

URBAN-RURAL DIFFERENCES IN THE USE OF MODERN
CONTRACEPTIVE METHODS AMONG THE PEOPLE
IN THE REPUBLIC OF YEMEN-1997

by

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ABSTRACT

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Population explosion is a major concern for many Middle Eastern countries. This study is aimed at exploring the urban-rural differences in the use of modern contraceptives in Yemen. The study also took into consideration the variable education that can influence the use of contraceptives among people of Yemen. This analysis utilized the secondary data from Yemen Demographic and Maternal Health Survey (YDMHS) of 1997. The YDMHS (1997) survey sample consisted of 10,414 women. The YDMHS survey was conducted with ever-married women in the age group of 15 to 49. This study is based on the ecosystem theory that states that the both person and environment continually influences other within a particular context. Logistic regression analysis method is used for analyzing the effect of the independent variables, urban-

rural residency, and level of education on the dependent variable modern contraceptive use.

The results of the study show that the odds of people living in urban area using modern contraceptives are more compared to people who live in the rural areas. The primary supposed reason for this being the influence of modernization being more acute in urban Yemen. Education was also found to have an influence on the use of modern contraceptive use with the odds of using modern contraceptive among people who have secondary and higher education is 2.0 times more the odds of using modern contraceptives among people who have primary or no education. Social work implication is also discussed.

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CHAPTER 1

INTRODUCTION

According to World Fact Book (2012) The Republic of Yemen is a Middle Eastern country bounded in the north by Saudi Arabia, east by Oman, south by the Gulf of Aden and west by the Red Sea. The Republic of Yemen was formed in the year 1990. Before the 1990 unification, Yemen was divided into two parts North Yemen and south Yemen. Imam Yahya and his predecessors gained control of Northern Yemen. The British forces captured the port of Aden in 1839 and extended their influence in the south and eastern portion of Yemen. The United Kingdom ruled Aden as part of British India until 1937, and Aden became the port of entry for many foreign visitors who travelled through Yemen. The unification of Yemen, which happened in the year 1990, resulted in the blending of different cultures from People's Democratic Republic of Yemen (South Yemen) and Yemen Arab Republic (North Yemen)

Among the different religious group in Yemen, the majority of the population comprises of Islam including Shaf'i (Sunni), Zaydi (Shia), and a small but growing number of Salafi (Sunni). Additionally, there are a small number of Jews, Christians, and Hindus (U.S Department of State, 2011).



Figure 1.1 Political map of Yemen

Middle Eastern fertility rates are known to rise steeply because of the religious and cultural values that discourage the use of birth control methods. Since Yemen is primarily a Muslim country, population explosion has been a major issue of concern with Yemen (Sunil & Pillai, 2004)

The foremost attempt of this paper is to see if there is any place of residency (urban-Rural) differences within the Yemen population in the use of modern contraceptive methods (oral pills and condoms). Secondly, paper also attempts to spotlight the various influential factors regarding contraceptive use inside the Yemen society. These two findings can in turn help us to correlate the influence of external forces like modernization inside a Muslim society on the use of contraception.

1.1 Problem

Population explosion is a major social issue faced by many Middle Eastern countries. Muslim population is known to hold their religious and cultural values. They are known to strictly follow principles of Quran. Thus, it is a common belief that, the Muslim population can never be open to any principles or ideas outside their religious thoughts. The social issues of high birth rates in Middle Eastern countries are mainly influenced by the Islamic culture and traditions, which does not promote the birth control techniques.

Sunil and Pillai (2004) Yemen is one of the poorest countries in the world with a high birth rate. The overall fertility rate in Yemen is seven children per women of reproductive age (Sunil & Pillai, 2004). After the unification of North and South Yemen in the year 1990, several planning programs have been introduced to reduce the birth rate of Yemen. Yemen's fertility rate has dropped by 2.8 children per woman in the past 20 years, but remains very high at six children per woman, guaranteeing future population growth for the long term (Madsen, 2010).

The use of contraceptive in the implementation of family planning is an important issue of concern for many developing countries. According to Saleem and Bobbak (2005) fertility and contraceptive use in developing countries is closely related to various socio economic factors, among which the most prominent is Women's education. Gorden (2011) correlated the relationship between women education and contraceptive use in Ethiopia found that, in Ethiopia women's education increased the

rate of contraceptive use from 15% in 2005 to 60% by 2015. There are also many studies that found a positive correlation between women's education and self-autonomy (decision-making power in a family). Thus, education is an important factor to be considered while examining level of modern contraceptive use among women in developing countries.

Women in Yemen tend to marry at an early age. The first birth interval in a Yemen family is shorter than any other Middle Eastern country (Sunil & Pillai, 2004). However, there has been a recent decline in fertility rate in Yemen. According to studies conducted by Sunil and Pillai (2004) that utilized the Yemen demographic and health surveys (YDHS) for the years 1991 and 1997, the mean number of children born for 1991 YDHS was 4.96 and the median was 5. However, the mean and median values for 1997 YDHS were 4.83 and 4.00 respectively. Thus, there has been a decline at least by 1 child during the time period.

This paper attempts to examine the factors associated with contraceptive use in Yemen. Even though there have been many studies that attempted to see the fertility rate in Yemen, the novelty of this paper lies in finding out the effects of Urban-Rural differences in the use of contraceptives.

Yemen can be listed among the countries of the world in the earliest stages of the demographic transition. Demographic transition can be described as the gradual shift from high birth and death rates to lower birth and death rates resulting in high life expectancy and small family size. As mentioned earlier, birth rates remain high as only a very small proportion of the population uses modern birth control methods. According

to Almuallm (2007) the contraceptive prevalence rate in Yemen was only about 10% in the 1991-92 survey, whereas Morocco had 42% and in Egypt, it was 46 % Maternal mortality rate is still very high at 114 maternal deaths per 10,000 live births and the infant mortality rate stood at 75 per 1000 in 1991(CSOY, 1998). Many studies have investigated the correlates of modern contraceptive use in Yemen. In general these studies have assumed that modern contraceptive use does not vary by cultural differences within the country.

Anthropological studies have found that sub cultures exist over space and therefore variations in cultural differences are highly correlated with regional variations. Thus, an examination of the Urban-Rural differences is a suitable method for examining the cultural differences in modern contraceptive use. Very few studies have attempted to examine urban-rural variations in contraceptive use. However, knowledge of Urban-Rural variations is important in explaining the variation in modern contraceptive use in Yemen. In sum, this study contributes to an existing theoretical literature on modern contraceptive use. Furthermore, given the problem of higher birth rate and poverty in Yemen, from a social work perspective, this study provides information for promoting modern contraceptive use in Yemen.

