterilization; and the wide availability of abortion services at little cost (Westoff 2005).

Current abortion policy in Armenia

In 2002 the Armenian Parliament adopted a law that confirmed the legality of induced abortions up to twelve weeks of gestation and up to twenty-two weeks by medical or social indication (NSS 2006).

Contraceptive underutilization

Despite a greater reported trend in contraceptive use over the last decade, as shown by the Armenia Demographic and Health Surveys (ADHS), modern contraceptives continue to be underutilized (NSS 2001; NSS 2006; NSS 2012). Armenians have maintained a reliance on traditional methods, such as withdrawal, that have a high failure rate (Chong et al 2009). Critical barriers to modern contraceptives include direct and indirect costs; a lack of awareness on the full range of available and effective means; misperception on side effects and public distrust (Sacci et al 2008). A recent study examining the availability and affordability of modern contraceptives in pharmacies, polyclinics, and health posts in Armenia show that only 6% of health posts, 44% of pharmacies, and 80% of polyclinics had the appropriate contraceptive method mix (Sacci et al 2008). Pharmacies offer a better selection of contraceptives than public health facilities where methods are free of charge (Sacci et al 2008). The intrauterine device, the method of choice for a tenth of Armenian

women and the most cost-effective method, is difficult to find at any institution (Sacci et al 2008). With the exception of the intrauterine device, having an abortion costs less than using modern contraceptives for one year (Sacci et al 2008). An additional barrier to contraceptive use is poor counseling with health care providers. An overwhelming majority of women who reported having an abortion, over 80%, did not discuss contraception with a health provider at post-abortion family planning visits (NSS 2012). Of the small percentage of women who were appropriately counseled, only 64% reported being offered contraception at that time (NSS 2012).

Knowledge & attitudes regarding family planning & abortion

In one qualitative study, married men and women from Yerevan, Gyumri and select villages were asked about their knowledge, attitudes, opinions, and beliefs toward family planning (Salvador & Danielian 1999). Opinions were mixed across all groups, though, in general, attitudes toward contraception were not positive (Salvador & Danielian 1999). Both men and women cited lack of necessity within the family, health, and convenience as their major concerns (Salvador & Danielian 1999). In general, both men and women also had negative opinions about abortion but felt that it was sometimes a necessity for financial and health reasons (Salvador & Danielian 1999). In the latest ADHS, the main reasons that women reported having an abortion, in order of importance, were a desire for no more children; socioeconomic reasons; birth spacing; concerns about maternal health; sex selection; partner objections; and risk of birth defects (NSS 2012). Another study surveying women about their knowledge and attitudes about abortion uncovered similar findings. The majority of the women believed that women in Armenia chose to have abortions due to financial constraints and the desire not to have any more children, and the main barriers reported were personal or religious beliefs, partner objections, and cost (Chong et al 2009).

Current abortion figures

Among countries with reliable information on abortion trends, the Caucasus region has the highest legal abortion rates in the world (Sedgh et al 2011). The proportion of reported pregnancies ending in induced abortion has declined steadily over the last decade - from 55% in 2000, to 45% in 2005, and to 29% in 2010 (NSS 2000, 2005, 2012). This apparent trend is also represented as number of reported induced abortions per woman in Armenia, which has reportedly been reduced from 2.6 in 2000, to 1.8 in 2005, and to 0.8 in 2010 (NSS 2000, 2005 & 2012). Despite a decreasing trend, there remains a strong propensity to have an abortion in the event of an unplanned pregnancy in Armenia. Approximately 17% of women with one child and nearly 60% of women with two or more children report having had an abortion (NSS 2012). Women who use induced abortion are predominantly married women interested in controlling fertility after achieving their desired family size, rather than unmarried women seeking to delay their first birth (Chong et al 2009). Among women who have ever had an abortion, 36% have reported more than one abortion, 47% have reported two or three abortions, 12% have reported four to five abortions, and 5% have reported six or more abortions (NSS 2012). Almost half of women who reported having an induced abortion stated contraceptive failure as the reason, and, among those, over a third reported that traditional methods, such as withdrawal and rhythm, led to such contraceptive failures (NSS 2012). The overwhelming majority, over half of all reported pregnancies that resulted in induced abortion, occurred among women who were not using any method of contraception (NSS 2012).

Medical complications of abortion

Abortion has long-term consequences and is a leading cause of maternal morbidity, mortality, and secondary infertility (Sacci et al 2008). Many Armenian women have had multiple surgical interventions with high rates of complications (Salvador & Danielian 1999). National data reveal that almost a tenth of all maternal deaths in Armenia are attributed to abortion (Sacci et al 2008).

Unreported abortions

A complete picture of the situation in Armenia is complicated by unreported abortions. A growing number of abortions performed in the private sector are not reported in official statistics (Westoff et al 2002). The growing trend of medical abortion and sex-selective abortion are also thought to be largely under-reported.

Medical abortion

Of particular interest is the growing use of abortifacients to induce abortions. The off-label use of Cytotec (misoprostol) has been documented in countries where abortion is carried out clandestinely and the drug is available at pharmacies, often without a prescription (Singh et al 2010). Researchers have conjectured that the significant decline in reported abortions in Armenia over the last decade may be due in part to the wide availability of Cytotec (Sacci et al 2008). Very little information is available on the use of Cytotec to self-induce abortions, though anecdotal evidence suggests that this practice is prevalent (Chong et al 2009). Additionally, despite its limited availability in Armenia, over half of all women in the study reported that they had heard about medical abortion (Chong et al 2009). The most recent ADHS included questions pertaining to Cytotec and other medicines or herbs with an abortive effect, though it is likely that women were unwilling to report the use of less socially acceptable methods (NSS 2012).

Sex-selective abortions

The prevalence of sex-selective abortions has increased to a great extent since Armenia's independence. Currently, the birth ratio is skewed such that 114-115 males are born per 100 females, which is the third highest level of birth masculinity observed in the world following China and Azerbaijan (Guilmoto 2013). This ratio is skewed based on birth order in that the sex ratio is relatively equal for the first birth but increases to 173 males per 100 females by the third birth

(Guilmoto 2013). This sex imbalance is primarily due to three interrelated factors: the availability of ultrasound technology to determine the sex of the fetus; a strong son preference; and the decreasing average family size in Armenia (Guilmoto 2013). In the latest ADHS, sex selection was cited as a reason for nearly a tenth of all induced abortions (NSS 2012). However, given that sex determination is unreliable at twelve weeks of gestation, it is likely that sex-selective abortions are carried out illegally and, therefore, largely underreported.

RATIONALE

Though comprehensive studies have examined the prevalence of abortion in Armenia, as well as the demographics of women who have abortions, very little is known about the familial and socio-cultural factors that lead to abortion seeking behavior, as well as the reasons for the growing prevalence of sex selection and misuse of medical abortion. Larger data sets that address contraceptive use and abortion in Armenia are oriented toward macro-level analyses that address demographics, such as education, age at marriage, rural-urban residence, and household poverty (NSS 2006; NSS 2012). Few qualitative studies were found in the literature concerning abortion-seeking behavior, and only two studies carried out over a decade ago have addressed the larger social context in which abortion decision-making occurs. The purpose of the following research project was to investigate the multifaceted and complex social factors that influence abortion-seeking behavior among women of reproductive age in Armenia. More qualitative research is needed to uncover the familial & socio-cultural influences that play a critical role in shaping the reliance on abortion, such as women's lack of decision-making power, family attitudes, and preference for male children. Gaining insight into women's attitudes, behaviors, values, concerns, and motivations related to abortion-seeking enables us to develop intervention strategies that would reduce the unmet need for family planning in Armenia and the number of unsafe/illegal abortions.

STUDY DESIGNS & METHODS

Study design

The project is a qualitative analysis employing individual, in-depth interviews. Interviews were chosen over other qualitative methods due to the sensitivity of the subject matter.

Population/sample

All participants were recruited via convenience sampling. The investigator accompanied staff from the Children of Armenia Fund NGO during routine visits to village health posts and clinics. Eligible participants included sexually active women between the ages of 18-49 who were able to comprehend oral consent to participate and were fluent in Armenian. Minor children, prisoners, and cognitively impaired adults were not able to participate.

Thirty interviews were conducted with married women of reproductive age. The age of the women interviewed ranged from twenty to thirty-eight, with the average age of twenty-eight. Ten interviews were conducted with key informants, health providers who worked in the same regions. Of the ten health providers, two were gynecologists, four were midwives, and four were nurses. See table below for more details.

Demographic Table: Key informants

Participant	Position	Gender	# Years Experience	Region
1	Midwife	Female	24	Aragatsotn
2	Midwife	Female	40	Aragatsotn
3	Midwife	Female	35	Armavir
4	Midwife	Female	8	Armavir
5	Gynecologist	Male	45	Aragatsotn
6	Nurse	Female	12	Armavir
7	Nurse	Female	<1	Armavir
8	Nurse	Female	24	Armavir
9	Nurse	Female	8	Armavir
10	Gynecologist	Female	21	Armavir

Ethical considerations

The proposal was reviewed by the Institutional Review Board/Committee on Human Research (IRB) within the College of Health Sciences at the American University of Armenia, as well as the IRB at Icahn School of Medicine at Mount Sinai in New York City. Before conducting each interview, the investigator explained the research and asked participants to provide oral consent, requiring no signature from participants in order to support anonymity. Furthermore, the investigator made participants aware that they could stop their participation at any point in time and could choose not to answer specific questions. Confidentiality was protected in all instances during the course of the study. Participants' names, contact information, and other personal qualifiers were not recorded and were not included in transcriptions. All verbatim quotes used in reporting the findings were edited to delete personal identifiers. Additionally, given that each village had a small number of residents, the investigator chose to record only the region and not the specific names of each village. After all interviews were transcribed and translated, recordings were deleted.

Data collection

The investigator used a semi-structured interview guide to collect data, which included an opening introductory narrative, questions that addressed different dimensions of the research questions, and probes in addition to main questions (see Appendix). The faculty at the American University of Armenia checked the interview guide and translation for accuracy. The investigator personally conducted all interviews in private rooms at village health posts, clinics and hospitals. When privacy was compromised, the topic was changed. All interviews with the exception of three were recorded after obtaining oral consent. Notes were also taken during interviews. The investigator subsequently carried out transcription and initial translation of the interviews, and a certified Armenian language teacher reviewed all translations for correctness and consistency. Data collection was ended once theoretical saturation was reached.

Data analysis

The investigator kept an audit trail in order to review analytical work during the course of the study. The process of coding began after the investigator became familiarized with the first few sets of text. In order to identify important themes and patterns, the investigator employed inductive content analysis to analyze the data. This approach was considered the most appropriate given the scant existing theory and literature on this research topic, as well as the ability to gain direct information from participants without imposing preconceived notions (Hsieh and Shannon 2007; Elo and Kyngas 2008). The investigator chose to use Microsoft Word to organize all data, initially using open coding to begin creating categories and abstraction; deemed the code structure finalized after theoretical saturation was reached; and subsequently developed themes corresponding to the codes.

Time Frame

The overall study lasted for approximately one year. The investigator conducted interviews from January through May 2013 and completed the analysis by the end of the year.

RESULTS

Results are grouped into four main sections. The first section summarizes women's experiences with family planning and contraception; preferences in terms of contraceptive methods; barriers to the use of modern contraception; and familial & socio-cultural influences on decision-making regarding family planning & contraceptive use. The second section discusses women's experiences with induced abortion & miscarriage; perceptions regarding abortion; the influence of medical training & the conditions of medical centers on the availability of abortion procedures; and the familial & socio-cultural influences on decision-making regarding abortion. The third section deals with sex-selective abortions in particular, namely the perceptions and experiences of women in regards to sex selection; reasons for sex preference; and the familial & socio-cultural influences on decision-making regarding sex-selection. The fourth section highlights the misuse of medical abortion; reasons given for using medical abortion to self-induce abortions; women's perceptions regarding how medical and surgical abortion differ; and the familial & socio-cultural influences on decision-making regarding medical abortion.

