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The Public Policy Ramifications of Adolescent Pregnancy in Developing Countries

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The Public Policy Ramifications of Adolescent Pregnancy in Developing Countries

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Abstract

Adolescent pregnancy is a worldwide issue. The subject is receiving attention even in developed, wealthy countries like the United States of America. However, while the United States has the fairly high rates of literacy and formal education, and societal structures to combat the problem, developing countries do not. Adolescent pregnancy is particularly damaging to girls, women, and families in developing nations. Changes in public policy, particularly in developing countries, in such a way as to increase education, access to healthcare, and combat cultural stigmas could provide some much needed respite from the consequences of adolescent pregnancy. This paper analyzes social science research, public policy, and demographic statistics to find causes for the increase and decrease in youth pregnancy rates. This research could be useful as developing countries and non-profit organizations seek to eliminate adolescent pregnancy.

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Introduction

Adolescent pregnancy is a worldwide issue. The subject is receiving attention even in developed, wealthy countries like the United States of America. However, while the United States has the fairly high rates of literacy and formal education, and societal structures to combat the problem, developing countries do not. Organizations like Advocates for Youth, Planned Parenthood, Candie's Foundation, and the National Campaign to Prevent Teen and Unplanned Pregnancies abound in the United States. However, in developing countries, government funding is not usually available for such groups, nor is there a large surplus of private funds. Adolescent pregnancy is particularly damaging to girls, women, and families in developing nations. Changes in public policy, particularly in developing countries, to increase education, provide access to healthcare, and combat cultural stigmas, could provide some much needed respite from the consequences of adolescent pregnancy.

General Characteristics

The United Nations Population Funds determined that lower levels of education, a lack of access to sex education, inadequate access to contraceptives, social emphasis on child marriage, and inadequate health care services increase the incidents of adolescent pregnancy (United Nations Population Fund, 2013, p. v). Many of the causal factors are characteristic of low-income nations. Adolescent pregnancy occurs most frequently in low-income households with low levels of education, living in rural environments (UNFPA 2013, p. 14). Rural environments are linked to low-income levels because of a lack of job opportunities and an increased likelihood of agricultural work, for which the entire household could be expected to work as often as they are able. These factors can

also result in lowered opportunities for education, either from a requirement to work or because rural settings are less likely to have a conveniently located school.

Young people are inherently more vulnerable. Adolescents are more likely to be victims of violence or forced sex than other age groups, and they are more susceptible to societal stigma (United Nations Population Fund, 2015). Adolescents, therefore, are an important group to target because they need protection more than other groups.

Adolescent Pregnancy in Developing Countries

Less developed nations, more than their developed counterparts, have unique attributes within their borders contributing to adolescent pregnancy. These include child marriage, lack of sex education, little or no access to contraceptives, and cultural beliefs or norms (Gennari, 2013, p. 57).

Adolescent pregnancy is an important issue globally, but in developing nations like Sierra Leone, Bangladesh, Mali, Niger, Guinea, and Madagascar it is of epidemic proportions, necessitating research and action. Annually, over 13 million 15 to 19 year-old girls give birth, and only 680,000 of these births occur in more developed nations (United Nations Population Fund, 2013, p. 13). Developing countries contain the majority of the global number of births to teens. Childbirth complications are the leading cause of death in this age groups of girls (Gennari, 2013, p. 57). According to the United Nations Population Fund, about ninety-five percent of the world's births to adolescents are located in developing countries (United Nations Population Fund, 2013, p. iv). In low-income nations, nearly a fifth of all women will become pregnant by their eighteenth birthday (UNFPA, 2013, p. 3).

Although the practice of early marriage tapered off in developed countries long ago, it continues to be a fairly widespread practice in less wealthy and stable nations. Early marriage has been seen as a human rights issue since at least 1962, according to a UN convention (Bunting, 2005, p. 19). However, according to the general consensus on international law, the UN convention on Consent to Marriage, Minimum Age for Marriage and Registration of Marriages alone does not create international law. National law and societal norms are important factors in the maintenance or destruction of child marriage. Cultural expectations of adolescent females play a very important role in pregnancy rates. In developing countries, ninety percent of adolescent pregnancies occur within a marriage (Gennari, 2013, p. 59). Where historical and cultural traditions hold child marriage as the norm, it is more difficult to pass a law prohibiting it, or enforce laws that do exist, because it is more likely that the society at large would condemn or ignore such a law.

Legal minimum age of consent to marriage is also an important factor affecting pregnancy rates of young mothers. Higher minimum marriage age directly correlates to lower teen births (Jones et al., 1985, p. 54). Births within marriage are generally more accepted in society, so when child marriage is legal, adolescent pregnancy rates will naturally be elevated.

> For example, half of all adolescent girls between 15 and 19 years were married in Niger and Mali, Bangladesh and Afghanistan. In the same countries less than 10 percent of boys of the same age group were married. In Bangladesh, one study found that 73 percent of girls marry by the age of 15. In Guinea, Mali, Niger and Yemen, UNICEF (1995) reports that

> more than half of the women they interviewed were married by the age of 16. In another 14 countries, half of all women are married before 18 years of age. In many countries of Sub-Saharan Africa, it was reported that 40 to 60 percent of adolescent women marry by age 18 and some 25 to 40 percent of young women marry by the age of 18 in most of Latin America and the Caribbean (Bunting, 2005, p. 23).

