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Obstacles for the Implementation of Fertility and Family Planning Initiatives in Post Conflict Rwanda

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Abstract

Increased measures by the State government to educate people on Family Planning and to provide access to contraceptives has had promising results in many countries in reducing poverty and raising the standard of living. However, it remains unclear whether these measures can have similar results in a post-conflict setting. Rwanda is the ideal setting to study these questions. The horrible genocide that occurred in Rwanda had a dramatic effect on the population in terms of infrastructure, fertility rates, and trust in the government. As the country is the most populous in the African continent as well as the site of intense ethnic conflict, Rwanda's fertility rate could have important consequences on both the poverty rates and the conflict cycle. Therefore, successfully lowering the fertility rates through family planning strategies is not only beneficial but essential. The Rwandan government has implemented a new planning to increase family planning awareness but the policy faces many possible obstacles such as religion, the post- ethnic conflict setting, education, culture, and poor infrastructure in rural regions, may block this initiative. While the current initiative has had promising successes, there is still room for improvement in the policy and implementation.

Introduction

Increased measures by the State to educate people on Family Planning and to provide access to contraceptives has had promising results in many countries in reducing poverty and raising the standard of living. However, it remains unclear whether these measures can have similar results in a post-conflict setting. Rwanda is the ideal setting to study these questions. The horrible genocide as well as earlier conflicts that occurred in Rwanda had a dramatic effect on the population in terms of infrastructure, fertility rates, and trust in the government. As the country is the most populous in the African continent as well as the site of intense ethnic conflict, Rwanda's fertility rate could have important consequences on both the poverty rates and the conflict cycle. A successful public policy concerning family planning in Rwanda could have massive implications for other countries facing similar poverty-ridden, post-conflict situations.

The Rwandan government sees family planning as essential to reducing poverty. Their family planning policies have been focused around the idea that the only way that they are realistically going to meet the Millennium Development Goals (MDG) is to lower their population. Such goals as the eradication of extreme poverty and hunger, the achievement universal primary education, reduction of child mortality and improvement maternal health would be far too expensive to provide to the people of Rwanda if the population and fertility rates remain high. Other goals such as promoting gender equality and empowering women, combating HIV/AIDS, malaria and other diseases; and ensuring environmental sustainability will also be positively affected by a well-designed and well-implemented Family Planning policy.

Another problem that Rwanda faces that could be eased with the help of family planning is it risk of conflict. Rwanda has been the site of several types of common conflicts that afflict other areas of the world. This research will be especially important considering the Rwandan

conflict combined the two types of conflicts that have and will continue to be the most prominent in our world: Resource-based conflicts and Intrastate conflicts. Resource-based conflicts are only becoming more prevalent as environmental and population pressures reduce the available farmland, clean water, and other necessary resources. While Rwanda is known as the land of a thousand hills, those hills are filling fast and there is simply not enough farm land and water to satisfy the needs of everyone in the most densely populated country in Africa. Competition over resources can quickly turn violent. Rwanda's conflicts have often contained an element of resource-based conflict and was a compounding factor in the genocide.

The next, most prevalent conflict in the world other than resource-based conflicts is intrastate conflicts, usually in terms of ethnic or nationalist violence. Rwanda's conflict had been brewing since the days of colonialism as it was a common colonial tactic to pit ethnic groups against one another. This means this type of conflict is present in other countries as well. When such conflicts arise, ethnic groups tend to adopt a type of group survival thinking. High fertility rates in these situations can easily turn into a security dilemma. Members of the other group will seek to make their group stronger in the face of the first group's high population growth either by following the same tactic of high fertility rates or by adopting more violent and overt methods. A successful family planning program could stabilize ethnic tensions as it stabilizes the population. This could keep a new conflict from arising in Rwanda as well as in other areas with strong ethnic or nationalist identities and tensions.

Therefore, successfully lowering the fertility rates through family planning strategies is not only beneficial but essential. The Rwandan government has implemented a new policy to increase family planning awareness and access. It is considerably decentralized and works with NGO's and faith-based organizations to provide family planning services. but their

effectiveness has yet to be evaluated properly as several factors such as religion, ethnic group survival thinking, culture, education, and poor infrastructure in rural regions, may block this initiative. This paper will explore these obstacles, the success the Rwandan government has had in dealing with these obstacles and what can be done to increase the effectiveness of Family planning in Rwanda.

Literature Review

Currently, Rwanda has one of the highest fertility rates in the Africa, and even in the world. After the Rwandan genocide, the fate of the future for Rwanda was unclear. Many non-governmental organizations and faith based organizations offered their help to Rwanda in hopes of creating a stable and functional health care system. The Rwandan government itself has implemented family planning initiatives.

According to an article found inside of the Public Health journal Lancet, titled Rwanda 20 years on: investing in life, opposed to some experts' predictions after the genocide, reduced child mortality has correlated closely with higher family planning uptake (Binagwaho, et. al., 2014, p. 373). This source outlines the observation that since more children are surviving parents are increasingly no longer harboring the need to have additional children. The need to have more children is to offset the expected deaths of children. But with the increasing access to health care and education less and less children are dying. The article highlights that smaller families leave parents with more resources to invest in the health and education of each child (p. 373). This article offers many valuable statistics, tables, and graphs. For example, the article states that "between 2005 and 2010, Rwanda's total fertility rate dropped by 25% (from 6.1 to 4.6 births per woman), and 45.1% of eligible women now use some form of modern contraception" (p. 373). While there are still many fertility rate related needs in some parts of Rwanda, it is clear that

promoting women's health through family planning has been beneficial. This article is useful for a brief overview of the current state and effect of family planning on fertility rates in Rwanda.