SECTION I: FAMILY PLANNING & CONTRACEPTION

Preferences in terms of family planning & contraception

Preference for fewer children

Nearly all of women interviewed remarked that they had or were planning to have fewer children than they desired due to the poor living conditions and inability to care for multiple children.

Several women noted that having four children was ideal but that they had or would only consider having two or three children. The following quote exemplifies the struggle that women face in Armenia's villages. Women noted not only the difficulty to provide for their children but also the impact of home conditions on decisions regarding family planning.

> The present conditions influence [the decision to abort], a lot... The home is small, there are no facilities... Consider that [the whole family] lives in a studio apartment... You can handle one or two children in a big family. They wait until conditions are better to have children. When things get better, it's possible to have more children, so that they have a place to sleep. Children should have their own room, not share one with their parents... There has to be better conditions [in order to have more children]. – 27 year-old woman, mother of one daughter & expecting another child, wife of a migrant worker, Armavir region

Preference for natural methods of contraception

About a third of the women interviewed had never used a modern contraceptive, though the vast majority of women had used methods of contraception for family planning, suggesting that there is a high reliance on natural methods of contraception. Women showed a preference for natural methods that have a high failure rate, such as withdrawal and the calendar method, or methods deemed natural, such as hand-made suppositories and condoms.

> We get those [vaginal suppositories], not factory-made but hand-made. There is a nurse who makes [them]... I try to use [a method] that doesn't do harm... It's better that I use those before having sex or for him to use withdrawal. Let me use protection like that, instead of putting in an IUD or taking pills. – 31 year-old woman, mother of two daughters, wife of a migrant worker, Armavir region

> It's better to be a little careful [by using withdrawal] rather than to be relaxed because you've [taken medication] in order not [to get pregnant]... If it's a necessity, we'll use condoms, but I don't think [I'll use] the IUD or the pill, especially the pill, because I don't believe in all of that. – 34 year-old woman, mother of four children, Armavir region

Preferences in terms of modern contraceptive methods

The intra-uterine device (IUD) was the most accepted modern contraceptive among participants based on the view that it is the least dangerous and most convenient, as well as the most affordable over the long term.[1] When health providers were asked what methods of contraception were best for their patients, the majority responded by saying that condoms were the best method considering the growing risks of STDs, primarily among women with migrant husbands; however, several of the participants noted that condoms, though widely accepted, are infrequently used due to partners' dislike. Out of the thirty women interviewed, only four had ever tried the pill. One woman had used it to regulate her cycle and stopped using it once she found out it was a hormonal contraceptive. The other three also discontinued use after a short period of time due to dislike and/or fear.

Barriers to using modern contraception

Unsurprisingly, the majority of women interviewed who had unplanned pregnancies were using natural methods or incorrect methods at the time of conception. Several of the women interviewed plan to use or are considering using an IUD in the future, though many noted that they would only consider this option after having their desired number of children. Participants noted that more women are interested in using modern contraception presently as compared with the past; however, the following barriers still prevented many from using modern contraception.

Cost

Participants expressed that cost is one of the primary barriers to using modern contraception.

[1] It should be noted that copper/gold IUDs are primarily in use in Armenia; thus, the research is limited to women's perceptions and experiences with copper/gold IUDs. Low utilization of hormonal IUDs is primarily due to distrust of hormonal contraceptives and the higher associated cost.

> It's better not to get [contraceptives], so that I don't spend a lot of money on it, especially because [my husband] is always getting me blood pressure medication... That's why I don't want to bother him with a second medication. – 28 year-old woman, mother of one son, wife of a migrant worker, Armavir region

Many women were interested in using modern contraception but couldn't afford it not because of the cost of the contraceptives themselves but the cost of treating existing medical conditions before using contraceptives.

> Some women wanted to have an IUD inserted… But they all had illnesses and needed to be treated… The doctor prescribed drugs, but I can say that very few bought them… When I asked, they told me that they didn't even get the drugs, because other burdens are more important than their health. – Midwife, eight years work experience, Armavir region

Another barrier, primarily in the case of the IUD, was the need for routine examinations. Additionally, participants noted that the opportunity cost for women to leave the village and thus forgo a day's salary was a barrier to reaching the pharmacy and/or clinic to obtain contraceptives.

Incorrect knowledge

A number of women used methods that were not contraceptive methods in order to control fertility, such as douching and urinating after sexual intercourse. Additionally, both women and health providers noted incorrect contraceptive method use when citing both personal experience as well as the experiences of women in their social networks. A few health providers noted that their patients often leave in IUDs longer than the recommended period. When referencing IUDs, several participants, including both health providers and women, believed that gold IUDs are more effective than copper IUDs.[2] Several women incorrectly used methods, such as the calendar and lactational amenorrhea methods, or overestimated their effectiveness.

[2] Given that the gold IUD is obsolete, the efficacy is unknown.

Fear/distrust

Several of the women interviewed feared that certain contraceptives would lead to health complications. The vast majority of participants believed hormonal contraceptives have a lasting, negative impact on a woman's health. Many women noted that they distrusted any contraceptive that altered their menstrual cycles. Several women believed that birth control pills cause infertility, skin disorders, hair growth/loss, and memory loss, among other disorders. Interestingly, for one woman, the mere fact that the birth control pill is in a pill form was a deterrent.

> Maybe one pill is helpful and another causes harm… The IUD gets put specifically into the uterus, right? But the pill, until it reaches the uterus, I think that it goes throughout the body and at the end... That's why pills are different than the condom or this method, the IUD. Perhaps they are better than pills. That's how I think... I think that pills have to pass through the entire body and then finally reach [the uterus] to do its specific job. – 34 year-old woman, mother of four children, Armavir region

Many of the participants believed that IUDs are dangerous for a woman's health. A few women believed that the IUD is not an effective form of contraception. Several women noted that IUDs harm female organs and/or other bodily organs or cause a variety of conditions, including ectopic pregnancies, fainting, hair growth, infertility, and weakness.

> In any case, because it's a foreign body, [IUDs] can cause different [illnesses]. That's why I don't really want to use that method. – 36 year-old woman, teacher, mother of two children, Armavir region

The low demand for family planning was also intimately tied to women's fear that certain contraceptives cause infertility, thus leading women to avoid modern contraception entirely until they have their desired number of children.

> I've heard that if you take [birth control pills] for three years straight, you'll become infertile. – 31 year-old woman, mother of two daughters, wife of a migrant worker, Armavir region

For some women, primarily those on the older end of the reproductive spectrum, the fear that contraceptives were harmful led them to believe abortions, if necessary, were a safer option than modern contraception.

> There are still people like that who think that contraceptive methods are harmful and have contraindications, but they don't think that the most harmful is having an abortion and they go down that path. – Family nurse, less than one year work experience, Armavir region

Consideration of contraceptives dependent on desired number of children and/or unplanned pregnancy

Several participants felt that it wasn't necessary to be informed about contraception until they were finished childbearing. This likely contributes to the high abortion rate among women who are interested in birth spacing. Additionally, some of the women only started using modern contraception after having experienced an abortion and others continued to use natural means of contraception even following an abortion.

> I suggested [having the IUD inserted]. [My husband] didn't want to use any contraceptive methods in general. When I first talked about the IUD, he didn't want it, but later he saw that I went for an abortion and was convinced [that I should use it]. He said, "Fine, it's better that you have an IUD inserted instead of constantly having abortions." – 26 year-old woman, mother of two children, produce seller, Armavir region

Inconvenience

Convenience was a major priority for women interviewed. Several health professionals and women reiterated the idea that it was too difficult for women to remember to take birth control

pills daily.

> Because our Armenian women have so many burdens, they don't have time to look after themselves. I doubt that they would remember to take that pill… For a specific period of time, I used those contraceptive pills. Then, because I was extremely busy, I would forget to take it at the right time. – 34 year-old woman, teacher, mother of three children, Aragatsotn region

Shame

For several of the interviewed women, the shame of picking up condoms from the pharmacy or clinic was a major barrier to use.

> When it's available, we use condoms... [My husband] asks, "If there are condoms, should I get them?" I say, "Bring them. It's better that way". Like that. It's like this between us... I'm the one who generally goes to the city for business, but I don't go into [the pharmacy] to pick up condoms because, to be honest, it's shameful. When he goes [to the city], he picks it up at that time. That's why I'm saying that, when it's available, we use them. – 25 year-old woman, mother of one son, produce seller, Armavir region

> It's better for me to get [condoms] from a market or pharmacy than from [the nurse at the village health post]... I'm embarassed. – 20 year-old woman, mother of one daughter, housewife, Armavir region

Availability/accessability

Many women noted that the issue of transportation from the village to the nearest city, an issue related to financial security, was a barrier to using modern contraception.

> We rarely use condoms. Most of the time [my husband] uses withdrawal… We don't have that many possibilies [to get to the city]. We don't get there very often... We don't have a car. We go with public transportation. He goes when he has work. If he has work, he'll [pick up condoms]. If he doesn't, he won't. It's like that. Infrequently. – 25 year-old woman, mother of two sons, Armavir region

Familial & socio-cultural influences on decision-making regarding family planning & contraceptive use

Husbands

Many of the women interviewed had never spoken about using modern contraception with their husbands.

> I found [having a conversation about with my husband about contraceptives] unnecessary... If [my husband] finds it convenient to use withdrawal, what else should I say? Maybe it's better that way... If he wants [to use withdrawal], he suggests that we use it. He doesn't seek other methods. What should you say to that?... He suggested it and that's how it is. – 26 year-old woman, mother of one son, wife of a previous migrant worker, Armavir region

Among women who had discussed contraception with their husbands and made a decision regarding the use of contraception, the majority noted that the decision was either mutual or that they were the primary decision-makers. Interestingly, the majority of the women, even those who were not the primary decision-makers, asserted that the decision should be made by women.

> I think that women [should make the decision about using contraceptives]. Men, they don't know. They're always thinking about what's good for them... They want to have unprotected [sex]. If you let men do whatever they want, they'll always want [unprotected] sex. Women have to be able [to protect themselves]. – 25 year-old woman, mother of one son, produce seller, Armavir region

> [Women] are the ones who struggle. They are the ones who decide [to use contraceptives]... The man doesn't know what goes on in the home. He works outside. The woman carries the burden, cares for the family, and struggles. She stays with her family. She raises the child, clothes him, feeds him. The man isn't around. The man isn't aware of this... Only the woman knows the burden. – Midwife, twenty-four years work experience, Aragatsotn region

It should be noted that, in some cases, women noted that the decision to use or not use contraceptives was mutual, though their personal narrative revealed that in fact more of the decision was made by their husbands.

Though cases where husbands primarily made the decision regarding contraception were less frequent, the participants' husbands often refused to wear condoms, thus holding the decision-making power in situations where the woman faced barriers to using other methods of modern contraception.

Another major theme was the impact of a husband's status as a migrant worker on family planning and contraceptive use. Nearly half of the women interviewed had husbands who were migrant workers or who had previously worked as migrants. Husband's migrant worker status influenced decisions about family planning in that women planned pregnancies around their husband's work schedules.

> I can't be pregnant in Spring. And if we're doing an awful amount of work, my husband's working in the field or isn't here, the burden falls on me. During this time, I can't be pregnant. If I get pregnant, I have to be pregnant in Winter, so that [the baby] would be at least four months old [when the burder is greater], so that I could manage. – 31 year-old woman, mother of two daughters, wife of a migrant worker, Armavir region

Women whose husbands work as seasonal migrants and are away for the majority of the year often do not consider using contraception even when they are at risk of an unwanted pregnancy during the time of the year when their husbands return.