Table 1 Data from Bunting 2005, p. 23

Nation or Region	*Percentage of Teens Married*
Mali	≅50
Bangladesh	≅50
Nigeria	≅50
Afghanistan	≅50
Sub-Saharan Africa	40-60
Latin America and the Caribbean	25-40

As reported in Table 1, the developing nations with the highest rate of young marriage are the same nations with some of the highest rates of teen pregnancy. Low economic status perpetuates early marriage. For example, women living below the poverty line are more likely to get married at a younger age (Bunting, 2005, p. 26). In developing countries, a larger number of citizens live under what wealthier nations, such as the United States of America, would define as poverty. In countries where education is not a priority for girls, poverty compels young women and their families to seek marriage as a way to reduce financial risk for all children and families.

Child marriage has also been perpetuated as a means to control young women and supposedly protect their virtue. Instead of promoting safe sex, early marriage can be used to ensure virginity (Bunting, 2005, p. 28). As long as a woman is married, pregnancy is not scandalous or socially unacceptable, thus pregnancy can occur at young ages in developing countries.

Health Risks of Adolescent Pregnancy

Although modern health advances have greatly reduced the danger of childbirth, adolescent pregnancy still poses health concerns. In societies where there is inadequate health care, there are more early marriages, and various illnesses, like obstetric fistula, can occur as a result of young pregnancy (Bunting, 2005, p.20). Obstetric fistula usually occurs when childbirth is attempted without a medical professional present. It is characterized as a hole that develops in the reproductive organs of the mother during childbirth that can only be repaired with surgery. If the condition is not treated, more serious complications can result. Because adolescent pregnancies are often unplanned, the mother does not receive prompt prenatal care to ensure a healthy pregnancy. The young mother may not realize for months that she is pregnant; she may wish to conceal her pregnancy for as long as possible; she may not even be sure whether or not she wants to keep the baby. The young mother may not have access to prenatal care if she lives in a developing country due to location or financial status.

Even with adequate prenatal care, adolescent mothers are not likely to deliver a perfectly healthy baby because their bodies are not physically ready to carry a child (Scholl, 2007, p. 194). Thus, teen pregnancy compounds the issue by forcing the mother's body to deprive itself and the fetus of development. Inadequate maternal growth

during pregnancy is even more common in the developing world because malnutrition during childhood often extends the growth period. Maternal growth becomes problematic when the body withholds fat stores to use them during for the mother, instead of using them for fetal growth the pregnancy (Scholl, 2007, p. 195). In maternal growth pregnancies, there is often a competition for nutrition between the mother and fetus, which can result in a reduction of blood flow to the uterus, which increases health problems in the fetus (Scholl, 2007, p. 195). In developing countries, because the growth period is extended, the likelihood of maternal growth pregnancies is higher, as is the gravity of the situation in which the young mother finds herself.

The serious health implications of early pregnancies include much higher levels of death in childbirth (Bunting, 2005, p. 30-31). Childbirth is much more dangerous when the mother is young, and is even more dangerous in developing countries. In developing countries, as a result of young pregnancy and early births, pregnancy and childbirth, in women aged 15-19, are the leading causes of death (Reynolds, Emelita, Wong, & Tucker, 2006, p. 6). Although the reality of teen pregnancy is dangerous, the same age group is less likely to receive care than their older counterparts. In India and some Latin American countries, adolescents were found to be less likely to use health care services than older mothers (Reynolds et al., 2006, p. 12). The unplanned nature of adolescent pregnancies, or the inexperience of the young mother with the health care system, might be to blame for it. Unplanned pregnancies, as an unexpected occurrence, might not always provide for the optimal time between acknowledgement or realization of pregnancy and birth in which to receive health care.

Often, these women do not seek out care because some manner of shame or stigma has been placed upon them. Social attitudes and prejudices about adolescents in health clinics can decrease the number of young mothers who receive care (Reynolds et al., 2006, p. 13). Adolescent pregnancies are far more dangerous than pregnancies of older women, so it is imperative that such stigmas regarding adolescent pregnancy and the general lack of access to medical care be ended. Adolescent mothers, aged fifteen to nineteen, are four times more likely to die during childbirth, or experience other serious health problems, than mature mothers, aged twenty to twenty-four (Scholl, 2007, p. 194).

During adolescent pregnancies, the fetus is also at an increased risk of dying or contracting a life-altering disease during childbirth. Adolescents in developing countries are at a higher risk for STIs and HIV: in fact, over half of all women in the world that are HIV positive are young females under 25 in a developing country (Speizer, Magnami, & Colvin, 2005, p. 324). Some STIs, like AIDs, can be transferred to the child, so the increase of risk for the mother also is an increased risk for the infant. Tests are inexpensive, and for many sexually transmitted diseases, there are treatment options or cures, so there is no reason to risk the health of a child. The lack of general knowledge concerning the subjects of sexually transmitted diseases and the dangers of adolescent pregnancies are compounding an already serious problem in developing countries.