The next useful article is published in Journal of Economic Development, is authored by Tugrul Temel, and is titled Family Planning, Growth, and Income Distribution: Graph-Theoretic Path Analysis of Rwanda. Temel (2014) suggests that investing in family planning-health is a viable strategy to create rural employment, increase agricultural production, and most importantly, reduce poverty. He continues by examining the recognition of the link between fertility and development outcomes, and notes that the Rwandan government views family planning as an important instrument for targeting poverty and raising per child resource allocation at the household level (Temel, 2014). Temel outlines the multilevel nature of poverty, realizing that decreasing family size can reduce it only partially. The creation of new employment opportunities is necessary for families to benefit from their investment in child quality because employment, sectoral productivity and household family size decision are interlinked at the intermediate level through economic and demographic policies (Temel, 2014).

The next source is written by Pierre Rutayisire, Annelet Broekhunis, and Pieter Hooimeijer, published in the African Population Studies Journal in October of 2013, and is titled *Role of Conflict in Shaping Fertility Preferences in Rwanda.* The authors focus on the case study Rwanda for the purpose of their article. The recognize that Rwanda is a conflict ridden country that has endured great loss and suffering. The authors suggest that conflict affects social and economic conditions could account for the stall in fertility rate declines in sub-Saharan Africa. In the case of Rwanda specifically, the authors argue that part of the fertility rate decline stall can be attributed to a lack of fertility control, but the question is whether social upheaval also affects fertility preferences. The authors identify three mechanisms through which the Rwandan conflict

has led to a preference for larger families: mortality experience, modernization, the attitudes of third parties.

The next source used for the purposed of our research is an article published Springer Science Journal and is authored by Dieudonne Ndaruhuye Muhoza, Pierre Claver Rutayisire, and Aline Umubyeyi. The article is titled *Measuring the success of family planning initiatives in Rwanda: a multivariate decomposition analysis*. This article is useful because it helps define the Rwandan government's position and activity regarding family planning initiatives. Muhoza et al. state that since 2007 the Rwandan Government has supported and encouraged family planning with a high level of commitment (2016, p. 364). The authors explain that "to enact this commitment, various actions have been taken including a massive public family planning campaign to strengthen the demand for family planning, an improvement in the quality of services and an increase in access to family planning services" (Muhoza et al., 2016, p. 364). The article continues by explaining in detail the extent of the Rwandan government's involvement in family planning initiatives. The rest of the article then moves into an in depth analysis of the effectiveness of Rwanda's family planning initiatives. They incorporate and analysis various factors and discuss how family planning initiatives affect socio-cultural and economic statuses, rural versus urban populations, and community engagement.

The next source comes from Public Radio International by Jon Rosen. Population in Rwanda is currently around 12.1 million people. This is extremely high for the size of their country which is only 1,060 square miles. Rosen discusses how Rwanda is Africa's most densely populated non-island nation with a population density of more than 1,000 people per square mile. He states that "Rwanda is expected to remain mired in poverty unless population growth is abated" (Rosen, 2010). Rwanda's population is expected to double in just 24 years according to

Rosen. After a population is affected by genocide, fertility rates sky rocket because people want to replace those who they lost. A history of high fertility rates is not uncommon for sub-Saharan African countries though; many have high fertility rates because a high number of children are not expected to live through adulthood. This source continues by discussing youth-bulges, and how the effect post-conflict societies. "A drop in fertility, others argue, would also assuage Rwanda's potentially destabilizing "youth bulge" — a term used by social scientists to describe national populations with a large proportion of young adults. Countries with more than 40 percent of adults aged 15 to 29 in the overall adult population were more than two times as likely to experience civil conflict during the 1990s as countries with smaller youth proportions, according to a 2003 study by Population Action International, an advocacy group" (Rosen, 2010).

Obstacles

Post Conflict Realities

As stated before, Rwanda has deep ethnic divides that still affect the country today. The ethnic conflict, "us versus them", mentality can lead to massive fertility rates as it becomes a woman's duty as well as in her best interest to make her group larger through having more children to ensure survival in the face of possible extinction. After the genocide, fertility rates skyrocketed as survival thinking continued to be in place and mortality rates slowed. This matches the idea of the security dilemma in ethnic conflicts as people were rapidly trying to

replace those who had been killed in the conflict. According to Rutayisire "In 1992 close to 30% wanted no more than 3 children, 70% regarded four or less as the ideal and 85 wanted less than six children. In 2000 the ideal number of children was much higher. Less than 20% wanted to stop at three and 50% indicated that they wanted more than 4 children, and 30% even wanted 6 or more" (2013). While this rise can also be partly attributed to the decline infrastructure, the role conflict thinking is definitely an important factor. According to Kinzer "After the genocide, officials were reluctant to promote population control because they feared it would offend the survivors, who believed they had a right to replenish what they had lost" (2007). While this reasoning against family planning has decreased in recent years, it is still an important consideration. A family planning program can also easily be seen as a tool to control other ethnic groups to keep them manageable and decrease the threat the pose to the ethnic group in power. If any government of a country with strong ethnic groups does not make a family planning program completely voluntary and is not careful about the way the policy is advertised can easily been seen as totalitarian and against human rights, especially the human rights of other ethnic groups. In this sense, Rwanda has to be highly sensitive to the remaining ethnic-conflict thinking and make sure that their plan is focused on reducing the population for the whole country and not just certain ethnic groups.