> Because we protect ourselves [using withdrawal], I haven't thought about any other [method]. He doesn't stay by my side that long so that I would think about this. If he had worked here and had stayed here for a long time, I would have intended on using the IUD for 6 years. Since he's not here, I don't see the point in having an IUD inserted or using the pill. – 28 year-old woman, mother of two children, wife of a migrant worker, Armavir region

Mothers-in-law

Participants noted that mothers-in-law generally do not get involved in decisions regarding the use of contraception. Though some women felt that it was respectful to ask their mothers-in-law for advice regarding family planning/contraception, the majority felt that it was not their mother-in-law's place or were ashamed to speak with their mothers-in-law about those topics as their elders.

> Before, mothers-in-law got involved a lot, they would tell their daughters-in-law what to do. Now, it's changed. It's changed a lot. Now the daughter-in-law already has a voice… The majority [of couples make the decision] about what to do and not do. Very seldomly do the mothers-in-law and fathers-in-law get involved in those matters. Very seldomly. For the most part, the youth make that decision. – Family nurse, twelve years work experience, Armavir region

Peer-to-peer/other family members

Women noted that other women in their communities advise them to have fewer children due to the poor living conditions.

> Whoever hears that I'm preparing for my third, they all say that it's not necessary, that two is enough, that I already have one boy and one girl. But I want it. – 25 year-old woman, mother of two children, subsistence farmer, Armavir region

Given that few women chose to see health providers for counseling about family planning & contraception, most of the women interviewed sought advice from other women in their social networks, including relatives and close friends.

> If [my sister and I] don't want to get pregnant, we tell each other that you can protect yourself this way, use this suppository... We talk about the bitter life struggles in life, that it's this way, now I don't want to get pregnant... We talk, my sister says, for instance, "It's up to you and your husband". She says, "No one can tell you to have or not have a

child. You need to figure out the solution." - 31 year-old woman, mother of two daughters, wife of a migrant worker, Armavir region

We gather together those women we are close to, and we can discuss [contraception]. Almost everyone uses the same method of protection. No one uses pills or other methods. It's only my sister-in-law who just started using an IUD this year. – 26 year-old woman, mother of one son, wife of a previous migrant worker, Armavir region

Health providers

Despite the fact that women noted having greater trust in modern contraceptives after counseling with health providers and valuing the opinions of health providers, few sought out professional counseling. When they did provide counseling, health providers generally encouraged the use of modern contraception but discouraged the use of certain modern contraceptives.

When I went for an abortion, I said that I wanted to have an IUD inserted at the same time, but [the health care workers] said that it's possible that my body would reject it, that I would gain weight, have hair growth, things like that would happen, and my hormones would get messed up... Then my sister-in-law advised me against [using an IUD]. My sister-in-law is a midwife... She said that it was better to just protect myself the right way with my husband, using natural means, in order not to get pregnant. – 25 year-old woman, mother of two children, subsistence farmer, Armavir region

I'm also against the pill, to be honest, because it's possible to use it for a month or two but not constantly. It influences the function of the ovaries and on the menstrual cycle. They say that it doesn't, that it's fine, it's fine, but it's not right. – Gynecologist, forty-five years work experience, Aragatsotn region

Several health providers across all levels of training had incorrect knowledge of certain contraceptives, primarily the birth control pill, and thus provided incorrect counseling. One midwife counseled women about using an incorrect method, urination after sexual intercourse, as a method of contraception. Other health providers overestimated the effectiveness of the calendar

method or believed that all women, regardless of menstrual cycle irregularity, could use the calendar method.

CHART I: Barriers to the use of modern contraceptives according to women and health providers. Note that health professionals have not been considered as a significant factor and do not appear on the chart due to the low frequency of health professional counseling on contraceptive methods.

SECTION II: ABORTION (GENERAL)

Experiences with miscarriage & induced abortion

Miscarriage

Two thirds of the women interviewed had experienced either miscarriages or induced abortions. Health professionals noted seeing a greater number of women who have miscarried in recent years, which they speculated was from an increasing prevalence in infections and poor nutrition. Several of the women relayed personal stories of their experiences with miscarriage, which they attributed to heavy lifting, sexually transmitted infections, toxoplasmosis, unknown medical conditions, and the accidental usage of medication following unplanned pregnancies.

> [I did] heavy work... I have to do the household chores... All the burden falls on me... I carry the burden, pretty much everything. That's why it's possible that I lifted something heavy and had a miscarriage from that. – 28 year-old woman, mother of two children, wife of a migrant worker, Armavir region

> In general, we didn't use methods of protection, but I didn't get pregnant. There was a reason. Something happened and I didn't get pregnant... In the process, I got treated. I went to the doctor. In the beginning, I didn't ovulate. Then I went incessantly for 3 months, got checked-up, and they said that there was a place where fertilization could happen in the ovaries. But then they called my husband. They sent him to Yerevan. They were going to run analyses at [the clinic]. He had a little too. The percentage was high. I don't know. It was that HIV. – 27 year-old woman, mother of one daughter & expecting another child, wife of a migrant worker, Armavir region

Induced abortion

Health providers noted that fewer women come to clinics/hospitals for surgical abortions than in the past.[3] The type of surgical abortion used was dependent on the medical facility. There was much variability in what medical professionals and women noted in regards to the type of surgical abortion women receive. Generally speaking, women had surgical abortions in nearby cities with the exception of sex-selective abortions, which were primarily carried out in the capital due to better availability of resources & cooperation from health care providers. The conditions of the clinics and hospitals in nearby cities were described as suboptimal. In one clinic where abortions are carried out, medical professionals noted that dilation & evacuation was the only method used due to the absence of a vacuum aspirator. The type of abortion used was also said to be dependent on the training of health providers.

The use of anesthesia and/or painkillers for abortions was variable and dependent on availability at the hospital, personal preference, and whether or not women were presented with the choice. In general, few women received anesthesia for abortions. Only those having second-trimester abortions received anesthesia. According to health providers, the primary barrier to using anesthesia was cost. It was often referred to as an "expensive luxury". The majority of women interviewed either chose not to use anesthesia due to the added cost or fear of side effects or were not given the option to use anesthesia. A few health professionals and women noted that anesthesia was not available. It's important to note that several women interviewed described their abortions as painful, thus creating an additional barrier to obtaining surgical abortions at clinics/hospitals as opposed to using medical abortion at home (described in greater detail in section four of the results section).

[3] Many health providers speculated that the number of abortions had decreased not due to fewer overall abortions but rather the increase in prevalence of medical abortion used in the home without physician supervision.

> No one suggested using anesthesia. I don't know. It's like that here. Who has it with anesthesia? They just give anesthesia in the city… Everything was done correctly, but I felt pain during the abortion. That was clear to everyone. Even though they gave me pain medication, I still basically felt the pain. – 34 year-old woman, teacher, mother of three children, Aragatsotn region

One woman relayed her story of how a health professional informed her that anesthesia for the first abortion was unnecessary due to the lower level of pain. Another woman noted that she specifically asked for painkillers but that health professionals carried out the abortion without using painkillers and told her afterwards that it hadn't been necessary.

> [The health professional] asked if I wanted painkillers. I said yes and that I was afraid, but they messed up... I was waiting for them to inject me, but then that time came where they put the tools inside. I said, "But you're not injecting me with painkillers?". They said, "It's the first one. You won't feel pain."... They tricked me. They didn't inject me with painkillers on the examining table, but I didn't have pain. Then I got off [the examining table] and they said that there's no pain with the first one. – 25 year-old woman, mother of two sons, housewife, Armavir region

Perceptions of abortion

Though attitudes regarding abortion are changing, some women still regard it as a means of family planning. When asked what methods women in her community use, one participant noted, "[Women] use protection, take pills, or have abortions from what I know." Another participant who had had multiple abortions noted that she bought pregnancy tests in advance in order to be able to catch early pregnancies in the future despite being familiar with methods of contraception.

> Now having experienced the third [abortion], I decided to definitely get a few [pregnancy] tests just in case. If I feel like my cycle is irregular or feel nausea or if my head spins, I'll already check [if I'm pregnant] with that… The earlier you figure out that [you're pregnant] and have to have an abortion, it's that much safer. – 34 year-old woman, mother of four children, Armavir region

Interestingly, though not unexpectedly, the women who spoke most strongly against having abortions were those who had experienced miscarriage or had to have abortions for medical reasons. They tended to characterize abortions differently than the others, using words such as "sin" to describe abortion.

> [If I had an abortion], I would know that I slaughtered my child with my own hands. It was killed in front of my eyes. I can't... My heart can't take it. When I hear about it, especially since that time when I lost my second one, the miscarriage that wasn't an abortion... I hear that people have done abortions, I know, I'm scared. [Children] are my whole world. You took that child with your hands, I don't know, it's like murder. I don't accept it... I will never accept it. – 27 year-old woman, mother of one daughter & expecting another child, wife of a migrant worker, Armavir region

According to the participants, there is a notable increase in infertility among women. The fear of infertility is an additional factor that impacts the way women perceive abortion. Due to this fear, several women noted that, even in the event of an unwanted pregnancy, they would not have abortions until after having two children. This theme was reiterated by several health providers.

> Now they say that it's not possible to abort the second one. That was mainly why [I kept it]. After that, there are problems and you can't [have more children]. It's not possible to get pregnant. That's why I was forced to have it. – 25 year-old woman from a village in the Armavir region, 2 children (1 boy & 1 girl), works as a subsistence farmer

> Naturally [women] think that it's dangerous to end the second pregnancy. We all know that and they know that too. It's common in the community to fear that they won't be able to have a second child. Rarely [do they abort the second one]. In general they have the second. – Midwife, thirty-five years work experience, Armavir region

Reasons for induced abortion

Poor living conditions

The primary reason that both health professionals and women gave for women seeking abortions was having unplanned pregnancies that they felt they could not keep due to poor socioeconomic conditions. A few women noted that living in a traditional household (sharing a home with extended family members) influenced the decision to have an abortion.

> I didn't want another [child at the time]. [My children] were young. During that time we were many people living in the home. The two brothers lived with one another. We were many people... [My brother-in-law] also had two children. That's why I didn't want to have [more children]. I had it taken out. – 28 year-old woman, mother of two children, wife of a migrant worker, Armavir region

Birth spacing

Though socioeconomic conditions were the over-arching theme, there were other reasons women had abortions. Over half of the women interviewed noted that birth spacing was one reason they had abortions.

Completion of family

Some women noted that they had abortions due to the desire for no more children, though this would have likely been a larger theme if the participants were at the upper end of the reproductive age spectrum.

Medical conditions/Birth defects

A few of the women were counseled by health professionals to have abortions due to the potential for birth defects caused by infections or the inappropriate use of medication while unknowingly pregnant or due to prior medical conditions which put them at risk during pregnancy.

Reasons given for late-term abortions

Four out of the thirty women had abortions in their 2nd trimester. Two of the women had sex-selective abortions (described in greater detail in section three of the results section), one woman had an abortion after learning of birth defects, and one woman couldn't afford the abortion and waited until she raised enough money.

> The doctor warned me that it was better to keep [the pregnancy] since it was already big. [She said that] one week later I would feel its movements and that it wasn't necessary to take it out, but I pleaded with her to do it. It just was not necessary [for me to have a child]… Each day I felt that my stomach was filling up... I got the money together. I told my doctor that I didn't want to have it, but I had little money… She said that if I had told her that I didn't have any money and asked her to do the abortion, that I needed an abortion, it would have been better at that time than letting it get to this level when it's already dangerous for her [to do the abortion] and when I would have problems with my health. – 34 year-old woman, mother of four children, Armavir region

Socio-cultural & familial influences on decision-making regarding abortion

Health providers

Participants relayed that few women seek professional counseling about abortion from health providers. Health providers noted that, in the event that they do provide counseling about abortion, it is generally ineffective. Interestingly, in regards to the use of anesthesia for surgical abortions, nurses and midwives noted that they generally counsel women against its use, whereas gynecologists noted that they recommend using anesthesia.