Health Risks and Pregnancy in Developing Countries

The health risks associated with pregnancy and childbirth are generally much higher in developing countries than in the developed world. Death as a result of childbirths in North America and Europe are about 10 out of every 100,000, but in Latin America it is 270, Asia is 420, and Africa is 640 (Ellertson, Winikoff, Armstrong, Camp,

& Senanayake, 1995, p. 256). Clearly, the scientific health care advances that have contributed to the drastic decline of maternal death in the developed world have yet to reach the developing one. Ninety-nine percent of maternal deaths each year occur in developing countries (Simkhada, van Teijlingen, Porter, & Simkhada, 2008, p. 244).

Death during childbirth is not the only concern in developing countries, though the finality of it may make it the most pressing. Malnourishment before and during pregnancy is a serious problem (Hiremath, 2008, p. 1180). Malnourishment, even before pregnancy, negatively affects the body's ability to safely carry a child. Pregnancy can exacerbate the symptoms of malnourishment because a pregnant woman needs more and better food to nourish her body and properly develop a fetus. Large percentages of women in Africa and Asia show signs of anemia and vitamin A deficiency during pregnancy (Hiremath, 2008, p. 1180). The iron and vitamin deficiency could easily be prevented with access to prenatal vitamins. However, as most women in these regions cannot afford the vitamins, without a program to distribute them, these women are unable to obtain prenatal supplements.

Malnutrition during pregnancy can easily result in low infant birth weight or other serious fetal abnormalities. Globally, ninety-six percent of all low birth weight babies are born in developing countries, and babies are twice as likely to be born with low birth weight in developing nations (Garrido, 2009, p. 2). Low birth weight is a concern in developing countries, often as a result of a young mother or insufficient nutrition for the mother (Schwartz, 2013, p. 743). Prenatal vitamins would not be the only solution necessary to combat malnutrition, but they are an important step in the right direction. Nutritional awareness, possibly achieved through community classes, and a higher

availability of foods with high nutritional value at low prices, would also help to combat malnutrition in pregnant mothers and children. Low infant weights and death by the age of five are also more likely in developing countries where mothers do not have access to health services (Reynolds, Emelita, Wong, & Tucker, 2006, p. 6). Low infant birth weight leads to a higher likelihood of chronic illness and insulin resistance, which is more detrimental in a developing country with few medical resources (Scholl, 2007, p. 197). Without access to reliable and safe health care, children born with a low birth weight can easily become sick, and, without a strong immune system, succumb to illness. Insulin resistance would require constant monitoring, which could be done by a mother if she were properly trained by a medical professional and had the proper equipment. Insulin resistance is a serious condition that necessitates further treatment. As many infants may not have access to treatment, they are condemned to be sick throughout their short lives. Therefore, to say that "maternal, fetal, and infant morbidity and mortality are among the most significant public health problems in developing and resource poor nations" is not an exaggeration or dramatization (Schwartz, 2013, p. 742). Improving the condition of maternal and fetal health in developing nations is vital to improving the condition of these nations as a whole.

Annually, around fifty million women living in malaria endemic zones become pregnant. Malaria during pregnancy is extremely serious and can lead to even more complications for the mother and fetus (Schwartz, 2013, p. 742). Malaria on its own is a deadly disease, but when a fetus is involved fighting the disease becomes more complex. Often, refugees in developing countries do not live in safe or particularly hygienic conditions. Refugee women and women living in high conflict areas are at increased risk

because they may not have access to health care or adequate resources (Schwartz, 2013, p. 744). Furthermore, adolescent groups in humanitarian setting were more vulnerable to sexual attacks, violence, and pregnancy (United Nations High Commissioner for Refugees, 2012, p. 1). These young women are in dangerous settings, and it is important that their sexual education is not forgotten in the chaos of their surroundings. It is vital that programs are established that are adaptive to the needs of different age groups and marital status for educating women in these situations (UNHCR, 2012, p. 2). The mental health of refugees is not ideal either, and the mental health of the mother is important for the future health of the fetus.

Refugee camps are not the only dangers in developing countries. Abortions are much more likely to be illegal in developing nations than in the developed world. As a result, women who get abortions do so in unsafe environments, risking their life in the process (Schwartz, 2013, p. 744). An abortion done outside of a properly equipped health care facility or done by anyone other than a qualified healthcare professional is much more likely to be dangerous, which could result in additional healthcare expenses which could cost developing nations.

Developing nations may aspire to the same levels of health care as wealthier, developed nations; however, there are significantly more challenges to establishing these systems in lower income nations. Health care systems in developing nations do not often have sufficient resources to meet the needs of their citizens. For example, in India, Intensive Care Units are overfull, resulting in the exclusion of high-risk mothers (Bajwa, Bajwa, Kaur, Singh, & Kaur, 2010 p. 331). Where health care systems are established in impoverished countries, they are often too small in scope to provide adequate care to all

who require it. In India, the Intensive Care Units bear too much weight in the health care system. Without a broader network, including more specifically focused clinics and places where ICU can refer patients for after-care or non-emergency treatment, much of the population will be excluded from health care.