Religion

Religion plays a complicated role in the success of family planning within a country. While it is true that on a macro-level, religion tends to play an insignificant role in the success of family planning initiatives, it is a different story when considering the micro-level decision making of individuals. Catholicism is the dominant religion in Rwanda and the Catholic church's oppositional stance on contraceptives is well-known. However, the strength of the church

doctrine on the population is mixed. On one hand, many catholic women do not want to use contraceptives because they believe it is against the catholic doctrine and using it would make them "savages" or bad Christians (Kinzer, 2007). This is reminiscent of the colonial policy of the Belgian catholic mission system in the country that insisted that those who didn't follow the doctrine fully were unredeemable savages. This was a common tactic used by colonial powers and christian ministries. This explains, in some part, why some of the most traditional and conservative opinions on Christianity come from areas that were once colonized and still see a high rate of christian missionaries.

Other examples of this including neighboring Uganda's anti-homosexuality bill which was highly supported and pushed by highly conservative evangelicals from western countries. On the other hand, the church's influence over the population's personal choices has waned. One reason for this is that Catholic nuns, monks, and priest actively participated in the genocide. Those seeking shelter in the churches from the death squads were then betrayed and turned over to Hutus by Catholic religious leaders. Catholic religious leaders also helped fuel the flames of the ethnic conflict since the days of colonialism. Once this came to light, the church's stance in the country was severely weakened. However, recently, Pope Francis has made a formal apology for the church's involvement, and this may lead to more respect and devotion to the church's commands, like the ban on family planning.

Furthermore, like in many western countries, many catholic Rwandans do not see it as a sin to go against the Church's doctrine on the issue of family planning. "'The priests don't understand about family planning … We have many problems in the home – there is so much to do, and it is hard for women to pay proper attention to their husband and children'" and "'Our priest preaches against family planning, but we ignore him' added Console, a mother of four…

‘We know we’re the ones who bear the burden of childbearing, not him’ (Habimana, 2009) In this situation, Religion may play an insignificant role in a woman’s decision to use family planning.

The one important area where religious doctrine will continue to play an important role is in the area of faith-based health services and their willingness to provide family planning services. For many, especially in rural areas, Catholic health services are the only ones available to them and this will certainly have a negative effect on their access to family planning and the overall fertility rate of the country. While Rwanda has addressed this issue in their policy, more work needs to be done when considering the influence of religion.

Education

Another important obstacle is education. No family planning policy can be successful without widespread education on the issue. This can easily be seen in one of the most successful voluntary Family Planning programs in history in Iran. There are two important barriers that education needs to address and has not yet; Education of adolescents on family planning and debunking common myths about family planning. The issue of educating teenagers and unmarried individuals is a contentious issue in many societies. There is a widely held idea that teaching these individuals about reproductive health and family planning will lead to immoral sexual behavior that runs against cultural, religious and social values. According to Isaac Munyakazi, the state minister for primary and secondary education, “under no circumstances should young girls be allowed to use contraceptives. Instead, they should be educated about the importance of abstinence before marriage. ‘Telling them that they have another option other than abstinence would be giving them the green light to engage in sex and lose focus on their studies,’ he said” (Use, 2017). However, as is true in all societies, the green light is there even without

the help of family planning and reproductive health educations. “Pregnancy among teenage girls in Rwanda increased from 6.1 per cent to 7.3 per cent according to the demographic and health survey 2014/2015” (Mushimiyimana, 2017). Besides being a huge health concern as those who are uneducated on reproductive health are at risk for contracting a spreading STD’s, teenagers who become pregnant are less likely to finish school, have healthy pregnancies, or be able to financially support the child. This negatively affects Rwanda’s MDG as it will prevent teen mothers from reaching their full potential in society, continue the cycle of poverty, and increase the infant and maternal mortality rates. A successful family planning policy will address this issue.

Educating the general public is also extremely important in any family planning initiative as it confronts myths that often keep women from using family planning services. Many people believe that modern contraceptives can cause cancer, infertility and other diseases. Fear over these possible outcomes makes seeking family planning services as a risk. While there has been some attempts to address these information gaps, they have not reached those who need it most. “According to the 2005 DHS, more than half of women (59%) did not see or hear a family planning message in newspapers/magazines or on radio or television. However, 41% of women did hear a family planning message on the radio, and 4% did see one on television. Only 5% of women saw a family planning message in a newspaper or magazine in the past few months” (Solo, 2008). Rwanda needs to focus on finding effective ways of reaching people with accurate family planning information if they are going to drastically change the fertility rates in the country.

Cultural Norms

It is important to evaluate and understand the cultural norms and traditions that impact the notion of family planning in Rwanda. In Rwanda, like most of Africa, a culture of high fertility developed long before the arrival of Western medicine, when parents sought many children because it was assumed most would not live to adulthood.