Husbands

Women primarily felt that the decision to have an abortion should either be theirs or a mutual decision with their husbands, and it was generally the case where women primarily made the decision or the decision was shared equally between husband and wife with the exception of sex selection (discussed in greater detail in section three of the results section).

> However I decide, that's the way it is. Sometimes [my husband] says that he wants [a child], and I say that I'm the one who suffers, so I'm the one who decides… I think it should be the woman. Who else? It would be better not [to have an abortion], but it should be the woman [who decides]. Because of men's wrongdoing, women always suffer.– 30 year-old woman, mother of two sons, employed, Armavir region

> [My husband] has wanted a third child so much, but he's generally outside [of Armenia] and he can't imagine what it's like. It's hard raising children, the home, household chores... I told him that I was pregnant, that I was going to have an abortion. That's it... In the beginning he said no, but later he already understood, I guess, because he didn't say anything. He didn't say anything... In every case, the woman [should decide whether or not to have an abortion]. [The fetus] grows inside of her. She's the one who knows when to have [a child] and when not to. Basically, she's the one who raises them. – 24 year-old woman, mother of three children, wife of a migrant worker, Armavir region

Mothers-in-law

It was reported that mothers-in-law are generally not involved in decisions regarding abortion or play a secondary role with the exception of sex selection (discussed in greater detail in section three of the results section).

> I told my mother-in-law and then my husband... I told her that I was pregnant, that I have to have an abortion. She was also in favor... She didn't make a sound. She said, "It's your business. Whatever you think is right, do it that way.". – 24 year-old woman, mother of three children, wife of a migrant worker, Armavir region

> The mother-in-law will give advice, but she won't be the one who makes the decision. Naturally the issue is up to the couple to decide, but, as their elders, [mothers-in-law] will give advice. Then it's up to the couple to decide to have the child or not. – Family nurse, less than one year work experience, Armavir region

Though it was noted that mothers-in-law are rarely primary decision-makers when it comes to abortion (excluding sex selection), some participants noted that mothers-in-law who live with their daughters-in-law may choose to get involved in their sons' absence.

> There are [families] where the mother-in-law [makes the decision to abort]... For instance, my sister that got married, she got pregnant a second time. She had one and was pregnant with the second. The mother-in-law put up a fight, she started a war, that [my sister] had to go and have it taken out. And the fighting made her cry, go, and take it out... She had been hitting her, starting fights, starting a war. She said, "If I have to live like this, let it be what they want." If not, she wouldn't have had [the abortion]... [The reason was] financial... There are many mothers-in-law like that. If the man goes [abroad], he shouldn't allow the mother to interfere a lot like that. – 25 year-old woman, mother of two sons, housewife, Armavir region

In summary, women often gave multi-varied reasons for seeking abortions & noted multiple socio-cultural & familial influences on the decision to have an abortion. Given that women's responses were nuanced & multifaceted, it is possible to represent the participants' reasons for seeking abortions as the following, taking into consideration socio-cultural & familial influences, as well as socio-economic & other factors:

CHART II: Reasons for induced abortion according to women and health providers. Note that Chart III (pg 41) expands on the sex selection component.

SECTION III: SEX PREFERENCE

Women's perceptions regarding sex preference

Approximately half of the participants noted sex preference, primarily for males, whereas the other half did not. Of the half that noted sex preference, the women fell into four distinct categories: 1) those who would abort the next pregnancy if female; 2) those who would have aborted the pregnancy if not for an incorrect sonogram reading; 3) those who were uncertain as to whether or not they would have sex-selective abortions; 4) and those who desire for the child to be the preferred sex but would not have a sex-selective abortion.

Participants noted that women who are adamant about having sex-selective abortions understand the risks associated with late abortions but find sex selection necessary.

> They understand that [as the fetus gets bigger it's more dangerous to have an abortion]. Knowing that, they can let it get to three, three and a half, and sometimes four or five months in order to determine the sex for sure and then go and have it taken out. – Family nurse, twelve years work experience, Armavir region

Experiences with sex-selective abortions

Both health professionals and women observed a high prevalence of sex-selective abortions in their communities. Only one nurse noted that the birth rate was high and sex selection rates low in her community. She attributed it to the changing Armenian mentality regarding sex preference. All the other health professionals spoke about the high number of women they have seen in recent years who have sex-selective abortions. Two of the health professionals noted that, with the advent of medical abortion and the prevalence of women misusing drugs, the majority of women they see who come for abortions are doing so based on sex preference.

> We've had many [cases of sex selection]... [This one woman] would get pregnant, go and have the sex determined in Yerevan at three months when it would be entirely visible. They would determine the sex there, a girl, and she would have it taken out there, have an abortion, and then come back. She took out seven before getting pregnant with a boy...There are cases like that where they want [a boy], they determine the sex, and it's a girl. – Family nurse, twelve-four years work experience, Armavir region

Two of the participants had sex-selective abortions. One of the women, a mother of two daughters, had a sex-selective abortion after finding out the sex was female, whereas the other, a mother of two sons, had a sex-selective abortion after finding out the sex was male. The woman who had a sex-selective abortion in order to have a son instead of a daughter was ready to have as many abortions as necessary to ensure a male heir despite her fear; however, the other woman decided not to have any more children after having one sex-selective abortion. Interestingly, she

noted that, had she not had sons already, she would be ready to have as many sex-selective abortions as necessary to ensure a son. Though she deemed it important enough to have a sex-selective abortion once because she wanted a daughter, she was not ready to have successive sex-selective abortions.

Experiences with a method of counting to predict the sex

Many of the participants used a method of counting to predict the sex of the next child in order to have their preferred sex, which they noted had been passed down from female elders in their communities. Women relayed that the counting method is based on different criteria, noting blood type, menstrual cycle, age of the woman and/or her husband, and the time of the year as factors. Several women believed that the counting method was effective, whereas others believed that it was ineffective based on personal experience or stories of women in their communities.

> There are many cases where [my aunt's] counting has matched up. Whatever sex of the child they want, that's what they have... Maybe it's a coincidence. I don't know. But because there are some cases where it's matched up, I also wanted [to have it done]... For all this time, I don't think that counting has failed, where they wanted a boy and a girl was born. In my circle, that hasn't happened... Using her counting, she was the only one who said it was a girl. The sonogram said it was a boy and a girl was born... Let me use [the counting method] to be sure. – 24 year-old woman, mother of one daughter, wife of a migrant worker, Aragatsotn region

> We give our numbers, me and husband's. In the village there are people who count, but it wasn't right last year... It was my sin that I took out that child. That's why I want to count the days, so that I'll have a boy. I don't want to find out again that it's a girl and go take it out again. I can't. I'll go have [the days] counted... I tell myself that it might work. – 31 year-old woman, mother of two daughters, housewife & subsistence farmer, Armavir region

Issues of illegality & unreported abortions

It should be noted that some participants had illegal, unreported abortions, primarily for the purpose of sex selection. It is commonly accepted to make informal agreements with a gynecologist if one wants an abortion post twelve weeks gestation. Health providers noted that, though many gynecologists refuse to carry out illegal abortions, other gynecologists within the same clinic/hospital frequently carry out illegal abortions. Health providers also noted that women were knowledgeable about the illegality of abortions after the first trimester, though women interviewed who had abortions post twelve weeks gestation asserted that no conversation with their gynecologist concerning legality took place. Along with issues concerning legality, there is the additional issue of registration and the skewing of abortion statistics.

> Doctors don't see it as an issue. They do [late-term abortions]. It's just that they charge more. Instead of 20 [thousand drams], they charge 35 or 40 [thousand drams]... Of course [the women] know [that abortion after 12 weeks is illegal]. They give an extra five thousand [drams] so that the doctor won't talk about it and agree to it and do a good job. – Family nurse, eight years work experience, Armavir region

> In public hospitals, for instance, they do [abortions] for less money, illegally, but for less money... They don't register [abortions]. They don't do anything... They don't have a right to do it legally, but they do it under the table... The other hospitals changed [the real statistics], so that they could show a low rate [of abortion]. There was also the issue of national statistics. They would say that the [number of] abortions had decreased and there were many births. – Gynecologist, forty-five years work experience, Aragatsotn region

> For the most part, I go to pick up the [patient] records... [The woman] tells me not to register her as pregnant yet. She wants to see if it's a boy or girl first and then, if it's a girl, she'll definitely go and have an abortion. I ask her what she's thinking, that the pregnancy is far along. She says that it's alright, that she definitely can't have a girl.– Family nurse, twelve years work experience, Armavir region

Reasons for sex-selective abortions

Continuation of family lineage/national heritage

Many participants identified the primary reason for sex preference in Armenian society as the perception that male children continue the family line and national heritage. Several women used the phrase, "Boys keep the fire in the hearth", a traditional way of characterizing the need for having male offspring to continue the family lineage and the Armenian heritage. Interestingly, similar wording in Armenian conveyed both the idea of family lineage and national heritage, suggesting that they were not just inter-related but viewed as one and the same.

Boys receive inheritance

Intimately tied to the idea that sons continue the family name is the reality that, among traditional families, the son receives the family inheritance.

> The home will be inherited by the boy grandchild and continue like that. But, if it's a girl, they don't accept [giving her the inheritance]... It's possible [that the home could go to the girl], but they leave the home to the boy so that the ancestral line continues. Armenians think like this, especially in these villages. There are many cases like that, where they must have a boy. They favor the boy over the girl. – 25 year-old woman, mother of two sons, Armavir region

Desire for fewer children and children of both sexes due to poor living conditions

As noted previously, women in Armenia generally have fewer children than desired due to the poor living conditions in which they live. The likelihood of having a male heir is lower within families that have only two or three children; therefore, in recent years, this has become a primary driver of sex-selective abortions.

> [Women have sex-selective abortions] because of the living conditions. No one wants to have many children. If they have one girl, they already want the next one to be a boy... or they have two girls and they don't want the third to be a girl... Many of them choose that path... They can't offer security and provide for [their children] like they should [be able to]. That's why they choose that path. – 24 year-old woman, mother of three children, wife of a migrant worker, Armavir region

Desire for son to have a brother

A common phrase uttered by women when speaking about sex preference was, "A brother needs a brother". It's interesting to note the use of the word "brother" in referencing the existing child who is not yet a brother. One participant talked about her "sons" in reference to her existing son and the future son she would have. By referring to their single male children as brothers or as one of their sons, it is clear that women have already mentally prepared themselves for birthing another male child.

Interestingly, a few of the participants noted the desire for both their sons and daughters to have same-sex siblings, though in cases where the women already had one son and one daughter, having a son trumped having another daughter due to financial constraints.

> We have one boy and one girl. I want the third to be a boy... They say that it's desirable for a sister to have a sister and a brother to have a brother, but I can't [have more children]. I can't have four children. – 25 year-old woman, mother of two children, subsistence farmer, Armavir region

Security for aging parents

In place of government welfare/social security, the elderly in Armenia rely primary on their families for support. In traditional family structures where daughters leave the ancestral home after marriage, sons are the primary caretakers of their parents.