A lack of urbanized nuclei in less developed countries makes widespread access to health care difficult when using a traditional city-based hospital model. Health care is difficult to access for poor people with no formal employment, low levels of education, indigenous backgrounds, or who are living in rural environments. All these are problems in developing countries (Bucher, Jäger, & Prado, 2016, p. 737). The lack of formal employment can be attributed to various circumstances: agricultural work on a small scale, seasonal menial labor, or illegal employment. Those with lower levels of education are less likely to seek medical care, especially if the care is costly because they probably would not have a high paying job to afford it. A lower level of education is both a cause and effect of unwanted pregnancy (Eggleston, 1999, p. 28). If a woman is not educated on the use of contraceptives, she stands a greater probability of getting pregnant, which in turn, could force her to abandon her education early. Historically, indigenous people groups have been stigmatized by society, and discouraged from taking part in mainstream culture. Rurally based peoples are also less inclined to receive care as it is highly unlikely that there is a care center close to them, and rural travel in developing countries is often difficult. In Ecuador, women living in rural areas were more likely to have unintended pregnancies (Eggleston, 1999, p. 29). This could be because of a result of a lack of resources, including contraceptives, a lack of education, or a cultural expectation that women in rural countries will have children at a younger age.

Furthermore, attitudes regarding health care in developing countries differ from those of developed nations. In developing countries, there is a general lack of a sense of entitlement to health care (Srivastava, Avan, Rajbangshi, & Bhattacharyya, 2015, p. 10). While most people in developed nations believe access to at least emergency health care is their right, those in developing countries might not agree. This difference in attitude could discourage the inhabitants of developing nations from demanding health care, which could, in turn, lessen the government's sense of urgency in resolving the issue.

Unplanned pregnancy is much more perilous in developed countries because there are limited ways to respond legally and because of the aforementioned lack of access to health care. Unintended pregnancies could be life threatening to women in developing countries because they could result in forced or dangerous abortions, miscarriage, or birth without proper medical care (Ellertson, Winikoff, Armstrong, Camp, & Senanayake, 1995, p. 255). For example, illegal abortions are deemed unsafe because they are unregulated, and are usually performed by someone without formal medical training. As a result, they often cause harm to the mother and are sometimes unsuccessful in terminating the pregnancy. Unsafe abortion is a leading cause of pregnancy-related death and injury in countries like Guatemala where abortion is illegal (Singh, Prada, & Kestler, 2006, p. 136). Abortion may only be induced legally to save a woman's life in Guatemala (Singh, Prada, & Kestler, 2006, p.136). A pregnancy must be confirmed as seriously life-threatening for an abortion to be a legal option. Often, in countries which allow abortions for life-threatening situations, at least one doctor must attest to the risk to the mother posed by the pregnancy, and someone in a position of administrative authority must approve the abortion.

The cost of unsafe abortions is high due to the treatment required as a result of complications from the procedure, and hospitals in developing nations like Guatemala do not usually have large budgets to sustain such treatments (Singh, Prada, & Kestler, 2006, p.137). Countries in which abortion is illegal often have high rates of unintended pregnancies even with newer contraceptives (Eggleston, 1999, p. 27). While legalizing abortion might seem to encourage reckless sexual activity because it provides an easy back-up plan, research seems to contradict that because the number of unintended pregnancies is high even when abortion is illegal. People of all nations are having sex, regardless of public policy concerning abortion. Making abortion illegal, therefore, is not the answer to perceived sexual promiscuity nor does it decrease unplanned abortions. A better method to encourage planned, and discourage unplanned, pregnancies would be to increase the availability of reliable contraception.

Some developing countries still practice forms of contraception that developed countries have either discontinued long ago or never practiced at all. Female sterilization is often used as a contraceptive in developing countries, especially those on the continent of Africa (Seiber, Bertrand, & Sullivan, 2007, p. 118). Operations, like female sterilizations, are not always safe in developing countries, especially when there is not a sterile medical environment in which the operation can take place. In the least developed regions of the world, twenty-two percent of those in need of contraception have no access to it (United Nations Population Fund, 2015). Likely as a result, the fertility rates in the least developed regions are over double that of the more developed (UNFPA, 2015). Surprisingly, condoms are not a widely used method of contraception in all areas of the developing world (Seiber, Bertrand, & Sullivan, 2007, p. 120).