CHAPTER 2

LITERATURE REVIEW

2.1 Role of Religion in the Use Contraceptive Methods

It is a common belief that religion plays a vital role in fertility rate across the globe. According to Sunil and Pillai (2004), Middle Eastern fertility rates are supposed to be higher than the expected rate. Among the many Middle Eastern countries, Yemen is among the top countries that has high fertility rate. This is primarily because of the religious and cultural of Islam that discourages the use of contraception (Sunil & Pillai, 2004)

Muslim society is primarily a male dominated society. Man is considered as the head of the family and is supposed to bring economic stability to the family. Although women are not forbidden to work outside the home, their primary role is to nurture the children and the marriage.

“Religious values may influence fertility not only directly through proximate variables, such as the use of contraceptive methods or postpartum infecundability, but also indirectly by increasing the number of children that couples desire without specifying a particular proximate determinant” (Scheelkens & Eisenbach, 2010, p.148). Although, the Quran states two purposes for marriage—love and procreation, a few religious scholars argue that the procreative element is the major aspect of marriage.

Thus, religious teachings may affect the number of children that couples desire (Scheelkens & Eisenbach, 2010)

Religious views also address broader issues of social organization. Scheelkens and Eisenbach (2010) stated that the high fertility rate of Israeli Arab Muslims does not reflect specific teachings related to contraception but rather Muslim views on the nature of familial relationships and the segregated roles of women. “The traditional Muslim family is considered to be male dominance. Patriarchal systems can increase the demand for children because they usually limit women’s non families’ opportunities of women for social status and economic support. Since women’s opportunities outside the home get limited, they tend to focus inward on family and children. Moreover, where group norms and practices limit women’s mobility and their contact with nonfamily members, women’s exposure to novel ideas or technological innovations, including contraceptives, may be constrained. The lower status and seclusion of women in Islamic societies has been attributed to the influence of religious texts” (Scheelkens & Eisenbach, 2010, p.148).

Scheelkens and Eisenbach (2010) study also focused on the status of Muslim being a minority group. “If acculturation is not desired and the group feels economically or politically disadvantaged, minority status may encourage Muslims to encourage higher fertility to ensure group preservation and strength in numbers (Scheelkens & Eisenbach, 2010, p.148).

Another study conducted by Addai (1999) examined the influence of religion on the contraceptive use among Ghanaian women. Ghana has been overwhelmed with

religious groups and more and more people interpret their daily life based on religious beliefs and rituals. Addai (1999) Ghana is about 43% Christians (Catholics, protestants, other Christians), 38% traditionalist (traditional and no religion), and 12% Muslims (Islam and Ahamadiyya) (Ghana Statistical Service, 1992).

The study of Addai (1999) tells that the religious affinity of a family plays a vital role in the use of contraception. Traditional African family tends to see bigger family size as a virtue. To accomplish this African family tend to associate reproductive failure and fertility restrictions with sin and punishment resulting minimizing the use of contraceptive methods.

Addai (1999) further stated that, Muslims women are less likely to use contraception because of their faith in procreation. Addai (1999) stated that Quran states that good deeds are better than wealth or children and Muslim religion considers children as the richest blessing from Allah, and the Quran specifies the need to marry and regenerate.

The results of the Addai (1999) study reveals that even though there is a high rate of modern contraceptive knowledge among various religious groups in Ghana, this knowledge does not translate into equal rates of utilization of modern contraceptives. The results also suggests that people of all religious affinity maybe easily motivated to use contraceptive methods if they have access to them. Also, women of all religious background have serious reservations about the side effects of modern contraception. Thus, creating more awareness among people can increase the contraceptive use among various religious groups. Training local health and field workers in the areas of

monitoring side effects and suggesting referrals can minimize the fear of using modern contraception.

Lawrence and Rozmus (2001) also stated that many Muslim scholars approve of family planning because contraception is not expressly forbidden in the Koran. However, there are scholars who believe that contraception is forbidden in Islam. The prohibits of contraceptive use cites the command to procreate and abound in number as a proof of this prohibition.

Also, another set of Muslim scholars believes that children are God's gift and that procreation is the primary objective of marriage. These scholars would argue that only God could decide the number of children that a couple will have (Libbus & Kridli, 1997).

Thus, the use of contraceptive is a controversial subject inside a Muslim society. There are people who believe in the use of contraception as an effective method of birth control. At the same time, there are people who believe that the use of contraceptive techniques is against the belief of Quran.

2.2 Different Contraceptive Techniques and its Side Effects

A High fertility rate and slow death rate has led to an increase in the trend of annual population growth. This increase in population is vastly due to increase of townships and also due to the shift from rural to urban environment. Family planning using contraceptive methods has helped many countries to bring down the birth rate

Studies conducted by Albsoul-Younes, Saleh and El-Khateeb (2003) on the perception of the use and discontinuation of birth control methods in Muslim Jordanian women have found that the total fertility rate in Jordan has declined from 7.4 children per women in 1976 to 5.6 in 19941.

The study by Albsoul-Younes, Saleh and El-Khateeb (2003) also stated that choosing the appropriate method of contraceptive is a major factor in preventing the discontinuation of the use. The results of Albsoul-Younes, Saleh and El-Khateeb, (2003) reported that between 7 and 27% of women ceased to practice contraception within a year of starting their method. The vital reasons reported for the discontinued use of contraceptive were, major side effects, method availability and quality of service provided by the environment in family planning. (Albsoul-Younes, Saleh & El-Khateeb, 2003)

(Albsoul-Younes, Saleh & El-Khateeb, 2003, p.157) have showed that “88% of the married women of the reproductive age have been using a contraceptive method in the past 12 months. Intrauterine device (IUD) was the most preferred method of contraception (30%). Effectiveness and convenience were the leading causes for choosing non-traditional methods (IUDs and pills), while safety was the main reason for choosing traditional methods. Excessive menstrual bleeding and Pelvic Inflammatory Disease (PID) was a major side effect of IUD. Even though the rate of usage of IUD was high, the rate of discontinuation was also high for IUD because of this side effect”.

“Oral contraceptive was the second choice for women in Jordan (17%). Unfortunately, only a small percentage of pill users in this study underwent proper

physical examination and laboratory testing before starting the method. Because of this the clients experienced side effects of pills such as headache, weight gain, and nausea.” (Albsoul-Younes, Saleh & El-Khateeb, 2003, p.159).

Albsoul-Younes, Saleh and El-Khateeb (2003) also states that 24% of the Jordan women relied on traditional method of contraceptive and relied on calendar calculator to determine the fertility period. Majority of the women who used this method knew the efficacy rate was very low for this method.

Studies conducted by Kamal and Islam (2010) in rural Bangladesh found that 49.4% women were using modern methods, and 11.4% were using traditional methods. Kamal and Islam (2010) further found that the most preferred modern method in rural areas was the oral pill (27.9%), followed by injectable (10.5%), female sterilization (5.6%), and condoms (3.2%). Periodic abstinence (7.0%) was the most preferred traditional method, followed by withdrawal (3.7%) and other (0.7%). The preference for modern methods was found to be significantly higher among those who were paid visits by Family Planning Field Workers (FPWs) whereas; the preference for traditional methods was significantly higher among those who were not paid visits by FPWs.