> It was me and my sister [growing up]. My parents are alone now... [My mother] fell, broke her hip, and was alone at home... There is no one to watch over them at the hospital... [If she had had a son] at least she would have a [daughter-in-law] who would get up and cook dinner, whether she was a good or bad [daughter-in-law]... The [reason] that I want [to have a boy] is because, if my daughters leave the home, I don't want to go through what my parents have gone through... [My daughter-in-law] would at least look after the home. She'd at least cook dinner, look after my husband, make him dinner. That's enough for me... Most of it, it seems, is for that reason, so that, when we're elderly, at least there will be someone to look after us, so we won't end up in old age homes. – 31 year-old woman, mother of two daughters, wife of a migrant worker, Armavir region

> Lets say you have a girl. Who's going to take care of you later?.. [Armenian] people are very nationalistic. The boy has to take care of his mother and father until the end... I look after my daughters-in-law well, and I always tell them, "I look after you this well, so that if tomorrow I fall, you'll look after me well"... In general, around us the boy has to stay closeby... [The elderly] also need to have grandchildren and need to be loved. They don't get any love in the old age home... The elderly need attention. This attention is worth everything to them. – Midwife, forty years work experience, Aragatsotn region

A few of the participants noted that the traditional family structure is changing due to the lack of opportunities in Armenia and the rising prevalence of migrant work, as well as couples' desire to live separately from their parents. In this changing atmosphere, the women noted that daughters often care for their parents and, for some families, this no longer determined sex preference.

> There are a lot [of people] who have boys, but now [their boys] are not by their side. The girls are by their side. How do they explain that? No, I don't think that's right when they talk like that... I've heard people say, "The girl will get married, she'll leave, she'll start her own family. The boy will stay and he'll provide [for the parents]". But it turns out to be a lie, that what they say isn't true. The boy gets married, leaves [the home], and leaves the parents alone, while the girl takes care of them. – 25 year-old woman, mother of one son, produce seller, Armavir region

Masculinity

The participants often attributed sex preference to their husbands' desire for male children, using words such as "manly" and phrases such as "a man's pride" to describe men's sex preference.

> I think that our Armenian men believe that having boys is a manly thing. I don't know. It makes them feel good... There are men that think that way who say, "It's a girl. I don't accept it. I'll send [my wife] back to her father's house". But it's their girl. What's the difference? – 25 year-old woman, mother of one son, produce seller, Armavir region

> Our Armenian men think in a different way... [Men think that] it's necessary to have a boy. If there are many girls, they feel bad and [think] why did they all turn out to be girls... The customs are from old times. Whatever it was then, that's the way it is now. It's true, little by little [the Armenian mentality] is developing, but the old is still preserved. A little [of the old mentality] remains. However much [people] want it to progress, the old [mentality] still remains. – 28 year-old woman, mother of two children, wife of a migrant worker, Armavir region

Only child complex

Several women noted that their husbands desire sons because they felt bad about not having brothers growing up. Interestingly, women referred to husbands who didn't have brothers as "only children" despite having had sisters. Several participants noted this idea that same-sex siblings are crucial to one's development and future well being and informed sex preference.

Physical strength/defending the homeland

A few participants noted that sex preference is rooted in a custom that arose from the time when only men were in the work force and handled work that required physical strength. Women noted that sons help their fathers with heavy chores and that sons "protect" fathers. One participant noted that, in addition to handling chores, boys are thought of as future soldiers who will defend the country.

Societal & familial influences on decision-making regarding sex-selective abortions

Health providers

One health provider spoke about one experience in which her advice not to have a sex-selective abortion was effective; however, all of the other health providers noted that women rarely come for counseling regarding sex-selective abortions and that their advice is generally not effective.

> If the person is inclined to have [a sex-selective abortion], she will never listen to me... She'll say, "My husband doesn't want it. It's true that I'm scared and all that, but my husband doesn't want it." I have seen this a lot (said with emphasis). It's not that they don't come to register. Someone once came to register and all. It was a 14 week old pregnancy, twin girls. She came happily and registered. The next week, she went and had it taken out. I wasn't aware. I call her for a consultation after a month since she hadn't come. She said that she ended her pregnancy. Why did she abort it? Her husband didn't want it. He found out that it was two girls... Now how should I know what goes on in her home? You know? Her husband didn't want it. – Midwife, thirty-five years work experience, Armavir region

Husbands and/or the husband's family

When speaking about their own experience or the experience of women in their social circles, the overwhelming majority of women noted that husbands and/or the husband's family had a strong son preference and the decision to have a sex-selective abortion was primarily made by them.

> If the family members don't want it, what is the poor daughter-in-law to do? However [the family members] choose, that's the way it is. Lets say, if the husband isn't against it, the husband should allow the child to be born. But if the husband is against it, what can we say to the one pregnant with a girl? It won't work... It's what she has to do. That's how it is for many [women]. – 27 year-old woman, mother of one daughter & expecting another child, wife of a migrant worker, Armavir region

> I think there are more [cases] where [women] are pressured by their family members. It's an Armenian family custom, right? All of their opinions are certainly taken into

> consideration, not just the woman's. It seems to me that if it were up to the woman, there would be less [sex-selective abortions]... It seems to me that it's mainly the husband [who decides about abortion], though there have been cases where it's the woman. The other family members also matter if, lets say, they live with the mother-in-law and father-in-law. – Family nurse, less than one year work experience, Armavir region

Interestingly, women often used words suggesting that they or other women in their social networks were the ones who had sex preference; however, over the course of the interview, it became apparent that it wasn't the woman's preference but rather the desire of their husband's or the husband's family.

> [My neighbor] had [an abortion] ten times. She wanted a girl. She had two boys... [She had abortions] ten times for a girl. We had [children] at the same time. She had a girl, and I had a boy. She just found out that the eleventh one was a girl and had the third [child]. Her husband forced her to go and take [the others] out. He didn't want a boy. [He wanted] a girl. – 25 year-old woman, mother of two sons, housewife, Armavir region

> Because my husband wants a boy, I want to fulfill my husband's wish... Every aspect of it is for him... It's all the same to me... I'm against [having an abortion], but if I have to I'll go down that path... In the Armenian family, for my father-in-law and, for the most part, us, having a boy is important. Even if they live seperately, the boy is a boy... That's what's accepted in Armenian families... Because of the conditions, we're forced to have a boy for my in-laws and for my husband. – 24 year-old woman, mother of one daughter, wife of a migrant worker, Aragatsotn region

One participant shared her personal story about the main reason why she had a sex-selective abortion. Interestingly, though she believed that one didn't need a son for future security, she felt compelled to have a sex-selective abortion due to pressure from her husband & husband's family.

> [I had sex-selective abortions] twice... [My husband] says that other people's wives go and have many abortions... He says, "The way other women do it, you should do it too"… [My husband] tells me to have one boy, that it's necessary... [He] says, "I'm here today, but when I'm not around at least the boys will take care of you." [He says] things like this... My husband and all the relatives say, "You have to have at least one boy.

> Don't depend on two girls. Have at least one [boy]."... "Don't be without a boy. You might be thrown aside"… [I've talked] with my husband's sister-in-law. She says to go and take it out. Why have that many [girls]?... If it were my acquaintances, they would say that two girls is enough, because we were also two sisters and didn't have a brother. It was us, but now my one sister is with my mom. They live together with her children… If it was just up to me, I wouldn't want to have any more [children]. Two girls is enough for me, but when I listen to what the neighbors say, that I should have a boy, that's when... If not for that, these two girls are enough for me. – 31 year-old woman, mother of two daughters, housewife & subsistence farmer, Armavir region.

In summary, there are a variety of reasons women cite for sex preference and having sex-selective abortions. Though some participants isolated specific reasons for their sex preference, others cited several reasons. For instance, one participant combined the idea that sons continue the family line with the idea that sons care for aging parents. A nuanced understanding of the various, multi-tiered reasons for sex preference and the conditions that are in place that lead to a prevalence of sex-selective abortions in Armenia is vital to a more complete picture regarding this complicated issue. It is possible to represent the participants' reasons for seeking sex-selective abortions as the following, taking into consideration familial influences and socio-economic factors.

CHART III: Reasons for son preference according to women and health providers.

SECTION IV: MEDICAL ABORTION

Rising prevalence of Cytotec to self-induce abortions

In recent years since the drug, Cytotec, became available over-the-counter and at a low cost, anecdotal evidence suggests that a large number of women have misused it to induce abortions (NSS 2012; Chong et al 2009). Nearly all of the women interviewed were familiar with the drug

by name and the majority had either taken it or knew someone who had taken it, suggesting that it is widely used. Health providers reinforced the view that the practice is highly prevalent.

> There is no working day when women don't come to be cleaned out after having used Cytotec. [In these cases, the fetus] is only partially miscarried or undeveloped and left inside... Perhaps there are more [cases] of that than real abortion. It's like that. – Gynecologist, twenty-one years work experience, Armavir region

> Many women [come to the pharmacy to buy Cytotec]. It's not just one or two people a week... It can be that in the course of a day, four or five people come and buy it... I know women who take it every month. In the course of the year they miscarried and they take it again the next month and the following month. – 23 year-old woman, pharmacist, mother of one son & expecting another child, Aragatsotn region

Several health professionals noted that the use of Cytotec is so extensive that it has heavily skewed the abortion figure.

> Now it's possible to say that fewer come [to the hospital], because [the number of unregistered abortions] have increased. That's why many in the community don't come [to us]. The building is empty. There are more [people who do abortions] cheaply... If [the abortion statistics] were to show the reality... If [they counted the abortions] done in the home, the number would be in the millions, because many do it in the home. – Gynecologist, forty-five years work experience, Aragatsotn region

Perceptions of Cytotec

Perhaps one of the most interesting research findings was the way in which participants often characterized the use of Cytotec as not being an abortion. In some instances, when speaking about the total number of abortions they had had, participants didn't count the number induced using Cytotec, clearly suggesting that they didn't consider ending pregnancies in that way as being abortions. This idea was reinforced by health professionals, one of whom noted that women consider it a more "civilized" way of ending pregnancies. Furthermore, the perception of

Cytotec as not being an abortion suggests that women who choose this path take the abortion more lightly.

> If they take Cytotec four times, they don't say that they've had four abortions. They don't count that as an abortion... When you ask them, they say that it's not an abortion. [They say that] they cleaned it out with Cytotec. – Midwife, forty years work experience, Aragatsotn region

Artificial/spontaneous miscarriage

Many participants identified Cytotec as an artificial or spontaneous miscarriage instead of an abortion.

> [Cytotec is] something that stimulates the uterus so that it narrows, right? I don't know. I guess it's that. It's definitely not an abortion where the fetus is removed from the uterine wall. – 34 year-old woman, teacher, mother of three children, Aragatsotn region

> [A woman] takes [Cytotec] to have a miscarriage. Then there's a woman who takes it and doesn't have a miscarriage. It doesn't help. Then she's forced to have an abortion. – 25 year-old woman, mother of one son, produce seller, Armavir region

"Abortion" connotes using medical tools

Some women perceived Cytotec as different from an abortion due to the perception that medical abortions are not interventions that require a doctor to use medical tools.

> "Abortion" is the Russian [word]. In Armenian, it's "artificial miscarriage"... It's the same word. It's just that one is Armenian and one is Russian. It's just that they don't know in order to tell you. They don't get it... They count "abortion" and "artificial miscarriage" as different. It's the same... No one says "artificial miscarriage", but it's the real name. They all use the word "abortion", right? It's possible that many don't understand if I say, "Go have an artificial miscarriage". They won't even understand what that means. The word "abortion" is accepted in the community. That's why they don't understand... They say that [using Cytotec] is not an abortion. They don't get that

> it's an abortion. It's a miscarriage, not an abortion... [If it's not with tools, it's a] miscarriage. – Midwife, thirty-five years work experience, Armavir region

Interestingly, even a few health providers (midwives & nurses) described abortion & Cytotec in different terms and the process of having to "clean out the uterus" after women misused Cytotec as different from an abortion.