A survey completed in 2010 that focused on Central America as a whole, including data on developing nations, provides valuable insight into the development of sexual practices and pregnancy in the region. Over the last 20 years in Central America, the number of 15-19 year olds who had had sex at least once in their lives has remained about the same, while the numbers that had been married previously or were currently married has decreased over time (Samandari & Speizer, 2010, p. 28). Child marriage therefore is decreasing in the area, but the number of teens having sex does not appear to follow that trend. The level of education and the socioeconomic status of adolescent women have improved, and the population continues to shift towards urban settings (Samandari & Speizer, 2010, p. 28). Though it is likely that there is a connection between the population shift from rural areas to more urbanized areas and the rising average level of education, it is not a link that can be objectively proven as a causal relationship. As more people move into city centers, the general public's access to education and hospitals increases purely as the result of vicinity. The number of participants in the survey that had used a modern form of contraception, be it an injection, condom, or a birth control pill, increased dramatically between 1987-2007 and the rate of fifteen to nineteen year olds giving birth decreased, but not as much as could be expected given the increase in education and contraception (Samandari & Speizer, 2010, p. 30). The correlation between the increase in the use of contraceptives and the decrease in the number of live births for adolescents was not a linear, one-to-one relationship. The rise in the number of adolescents using contraceptives increased more over the twenty years than the number of live births fell.

Financial Aspects of the Problem

Furthermore, adolescent pregnancy has an important economic impact on developing nations. In developing countries, approximately 19 million unsafe abortions occur every year, resulting in about 5 million women who are treated for complications (Vlassoff, Walker, Shearer, Newlands, & Singh, 2009, p. 114). Ninety-eight percent of unsafe abortions happen in less-developed or least-developed nations (United Nations Population Fund, 2013, p. 20). Unsafe abortions can be unsuccessful and cause serious injury to the woman. The average cost to Latin America and African health care systems from unsafe abortion complications was 280 million dollars (Vlassoff, Walker, Shearer, Newlands, & Singh, 2009, p. 117). The health care systems simply cannot sustain the steep costs of injuries as a result of illegal abortions. The costs are high and the healthcare systems of developing countries are already stretched thin (Vlassoff, Walker, Shearer, Newlands, & Singh, 2009, p. 119). Negative birth outcomes can negatively affect economic development as they cost human capital and impose elevated health care costs on already poor nations (Garrido, 2009, p. 2).

What Other Issues are at Play that Prevent Women from Receiving Care?

There are various other reasons that women in developing countries do not have reliable access to health care. The things that prevent their receiving care are not always easily changed or avoided by the respective governments; however, there are steps that can be taken to increase the number of women that receive the care they need, especially during pregnancy. Lack of access to transportation prevents large numbers of high risk mothers from receiving necessary care (Bajwa, Bajwa, Kaur, Singh, & Kaur, 2010 p. 333). Rural areas, especially in developing nations, do not usually have any form of public transportation, reducing the availability of transportation to the average inhabitant.

In situations where transportation is available, it may be too expensive and the journey too long or dangerous. Roads are not likely to be well maintained, making journeys even more dangerous and longer. Once patients do arrive, excessive wait times for admission, the mean was over eleven hours in India in 2010, can worsen a health problem and discourage patients from making the journey in the first place (Bajwa, Bajwa, Kaur, Singh, & Kaur, 2010 p. 333). Patients are discouraged from making the trip to receive care if they cannot be sure they will receive care upon arrival. It is not likely they would have the funds to stay overnight in the destination city.

As a result of the low availability of health care, preventative care is not a priority. People with limited access to health care do not usually receive preventative care, so they are only treated when they have a serious health condition (Bucher, Jäger, & Prado, 2016, p. 739). Preventative care is vital for a successful health care system because it decreases the number of serious illnesses and health conditions needing treatment at health care centers, which in turn, decreases the cost of health care for the nation as a whole. Therefore, preventative care is necessary, if developing nations with small budgets are to improve their national systems of health care.

Lower levels of income decrease the probability of seeking out prenatal care or a professionally attended birth, which increases the chance of death and complications during the pregnancy and delivery (Gennari, 2013, p. 60). Poor women are not encouraged to receive care, either because they cannot afford such care or because they do not feel comfortable in the clinic or hospitable environment. Women living in rural areas were four times less likely to receive health care assistance during birth compared to urban women, probably due to limited access to health care centers (Kruk & Prescott,

2012, p. 648). Developing countries are not usually as urban-based as wealthier nations, and there is not an established tradition of professional health care during pregnancy or birth to encourage it in the face of other difficulties. While there is a lack of data concerning the percentage of births attended in the least developed regions as a unit, less than half of all births in West and Central Africa are attended, and East Africa is only marginally better (United Nations Population Fund, 2015). Furthermore, many impoverished nations do not have sufficient numbers of health care workers to provide adequate services for pregnant women (Gennari, 2013, p. 61). Even if women were effectively encouraged to seek healthcare, there would not be the health care professionals to provide the care needed.

Social and economic status and perception also proved to be important in predicting whether health care would be sought out or given. The poor have less access to reproductive health services, sexual education, and contraceptives as a result of their economic situation. Often, lower income levels correlate to lower levels of education, reducing the opportunities for government official or health service providers to reach and educate them on contraception, preventative and prenatal care, and the benefits of giving birth in the presence of an experienced medical professional. In wealthier countries, attended births are more likely (Kruk & Prescott, 2012, p. 648). In societies with a tradition of births not attended by medical professionals if the service is costly, it may be viewed as an unnecessary expense. Furthermore, as a result of their lower social and economic statuses, if young, impoverished women do seek such services, the power of the physician over the patient is increased, resulting in some physicians refusing certain services due to religious or societal contexts (Sommer & Mmari, 2015, p. 1974).