Rwanda's 1994 genocide, in which over 800,000 people were killed, set back efforts at birth control, said Anicet Nzabonimpa, family planning and HIV integration coordinator at Rwanda's ministry of health (Rosen, 2010). "It was very difficult to talk about family planning after the genocide," he said, "people wanted to replace those who had died" (Rosen, 2010). The genocide took away the loved ones of so many Rwandans, this fact has to be taken into account when discussing family planning initiatives.

A 1997 qualitative study done by the *Office National de la Population* (ONAPO) explored attitudes towards family planning and found that the idea of limitation of births was not acceptable, but the concept of 'responsible parenthood'—that is having the number of children one can provide for—was perceived as logical and acceptable (ONAPO, 1997). In addition, there was considerable emphasis on the voluntary nature of family planning, insisting that the need for it depends on the individual situation.

The attitudes of the husband as well as other community members, like parents or mothers in law, are a factor that may account for the change in fertility preferences in Rwanda. Rutayisire et al (2013) suggest that third parties might have an effect on the reported fertility preferences of women as they are affected by the society, which is a patriarchy in most of the cases in sub-Saharan Africa. It is therefore unlikely that the fertility preference could be explained by individual characteristics only, even for educated and employed women as the role of the male is still preponderant (Rutayisire et al., 2013).

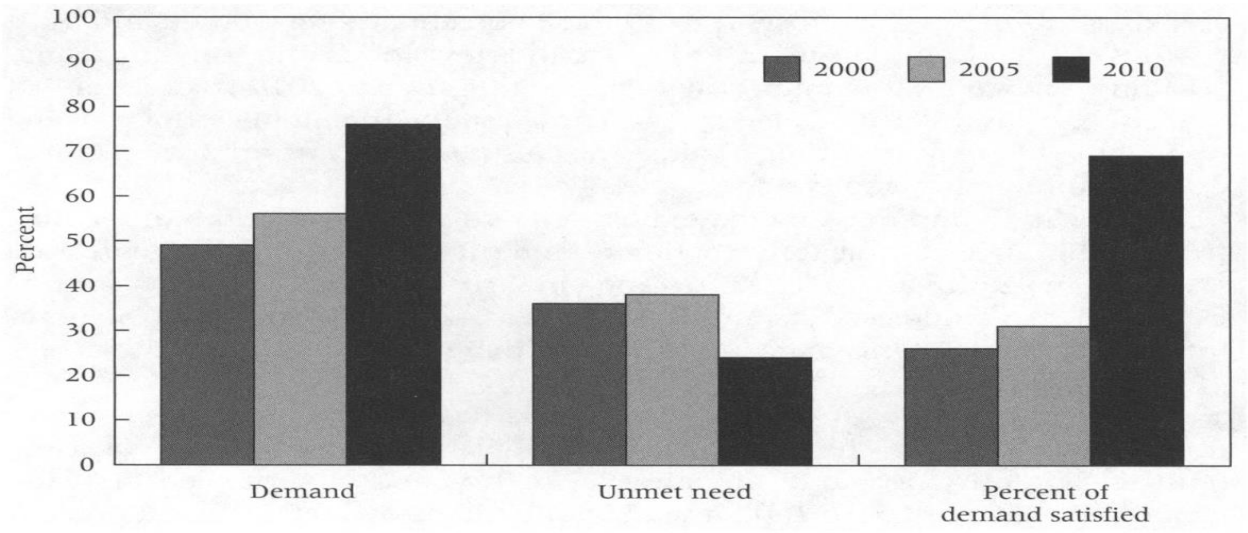
Governmental Involvement

Rwanda has experienced a dramatic increase in contraceptive use during the last several years. According to Muhoza et al, the contraceptive prevalence rate has increased from 17 percent to 52 percent between 2005 and 2010 (Muhoza et al., 2016). Unmet need for family planning has declined from 38 percent to 19 percent; and the total fertility rate from 6.1 to 4.6 births (Muhoza et al., 2016). These achievements occurred in the context where the Rwandan government has been promoting family planning through various strategies. According to the 2010 DHS, 91 percent of current contraceptive users obtain their supplies at government facilities.

The Rwandan government has strongly supported and encouraged family planning since about 2007. Governmental strategies for a strong family planning campaign include training providers, conducting mass media campaigns, and strengthening health facilities by making contraceptives more widely available and affordable (Muhoza et al., 2016). To enact this commitment, various actions have been taken including a massive public family planning campaign to strengthen the demand for family planning, an improvement in the quality of services and an increase in access to family planning services (Rwanda Ministry of Health, 2009).

In 2005 the Ministry of Health created the Maternal Child Health unit to respond to the issues of higher infant and maternal mortality rates and to the low level of contraceptive use. In 2006 it elaborated a family planning policy aiming to reduce fertility and also to improve infant and maternal health. To increase family planning coverage, the Rwandan government increased the budget for family planning activities and extended the number of partners. Partners are what the Rwandan government call their aid providers.

According to Solo (2008), the government of Rwanda stated a budget for contraceptives of $200,000 in 2007 and then proceeded to increase this to a projected $900,000 in 2008. Solo argues that while this is an important step the Rwandan government is taking, this is only a fraction of the current and projected costs of commodities for Rwanda. Given the trend of increasing use, there was widespread concern about meeting the existing and growing costs of contraceptives.