“Improving the level of education and access to family planning options has a positive impact on increasing the use of contraceptive methods and proper family planning. Oral contraceptive pills are a better alternative than traditional methods for most women unable to tolerate IUD, Women need to know all the facts about birth control methods. Health care professional must play a vital role in correction of any misperceptions should be done before starting a method. Counseling must include

information about advantages, disadvantages, adverse effects, contraindications and failure rate” (Albsoul-Younes, Saleh & El-Khateeb, 2003, p.149)

2.3 Role of Governmental Policies in the Access of Contraceptives

The study of Sunil and Pillai (2004) said that population control can be controlled effectively achieved only by providing social and economic advancement for women.

According to Sunil and Pillai (2004) Yemen is one of the countries of the world that has high birth rate. Sunil and Pillai (2004) stated that during 1990 Yemen did not have an explicit population control policy and the country was in the early stages of demographic transition. The lack of explicit population policy and lack of population policy makers is a hindrance to countries economic and social development (Sunil & Pillai, 2004)

As a part of the efforts to provide better access and knowledge to the use of contraceptives the government of Yemen established a family care association in 1996. Additional family planning services are also offered through the ministry of public health service. The prevalence of contraceptive use among married women doubled in less than a decade, from 10 to 21 percent during the span of 1991-1992 to 1997(Sunil & Pillai, 2004)

2.4 Female Autonomy and Fertility Rate

Studies conducted by Morgan, Stash, Smith, and Mason (2002) examined the specific claim that the higher fertility of Muslims (compared to non-Muslims) can be traced to the lower level of power and autonomy afforded to Muslim women.

The study Morgan, Stash, Smith, and Mason (2002) showed that Muslims have more children, are more likely to want another child, and, if they want no more children, are consistently less likely to be using contraception. This could provide a good idea related to the association of powerful individual-level associations could mediate the aggregate association between religion, women's autonomy, and fertility. Specifically, women with greater autonomy might desire fewer children and be more likely to use contraception. Religion or ethnicity might operate by shifting the distributions of autonomy among women in Muslim versus non-Muslim settings.

2.5 Role of Husbands in the Use of Contraceptive Methods

“Exploring the role of husbands in there and their spouse contraceptive practices is particularly important in countries such as Yemen, where women have relatively limited personal control over their lives and are dependent on their husbands for many decisions”(Almuallm, 2007, p.4).

Findings of Kamal and Islam (2010) suggest that discussion between husband and wife on family planning has the single significant effect on contraceptive uses.

Kamal and Islam (2010) study found out that the prevalence of traditional methods was found to be slightly higher among women who had never discussed family planning issues with their husband and who did not belong to NGOs. Besides, the rate of use of modern methods was found to be significantly higher among those who ever discussed family planning with their husband and who had NGO membership.

Similar study conducted in Oman by Riyami, Afifi, and Marby (2004) stated that since Oman is gender stratified society it is the husband who decides they should use family planning (from 38.5% of non-literate women to 50.4% of university-educated women). This places limits on the decisions educated women can make.

2.6 Socio-Cultural Variations in the Use of Contraception

Studies conducted by Kamal and Islam (2010) in Bangladesh showed that “compared with women who had no experience of child mortality, women who had experienced the death of a child been less likely to use contraceptives. This is partly because women who experience their child’s death are likely to fill the gap by getting pregnant, resulting in a lower rate of use of contraceptives. Women who had at least 1 son were 60% more likely to use contraceptives compared with women who had no sons. In Bangladesh, the desire that the first child be a boy is highly cherished among couples. When parents already have 1 son or more among their offspring, they are more likely to use contraceptives to delay childbearing. Contraceptive use is nevertheless lower if all the children are daughters rather than sons, and the opposite is not true,

indicating that bias for a son still exists in Bangladeshi culture”. (Kamal & Islam 2010, p.444)

2.7 Role of Women’s Education in the Use of Contraceptives

It is a common assumption that education and jobs provides a sense of autonomy in women’s life.(Riyami, Afifi, & Marby (2004) in their study assumed that education leads to autonomy and this helps women to stand up to their husbands and provides them a forum to learn about fertility control and make effective use of the health care system. According to Riyami, Afifi, and Marby (2004) the five interdependent aspects of women’s autonomy are autonomy of knowledge, decision making, physical autonomy (educated women have more contact with outside world), emotional autonomy (educated women shift loyalty from extended kin to conjugal family) economic and social autonomy, Autonomy can help a women to achieve equal rights in a marital relationship which in turn can help them to make decisions about fertility control and effective use of health care system.

Study done women’s autonomy and education in Oman and their influence on contraceptive use have shown that education is a vital factor in determining the women’s status in Oman. “8.7% of women aged 25–29 had had secondary education or above compared to only 1.5% of those aged 45–49. As a result, the paid employment rate was also high for the women of ages 25-29. More than half the women in paid employment were using contraception, another significant relationship”(Riyami, Afifi, & Marby, 2004, p.148).

According to Castro & Juarez (1994) education can influence a women's reproduction by positively affecting the socio economic status, changing attitudes of fertility control, and also increasing authority over husband and use of family planning methods.

Caldwell (1982) describes education as a means by which people learn more Western views about the family. These views can leads to a more child centered parenting approach, and may lead to a demand for fewer children, and consequently, the use of contraceptives to prevent or to space childbirth.

2.8 Knowledge About the use of Contraceptives

Ryan, Franzetta and Manlove (2007) considered four different hypotheses for their study. These are, teens with better, more accurate knowledge about condoms and about reproductive health will be more likely than those whose knowledge is not as strong to use contraception and to use it consistently, especially in first sexual relationships, where the majority of teens use condoms as their most effective method. Ryan, Franzetta and Manlove (2007) study expected that teens who think they know more about condoms, who think birth control is easy to obtain, and who think they have strong self-efficacy will be more likely to use contraception and to use it consistently. Third, the stronger motivations to use birth control and to avoid pregnancy will be associated with better actual use of contraception. Fourth, we anticipate that the influence of knowledge, perceptions, and motivations on contraceptive use patterns will vary for males and females. (Ryan, Franzetta & Manlove, 2007)

This Study conducted by Ryan, Franzetta, and Manlove (2007) on knowledge, perception, and motivation to use contraception among teenage population has shown that a better knowledge of reproductive health is related to greater odds of ever using birth control, particularly for females, whereas strong knowledge of condom use is marginally related to lower odds of consistent contraceptive use. Perceived condom knowledge is associated with increased odds of using contraception for males, whereas stronger perceived self-efficacy regarding contraceptive use is associated with more vigilant use of birth control. Results from Ryan, Franzetta and Manlove (2007) show that knowledge and perceptions surrounding sexual activity and contraception are indeed important predictors of contraceptive outcomes. For both genders, ease of access to contraceptives is associated with increased odds of ever-using contraception and using contraception consistently. For males, greater perceived condom knowledge is associated with increased odds of ever using contraception. For females, higher levels of actual reproductive health knowledge are associated with increased odds of ever using contraception.