In circumstances where the patient is uneducated and poor, the doctor may assume that the patient does not know what is best for herself, and make all decisions regarding the patient without the patient's input.

Societal structures including public policy on education, sexual education, abortion, and child marriage are also vital for understanding the root causes of adolescent pregnancy. In sub-Saharan Africa, sexual education initiatives failed to significantly reduce pregnancies because teachers were not allowed to demonstrate the proper use of contraceptives. Without the ability to demonstrate how to use different methods of contraceptives, students may not use them correctly and effectively, resulting in unplanned pregnancy and the further spread of sexual transmitted diseases.

The study of socioeconomic factors and antenatal care found that both the wife's and husband's education level was an important indicator as to whether the mother would seek care (Simkhada, van Teijlingen, Porter, & Simkhada, 2008, p. 248). Higher levels of education, resulting in an increased awareness of the dangers of pregnancy and childbirth, encourages woman, and men, to seek the help of a professional. Marriage was also significant in the decision to seek care; married women were found to be more likely to receive care than unmarried women, regardless of whether they are single or in a committed relationship (Simkhada, van Teijlingen, Porter, & Simkhada, 2008, p. 249). Relationship status also has ties to the age of the woman. The older women who are more likely to seek care are probably married, and young teens are not as likely to be married, even in the developing nations that practice child marriage. In order to reverse the trend of younger women not seeking out care, the education of young mothers should be a priority in order to ensure the health of the child.

Proposed Solutions

With an understanding of the diverse issues surrounding teen pregnancy and its relationship with healthcare in developing nations, it is possible to offer solutions to public policy failures regarding adolescent pregnancy. One such issue is the overcrowding of emergency care centers and ICUs in countries that have them. Other systems could be set up to prevent high risk mothers from flooding ICUs and to better use other available healthcare resources in a developing nation, like India (335). Clinics could be set up locally, increasing the access of rural citizens to health care and increasing the probability of young mothers giving birth in a sanitary setting. Furthermore, with outlets for high risk mothers, ICUs would only offer care in emergency situations, and better use available resources.

Preventative care is also an avenue to better use limited resources. Its purpose is to prevent the necessity for more expense procedures, and even death from serious health conditions, by catching them before an illness fully manifests itself. Prenatal care is often used to improve birth outcomes and reduce the negative impacts on developing nations (Gajate Garrido, 2009, p. 2). Prenatal care is preventative care for the pregnant mother and child because it can prevent malnourishment, vitamin deficiency, dangerous child birth, and even early birth. Prenatal care improves birth outcomes by improving the mother's nutritional, behavioral, and medical wellbeing (Garrido, 2009, p. 4). Prenatal care could also detect fetal abnormalities that can be treated before birth to save health care costs and the human capital of the nation (Garrido, 2009, p. 4). Treating conditions before birth, or being fully prepared to begin treatment soon after birth, can lengthen the life expectancy of the child as well as improve the expected quality of life.

The Antenatal Corticosteroids Trial serves directly as a model for the study of prenatal care in developing nations. The Antenatal Corticosteroids Trial, or ACT, took place over eighteen months and throughout seven different geographical locations in partnership with the Global Network for Women's and Children's Health Research (Althabe et al., 2015, p. 630). Workers distributed kits for antenatal corticosteroids and identified those at risk of preterm labor (Althabe et al., 2015, p. 631). Although Antenatal Corticosteroids were not found to be an effective prenatal supplement for reducing early birth and low birth weight infants, the structuring of the trial can be used as a successful method of distributing antenatal care and supplements. Furthermore, the identification of high-risk pregnancies, even in women who did not seek other medical care, allows for a trained professional to refer women who need additional care to facilities that are better equipped to manage their needs.

Prenatal care is an important step in ensuring safe delivery. Although there are maternal and fetal conditions that cannot be prevented, it is important that health care workers and expectant mothers be trained to recognize symptoms (Simkhada, van Teijlingen, Porter, & Simkhada, 2008, p. 245). This would encourage mothers to seek care and could increase the number of safe deliveries. There are many different types of antenatal care. Prenatal vitamins are vital, especially in developing countries where vitamin deficiencies in mother and child, malnutrition, and low birth weight are all commonplace. Micronutrient supplements are important for the mother and child's health (Hiremath, 2008, p. 1181). Many women in developed nations take these supplements, although they are not as necessary as in developing countries. Micronutrient supplements could help stave off malnutrition and anemia during pregnancy. The established

distribution of prenatal kits from the ACT could be used with micronutrient supplements for a more effective treatment option.