> We've sent [women who've taken Cytotec to the hospital] to have pieces cleaned out. If there are pieces remaining and they have bleeding, they get it cleaned out. You don't send them to have an abortion.– Midwife, thirty-five years work experience, Armavir region

Late/elongated menstrual period

Both health providers and women described the use of Cytotec as being a late menstrual period. Those who experienced bleeding for a period of time after using Cytotec described it as being like an elongated menstrual period and didn't believe that it warranted medical attention.

> I wouldn't say that [using Cytotec] was an abortion... It feels like a prolonged period... It was like that. There are women who handle it differently. There are women who have a lot of pain, but that didn't happen to me. It's just that this time [my period] lasted longer. It was terrible. Imagine [having a period] for two months. – 28 year-old woman, mother of one son, wife of a migrant worker, Armavir region

Early intervention/Means of controlling fertility

Some participants used language that suggested that they viewed Cytotec as a means of early intervention that prevented having to have an abortion.

> I wouldn't say that [using Cytotec] is an abortion. Perhaps it interrupts [the pregnancy] early on… so you don't need to have an abortion. – 24 year-old woman, mother of two children, Aragatsotn region

In a few instances, women likened the use of Cytotec to the birth control pill, suggesting that they consider it more of a means of controlling fertility than as an abortion.

> They don't use contraceptives as much as they use those tablets to miscarry. There aren't many [women] who use those monthly 21 or 28 [birth control] tablets. I've heard very rarely that [women] have taken [the birth control pill]. They think that, instead of taking [pills] for the entire month, they'll take four or five Cytotec [pills]. They'll take those tablets and it'll be cleaned out. – Family nurse, twenty-four years work experience, Armavir region

Perception of risks associated with Cytotec

A few of the health professionals noted that women in their communities had developed a fear of Cytotec due to stories told by women in their social circles. Approximately half of the health professionals thought that their patients did not understand the risks associated with Cytotec, whereas the other half thought that women did understand the risks but that those who decided to try Cytotec were willing to take a risk due to their preference of using Cytotec over having a surgical abortion. A few even noted that women, when faced with the decision of using Cytotec over having a surgical abortion, are willing to take the risk even when they fully understand the potential complications that may arise.

> [Women] think that, I don't care, let me take the risk. If it happened, it happened. If it doesn't, I'll go and have it cleaned out. I've heard that a lot. – Family nurse, twenty-four years work experience, Armavir region

> [Women from the community] gave me advice. They told me these other pills are very dangerous… They told me that it was possible that [Cytotec] wouldn't clean out everything and that my blood would get infected… They can even cause death… I had heard this, but they told me that it's up to me. They warned me about the consequences. Being aware of this, I told myself that I would take very, very little of that pill every hour. – 25 year-old woman, mother of two sons, Armavir region

Women take different dosages of Cytotec

The midwives and nurses interviewed did not know the indications of Cytotec and the recommended dosage for inducing abortion. One of the gynecologists did not offer medical abortion and was not familiar with the recommended dosage, whereas the other gynecologist was familiar with the clinical guidelines and appropriately administered medical abortion. Alarmingly, each health professional noted that their patients misused Cytotec in different ways before arriving at the clinic/hospital. There was variability in terms of dosage, timing, and how the pills were administered (orally, sublingually, or vaginally). Additionally, some women took the complete dosage all at once, whereas others extended the dosage over a period of hours or days. Women who were counseled by health professionals after misusing Cytotec took less than the World Health Organization (WHO) recommended dose and up to three times the recommended dose (WHO 2012). Interviewed women often simultaneously took the same dose of misoprostol vaginally and orally despite WHO recommendations about using a different dose for vaginal/buccal/sublingual administration and oral administration of misoprostol (WHO 2012). Additionally, though it is recommended not to use the drug past nine weeks gestation, health providers noted that they have had patients who have attempted to use Cytotec to self-induce abortions after the first trimester.

> [Some women] say that they take one, put one under [the tongue], and then insert one inside [the vagina]. They do the same thing again in half an hour and that's it... There are people I know who take ten or twenty pills... They don't buy 10 pills at once. To begin with, they buy four or five. Then when they use it and it doesn't work, they come back and continue to buy more... To tell you the truth, when I ask them what their doctor advised, everyone says something different. No one gets the same [advice] or says the same things... However many [pills] they want, it's up to them... Whatever they hear from whomever, that's how much they want. It's like that. Advice, shmadvice. – 23 year-old woman, pharmacist, mother of one son & expecting another child, Aragatsotn region

Complications from Cytotec

Health providers recall having patients with various symptoms and complications after taking Cytotec, including impartial abortions, excessive bleeding, infection, abdominal pain, nausea, polyps, and infertility. Several women believed surgical abortion was safer and more effective. The majority of women interviewed also identified various symptoms and complications, including impartial abortions, bleeding, pain, infection, and weakness, as well as rare cases of mortality.

According to participants' personal narratives or relayed experiences of friends and family members, women who take Cytotec and have complications only go to the hospital in emergency situations if they deem it absolutely necessary. Participants used a common phrase, "Until the knife hits the bone", to portray how long women wait before seeking out care.

View that Cytotec should be regulated

Health professionals were concerned about women's cavalier use of Cytotec, citing that it was dangerous considering the absence of gynecologists and emergency service in the villages. Health professionals believed that there should be warnings on packages or public service announcements and that it should become illegal for Cytotec to be sold over-the-counter. Some women had seen advertisements on television and learned about the risks of misusing Cytotec, which informed their views. One woman noted that she decided to take the risk after having been informed, suggesting that primarily socio-economic factors played a role in her decision-making.

Reasons why Cytotec used over surgical abortion

Cost

One of the primary reasons for the misuse of Cytotec as noted by health professionals and women is that it is much cheaper to use at home as compared to having a surgical abortion.

> [Women] get four Cytotec [pills], which is 1,000 drams (~$2.50). They tell [themselves] to wait and try this rather than going [to have an abortion], give 10,000 (~$25.00), and get up on the examining table. – Midwife, eight years work experience, Armavir region

One health professional noted how women began using Cytotec in recent years once the price drastically dropped.

> Before [women] used to get small [amounts of Cytotec], and it was expensive to buy. They didn't buy lots. It used to be 1,500 drams (~$3.75) [per pill] during that time. Now it's 170 drams (~$0.43)[per pill]. That's why now they buy it… The drug business is terrible. They saw that Cytotec was being sold, and they all brought it. And they can't sell it to everyone for 1,500 [drams]. The price went down. – Gynecologist, forty five years work experience, Aragatsotn region

Though some women are aware that they can have medical abortion administered at the hospital, few are willing to pay the higher cost, which includes the combination dose of mifepristone and Cytotec, consultation and ultrasound fees, as well as surgical abortion if necessary.

> If [mifepristone] is ten thousand [drams] (~$25), of course [no one's going to buy it]. She'll buy Cytotec without telling a doctor, because it's 400 [drams] (~$1) or a couple thousand drams (~$5). She'll pay that much and that's it. It's over with. But she won't pay ten thousand [drams]. That's a lot of money. [She'll just take Cytotec] and won't know if she miscarried or not. That's why she'll have to go to a doctor – Gynecologist, twenty-one years work experience, Armavir region

Fear of surgical abortion

Several participants spoke about how the fear of surgical abortions is a primary reason that women choose to use medical abortion instead.

> [I'm afraid of having a surgical abortion] because of the [medical] tools, which they insert to scrape and take out the fetus in order to clean the uterus. I know that my insides would hurt. – 25 year-old woman, mother of two sons, Armavir region

> There was someone here in the building next to this one. She took six pills and didn't get her period. She took three or four again and saw that there was nothing. She had taken six [pills]. Then, she took it again and it became 12 [pills]. After 12 of them, it cleaned it out after 2 or 3 days. She said that it had deteriorated [her inside] quite a bit. [The fetus] fell out and she said that for 10 days it was like a faucet opened. That's how much she bled. She called me and told me that it was already the 7th or 8th day that she was bleeding. I told her to put an ice pack on her uterus and have the gynecologist take a look. [She said that] she wouldn't go [to the doctor] even if she was dying, because she was totally afraid of [getting on] the examining table. –Family nurse, twenty-four years work experience, Armavir region

Psychological stress/Shame

Women often used language to suggest that having surgical abortions were psychologically stressful and/or shameful; however, this same language was not used to describe medical abortion.

> Oh, I would die [if I had to have another abortion]… My abortion was terrible. I guess it's not like that for anyone else. Imagine, for two days the thought of it made me cry. It's true, I didn't feel pain, but, when I thought about it, I cried for two days straight… I was so ashamed when I had an abortion. It was a shameful time... You're lying there with so many women. Imagine that. Maybe that's why it was more shameful. – 28 year-old woman, mother of one son, wife of a migrant worker, Armavir region

> Abortion, I don't know, it's a different feeling. They will feel calm taking that drug. When it comes to abortion, they will think about it and suffer and it'll feel like half of their life is over. It'll take a week for them to get over the psychological pressure [before having the abortion]...Very seldomly will someone feel comfortable with having an abortion... I guess because [with abortions] they're cutting [the fetus] and doing things. It's on their conscience, and that makes it more painful. I don't know. They're taking it by themselves and getting it over with by taking the drug in their homes. But [for an abortion] you have to go, pay money, feel pain, and endure the psychological pressure. There's a lot to it. – Family nurse, twelve years work experience, Armavir region

Convenience

Some of the participants noted the ease of going to the pharmacy and taking the drug at home in comparison with the difficulty of reaching the hospital and having to undergo a medical intervention.

Secrecy

Some of the participants, including health professionals who had seen cases, noted that women sometimes use Cytotec in order to secretly end the pregnancy without the knowledge of one or more family members.

End pregnancy earlier

Some women who learned of unwanted pregnancies during the first month of gestation chose to use medical abortion because they didn't want to wait longer in order to have a surgical abortion.

> It seemed to me that [by taking Cytotec] you nip it in the bud. You don't have to wait until [the fetus] gets bigger. – 30 year-old woman, mother of two sons, employed, Armavir region

Familial & societal influences on decision-making regarding the use of Cytotec

Peer-to-peer

Several of the women interviewed had used Cytotec and/or knew women in their social circles who had used Cytotec. Knowledge of Cytotec was high due to peer-to-peer counseling.

> Two years ago, very few knew that there was this drug and very few would take it to miscarry, but now if you look around, everyone already knows about the drug. One person learns about it from another. – Midwife, eight years work experience, Armavir region

Husbands and/or husband's family

The family in general does not play a large role in decision-making when it comes to having a surgical abortion or using medical abortion.

> My husband was the first to know about my pregnancy. I told him that I have to take [Cytotec]. Then I told my mother-in-law that I have to take it. Both of them thought it was a bad idea, because they are the caretakers… My husband really didn't want me to take it. I talked to him a lot about it and I convinced him, but he was a little afraid, because he heard a few bad cases… If something happens, they are the ones that are going to take care of me. It's like that. Both of them said that it's your business and they warned me... If you're confident, you can take on the risk. They told me that there are these bad cases. They warned me again. Even though I knew everything, I tried it. – 25 year-old woman, mother of two sons, Armavir region

Health providers

Some women relayed that they or women in their social circles received counseling about using Cytotec from midwives and gynecologists; however, the majority noted that women only seek counseling from pharmacists and other women in their social circles. Similarly, health providers stated that women do not seek counseling from them regarding medical abortion, and the majority

of women only seek counseling after having incorrectly taken the drug and experienced complications. In fact, several participants noted cases where women lied to health providers about using Cytotec and pretended to have had a spontaneous miscarriage. When asked, most of the health providers advised women against taking measures into their own hands and advised them instead to have surgical abortions.