2.9 Fertility Rate and Modernization

In almost every country where people have moved from traditional ways of life to modern ones, they are choosing to have too few children to replace themselves. This is true in Western and in Eastern countries, in Catholic and in secular societies. And it is true in the richest parts of the richest countries. The only exceptions seem to be some

small religious communities. But, this trend is unpredictable with the Muslim society because of the lack of modernization adapted by the Muslim society. (Singer, 1999)

Riyami, Afifi and Marby (2004) stated that Oman has a high fertility rate of 3.8 percent that is among the highest in the world. Whereas, according the World Bank data the fertility rate for Egypt was 2.83 in 2008. The reason given by Riyami, Afifi and Marby (2004) was that, Oman was new to the development and modernization process. In contrast, Egypt became a modern state much earlier, including the establishment of schools for girls before the turn of the 20th century. Oman has only had one generation of adults who have been educated, particularly those under the age of 30. Since cultural and attitudinal changes take time, there could be a generational lag in attitudes towards contraception and fertility.

2.10 Regional Differences in the Use of Contraceptives

Studies conducted by Leite and Gupta (2007) that assessed the regional differences in contraceptive discontinuation, failure and switching in Brazil found out that Contraceptive continuation was found to be highest for the contraceptive pill. The use of contraceptive pill was recognized as the most popular reversible method. Probabilities of abandonment while in need of family planning and of switching to another method were highest for injections. Failure, abandonment and switching were higher among users in the Northeast region compared to the southeast and South parts of Brazil.

The reason for this difference is supposed to be due to the regional inequalities present in Brazil after the colonization period. The Northeast part of the country is more poverty and rural driven whereas the southeast part of the country is considered as more affluent and urban driven. This is also similar in Total Fertility Rate (TFR) of the country. The TFR is in a low of 2.1 in southeastern state Rio de Janeiro whereas the northeastern states have a high of 3.1 (Leite & Gupta, 2007)

2.11 HIV and Use of Contraceptives

According to Rosenberg, Davidson, Chen, Chudson and Douglas (1992) during the year 1992, an estimated 12 million new cases of sexually transmitted diseases occurred in U.S.A. This increase in STD's reported made the government realized complications of millions of dollars involved in the treatment of sexually transmitted diseases. Certain STD's are also responsible for the transmission of HIV.

Rosenburg, Davidson, Chen, Chudson and Douglas (1992) said that "Women who use barrier contraceptives (spermicide, the contraceptive sponge, condoms, or diaphragms) have generally lower prevalence rates of STDs than women using other forms of contraception or no contraception. Clinical studies, however, show variable degrees of reduction in gonorrhea, nongonococcal urethritis, and chlamydia among users of condoms and spermicide. The results of the study showed that women using contraceptive, sponge, diaphragm, had significantly low rate of HIV infection compared to women who does not use these barriers. Furthermore, for gonorrhea and

trichomoniasis, a greater reduction was found among women using the contraceptive sponge or diaphragm than those using condoms.

Riyami, Afifi, and Marby (2004) have also shown that teenage population has remained inconsistent users of contraceptives and there has been a high risk of unintended pregnancies and sexually transmitted diseases. Estimates of contraceptive consistency within teens' first sexual relationships show that 21% of teens use no method and 16% are inconsistent contraceptive users, using a method only occasionally.

2.12 Age at Marriage and Use of Contraceptives

Early marriage has been a major area of concern in many parts of the world. Many communities have set a low age requirement for marriages especially for girls. These societies do not consider the readiness of a girl to get married at an early age.

According to Sunil and Pillai (2004) increase in women's education in Yemen has caused a delay in the age at marriage, which in turn has reduces the likelihood of abortion and an increase in contraceptive use. According to Sunil and Pillai (2004) Husband's employment at a professional sector had a positive correlation with husband's approval of family planning and use of modern contraceptive methods. Sunil and Pillai (2004) also stated that use of contraceptive is less during early part of the marriage and increases slowly over the birth order of 3 and higher.

A similar study conducted measured the effect of child marriage on fertility and fertility-control outcomes in India (Santhya et al., 2010). The sample was again women aged 20-24 in India. The results strongly proved. 77.2% of women who had child

marriages reported of not using contraceptive before first pregnancy. These studies are also backed by various other studies from developing nations published by UNICEF in various reports.

According to (UNICEF, 2001, p.10) “In Cameroon, Mali and Nigeria, the modern contraceptive usage rates among married 15-19 year olds are only 1.5, 2.4 and 0.6 per cent respectively”. The girls’ right to have any say over when and if they should become pregnant is unacknowledged, and their chances of early pregnancy are high”.

According to UNICEF (2001) very few girls living in developing countries who get married at an early age only have access to contraceptives and many societies have child soon after marriage as an integral part of women’s social status. “ In Yemen 11% wives of wives aged 15-29 stated that they did not use contraceptive because of their birth-weight and a higher chances of new born baby not surviving” (UNICEF, 2001, p.10).

Studies conducted by Kamal and Islam (2010) showed that the increased odds for women aged 25 to 34 using contraceptive techniques is more because of the fact that most of them had already achieved their desired family size and had taken the decision to stop childbearing or space the next childbirth. The women aged less than 25 years are relatively younger newlywed, and have lower parity. As a result, they are reluctant to use contraceptive methods in the early years of their reproductive age (Kamal & Islam, 2010)

The knowledge about the use of contraceptives during early stages of marriage in developing countries is a key factor for social and economic progress of the society.

Santhya et al. (2010) studied the effect of early marriage, which is before age of 18 in India, on marital, reproductive and other health issues faced. The results of the study shows that the girls married at early age were less likely to use contraceptive to delay first pregnancy unlike their counterpart. This can be considered as a reflection of strong pressure on young women to prove their fertility after marriage.

CHAPTER 3

THEORY

3.1 Ecosystem Theory

According to (Germain & Gitterman, 1995, P.186) “the ecological perspective makes clear the need to view people and environments as a unitary system within a particular cultural and historic context. Both person and environment can be fully understood only in terms of their relationship, in which each continually influences the other within a particular context”. The Ecosystems perspective conceptualizes the environment as more than a static setting for people lives and this perspective is consistent with person in environment world view of social workers” (Germain & Gitterman, 1995). Similarly, while looking at the urban-rural differences in the use of contraceptive in Yemen, we are basically looking at the changes in reproductive behavior of the people in the Yemen. Athar (1999) describes the main reason for high fertility rates in Muslim countries as some scholars misinterpreting the Quran principle of procreation. These scholars believe that procreation is the primary reason for marriage and Muslim families should not be using any kind of contraceptive techniques (Athar, 1999). Thus, the environment and cultural principles can influence a society's perception on the use of contraceptive.