Environmental factors can also have an important impact on young mothers and pregnancy outcomes. Although nothing can be done to prevent environmental and atmospheric changes, public policy, especially concerning government spending, can be implemented to lessen their impact of them. Rainfall can also have an import effect on prenatal care received by mothers because it affects road conditions and food production (Gajate Garrido, 2009, p. 24) Road conditions are relevant to prenatal care because in developing countries it is more likely that the mother will have to travel from a rural zone to receive care. Therefore, infrastructure is an important investment for the nation in order to safeguard the health of mother and child. With regard to food production, if there is too little rain, crops will not grow, and if there is too much, it may cause flooding that destroys crops. Both of these outcomes would lower the nutrition levels of the mother and increase the likelihood of delivering a low birth weight infant.

During childbirth, safe delivery becomes the priority. Demographic and Health Survey Data from 2012 analyzed structural and health care factors for safe delivery for 165,774 women living in thirty-one middle to low income countries. Safe delivery is defined as a delivery attended by a professional health care provider. "More health care workers, higher national income, urbanization, and lower income inequality were associated with higher odds of an attended delivery" (Kruk & Prescott, 2012, p. 645). Although the presence of a health care professional is generally considered an important aspect of a safe delivery, in many parts of the world, especially in low-income nations, the rates of attendance are low (Kruk & Prescott, 2012, p. 646). When the number of

health care workers increased by ten percent per 1000, the likelihood of women having a safe birth increased by eight percent (Kruk & Prescott, 2012, p. 648). Logically, the number of health care workers would increase with the income level of the country; however, the study does not directly deal with this, so it cannot be labeled as a definite correlation.

There is widespread, global debate concerning whether health care should be run by the private or public sphere (Powell-Jackson, Macleod, Benova, Lynch, & Campbell, 2015, p. 230). In developing countries, where fiscal resources are scarce, the debate is even more fierce. Those in favor of the privatization of the health care system argue that the competition of the private sector would increase efficiency and performance However, private health care systems rank lower in overall patient satisfaction (Powell-Jackson, Macleod, Benova, Lynch, & Campbell, 2015, p. 230). The number of health care workers is usually lower in public sector health care than in private, but the quality of healthcare is generally worse in private sector (Powell-Jackson, Macleod, Benova, Lynch, & Campbell, 2015, p. 232). While private entities motivated by profit may likely find ways to be more efficient, using less money, they rank lower on patient satisfaction. This could be explained in one of two ways: the private groups are not as invested in the well being of the patients as countryman, or the patients are more satisfied with publicly run health care simply because the cost is lower for them, having nothing to do with the level of care. The best health care system proved to be the not-for-profit private groups, an interesting combination of the values of the public system and the competition and efficiency of the private (Powell-Jackson, Macleod, Benova, Lynch, & Campbell, 2015, p. 235). The not-for-profit groups proved useful because they were motivated to be

efficient for the good of the people they serve, not seeking profits, and they were as invested in the wellbeing of the nation as the public run groups.

The satisfaction of mothers in health care is important in order to encourage them to seek out care from a facility. Furthermore, understanding what makes an experience in a health care system a good one is important when designing a system to best serve target groups. Achieving maternal satisfaction is actually quite simple. Mothers were found to be satisfied with antenatal health care if the facilities were clean, well staffed, they were allowed a measure of privacy, and they were offered adequate services (Srivastava, Avan, Rajbangshi, & Bhattacharyya, 2015, p. 6). Any facility that is following health procedure protocols and national guidelines should easily meet all of these standards. If no such health laws have been established, which may be the case in various developing nations, they could easily be drafted by modelling the codes of developing nations. Cost of care was also found to be incredibly important (Srivastava, Avan, Rajbangshi, & Bhattacharyya, 2015, p.8). In this way, a governmentally subsidized or not-for-profit run health care system may be the most successful option.

In developing nations, where much of the population is rurally focused, city-based hospital systems may not be effective in reaching the population. Mobile health care could be the answer to pregnancy and childbirth complications that are preventable and can lead to death. Unfortunately, the equipment necessary, alongside the training and payment of health care workers, is expensive and the equipment would not last forever (DeStigter, 2012, p. 41). However, such an investment would prove worthwhile because it has been proven to reduce infant and maternal mortality rates, as well as fetal complications (DeStigter, 2012, p. 42). Mobile health care clinics could be the solution

for reaching a more rurally- based population with limited access to transport. Mobile health care would not provide a constant presence of health care professionals in the event of births or emergencies; however, it would be able to distribute prenatal care effectively.

Emergency contraception is an important option for preventing pregnancy. Unfortunately, emergency contraception options are not well advertised in developing countries (Ellertson, Winikoff, Armstrong, Camp, & Senanayake, 1995, p. 251). That may be a result of emergency contraceptives like Plan B being connected with abortion. Scientifically speaking, they should not be connected because in most cases of emergency contraception use, women would not have become pregnant, even without the treatment (Ellertson, Winikoff, Armstrong, Camp, & Senanayake, 1995, p. 252). Emergency contraceptives are intended to be used after unprotected sex, generally within seventy-two hours. They are not normal birth controls, to be used daily, but only in the case of an emergency. Emergency contraceptives would be a cost-efficient way to prevent unintended pregnancies. The most expensive aspect of using this as a government subsidized treatment would be informing women of its availability (Ellertson, Winikoff, Armstrong, Camp, & Senanayake, 1995, p. 256). Emergency contraception could be an acceptable and cost efficient way to prevent pregnancy, particularly in developing nations where abortions are much more likely to be illegal. Often, in developing countries, women are uninformed of contraceptive options or are denied access as a result of income or national availability. As access to modern methods of contraception increase, so does their use (Seiber, Bertrand, & Sullivan, 2007, p. 120). Injectable birth controls are also increasing as an effective, long lasting alternative to the pill (Seiber, Bertrand, &

