MASS MEDIA EXPOSURE AND USE OF CONTRACEPTION
AMONG WOMEN OF REPRODUCTIVE AGE
IN UTTAR PRADESH INDIA

SUNITA SINGH

A THESIS SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR
THE DEGREE OF MASTER OF ARTS
(POPULATION AND REPRODUCTIVE HEALTH RESEARCH)
FACULTY OF GRADUATE STUDIES
MAHIDOL UNIVERSITY
2001
ISBN 974-04-0679-3
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Thesis entitled

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Ms. Sunita Singh
Candidate

Assoc. Prof. Sairudee Vorakitphokatorn, Ph.D.
Major-Advisor

Lect. Masaki Matsumura, Ph.D.
Co-advisor

Prof. Liangchai Limlomwongse, Ph.D.
Dean
Faculty of Graduate Studies

Assoc. Prof. Uraiwan Kanungsukkasem, Ph.D.
Chair
Master of Arts Program in Population and Reproductive Health Research
Institute for Population and Social Research

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MASS MEDIA EXPOSURE AND USE OF CONTRACEPTION
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UTTAR PRADESH, INDIA

was submitted to the Faculty of Graduate Studies, Mahidol University
for the Degree of Master of Arts
(Population and Reproductive Health Research)
on
September 28, 2001

Ms. Sunita Singh
Candidate

Assoc. Prof. Sairudee Vorakitphokatorn, Ph.D.
Chair

Lect. Masaki Matsumura, Ph.D.
Member

Ms. Ladda Jitwatanapataya, B.A
Member

Prof. Liangchai Limlomwongse, Ph.D.
Dean
Faculty of Graduate Studies
Mahidol University

Assoc. Prof. Bencha Yoddumnern-Attig, Ph.D.
Director
Institute for Population and Social Research
Mahidol University
ACKNOWLEDGEMENT

I would like to extend my gratitude to God who really showed me the right path and gave me strength during those challenging times. Second thanks goes to MEASURE (USAID) evaluation, whose scholarship award made it possible for me to attend this program. There are numbers of people to whom I would like to acknowledge.

I am grateful to my advisor Dr. Sairurdee Vorakitphokatorn, for her kind help and support. I would like to express my thanks for her outstanding knowledge and guidance that she provided to me during the course of thesis writing. My co-advisor Dr. Masaki Matsumura, provided valuable suggestions that gave a proper shape to my thesis and helped me to finish it on time. I am really thankful of his remarkable suggestions, kind help and support. Dr. Shelah S. Bloom, a research fellow of the University of North Carolina, acted as my external advisor. Thanks for being a wonderful friend and for her remarkable guidance. You made the things that used to seem so difficult for me easy. I am very honored to work with you as your research assistant. I am grateful to my external reader, Ms. Ladda Jitwananapataya, (Member), for her review of my thesis and valuable suggestions she provided. Thanks to Sarah Bassett, the UNC training officer, for her prompt reply and kind assistance during the course of my work in Thailand.

Thanks to, Dr. Uraiwan Kanungsukasem, Chair of the program and Director Dr. Bencha Yoddumnern-Attig, for their kind support and help during the course of my studies in Thailand.

Thanks to the former chairman of the program, Dr. Chai Podhisita, for always being there to listen and for the encouragement that he gave, which motivated me in times of doubt. And thanks to my former co-advisor, Dr. Churnrurtai Kanchanachitra, whose encouragements are really appreciated by me. I hope I will able to work with you once again in the near future. Dr. Phillip Guest, and Dr. Wassana Im-Em, who taught during the first semester, I really enjoyed your classes and will use the knowledge gained in further career pursuits.

I would like to acknowledge the help rendered by all staff of IPSR, Khun Luxana Nil-Ubol, the course coordinator, Khun Pradiwara Prasartkul (Gring), Librarian Khun Sansiri Chulerttiyawong, Khun Sansook Dokpruksri (Lib. Staff), Khun Yuwadee Siripodjanapip “Ning” (Lib. Staff), and Khun Boom. I thank you all for solving the technical and course related problems for me that made my life more comfortable in Salaya.

Last but not least, my special thanks goes to my dearest and loving friend Thomas Kaluzny, for being there most of the time; my parents, sisters Kalpana and Anita and my brother Arun, for their kind love and support. My best friend Caterina Guenzi for her moral support and great friendship; Carolyn Karft for her best wishes and prayers; and my classmates Sultan Ahmed and Subrata Kumar Bhadroy (Dada) for solving my problems during my this studies.