According to (U.N, nd) Yemen is also among the countries that are in the early stages of a demographic transition. Demographic transition is the gradual shift from high birth and death rates to higher life expectancy and small families. According to Peterson (1982) modernization is the socioeconomic, political, and personal attitude change in people with some degree of westernization. This has been happening in Yemen as part of their demographic transition. Peterson (1982) also describes modernization as the disintegration of old rigid structure of society which begins as individuals increasingly ignores the traditional social identity of the parents and family. Thus, there is a likelihood of modernization influencing the reproductive behavior of people of Yemen.

According to Germain and Gitterman, (1995) the ecosystem perspective of “adaptation is described as the various process people use to achieve a better level of fit between themselves and the settings in which they find themselves”.

Bigombe and Khadiagala (2003) have said that the rapid expansion of educational opportunities and availability of contraceptive methods as a trend towards modernity have contributed to the emerging perception that large families is an economic burden. Therefore, if people feel that changes happening in the environment are benefitting their quality of life, it is more likely that householders will deviate from the traditional religious viewpoints of not using contraceptive techniques.

Bigombe and Khadiagala (2003) also stated that the trend toward modernity has lead to gradual transformations of marriage and family organizations away from corporate kinship and extended families toward nuclear households. The YDMHS

(1997) have shown that the knowledge of family planning have greatly increased since the 1991-1992 YDMHS. YDMHS (1997) shows that 84 % of the currently married women in Yemen have heard about a method of contraception and 52% know about a modern method of contraception. The ever-use rate contraceptive rate has almost doubled from the 1991-92 to 1997 YDMCHS (YDMHS, 1997). Thus, the families living in regions of Yemen who have been exposed to family planning classes and modern methods of contraceptive use may have more chances of adapting themselves to the modern concept of limited family size.

According to (Germain & Gitterman, 1995, p.817) in the ecosystem theory Habitat can be defined as “place or setting where individual can be found”. Region will have influence in the use of contraception. In Yemen, mostly the Mountains, and desert regions will have less economic development as these places lack means of transportation and also the fact the desert regions of the country are mostly inhabited by nomads. The coastal regions will have more economic development because of the coastal trade. Peterson (1982) clearly describes how demographic regions with more resources like coastal line can lead to economic growth and inherently urbanization in that region. The 1997 YDMHS shows that there is a significant relation between fertility rate and place of residency and education. According to 1997 YDMHS the total fertility rate of Yemen in Urban are 5 children/women, exactly two children less than rural. Fertility in mountain, plateaus, and desert region is almost one child higher than coastal region. Thus, the place of habitat will have a direct influence on the overall fertility rate of a country.

3.2 Hypothesis

Women having higher educational attainments will have high modern contraceptive use than women with lower educational attainments.

Women living in urban areas of Yemen will have higher level of modern contraceptive use compared to women living in rural areas of Yemen.

CHAPTER 4

METHODOLOGY

4.1 Yemen Demographic and Maternal and Child Health Survey

The data used for this study is the Yemen Demographic, Maternal, and Child Health Surveys of 1997(YDMCHS). Central Statistical Organization (CSO) completed the YDMHS 1997 in collaboration with Ministry of Public Health and other relevant authorities including the Ministry of Planning and Development and the General Secretariat of the national council for population (YDMHS, 1997). The main objectives of the survey include:

Analyzing the demographic data and the factors affecting the level and trends of fertility rates among females and mortality rates of infants children under 5 years of age

Estimate the differential levels of knowledge and use of family

Provide useful and reliable data to policymakers, decision makers, researchers and scholars to design optimal policies

Provide vital statistics regarding the trend in the current usage of contraceptives in the urban-rural parts of the country.

Collecting information on the nutritional statistics of married women.

The survey was conducted by dividing Yemen geographically into five major areas the Mountainous area, the Coastal area, the Plateau area, the Desert (Al-Ruba Al-Khali) area, and the Yemeni islands (YDMHS, 1997).

The YDMHS (1997) survey sample consisted of 10,414 women. The survey was conducted with ever-married women in the age group of 15 to 49. The survey included two sets of questionnaire, household questionnaire and individual questionnaire. The household questionnaire included age, sex, marital status, educational level, work status, fertility and mortality and housing characteristics. Whereas, individual questionnaire were for all ever-married women age 15 to 49 years. These individual questionnaire included respondent's background, reproduction, family planning, pregnancy and breastfeeding, immunization and health, birth preferences, marriage and husband's background, maternal mortality, female circumcision and height and weight (YDMCHS, 1997).

4.2 Variables

4.2.1 Independent Variables

The independent variable for this study is the place of residency. The study will determine the influence of place of residency (urban or rural) in the use of modern contraceptive among married women of Yemen. The place of residency will be measured in terms of urban-rural living. For the purposes of this study, urban areas are considered to be city or town, whereas rural areas will be considered as places where people living in the country. The data taken from YDMCHS (1997) includes all

governorates at the urban and rural levels. For the purposes of the study, three variables will be created:

Urban: The value for this variable will be 1 and for rest will be 0

Rural: The value for this variable will be 0

The Second independent variable in this study is women's level of education. The study will measure the effect of level of education of women on the rate of use of contraception. Riyami, Afifi, and Marby (2004) have described that education leads to autonomy in women and autonomy can help women to make important decision in fertility control. Thus, education has a direct role in the use of contraception. Education is measures at ordinal level. A new variable called "newedu" was coded with,

Secondary and higher education as 1

Primary and no education as 0

4.2.2 Dependent Variable

The dependent variable of the study is the contraceptive use. It is coded as "newcontra" It is a binary variable with those who use modern contraceptive methods coded 1 and the rest coded 0.

4.2.3 Control Variable

Regions is the control variable in the study. Yemen has four major regions, mountainous, coastal, plateau and desert. There are also 112 islands in the waters of the Red Sea and the Arabian Sea. The effect of urban-rural residency and level of education will be evaluated controlling for the effect of region.

The governorates are distributed into four major regions. Table 1 shows the distribution. The following control variables will be considered for operationalization into four variables:

‘Mountain’: Those who live in mountain regions will be coded 1

‘Coastal’: Those who live in coastal regions will be coded 2

‘Highland’: Those who live in highland will be coded 3

‘Desert’: Those who live in desert regions will be coded 4

‘Reference’: This will be the governorates that are the combination of two or more regions. It will be coded 0

4.3Data Analysis Method

Binary logistic regression analysis method is used for analyzing the effect of the independent variables, urban-rural residency, and level of education on the dependent variable contraceptive use. Regression analysis is one of them most common methods to analyze effect of multiple independent variables on a dependent variable. Statistical Package for the social sciences (SPSS) will be used to conduct multiple regression analysis.