> If only they go to a doctor. The doctor will give the right advice and she'll listen to the doctor, not the neighbor or a friend or even the pharmacist… You hear that a lot. [We ask them] why they take [Cytotec] and who told them to take it. [They say that] the pharmacist or neighbor [told them about it]. [They think that] they will miscarry the way that another has. I tell them that, if they would have come to me instead of going somewhere else, that wouldn't have happened.- Gynecologist, twenty-one years work experience, Armavir region

> Now there are so many women that use their own methods. The other day someone came [to the clinic] and told me that she inserted Cytotec inside her vagina and took it orally and now was having cramps. I got really mad at her and told her it wasn't possible [to take Cytotec]. I asked her why she did this and who gave her the go ahead. I scared her to make her understand. They don't understand. I've dealt with so many cases [of misusing Cytotec] here. – Midwife, forty years work experience, Aragatsotn region

In general, health providers had a negative perception of medical abortion and expressed great distrust. Health providers were wary of the effectiveness of medical abortion and felt that the risk of complications was high. One midwife went so far as to refer to using Cytotec as committing a "crime". Another midwife said that, even if she knew the recommended dosage, she would be too afraid to prescribe medical abortion since the gynecologist only worked at the village clinic once per week and would likely not be available in the event of an emergency. Only one health provider, a gynecologist, noted the correct administration of medical abortion, citing the recommended combination therapy and the correct dosages of each drug.

Pharmacists

Among the women who had used Cytotec, the majority received counseling from pharmacists on how to administer it and what dosage to take. Only one woman noted that a pharmacist scared her out of using Cytotec and refused to sell it to her. Health professionals felt very strongly that the pharmacists had no right to advise women on how to take Cytotec. Some even suggested that pharmacists readily sold it in order to make a profit.

> Pharmacists [act like they] are fully doctors. Each one of them gives their own incorrect advice [about Cytotec]. – Midwife, 24 years work experience, Aragatsotn region

> [Pharmacists] want to sell the drug... Now it's sold over-the-counter. Whoever wants it, takes it... You can go and say that your tooth hurts and have them give you a drug. Now you can also say that you haven't gotten your period and that you want Cytotec, and they'll give it to you. They're on the same level... [Pharmacists] give it out and give advice too. It's not like they say that it's not possible or that it's better to see a gynecologist. They give out the drug. – Family nurse, eight years work experience, Armavir region

One of the participants, a pharmacist, acknowledged that, because the drug was over-the-counter, she felt that she had no control over whether or not women bought the drug despite being against its use.

> You can get [Cytotec] without a prescription. We don't recommend it to anyone... They tell us to give it to them, don't give us advice, just give it to us, let us buy it... If they ask us, we say that we don't know about it. [Cytotec] is not for that purpose. It's for those with stomach illnesses... There are a lot [of cases where Cytotec is not effective]. I've heard it a dreadful amount of times, and I don't give advice to anyone to take it. When they come and buy it, I say, "Don't buy it. It's better if you go and have an abortion." – 23 year-old woman, pharmacist, mother of one son & expecting another child, Aragatsotn region

Themes regarding medical abortion were often interwoven and inter-related. For instance, several health professionals and women noted that both cost and fear of surgical abortions were reasons for using Cytotec. Given this nuanced overall picture, the following chart describes the socio-cultural and familial influences, as well as socio-economic and other factors that play a role in the decision to have medical abortions.

CHART IV: Reasons for misusing medical abortion according to women and health providers.

DISCUSSION

Perceptions & experiences with contraceptive methods & abortion

Women generally showed a preference for natural means of contraception. IUDs were the most accepted modern contraceptive among participants. Women noted trust, effectiveness, convenience, and affordability as primary reasons for their positive perceptions in regards to IUDs.

Participants commonly experienced miscarriages and induced abortion. According to women's narratives, the method of surgical abortion used varied according to the training of the medical provider and the conditions of the clinic/hospital in which the abortion took place. The administration of anesthesia also depended on a variety of factors including the training of medical providers, conditions of the clinic/hospital, personal preference, and whether or not counseling regarding anesthesia took place. Some women spoke about abortion as a means of family planning, but most women felt strongly opposed to having abortions, though they often regarded it as a necessary evil.

Several participants exhibited sex preference, identifying that a method of counting was used to predict the sex of the future offspring, and noted the high prevalence of sex-selective abortions in their communities, primarily in order to bear sons.

Nearly all the participants were familiar with Cytotec and had either personal experience with using Cytotec or knew of family, friends, or acquaintances who had used Cytotec. Several participants described the use of Cytotec as not an abortion but rather an artificial miscarriage or a prolonged menstrual period. Many believed that abortions constituted medical interventions and were carried out with medical tools, whereas pills used to induce "miscarriages" did not

constitute as such. Furthermore, some participants perceived Cytotec as a method used to prevent the need to have an abortion.

Decision-making factors regarding contraception & abortion

The research findings showcase a nuanced and multi-dimensional portrayal of several factors that play a role in the decision-making regarding the use of various methods of contraception and abortion. Various socio-economic and socio-cultural factors, as well as familial ties, played a large role in decision-making.

Regarding contraception, the factors that women noted as influencing decision-making included negative perceptions, such as fear, distrust, and shame; incorrect knowledge; the availability, accessibility, and affordability of certain contraceptives; advice from peers and health providers; and the influence of husbands and other family members.

Regarding abortions, the findings suggest that familial and socio-cultural influences play a minor role and the poor living conditions and the desire for birth spacing or limiting family size are the primarily factors influencing decision-making. However, the familial, socio-cultural and other influences become more complex when it comes to sex-selective abortions. Though several women cited sex preference, few perceived that a sex-selective abortion was necessary for them. In this case, the interplay of familial and socio-cultural influences highly skewed decision-making regarding abortion in the event that husbands and/or the husband's family exhibited son preference. Women noted that their husbands desired to have sons due to a number of intertwined factors based on tradition, such as the perception that only sons continue the family lineage and national heritage; obtain the family inheritance; provide security to aging parents; and are a source of physical strength needed for the family and to defend the homeland. Along with familial influence and traditional mentality, factors such as the poor living conditions affected the desire to have fewer children and children of both sexes. In regards to the use of medical

abortion over surgical abortion, women cited a number of factors related to both inappropriate counseling received by pharmacists and peers, as well as other factors, including the greater affordability and convenience of using Cytotec and feelings of fear, psychological stress, and shame when it came to having surgical abortions.

Strengths & limitations of the research study

The major limitation of this research study is that it may not be generalizable for the entire population since it relates directly to women living in rural settings in the Armavir & Aragatsotn regions of Armenia. However, given the relative homogeneity of the Armenian population and the small size of the country, it likely does capture the issues facing the general public. Another limitation may be response bias. Given that women were chosen through convenience sampling at village health posts, it is likely that the women interviewed were more proactive and took greater preventative measures in regards to their health. Thus, it is possible that this cohort of women was more likely to use family planning and less likely to use abortion than their peers.

The main strength of this study is the large scope in terms of variety of stakeholders & number of interviews carried out. Interviewing several health providers and women of reproductive age allowed for a multi-dimensional understanding and an in-depth look at women's perceptions and experiences, as well as the specific factors that influence decision-making about contraception and abortion. Another major advantage of the study was the richness of the data collected despite the fact that the topic of conversation was regarding a sensitive subject. Given that the investigator was related to as a peer due to the similarity in age and background and the fact that abortion is not highly stigmatized in Armenia, it seems unlikely that participants left out relevant information about their perceptions and experiences.

CONCLUSION

Family planning & contraception

Though modern contraception was used by a number of participants, the data suggests that women in Armenia still rely heavily on natural methods of contraception with a high failure rate and abortion as a means of family planning. Reducing this dependence requires a three-pronged approach.

1) Expanding education on modern contraception

Women of reproductive age in Armenia must be better educated about the various methods of contraception in order to make better contraceptive choices; debunk long-held myths; and dispel fear and distrust of certain modern contraceptives. Health providers also need to be better equipped with knowledge regarding modern contraception and the patterns of decision-making in order to counsel women more effectively. For instance, an understanding of how one's husband's status as a migrant worker influences decision-making about contraception will help health providers adequately counsel women in their communities. Health education must also include men in the communities in order to encourage them to take a more active role in their partners' reproductive health.

2) Greater availability and accessibility of modern contraceptives

More modern contraceptives need to become available and accessible to women in Armenia by ensuring that health centers/pharmacies carry various methods and that public transportation to these health centers/pharmacies are adequate. Given that participants noted that women readily come to the village health posts but rarely go to hospitals, it is imperative that more medical supplies and contraceptives be available at these centers. For instance, women have a greater preference for IUDs over other means of modern contraception; therefore, it would be ideal to

equip the health posts with medical instruments and sterilization devices in order to allow physicians to insert IUDs at these village health posts.

3) Empowerment of women

Women in Armenia must be empowered to take a more active stance in regards to communication, assertiveness, and negotiation with their partners about contraception in order to enhance personal relationships and make informed choices about family planning. Though perhaps the most challenging task considering the different factors that influence a woman's agency, based on interviews with participants, initiatives that focus on empowerment of women, such as educational forums and expanding socio-economic opportunities, will likely also be the most effective in reducing the dependence on natural methods of contraception with a high failure rate.

Miscarriage/infertility

Anecdotal evidence suggests that the rate of miscarriage and infertility has increased in recent years. Given this information, studies should be carried out to determine whether this rate is actually increasing and what the causes of miscarriage and infertility are in order to create public health interventions to reduce this number.

Induced abortion

Regarding surgical abortions, the variability of what tools were available, what method was used, and whether or not anesthesia was administered led to varied experiences. A sizable number of women interviewed relayed that their surgical abortions had been painful. Taken together with the research findings on the misuse of medical abortion, it is evident that the fear of pain during surgical abortion was a primary reason that women turned to the unregulated use of Cytotec. In order to encourage women not to turn to unsafe means of self-inducing abortion, it is vital that

surgical abortion be carried out under suitable conditions and medical providers use only best, up-to-date practices in order to carry out abortions safely and effectively. Clinics and hospitals where abortions are carried out should be monitored, and it should be mandatory for health providers to attend refresher trainings in order to ensure that best practices are being employed.

Sex-selective abortions

The results suggest that the reasons for sex preference and sex-selective abortion among Armenians are often multi-varied and multi-dimensional. Women were found to be generally knowledgeable about the risks concerning late abortion but felt that sex selection was necessary to carry out. In general, the results show that the overwhelming majority of women are either outwardly pressured by family members or feel a duty to carry out sex-selective abortions for their families.

There have been multiple predictions that highly skewed birth ratios, such as the ones seen in Armenia, will have negative social consequences that threaten long-term stability in society, such as increased levels of violence, a dearth of women for marriage, and trafficking of women and girls (Li 2007; Barot 2012). In order to prevent these consequences, the following policy level recommendations that have the potential to lower the dependence on sex selection should be considered:

Short and long-term recommendations

Short-term:

1) Small financial incentives for having two or more daughters

Given that women in Armenia often consider sex selection after already having one female child, financial incentives for having two or more daughters may offset the decision to have a sex-

selective abortion. This could be in the form of direct subsidies at the time of the girl's birth.

2) Small-scale community level expansion of educational and work opportunities

Rising gender equality through higher education and labor force participation of females have been shown to be major forces in discouraging the use of sex-selective abortion (Bongaarts 2013). The traditional division of labor by gender makes women in Armenia economically dependent on men. Expanding small-scale programs, such as small microfinance lending, to be more inclusive of women at the community level can have a big impact on their agency and ability to make decisions that affect their reproductive health and well being.