Sunita Singh
The objective of this study is to analyze the relationship between exposure to mass media and the utilization of contraception among women of Uttar Pradesh, India. This study has used data collected by the PERFROM system of indicator survey between May and September 1995. The data was collected from 28 districts of Uttar Pradesh covering the population of currently married women in the age range 13-49 years.

In Uttar Pradesh, all currently married women know at least one method of contraception, but only 38 percent of currently married women have ever used a contraceptive method. Modern methods have been used by 30 percent and traditional methods by 12 percent only. Current use of contraception is nearly twice as high in urban areas compared with rural areas. Attitudes towards the use of contraceptives are generally positive, but a substantial percentage of women from minority (Muslims) groups do not approve of family planning.

The findings indicate that there is a strong relationship between the exposure to mass media and utilization of contraception. Women who are exposed to the radio and TV family planning messages, are two to three time more likely to practice contraception in comparison to women who are not exposed to any kind of mass media family planning messages. This study has found that though mass media exposure is one of the prime determinants for utilization of contraception, exposure to the mass media and utilization of contraception may vary according to socio-demographic characteristics. This study reveals electricity supply, place of residence and numbers of household assets affect the exposure to mass media and utilization of contraception.

From the study we suggest that the government should continue to sponsor family planning messages on radio and television. This would seem to be a cost-effective approach to reach the millions of women who are exposed to electronic media, to inform them about the use of contraception and the benefit of small family size. The government should try to increase general exposure to electronic mass media. One of the main constraints that limits the exposure to the supply electronic mass media is a limited access to the supply of electricity and also place of residence. They must try to facilitate the access to the supply of electricity and urbanization of rural places. The pace of electrification and telecommunication networks in the rural areas could increase media exposure.
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CHAPTER I
INTRODUCTION

There is a missing connection between theories of the fertility transition and the role of mass media. Ideas related to family planning that is communicated by the mass media compete with traditional notions of early childbearing and larger family size. People can learn modern ideas that can take the indirect form of encouraging consumer values that may conflict with early marriage notion of high fertility and long years of reproductive age. Or they may be more direct in the form of explicit messages about family planning.

With the rapidly increasing exposure to the mass media in developing countries, the potential impact of the transmission of modern ideas that can influence reproductive behavior, even without other radical social changes, is considerable. (Westoff et al., 1997). Modern ideas could be communicated in television, advertising, music, wall paintings, newspapers, magazines and many other forms. Westoff et al. (1999), in their study found that modern ideas could profoundly influence peoples' attitude and behavior even in the area as traditionally imbedded as that concerning reproduction. The main interest of this thesis is to examine the correlation between women's exposure to mass media family planning messages, primarily to radio and television and their extent of contraceptive utilization. Additionally, this study examines the other factors that influence women's exposure to mass media and utilization of family planning methods.
1.1. Background of the country

In 1951, India became the first country in the developing world to initiate state-sponsored family planning. The Indian government saw the program not only as a way to lower the country's fertility level and population growth rate, but also as part of a broader economic and social development plan. However, even more than 50 years later, India has not achieved satisfactory success in meeting its goal of lowering the population growth. (Jain, 1998).

India is likely to replace China as the world's most populous country some time before the middle of the twenty-first century. Even after following the family planning for last 50 years, India's birth rates and total fertility rates remain extremely high (TFR= 3.83) (Zodgekar, 1996). There is debate as to why Indian fertility remains high even after years of birth control programs. One of the key determinants of higher fertility is low level of contraceptive use by Indians.

In order to control population growth, the government of India promotes several family planning programs at community, state and national levels. At the community level there are several groups formed to provide family planning information. The government has attempted to train the service providers to better educate men and women concerning family planning. A study conducted by Kambo et al., (1994), in Uttar Pradesh found that government of India has 500,000 formally trained practitioners of various indigenous systems of medicine, including Ayurveda, Sidha, Unani, and Homeopathy. They found that traditional systems are deeply rooted in Indian society. Folk dancers and dais (traditional birth attendants) provide
indigenous traditional methods of contraception in tribal and rural areas of India. Roger et al. (1975), in their study found that many Asian countries are using traditional midwives in order to provide family planning knowledge.