Table 4.1 Governorates and regions in Yemen

Number	Governorates	Regions
1.	Amran	Mountain
2.	Ad Dali'	Mountain
3.	Al Bayda'	Mountain
4.	Al Hudaydah	Coastal Plains
5.	Al Jawf	West Mountain + North Desert
6.	Al Mahwit	Mountain
7.	Amanat Al Asimah	Mountain
8.	Dhamar	Mountain
9.	Hajjah	Mountain
10.	Ibb	Mountain
11.	Ma'rib	West Mountain + North East Desert
12.	Raymah	Mountain
13.	Sa'dah	Mountain
14.	Sana'a	Mountain
15.	Ta'izz	Mountain
16.	Adan	Coastal Plains
17.	Abyan	South Coastal + North East Highland + North West Mountains
18.	Al Mahrah	North Desert + South Highland
19.	Hadramaut	North Desert + South Highland
20.	Lahij	North Mountain + South Coastal Plains

CHAPTER 5
RESULTS AND DATA ANALYSIS

5.1 Frequency Distribution

Frequency distribution is usually the first step in SPSS for examining the variables in the data. In this study, we analyzed the effects of place of residency (urban/rural) and the level of education on the use of modern contraceptive methods among women in Yemen. The unit of analysis for the study is women between the age groups of 15-49.

The frequency distribution was obtained for independent, dependent and control variables. A total of 10414 women participated in the YDMCHS survey of 1997. Frequency distribution table for independent variable, the place of residency (urban and rural) shows that, out of 10414-sample population, 71.7 % lives in rural Yemen and 28.3 % lives in urban Yemen. The second independent variable, level of education shows that 78.9% of the sample population has no education, 12.4% had completed their primary education, 7.5% had completed secondary education and only 1.1% has higher education. The percentage distribution of the control variable 'region' is as follows: nearly 57% population lives in mountainous region, 9.2% in coastal region, 4.9% in highlands, 4.6% in desert and 24.2% in others. See Table 5.1, Table 5.2 and Table 5.3 below.

Table 5.1 Frequency Distribution for place of residency

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Urban	2945	28.3	28.3	28.3
Rural	7469	71.7	71.7	100.0
Total	10414	100.0	100.0	

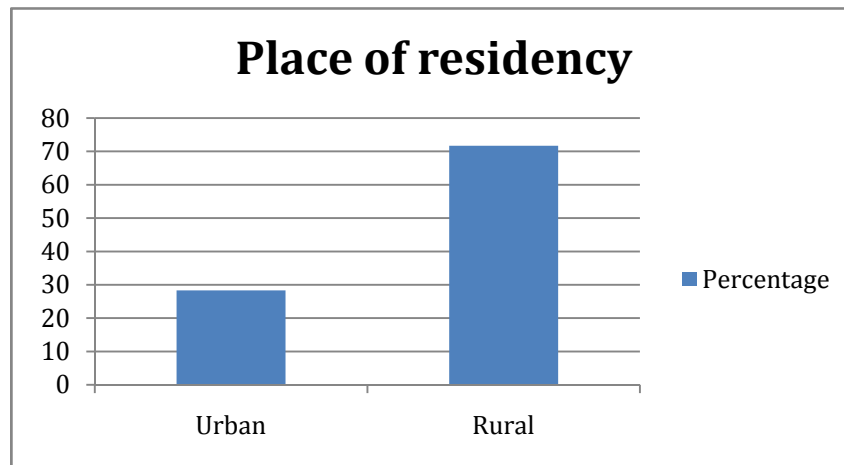


Figure 5.2 Histogram for the place of residency

Table 5.2 Frequency Distribution for level of education

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid No education	8220	78.9	78.9	78.9
Primary	1293	12.4	12.4	91.3
Secondary	783	7.5	7.5	98.9
Higher	118	1.1	1.1	100.0
Total	10414	100.0	100.0	

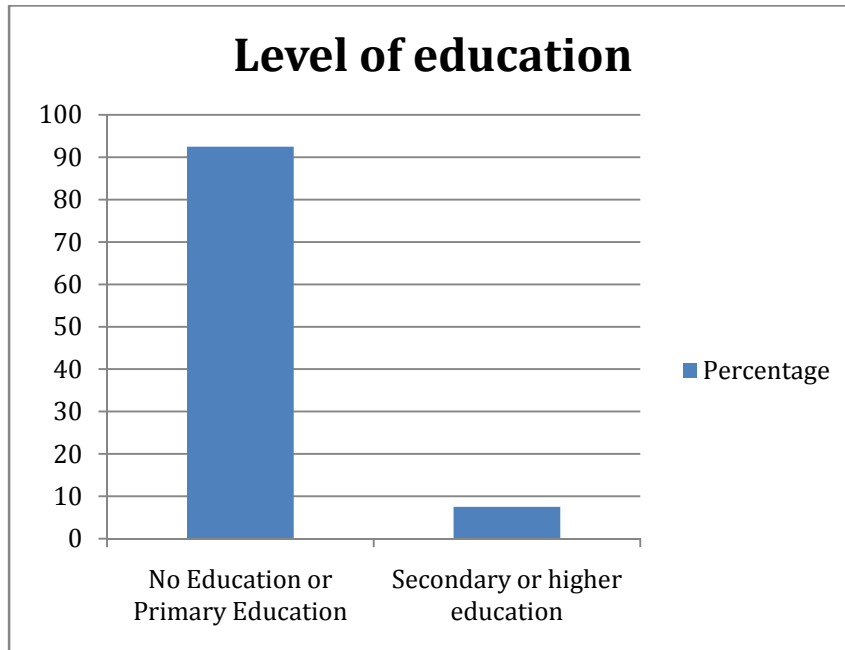


Figure 5.3 Histogram for level of education

Table 5.3 Frequency Distribution for region

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Rest	2523	24.2	24.2	24.2
Mountain	5940	57.0	57.0	81.3
Coastal	959	9.2	9.2	90.5
Highland	509	4.9	4.9	95.4
Desert	483	4.6	4.6	100.0
Total	10414	100.0	100.0	

The frequency distribution table for the dependent variable, use of contraceptives shows that 24.5% of the total population sample used modern methods of contraception, 14.8% used traditional methods, .2% used only folkloric , and60.4% of the population never used any sort of contraceptive methods. See table 5.4 below.

Table 5.4 Frequency Distribution for use of different contraceptives

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Never used	6294	60.4	60.4	60.4
Used only folkloric	21	.2	.2	60.6
Used only trad meth	1544	14.8	14.8	75.5
Used modern method	2555	24.5	24.5	100.0
Total	10414	100.0	100.0	

5.2 Chi-Square Test

Chi-square test is used in this study to examine the association between the dependent variable and the two independent variables. The first Chi Square test is used to determine that association between use of modern contraceptives and place of residency (Urban and rural). The second chi square test found the relationship between level of education and use of modern contraceptives. Third chi square test was used to find the relationship between place of residency and level of education. For the implementation of the chi square tests, two dummy variables were created. The first dummy variable was called “new contra” which was coded with modern methods of contraception as 1 and every other method as 0. The second dummy variable is “new edu”. The new edu variable was coded with secondary and higher education as 1 and primary and no education as 0. Table 5.5, and 5.6 below shows the cross tabulation

and chi square analysis table for the place of residency (urban and rural) and use of modern contraceptives.