NOTE: Demand is the sum of unmet need and contraceptive use.
SOURCE: Demographic and Health Surveys, Rwanda: 2000, 2005, 2010.

Figure 1. Trends in the demand for family planning, unmet need, and the percentage of demand satisfied, currently married in Rwanda, 2000, 2005, 2010 (Westoff, 2012, p. 175).

According to the graph displayed in *Figure 1*, the efforts that the Rwandan government are putting forth are obviously making an impact on the problem at hand. Between 2000-2005, more than half of the need for contraceptives were unmet, but most recently in 2010, only about 27 percent of the need was unmet. There is still room for improvement, but the good news is the government is on the right track and continually improving. USAID and UNFPA have been the two primary supporters of contraceptive procurement, but the Rwandan government is now

reaching out to other donors to help cover the increasing costs and meet all family planning needs (Solo, 2008).

Finally, the best part currently about the family planning services offered in Rwanda are that they are free, and that includes contraceptives. This is in part due to international donors such as USAID and UNFPA. But nevertheless, the most effective family planning program for the people of Rwanda is one that is free, and that is currently provided to them.

Funding, Access and Supplies

Rwanda lost most of its health infrastructure during the genocide, which means that Rwanda has had to rebuild its entire system over the last 20 years. Poor infrastructure will impact the effectiveness of any family planning initiative. If there are bad roads, a lack of clinics, and a general lack of government services in an area, it will be hard if not impossible to implement a family planning program before addressing those issues. Like in many cases, there is a clear divide in the public services provided to people in rural versus urban areas, and Rwanda is not exception. This is especially important because the rural areas that have the poorest infrastructure tend to also be the areas with the highest fertility rates. Rural areas with a reliance on subsistence agriculture are often the ones with high fertility rates as more children equal more social security for aging parents as well as labor. Much of rural Rwanda relies on this system but it has also kept the area in poverty. Family planning in the area will only be successful if a program addresses the social and economic need for large families in rural areas.

According to Muhoza et al, one large challenge of the Rwandan health system in regard to family planning is that a significant proportion of health facilities, 40% in 2001, are 'faith-based' and as a consequence do not offer modern contraceptives (2016). So, as a way to overcome this obstacle, the government decided to construct "secondary posts" not far from

religious-affiliated health facilities to meet the needs of clients of those areas. A total of 31 secondary posts were constructed between 2006 and 2009 (USAID-Rwanda 2008). And to serve other regions that had been without services, five new hospitals and 15 new health centers were constructed between 2005 and 2011 (Muhoza et al., 2016).

Successes

Despite these obstacles, Rwanda has shown great improvement and has a lot of success in some areas. One such success was dealing with the issue of faith-based organizations (FBO). As stated before, Rwandans often rely on FBO to provide health services but certain religions, especially Catholicism, do not allow for family planning methods and that is reflected in their organizations. Since "40% of facilities in Rwanda are religiously affiliated, and 18% are Catholic" (Solo 2008), it is clear that issue could not be left addressed. The Rwandan Government implemented a system of secondary post that would be located near the FBOs that do not provide family planning services to fill the gap. While there are some problems with these posts, such as the question of necessity of creating a parallel system and limited hours that these post are open, overall they have been successful in increasing the accessibility of family services in many areas.

Another area of success is the plan's ability to integrate cultural practices in the plan. This is important as it establishes that the family planning program is not a plan that was forced on the people by an outside source but rather a local initiative with local ownership and local benefits. One important example of this is the plan's use of performance-based contract under the cultural practice of Imihigo. Imihigo is a "traditional Rwandan practice, in which an individual publicly states and demonstrates what he or she can do and is committed to, and then be held accountable to his words, actions and deeds" (Solo, 2008). This has helped build trust in

government officials and has established accountability in projects such as family planning services.

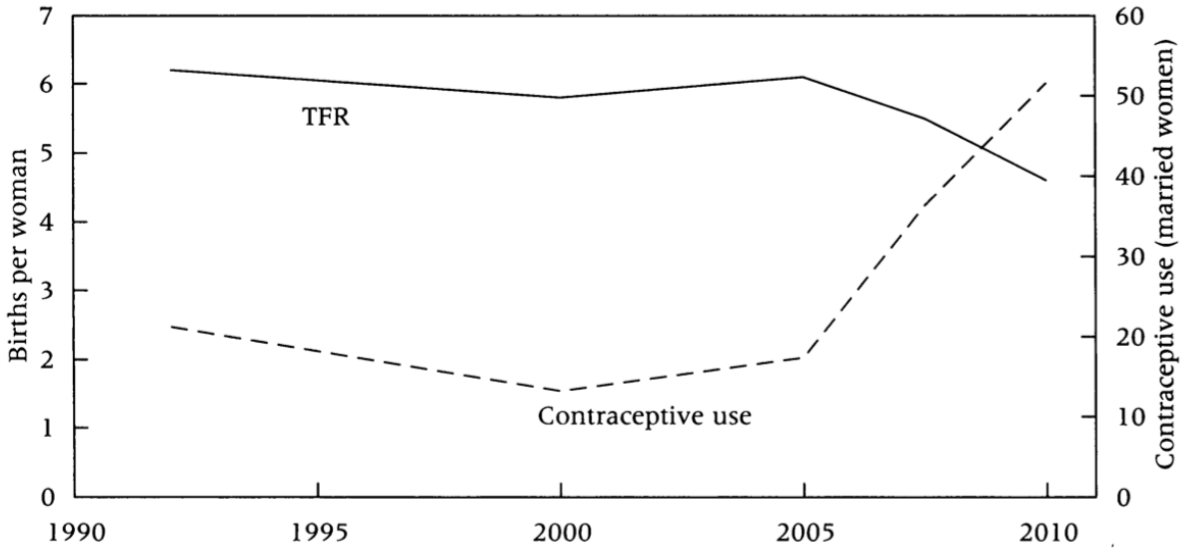
Furthermore, another gleaming success is that the rates of child mortality, fertility and desired family size have all continually decreased.