In India, there are several community level programmes like interpersonal visit, Mahila Mandel (women’s group), Mahila Sawasth Sangh (women’s health group), youth club and orientation training camps that educate women in relation to contraception and their health. Anganwadi (day care center for women and their kids), Mahila Mandal provide information related to nutrition, childcare and family planning.

The government has also been using printed media to disseminate family planning messages. There are several wall paintings, billboards, and printed advertisements and materials that are directed at having a smaller family size and use of contraceptives. The Indian official family planning program has released several slogans including, “Do yaa teen bas (Two or three are enough)” (Kulkarni et. al., 1998). Later the government adopted two child policy and circulated the slogan “Hum do hamare do (we two and our two).” As a result of strong preference for sons over daughters found in Indian society and due to the rapid population growth, the government propagated one child policy using the slogan “Ladki ho ya Ladka eke hi buccha abse accha (Girl or boy one child is the best)”. To discourage young women pregnancy there was the slogan, “pahal buccha abhi nahi dusra buccha kabhi nahi (first baby not now and second baby never)".
In 1999 illiteracy rate for India was 58.6 percent among women. A great number of women are unable to read the various forms of printed slogans. Furthermore, unfortunately, Indian women have limited autonomy and they are not allowed to go out of their house unaccompanied (Bloom et al., 2000). The best methods to reach these women is through mass media such as radio and TV that have become more popular among Indian households.

1.2. Background of the study area

Uttar Pradesh (UP), one of the largest and most densely populated states, situated in north central India. It is known for its poor health services and high illiteracy rate. According to the census of 1991, the population of Uttar Pradesh was 139.1 million increasing at the rate of 2.27 per year (NFHS-1992-93). The crude birth rate of 32.2 per 1000 and the crude death rate of 10.3 per 1000 population in the state were higher than India's overall crude birth rate of 25.1 and crude death rate of 9.7 that was estimated by the Sample Registration System (SRS) between 1998-99 in Uttar Pradesh. The total fertility rate is 4.3 children per woman, which is higher than India's overall rate of 2.9 children per woman (NFHS-1998-99).

According to the registrar general of India (1996), the projected life expectancy of male and female in Uttar Pradesh during 1996-01 are 61.2 for males and 61.1 for females that lower than India’s over all life expectancy of 62.5 for males and 64.2 for females. The infant mortality rate is 87 per 1000 compared to the country’s overall infant mortality rate of 68 per 1000. The higher TFR of the state, higher death and infant mortality rates, coupled with lower life expectancy reveal a
strong need to increase the availability of family planning services and utilization of
general health, maternal and child health care services in Uttar Pradesh.

1.3. Rational and justification

In Uttar Pradesh more than 79 percent of the population live in rural areas. The state has experienced a slight fertility rate decline in recent years. In comparison to the other Indian states, Uttar Pradesh is lagging behind in development. State records show higher illiteracy rate (28.2% among males and 57.3% among females) and higher fertility rate (TFR 3.99) (NFHS-1998-99, Uttar Pradesh).

In the backdrop of the above situation the Government of India is trying to promote the Family Planning in order to improve maternal and child health, and to diminish the higher infant and maternal mortality in the state. The Government is attempting use the influence of Mass Media in those remote areas of the state, where women still lack better access to Family Planning and maternal and child health services and their socioeconomic and educational situation is very precarious.

Although in Uttar Pradesh’s all currently married women know at least one method of contraception, but 38 percent of them have ever used a contraceptive method. Current practice of contraception is nearly twice as high in urban areas (45 percent) compared to rural areas (24 percent). Female sterilization is the most popular contraceptive method in Uttar Pradesh like most of other Indian States. Female sterilization is used by 15 percent of currently married women, accounting for about 60 percent of the contraception. Except for injections (the use of which is almost
negligible in all areas of the state), current use of every single method of family planning, including the terminal methods, is higher in urban areas than in rural areas. Religious differentials in the prevalence of contraception are also quite substantial. The prevalence rate is lowest among Muslims; only 22 percent of Muslim women use any methods, (NFHS-2-1998-99).