Table 5.5 cross tabulation result between place of residency and use of modern contraceptives. Cross tabulation results shows that in rural area 85.52% of the population used other methods of contraception whereas only 14.4% participants used modern methods of contraception. In urban areas the number is more equally distributed with 49.9% participants using other methods of contraception and 50.05% participants using modern methods other method. Thus, showing that the urban Yemen has high proportion of people using modern contraceptives

Table 5.5 Cross Tab for urban and newcontra

		newcontra		Total
		.00	1.00	
urban	rural	6388	1081	7469
	urban	1471	1474	2945
Total		7859	2555	10414

Table 5.6 below shows a Pearson chi square value of (P) value of .000 suggesting that the association between place of residency and use of modern contraceptives is significant at the 0.05 level. Thus, there is a relationship between place of residency and use of modern contraceptives

Table 5.6 Chi-Squar for urban and newcontra

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1443.992	1	.000		
Continuity Correction	1442.071	1	.000		
Likelihood Ratio	1345.634	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	1443.853	1	.000		
N of Valid Cases	10414				

The second sets of cross tabulation and chi square tests are done for the level of education and use of modern contraceptives.

Cross tabulation table 5.7 shows that 77.56% of the population with primary or no education used other methods of contraception and 22.43% used modern methods of contraception. In terms of Population with Secondary and higher education population, 49.68% using other methods of contraception and 50.31% using modern methods of contraception. Clearly showing an increase in use of contraceptives with increase in level of education

Table 5.7 Cross Tab for newedu and newcontra

		newcontra		Total
		0	1	
newedu	0	7470	2161	9631
	1	389	394	783
Total		7859	2555	10414

Table 5.8 below shows a Pearson chi square value of (P) value of .000 suggesting that the association between level of education and use of modern contraceptives is significant at the 0.05 level. Thus, suggesting a strong relationship between place of residency and use of modern contraceptive methods.

Table5.8 Chi-Square for newedu and newcontra

	Value	df	Asymp.Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	304.032	1	.000		
Continuity Correction	302.528	1	.000		
Likelihood Ratio	264.103	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	304.003	1	.000		
N of Valid Cases	10414				

The third sets of cross tabulation and chi square tests are done between place of residency (urban and rural) and level of education. Table 5.9 and 5.10 shows the cross tabulation and chi square test results for the place of residency and level of education.

Table 5.9 below shows a cross tabulation between place of residency and level of education. 75.25% of the population in rural area have primary or no education compared to only 24.74% of the urban areas with primary or no education. 71.7% of the urban population has secondary or higher education compared to 28.2% in rural area. Thus, showing the urban area of Yemen has more people with higher educational attainments.

Table 5.9 Cross Tab for newedu and urban

		Place of residency		Total
		rural	urban	
newedu	.00	7248	2383	9631
	1.00	221	562	783
Total		7469	2945	10414

Table 5.10 shows a Pearson Chi Square value of (P) value of .000 suggesting that the association between place of residency and level of education is significant at the 0.05 level. Thus, there is a positive relationship between level of education and place of residency. See table 5.10 below

Table 5.10 Chi-Square for neweduand urban

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	304.032	1	.000		
Continuity Correction	302.528	1	.000		
Likelihood Ratio	264.103	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	304.003	1	.000		
N of Valid Cases	10414				

5.3 Regression Analysis

Regression analysis is used to predict the relationship between the dependent variable and the independent variable or multiple independent variables (Jaccard & Beckard, 2002). Regression analysis tells us whether particular relationship between independent and dependent variable is statistically significant (Allen, 2004)

In this particular study, since modern contraceptive use is a dichotomous variable we utilized logistic regression analysis to assess the effect of the place of residency (urban and rural) and level of education on the use of modern contraceptive

methods among women of Yemen in 1997. Logistic regression analysis usually predicts the odds of something happening or not (Vogt, 1999)

To run the logistic regression a new interaction variable “inter1” was created to find the interaction effect of two independent variables place of residency (urban and rural) and level of education. Region is also added as a control variable to find the effect of control variable. Table 5.11 below shows the logistic regression table

Table 5.11 Logistic regression place of residency and level of education , interaction variable and region as control variable

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1	region	.036	.025	2.025	1	.155	1.037
	urban	1.709	.053	1035.595	1	.000	5.523
	inter1	-.190	.186	1.050	1	.305	.827
	newedu	.702	.159	19.416	1	.000	2.017
	constant	-1.842	.044	1759.083	1	.000	.158

The logistic regression table 5.11 above shows that place of residency has a significant effect on the use of modern contraceptives at .000 level. Thus, the odds of people living in urban area using modern contraceptives are 5.5 times the odds of using modern contraceptives among people who lives in the rural areas. Thus, the odds of modern contraceptive use in urban area are higher and significant.

The logistic regression table 5.11 also shows that the level of education has a significant effect on the use of modern contraceptive at .000 levels. The odds of using modern contraceptive among people who have secondary and higher education is 2.0

times more the odds of using modern contraceptives among people who have primary or no education. The odds of use of modern contraceptive increases with increase in level of education.

The interaction variable-“inter1” was added to find the interaction effect of two independent variables on the use of modern contraceptive. The results showed that the interaction variable was insignificant effect at the .05 level. Thus, the effect of education on the odds of using modern contraceptives did not differ across place of place of residence.

Lastly, region as a control variable was added to the existing variable showed insignificant effect on the other variables. See table 5.11 above.

CHAPTER 6

DISCUSSIONS AND CONCLUSIONS

6.1 Discussions

Since Yemen is an Islam country with mixed viewpoints about the use of contraceptive techniques it was intriguing to gain insight into the use of modern contraceptive methods within the Yemen society. Also, the fact that the Yemen has an annual population growth of 3.4% adds to the curiosity of the use of contraceptives in Yemen. This hike in population growth is an important factor affecting the poverty Yemen is facing. As mentioned above in the introduction, Yemen society has religious restrictions in the use of contraceptive techniques because of their strong belief in procreation. However, the use of contraceptives is an important factor in understanding how the Yemeni women control their fertility (Sunil & Pillai, 2002). The study tries to understand the cultural changes happening within the Yemen society that is affecting the women. The study tries to correlate the relationship between the place of residency (urban and rural) and the use of modern contraceptives within the Yemen society.