3) Girl-positive social marketing

Gender inequality in Armenia has contributed to the lower social, economic, and political status of women in society. Though not a solution to the problem at large, campaigns wide in scope and targeted toward women, couples, and youth that celebrate Armenian women and discourage sex selection could be used in conjunction with other strategies to help ameliorate the situation. Such campaigns must be devoid of judgment and be sure not to jeopardize access to safe abortion services (WHO 2011). Instead, the content should be constructed to stimulate dialogue about positive attributes of women and girls (WHO 2011).

4) Increased pension payments for parents with only daughters

A primary driver of son preference is security for parents in their elderly years. Increased pensions for parents of only daughters would likely be an incentive against having sex-selective abortions. This policy could be piloted on a small-scale and then expanded to the whole country if found to be effective.

5) More extensive research into sex selection

This exploratory qualitative research project elucidated the multifaceted and complex reasons for why women undergo sex-selective abortions in Armenia. However, more research should be carried out to monitor sex ratio imbalances, expand statistical data, and delve further into the relationships between sex selection and social factors, such as migration and systems of inheritance.

Long-term:

1) Property inheritance laws

A variety of factors continue to make males more socially and economically valuable than females, driving a deep-seated preference for sons over daughters. One of these factors in Armenia is the patrilineal inheritance custom. It is uncommon for inheritance and/or land to be passed down to daughters due to marriage practices and the status of men as family heirs. Regulations dealing with property inheritance laws could be altered to give greater support to female offspring, which could result in deterring sex selection.

2) Large-scale expansion of educational and work opportunities

It is the government's responsibility to address the economic and political issues involved in sex selection and create integrated socio-economic development policies, which would contribute to the decline of sex-selective abortions. Policies and regulations that promote equal rights and opportunities for women in terms of education and employment will likely drive down son preference. This could take the form of gender-based school quotas or scholarship programs for girls.

3) Expanded old-age support

Armenia is a low middle-income country in a transitional stage. The social security system is largely nonexistent. Due to these barriers, family support for the elderly continues to be the dominant form of care for the elderly. Daughters who are married-off provide only auxiliary support, whereas sons have the greater responsibility to provide economic support to their parents. Laws and regulations that improve old-age support, such as increasing pensions for all elderly and providing better services at old age homes, would likely have a large impact on mitigating the issue of sex selection in Armenia.

Addressing the issue of banning sex-selective abortions

It's important to remember that sex preference is not a product of sex selection; rather, sex selection is a product of sex preference. In many societies, including Armenia, sex preference is steeped in long-standing cultural practices and traditional mindsets. The advent of medical technology to determine the sex of the fetus has made sex selection possible, but it is not the reason in and of itself for sex selection. For this reason, limiting ultrasound technology is not a quick fix to the issue of sex selection in Armenia. We can take the examples of India, China, and Korea, countries that passed legislation banning health care providers from revealing the sex of the fetus. The impact of these policies on reducing sex selection is generally thought to be small (Bongaarts 2013). The declines in sex ratios that have been documented, especially in the case of Korea, are primarily attributable to social and economic development that altered underlying social norms rather than the institutionalized bans on sex selection (Bongaarts 2013; WHO 2011; (Barot 2012). This is because legislation that only addresses the issues of prenatal determination using ultrasound technology does not eliminate the fundamental causes of sex preference (Li 2007). Restricting access to ultrasound technology without addressing the main causes of sex preference that determines its use is likely to result in a greater demand for clandestine

procedures that are illegal and/or unsafe (Barot 2012; WHO 2011). Instead, any change in policy that addresses sex determination must be carried out in tandem with interventions that empower women and improve the socio-economic conditions of women at the community level.

Medical abortion

The rising prevalence of the misuse of medical abortion is a great cause for concern. The research findings show that there is great variability in terms of dosage, timing, and how the pills are administered, which suggests that this practice is highly unregulated in Armenia. However, medical abortion has the potential to be an important alternative to surgical abortion if used properly (Ngo 2011). In order to prevent morbidity & mortality from further misuse of Cytotec and to encourage proper use of medical abortion, the following recommendations should be considered:

1) Wide-scale education campaigns targeting health providers and women

Health providers must be educated about best practices concerning medical abortion. The majority of providers interviewed did not know the recommended dosages, suggesting that there is great need for health education outreach. Given that nurses and midwives generally interact on a more regular basis with women in rural settings, it is imperative that they be equipped with adequate information regarding not only the correct administration of medical abortion but also how to best counsel women about medical abortion and how to handle complications in the event that women have incorrectly used the drug. It is also essential that pharmacists be included in trainings, since the research shows that more women seek counseling from pharmacists than nurses, midwives, and doctors. In addition to health providers, women must be educated about safe and effective abortion options and be made aware of the risks of self-inducing abortion. Though there has been some media attention, a more extensive, wide-scale campaign to get public service announcements on television is needed in order to reach a large number of women,

especially those in rural settings. Health education seminars on medical abortion should also be made available to women.

2) Cytotec sold as a prescription-only drug

Cytotec should be available in pharmacies only by prescription instead of over-the-counter. Limiting the sale of Cytotec to women who have received a prescription from a physician will require women to be examined before undergoing medical abortion, which will likely largely reduce incorrect administration of the drug. Monitoring will need to be carried out in order to assure enforcement of a prescription-only policy.

3) Lower cost of medical abortion at clinics/hospitals

The cost of medical abortion at hospitals should mirror the cost of surgical abortions. The World Health Organization recommends a regimen composed of mifepristone plus Cytotec in place of Cytotec alone for increased efficacy (WHO 2012). Currently, mifepristone is considerably costly, considering the standard of living in Armenia. Medical abortion generally costs roughly four times that of a first trimester surgical abortion, because it includes the costs of the drugs, consultations, and ultrasound technology to assure a complete abortion. Lowering the cost of the procedures associated with medical abortion to mirror that of surgical abortion would incentivize women to use it appropriately.

4) Promotion of home-based medical abortion

Home-based medical abortion is commonly used in the United States and France (Ngo 2011). Women who undergo home-based medical abortion receive the dose of mifepristone at the clinic and later take Cytotec at home. This method is intended to simplify the medical abortion process by reducing the number of clinic visits (Ngo 2011). Furthermore, there is no evidence that home-based medical abortion is any less efficacious than clinic-based protocols (Ngo 2011). Home-

based medical abortion is ideal for women living in resource-limited settings who would have difficulty accessing the clinic multiple times. This method would still allow women to self-administer Cytotec in the privacy and comfort of their homes but only after consulting with a physician and receiving the dose of mifepristone at the clinic. Promotion of home-based administration of medical abortion would help break down some of the considerable barriers to accessing medical abortion; offer women greater freedoms in choosing the method of abortion that best suits their needs; and would help deter women from seeking unsafe means of self-inducing abortion.

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APPENDIX: SEMI-STRUCTURED INTERVIEW GUIDE

Thank you so much for meeting with me and taking part in this study. We're interested in learning about your opinion and experiences with family planning. I'd like to take some time to read you a consent form that I've prepared so that you're aware of everything before we begin. (Read consent form and obtain oral consent.)

1. Tell me a little bit about yourself.

- Where do you live? In the village or in the city?
- How old are you?
- Are you married?
- Do you have children? (If yes) How old are they? How many boys and how many girls do you have?
- How many people live in your household and how are they related to you? (If not divorced/separated) Does your husband travel outside of Armenia for work? Is he away now?

Introductory questions:

I'm going to ask you some questions about family planning. (By family planning I mean planning when to have children and when to use birth control.) I would like you to answer these questions to the best of your ability. There are no right or wrong answers. I am simply interested in understanding your perspective.

2. What is the ideal family size for you and your family?

- How many children do families in your community have and why?

- (If there is a difference between ideal and actual family size) Do women in your community have fewer children than they desire, and why?

3. What methods do women in your community use to space or limit births?

   - Do they use no method, traditional methods or modern methods of contraception and why?

     By traditional methods I mean methods like withdrawal and the calendar method, and by modern methods I mean condoms, oral contraceptives, and the intra-uterine device. Both kinds of methods are used by men and women during sexual intercourse to reduce the chance that it will cause a pregnancy.

Perception of traditional and modern contraceptives:

4. What methods of family planning have you ever used?
5. What method(s), if any, do you currently use?
6. Is there a method that you think is the ideal method for you, and, if so, why?
7. What do you think about modern contraceptives?
   - What is your opinion on oral contraceptives?
   - What is your opinion on condoms?
   - What is your opinion on the IUD?
   - If you've heard of any other methods, what are your thoughts about them?
8. What do you think about traditional methods?
   - What is your opinion on withdrawal?
   - What is your opinion on the calendar method/safe period method?
   - What is your opinion on douching/urinating after sex as a method of contraception?
   - If you've heard of other traditional methods, what are your thoughts about them?

9. If modern contraceptives were more affordable, do you think more women in your community would use them? Why or why not?
10. If a trusted physician or nurse recommended a modern contraceptive, do you think more women in your community would use them? Why or why not?

Social influences on contraceptive utilization:

11. Have you had discussions with your spouse/partner about using contraception?

    - Who initiated that conversation?
    - How did that conversation go?
    - What conclusions did you come up with after talking to him?
    - (If hasn't had conversations with her spouse) What has prevented you from having those conversations?

12. Have you had discussions with your mother-in-law about using contraception?

    - Who initiated that conversation?
    - How did that conversation go?
    - What conclusions did you come up with after talking to her?

13. Have you had discussions with a family member other than your spouse or mother-in-law about using contraception?

    - Who initiated that conversation?
    - How did that conversation go?
    - What conclusions did you come up with after talking to him/her?

14. Who do you think holds the responsibility for making decisions about what family planning contraceptive methods you use?

- If the decision is made either in part or whole by someone other than you, why is that?
- Who do you think should make those decisions?

Experience & perception of abortion

15. Have you ever had an abortion?

    - Did you have the abortion(s) ended by a physician?
    - Have you taken the drug "Cytotec" with the goal of ending a pregnancy?
    - Did you have an abortion based on the sex of the fetus?

16. In your opinion, why do you think women sometimes choose to use "Cytotec" to end their pregnancies?
17. In your opinion, why do you think women sometimes choose to have an abortion based on the sex of the fetus?

Social influences on abortion:

18. Have you ever talked to your spouse about ending a pregnancy?

    - Who initiated that conversation?
    - How did that conversation go?
    - What conclusions did you come up with after talking to him?
    - (If has not discussed with spouse) What has prevented you from having conversations about abortion with your spouse?

19. Have you ever talked to your mother-in-law about ending a pregnancy?

    - Who initiated that conversation?
    - How did that conversation go?

- What conclusions did you come up with after talking to her?

20. Have you ever talked to a family member besides your spouse or mother-in-law about ending a pregnancy?

    - Who initiated that conversation?
    - How did that conversation go?
    - What conclusions did you come up with after talking to him/her?

21. (If never had an abortion) In your community, who is involved in the decision to end the pregnancy?

    (If has had an abortion) In your case, who was involved in the decision to end the pregnancy?

    - Does your husband, mother-in-law, or other family members have a role in this decision?
    - (If the decision was made with only the husband) Was the decision shared equally by you and your husband?
    - (If family members other than the husband were involved) How much did other family members influence the decision to end the pregnancy?
    - Who do you think should make the decision to end or keep a pregnancy?

22. In your family, is more preference given to sons or daughters?

    - (If preference given) Why does your family give preference to one gender over the other?
    - Who in the family decides how many daughters and how many sons you should have and why is this so?

- Has any member of your family encouraged you to have an abortion based on the sex of the fetus?

Concluding questions:

23. (If has had an abortion) What contraceptives or methods, if any, did you use or consider using after experiencing an unintended pregnancy?

    - Why did you consider or choose that method?

24. Is there anything more that you would like to add about family planning or abortion?

Thank you for your time and for sharing your thoughts and experiences with me.