Sullivan, 2007, p. 123). Injectable birth control would be useful in developing nations because it does not necessitate monthly prescriptions. The United Nations Population Fund found, in 2015, that when one dollar was spent on contraceptives, at least one dollar and seventy cents was saved and up to four dollars could be saved (United Nations Population Fund, 2015). There is every reason, therefore, for even the least developed nations to invest in contraceptives, as they can expect to save far more than they might invest.

Sex education, which is noticeably lacking in developing countries, is key to combatting adolescent pregnancy. The fact that only a minority of young people in some developing countries, such as in sub-Saharan Africa, attend school means that a school-based sex education program would not function effectively (Singh 310). In Latin America, too, a significant portion of the youth population (⅓-¼) does not attend school (Singh, Bankole, & Woog, 2005, p. 310). The establishment of community centers would prove useful for gathering young people for sex education, as would increasing the number of people reached by radio, television, and newspapers (Singh, Bankole, & Woog, 2005, p. 312-313). There is a surprisingly large portion of the youth, even in impoverished areas, that are exposed to media outreach. Young, married women are often ignored for sex education, but programs would still be useful to increase the number of young women practicing safe sex (Singh, Bankole, & Woog, 2005, p. 313). In nations where child marriage is practiced, it would be necessary to include young, married women in sexual education programs to encourage them to delay child bearing until they are physical and mentally capable of doing so in a healthy manner. Safe sex practices

could increase the average age of pregnancy, improving outcomes for mother and child, and decrease the spread of STDs like HIV.

Enabling young girls and teens to believe in themselves and see their own worth as human beings would decrease the number of them seeking out men to complete them or give them an identity. Generally, increased income, urbanization, and education lower adolescent pregnancy rates because these factors seem to increase the pursuit of individual goals (Gennari, 2013, p. 58). When young women are encouraged to pursue personal dreams besides marriage and men, they are less likely to become pregnant before the age of 18. Empowering young girls is an important objective in combating adolescent pregnancy according to the United Nations (United Nations Population Fund, 2013, viii). A different type of education is therefore necessary to prevent adolescent pregnancy, one that builds up young women for personal growth.

Conclusion

This paper has analyzed data on adolescent pregnancy in less developed nations in such a way as to understand the causes, so that public policy might be implemented to lower the rates of young mothers. There are proposed solutions to high rates of adolescent pregnancy that are backed by social scientific evidence which could be implemented and tested in lower-income regions of the world.

Adolescent pregnancy has a serious impact on the financial well-being of developing nations, especially resulting in increased health care costs. The solution, if it is to be effective, cannot be a one step process because there are various levels to the issue. The easiest and most immediately effective actions in public policy might be to legalize abortion and make child marriage illegal. It would be important for public policy

in these areas, especially abortion, to reflect cultural context and motivations, so that legal abortions were not used to target one segment of society, rather than as a tool to protect young women from negative mental and physical health consequences. These actions allow for regulation that protects women from unsafe abortions by providers who are not medically trained and avoids the necessity of emergency care. The accessibility of contraceptives also needs to be increased. If young people are sexually active, contraceptives can be used safely to prevent pregnancy, especially at an age when pregnancy would be dangerous. An increased use of contraceptives would also decrease national health costs caused by young pregnancies that often result in additional health complications for both the mother and child. Health care providers also need to become more easily accessible for all. Mobile health care would be incredibly useful for the distribution of prenatal care, especially dietary supplements, and education on pregnancy and childbirth. It could also recognize mothers with high risks for birth complications. For more substantial care, however, either health care facilities will need to be located in both urban and rural settings, or inexpensive or free transportation from rural areas will need to be provided. Transportation would necessitate some manner of infrastructure improvements in developing countries, as would mobile health care, for safer travel. Government subsidized health care or not-for-profit run systems would decrease or eliminate the cost to the general public, encouraging them to seek out health care. Inexpensive, accessible health care would increase the likelihood of attended births, decreasing the number of maternal or fetal deaths at birth. For a more sustainable trend in the reduction of adolescent pregnancies, sexual education is imperative. Establishing community centers in both rural and urban settings would provide environments outside

school, which many do not attend, for afternoon activities and sexual education. These centers would also encourage young women to achieve goals outside marriage.

Adolescent pregnancy affects developing nations financially in ways they cannot afford. The money, if saved, could be used to better the nation's economy, infrastructure, and development. Furthermore, any money invested to decrease the number of adolescent pregnancies would be recouped in the money saved over time. Public policy changes could drastically reduce the rates of teen pregnancy in developing nations, which, in turn, would change the face of developing nations for the better.

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