The first hypothesis of this study was women living in urban areas of Yemen would have higher level of modern contraceptive use compared to women living in rural areas of Yemen. The result of the study shows that place of residency (urban and rural) has a significant effect on the use of modern contraceptives. The result of the

study adds to the existing theoretical literature on modern contraceptive use. Study done by Bogale, Wondafrash, Tilahun, and Girma (2011) on the use of modern contraceptive techniques in urban and rural Ethiopia states that Current modern contraceptive use among married women in the urban was 293 (87.5%) and 243 (72.8%) in rural. Married women who reside in urban area were more likely to decide on the use of modern contraceptive method than rural women. Having better knowledge about modern contraceptive methods, gender equitable attitude, better involvement in decisions related to children, socio-cultural and family relations were statistically significant factors for decision-making power of women on the use of modern contraceptive methods in the urban setting.

Yemen is a country going through demographic transition. Peterson (1982) has said that modernization has affected the urban areas of Yemen most acutely. Peterson (1982) has also said that with modernization the old rigid structure of the society begins to disintegrate as the individual increasingly ignores the traditional occupation and social identity of parents and family. In addition, immigration to urban areas of Yemen has shown a considerable increase. Also, urban areas of Yemen provide more access to health care and family planning methods with more hospitals and clinics. Thus, Modernization might have been an influence for people living in urban areas to deviate from traditional thinking of rejecting the use of contraceptives and exposing them to novel ideas of modern contraceptives when compared to people living in rural areas.

The second hypothesis of the study was the influence of level of education on the use of modern contraceptive methods. The results show that level of education has a

positive influence on the use of modern contraceptives. Meaning with the increase in level of education the likelihood of using modern contraceptive methods increases. The result also adds to existing literature that emphasizes the importance of women education. According to Castro and Juarez (1994) education can influence a women's reproduction by positively affecting the socio economic status, changing attitudes of fertility control, and also increasing authority over husband and use of family planning methods. Another study done by Gorden (2011) in Ethiopia found that, in Ethiopia women education is supposed to increase the rate of contraceptive use from 15% in 2005 to 60% by 2015. The result of this study also adds to the existing literature that shows the value of women education in the effective practice of family planning methods. The Yemen Demographic Maternal Health Survey has shown there is a huge disparity between male and female education and between women living in urban and rural area. The proportion of males who have some education is twice than that of females and 59% women living in urban area attend school compared to only 24% females in rural area. (YDMHS, 1997). Thus, Women education is an important area of concern for the Yemen society. Gender disparity has been a major cultural concern for Yemen; especially the gender gap in education in Yemen is among the highest in the world. Yemeni people should be encouraged to have a more liberal mind approach to women education. The result of the study shows that empowering women through education should be a priority for the better future of Yemeni society.

6.2 Limitation and Future Studies

Even though the study found a significant relationship between place of residency and level of education on the use of modern contraceptives, the study does have limitations. Firstly, the use of secondary data limits the opportunity to ask questions directly related to the contraceptive preferences of women of Yemen. The Yemen Demographic Maternal Health Survey of 1997 can be subjected to general sampling errors.

During the survey period, Yemen was under the dictatorship of Ali Abdullah Saleh. This might have had an influence on the response of the participants. However, currently country is going through a revolutionary change with Ali Abdullah Saleh being thrown out of the power. In addition, according to the CIA fact book the population growth rate of Yemen for 2012 is estimated to be 2.57% compared to 3.4% during the time the survey (Central Intelligence Agency, 2012).

Thus, Yemen is going through an economic and social reform. Therefore, it would be interesting to do a study with recent data.

Despite the limitations, the results of the study have potential for future research. Given the socio economic situation of Yemen, a future study can be conducted that attempts to find the correlation of use of modern contraception and social status of the women. In addition, given the fact, the Yemen is a patriarchal society; it would be interesting to see how women's autonomy is related to level of education and acceptance of family planning techniques.

In the frequency distribution section of the paper, it is clearly mentioned that 60.4% of the survey participants has never used any sort of contraceptive techniques; I would strongly recommend a future study trying to explore the reasons for the high proportion participants not using any sort of contraceptive techniques. This proposed study could be a basis for future programs aimed at bringing down the rate of sexually transmitted disease and HIV/AIDS epidemiology Yemen is currently facing.

6.3 Social Work Implications

The national association of social workers has defined the primary goal of a social worker is to help people in need and address social problems. A social worker should challenge social injustice by pursuing social change, particularly with and on behalf of vulnerable and oppressed individuals and groups of people. Social workers' social change efforts are focused primarily on issues of poverty, unemployment, discrimination, and other forms of social injustice (NASW, 2008).

The result of this study shows that women living in urban area tend to use modern contraceptives more than women living in rural areas. Social workers working in the field of reproductive health sector should try to work with the city or government official to provide more effective reproductive health care services to the people of Yemen living in rural areas.

The result of the study can be encouraging for the United States Agency for International Development (USAID) funded five-year program aimed at increasing the use of reproductive, maternal, and child health services among people of Yemen. The

two main programs developed for this are the Basic Health Services (BHS) Project and the Yemen Partnership for Health Reform (YPHR) Project. The BHS program has been helpful in increasing access to quality health services and increased health knowledge among people of Yemen.

Social service providers are encouraged to write policies that can provide free and easy access to modern contraceptives to women living in rural and also to the women living in urban areas. The easy availability of modern contraceptives like condoms can play a vital role in decreasing the pregnancy rate and preventing the transmission of sexually transmitted diseases and HIV/AIDS. This can lead to overall wellbeing of the society. Outreach events are recommended to eliminate the cultural stigma associated within the Yemen society regarding the use of contraceptives. Educating the people of Yemen the importance of use of contraceptives will play a vital role in reducing the stigma associated with use of contraceptives.

The second result of the study shows that higher level of education is associated with increase in use of contraceptives. On the basis this result, social outreach events can be conducted and programs can be telecasted through mass media to bring awareness among the people about the importance of female education. Female education is a powerful tool that the Yemen society can consider to alleviate poverty country is currently facing. There is a need for awareness within the Yemen society to consider the women's role other than a housewife.

Policy makers are suggested to develop policies to increase the quality of education in Yemen. Since Yemen has a very low age at marriage, the chances of

females getting pregnant during their school days are higher. In order to prevent this, sex education can be made part of the primary and secondary school curriculum. School counselors can make students aware about the repercussions of early pregnancy and the value of education in their future life.

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BIOGRAPHICAL INFORMATION

Vivin Thomas was born and raised in Kerala, India. He completed his Bachelor degree in Pharmacy from R.V.S College, Coimbatore, India, in the year 2008. Interested in working for the welfare of the society, he pursued his graduate degree in Social Work from the University of Texas at Arlington during the year of 2010-2012. Vivin Thomas was actively involved in many research projects during his graduate school, which included, effect of urbanization in use of contraception among women of Yemen and he was a graduate research assistant for the crossroad survey that aimed at increasing educational attainment of high school students. His future plan includes pursuing a career in Social Work that would provide direct service to people.