	2000	2005	2010
Infant mortality	107	86	50
Under five mortality	196	152	76
Total Fertility Rate	5.8	6.1	4.6
Ideal family size	4.9	4.3	3.3
Unmet need for contraceptive	36%	38%	24%
Use of modern contraception	4%	10%	45%

Source: RDHS 2000 [11], RDHS 2005 [12], and RDHS 2010 [10] reports.

Table 1. Change in child mortality, fertility, and desired family size in Rwanda, 2000, 2005, 2010 (Westoff, 2012, p. 173).

All of the factors found in *Table 1* have been proven to directly contribute to the overall fertility rate of a country. The continual decline of each one of the six factors shown in *Table 1* prove that there are successes to be celebrated but grown upon in the coming years for Rwanda.



SOURCE: DHS surveys.

Figure 2. Trends in fertility and contraceptive use, 1992-2010. (Westoff, 2012, p. 170).

As shown in *Figure 2*, the increased use of contraceptives directly influenced the total fertility rate (TFR). Since 2005, as the contraceptive use rises the total fertility rate lowers. Between 2005 and 2010, the total fertility rate dropped from 6.1 to 4.6, which is about a 25 percent decline (Westoff, 171). The continual decline in fertility can primarily be attributed to the increasing availability of birth controls and successful family planning initiatives. Another important factor is that the government recognized the need to address population issues, and chose to do something about it.

Conclusion

Rwanda's current plan concerning family planning programs has had a quite a few successes and will definitely lower the fertility rates in the country to some extent. However, Rwanda needs a rigorous program that will lead to a steep decline in fertility rates to reach its MDG through a lower population. While certain obstacles have been addressed to a degree, such

as religion, culture and access, other obstacles, such as education and post-ethnic conflict thinking, have not been addressed nearly as much as they should be. Family planning education and sex education for adolescence are not meeting the standards set by societies with steadfast fertility rates.

Policy Changes Proposal

While the current Family Planning Policy Rwanda has is showing good results, Rwanda's high goals of lowering the fertility and population will only be achieved by filling in the large gaps in their policy. Four areas that have largely been underrepresented in the policy is Men's education on reproductive health and family planning, the education on and access to family planning and reproductive health resources for adolescents, farm efficiency programs and the use of easily-accessible radio programing.

Radio Programming

During the Genocide, Radio was an effective tool of destruction that fanned the flames of ethnic conflict and hate. However, the radio could redeem itself can be used as a tool for good by promoting family planning. Unlike other popular methods that have been used to spread information about family planning, Radio an accessible form of communication in Rwanda, as well as many other parts of the world. Radios requires minimum electricity, are cost-effective, can reach many people at one time, and require no literacy. With this in mind, the Rwandan government should start to make radio programing about family planning a priority.

Rwanda would not be the first country to try such a program. Many countries in similar economic and social situations have seen great improvements in family planning use and education with the use of radio shows. Tanzania, Rwanda's neighbor, has had such a program since the 1990's and has seen explanatory results in encouraging spousal discussions and self-

efficacy (Rogers, 1999). Sierra Leone, who has recently experienced a conflict that devastated health and social services infrastructure, has a radio program that promotes family planning that has been successfully encouraging women to use family planning methods ("Family").

These radio shows tend to follow the Entertainment-Education strategy that is based "directly upon Bandura's … social learning theory, which posits that an individual learns by observing and imitating the overt behavior of other individuals who serve as role models for the new behavior, thereby gaining a sense of self-efficacy" (Rogers, 1999, p. 194). By combining Soap Opera entertainment with comprehensive family planning and reproductive health education, these radio programs reach and hold the interest of more people than traditional educational means. The characters who use family planning in their storylines are often rewarded and the listeners can hear about the benefits of such actions. Characters who do not use family planning, on the other hand, see plenty of negative consequences and so too do the listeners. Another important aspect of these shows is their careful consideration of their listener's values. Never are family planning methods used in scandalous acts or story lines and this keeps the methods from developing further negative associations.

Currently, Rwanda has some Radio programs that address Family planning, but they are almost all made and funded by foreign NGO's. While these shows have shown success, they could be even more successful if coordinated by the government and given local input. The show the government funds should combined the entertainment and relatable characters of a soap opera with a focus on how they discuss family planning and reproductive health with the people in their lives, the benefits and side effects as well as addressing myths, and where to get the contraceptives etc. However, it will be important that the drama does not associate family planning with the characters' bad or immoral choices.

Male Education

It is important that both sexes learn about family planning and reproductive health. However, many policies and educational materials focus far too much on women only. This is problematic because in patriarchal cultures, such as Rwanda has, men can usually prevent their wives or women relatives from accessing family planning resources. Judith Msovelal and Anna Tengia–Kessy state in their research that "various studies globally have reported that more than 90% of men have general knowledge of family planning", but also suggest that men lack specific knowledge on different methods from which they can choose, how to access services, and how the different methods work (2016, p. 2).

The Ministry of Health in Rwanda has identified limited male involvement as a community level issue. In the most recent policy regarding Family Planning in Rwanda, the main goal was to increase the use of Family Planning by Rwandan women of reproductive age group (Ministry of Health, 2012, p. 15). This is primary gold of increasing women's use of Family Planning programs is a noble and desirable goal. But it does not directly address the huge disparity that is present with male participation in Rwanda's Family Planning initiatives.

The policy does later briefly identify the need for promotion of greater male participation in Family Planning programs (Ministry of Health, 2012, p. 16). They have identified that male participation is mainly through the use of condoms (p. 10). And suggest that to ensure that men are constructively engaged, the Ministry of Health should identify and address causes and concerns related to the lack of involvement by males in Family Planning. The policy states that it will implement appropriate strategies to promote male involvement in Sexual Reproductive Health and Family planning for males 15–49 years of age (p. 18). Some information exists within Rwanda Men's Resource Centre, which aims for a peaceful society where women and

men share roles and responsibilities of raising families and governing society in equality and respect.

Men hold significant power and influence over a reproductive decision making, but they are often not the target of education. If family planning is going to be successful, it must be seen as the responsibility of both partners. While men have been involved in several HIV/AIDs prevention programs which often have some contraceptive education involved, programs focused solely on educating men on the issue of reproductive health and family planning are seriously lacking. This issue needs to be reflected in the country's policy if they are going to be successful in reaching their goals.

In order to more effectively involve men in the Family Planning process, we suggest that more focus is placed on male educational strategies. Also, an emphasis on men's duty to provide for their families through limiting the number of births, and to focus on the men duty to respect a woman's right to decide how many children she has.

Karen Hardee, Melanie Croce-Galis and Jill Gay are the author of a scholarly article titled; *Are men well served by family planning programs?* The authors researched many Family Planning programs from around the world and report on which strategies are most effective for male inclusiveness. They suggest that the most effective strategies are as follows; "provide information and services to men and boys where and when they need it, address gender norms that affect men's use of contraceptive methods, improve couple and community communication, meet men's needs while respecting women's autonomy, link men's family planning use with their desire to support their families, teach adolescent boys about pregnancy prevention and healthy sexual relationships, develop national policies and guidelines that include men as family

planning users, scale up programs for men, fill the gaps through monitoring, evaluation, and implementation science, and create more contraceptive options for men" (Hardee et al, 2017).

Out of that long list of effective strategies that can be used to improve male involvement in family, there are a few that could particularly be effectively implemented in Rwanda. Currently, many women in Rwanda feel that they do not have the ability to decide when she wants to have children. With that in mind, couple communication is a strategy that is highly effective while also requiring the least amount of new resources. Couple communication is important for improving contraceptive use and gender equity and is a component of many interventions to promote male engagement. When couples have discussed family planning, contraceptive use tends to go up, with recent evidence from Kenya, Ethiopia, Nepal, Bangladesh and Pakistan (Hardee et al, 2017). An analysis of Department of Human Services survey from Bangladesh found that discussions between husband and wife on family planning was the single most significant effect on both current contraceptive use and modern method preference (Hardee et al, 2017). Promoting couple communication should include encouraging partners to discuss use of contraception by each partner.

The last strategy that would be very effective if implemented in Rwanda is linking men's family planning use and involvement with their desire to support their families Rwanda is a strict patriarchal society that fosters a culture surrounded by the idea of men as the providers of strength, wealth, wisdom, and so on. Men's overall attitudes have been changing regarding family planning and men want to be involved in decisions about having or not having children. A 2014 study in Pakistan found that one of the main motivators behind a trend of wanting smaller families is economic stress and pressure men feel about being the main income earners for their

family (Hardee et al, 2017). This would be an easy policy implementation in Rwanda. Although this strategy requires a cultural shift, other studies have found successful results in doing so.

Adolescence Education and Access

Moving on to the policy change propositions for increased adolescence family planning and sexual reproductive health education, there are many issues to be addressed. Many schools in Rwanda do not offer any type of sexual reproductive health curriculum, leaving a massive gap in the education of their youth. Unfortunately, youth population of Rwanda is marginalized and not provided adequate access to family planning and sexual reproductive health education.

According to an article written by Donna Clifton, inadequate access to family planning and sexual reproductive health education is more popular around the world than one might expect. She discusses the positive leaps forward that some countries in Latin America have taken to help combat their little to no access for their youth to family planning and sexual reproductive health education. Clifton (2011), "to reach vulnerable young people, the International Planned Parenthood Federation/Western Hemisphere Region (IPPF/WHR) and its member association in Peru, INPPARES, provide clinical services specifically for youth. In Lima [Peru], youth are served by a separate center, Centro Juvenil Futuro, while in Chiclayo, youth services are provided in a separate space within the adult clinic". The centers that she discusses thrive on input from young people in the community and pride themselves in maintaining an ongoing effort to improve their services. The centers in Peru were part of a recent three country initiative in Latin America.

Rwanda should follow in the examples set by the successes seen in Latin America by offering either separate clinics for adolescents or offering them a separate space in the family planning/reproductive health clinics that already exist. The importance of the youth having

proper education in the field of family planning and sexual reproductive health is very vital. They are the current generation that is capable of significantly lowering Rwanda's fertility rates and total population. What is taught to them as children they will carry into their adulthood and can pass down to their children, who can pass the knowledge on to their children, and so on and so forth.

The Ministry of Health Family Planning policy does mention the right that each adolescent in Rwanda has to access family planning and sexual reproductive health education. The policy and its strategic plan emphasizes the importance of providing information and counseling, as well as increasing access to family planning methods for adolescents (Ministry of Health, 2012, p. 16). The policy also mentions improving awareness of family planning and access to family planning services for youth (and men) using social communication and mobilization programs (Ministry of Health, p. 6). Therefore, it is important to note the recognition that Rwanda has given to the problem at hand, but let it be realized that not much has actually been done to address or solve the problem.

In order to fully and successful address the lack of access to education for the youth of Rwanda, we propose that the Rwandan government provide incentives (monetary or otherwise) to schools on the condition that they teach comprehensive family planning and sexual reproductive health curriculum. This incentive program utilizes schools that are already established and helps to provide beneficial services to the youth, and benefits to the schools that choose to participate. Furthermore, another incentive program should be implemented that provides incentives to healthcare clinics, family planning clinics, and sexual reproductive health clinics, that chose to include a separate space and services for adolescents. Extra incentive should

be offered to those health clinics that operate in the most rural areas and focus on bettering their services to the community.

Farm Efficiency Program

One of the driving factors in a family's desire to have a lot of children is the demands of subsistence agriculture. In this context, rural families tend to want more children because they equal wealth. The more children a family has, the more likely their farm will be efficient enough to produce a profit. However, this tend to cause many problems like environmental degradation, high fertility rates, continued poverty in the long-term, and an inability to secure education, healthcare, and adequate food for all children. A solution to this problem would be to make farms more efficient without the help of children. While there has yet to be any study or program that shows the direct relationship between increased farm efficiency and fertility rates, higher standards of living have been liked in most cases with lower fertility rates and farm efficiency would raise the standard of living.

One way to increase farm efficiency is to conduct research to experiment with new methods of farming, irrigation, and crop types. Some research has already been conducted in this area. For example, research has been done to test the effectiveness of *in situ* rainwater harvesting techniques in increasing maize growth and grain yield in a semi-arid agro-ecology. This research found that this method, which is cheaper and more realistic than mass irrigation, "indicate that mulching, tied ridges and potholes ... have potential to increase soil moisture content and reduce the damage caused by drought stress to maize growth and grain yield" (Mudatenguha, 2014). While this research is promising, more research in other areas will be required.

However, this type of research, as well as many other experiments and breakthroughs, are inaccessible to many in rural Rwanda due to lack of education. Therefore, the Rwandan government should start a farming education program that will help farmers of all regions increase the efficiency of their farms. These class should focus on evaluating the traditional techniques of farming and then adjusting them to be more efficient in the current economic and ecological climate. For example, the above research would be extremely helpful to farmers all over Rwanda because the increasing risk and longer durations of droughts caused by climate change. There should also be a focus on diversifying the crops on one's farms as this will help families feed themselves better as well as better protect them from market fluctuations that are often devastating to these families who rely on cash crops.

As beneficial as these class could be, they would not be as effective without funding for the farmers. Many farmers lack the resources to buy better seeds, tools, etc. needed to implement the new techniques. For example, the Rwandan government is trying to encourage reclamation of the wetlands for rice farming but farmers are unable to follow the program because of "water shortage and lack of availability of improved seeds and high prices of fertilisers" (Nabahungu, 2013). This lack of necessary resources will cause any effort to fail so it is important that it is addressed. The government could organize a farm loan program with a low or non-existent interest rate that helps farmers pay for seeds and fertilizers. Another solution would be the creation of community-based farm-tool and seed bank that would create a local solution to the problem. Rwanda has shown success in several community-based programs as solutions to major problems in the past, such as their transitional justice program of Gacaca Courts, and new community based initiatives should be doable.

Ideally, these programs would address far more than just family planning issues. Increasing crop diversity would protect people from economic and ecological disasters. Better farm yields will create food security and alleviate poverty. Better farming techniques can combat environmental degradation and keep farmers healthier. Fortunately, all these benefits can positively affect the fertility rates as well. Better food security will lead to more children living to adulthood. Higher household income will lead to children being more likely to be educated and therefore more likely to be educated in reproductive health and family planning methods. Overall, farm efficiency should be on the forefront of Rwandan policies and government programs.

In conclusion, the policy changes introduced, explained, and discusses in the proposal are all necessary keys that need to be used to unlock Rwanda's desire to lower their total fertility rates and overall population in order to meet their Millennium Developmental Goals. If Rwanda were to address the four significant areas of radio programming, male education and involvement, access for adolescents to family planning and reproductive health education, and farming efficiency programs, it can be safely assumed that Rwanda's chances of lowering fertility rates are very high. Based on examples from other countries around the world who have had successes with the policies proposed, Rwanda's family planning policies would see a great overall improvement.

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