1.4. Exposure to family planning messages

Up to 17 percent of households in Uttar Pradesh own televisions and only 33 percent own radio (NFHS-1992-93). Urban-rural difference in media coverage are substantial. Family planning messages on radio or television reached 64 percent of women in urban areas and 25 percent of women in rural area. Fifty percent of the women said it is acceptable to have family planning messages on radio and television, while only 11 percent said it is not acceptable and 39 percent were not sure.

As previously mentioned, Uttar Pradesh has higher fertility rate in comparison to the country as a whole, consequently it is a big challenge for government of India and Uttar Pradesh to control the population. Previously, the government has on occasion, introduced several family planning programs and has used advertising through the media in an attempt to motivate people to adopt these programs. The media chosen has been directed primarily at women as the key audience of family planning programs. For many years India's national family welfare program has been broadcasting family planning messages on radio and television.
1.5. Objective of the study

1. To analyze the relationship between mass media exposure and utilization of contraception among women of Uttar Pradesh.

1.6. Research questions

The general research question of this study is to investigate if mass media i.e. radio and television exposure has any influence on contraceptive use status or not. Additionally, this paper attempts to explore other factors that may have influence on the contraception use status. The specific research questions are:

1. Do exposure to the mass media influence women to use contraception?
2. After controlling demographic and other socio-economic factors, is mass media still a significant indicator of contraceptive use and non-use?
CHAPTER II

LITERATURE REVIEW

2.1. General sketch

The influence of mass media on humans' reproductive behavior has been subject of much research over the last 50 years. Previous studies suggested that mass media had little effect, since people were more influenced by personal contacts and selective perceptions (Lazarsfeld et al., 1948; Hyman and Sheatsley, 1974). Later research, looking at more sophisticated campaigns designed to change a variety of behaviors, shows that some mass media campaigns have indeed had an influence on people's behavior. Usually these campaigns were better planned and executed, relying more on audience and consumer research in the context of highly mobilized personal and community interactions (Rogers and Storey, 1987).

The social learning theory, as outlined by Bandura (1986) and others quoted by Piotrow et al., (1990), suggests that mass media may have far greater capabilities than the acknowledged role of creating public awareness or spreading specific information. In reality people learn by observation and by using other people as role models.

A study done by Westoff et al. in 1999 on mass media exposure and reproductive behavior in Pakistan, India and Bangladesh, used data based on five
national samples of women of reproductive age; Pakistan 1990-91 and in 1994-95, India in 1992-93, and Bangladesh in 1993-94 and 1996-97. The result of the study clearly supports that mass media exposure is directly associated with reproductive behaviors. The study reveals that both exposure to the media in general and exposure to the family planning media messages are independently associated with reproductive behaviors. The Study found that the approval of family planning and ever use of contraception are most consistently related to the media exposure. (Westoff et al., 1999). A similar type of study conducted in African countries (Westoff et al., 1997) found that exposure to the media is significantly associated with reproductive behaviors. These results remained unchanged when others factor were controlled. The same study also suggested that exposure to the radio in general, as well as exposure to targeted family planning messages broadcasted by radio has strong associations with other controlled factors.

Another study conducted in Tanzania reveals that the effect of radio education contained with the entertainment of TV and radio programs had significant association with family planning behavior (Rogers et al., 1999). This radio soap opera drama was introduced in Tanzania during 1993 and evaluated by means of a field experimental design study in which seven mainland stations of Radio Tanzania broadcasting such radio program. The study found that the soap opera program had strong effect on the degree of family planning adoption. They quoted Klapper’s general findings of the effects of entertainment education contrasts with most previous studies of the effects of mass media following way:
'Mass communication ordinarily does not serve as a necessary and sufficient cause of audience effects, but rather functions among and through a nexus of mediating factors and influences, but there are certain residual situations in which mass communication seems to produce direct effects" (Rogers et al., 1999).

On the basis of Kalppers findings, Roger et al., argues that apart from mass communication there are two consistent findings which are interpersonal communication and spousal communication about family planning. Both of these are strongly associated with the adoption of contraception (Roger et al., 1999).

Kane et al., (1998) argues that Mass media communication techniques have been found to be an effective way to diffuse family planning information and to changes the attitudes toward practice of contraception in various populations groups. It also found that in traditional societies where the early stages of modern contraceptive practice, traditional norms, values, and beliefs have a strong influence. Thus in such contexts, any messages on family planning should be presented in a culturally acceptable manners. For example, in a developing country like Bangladesh where traditional norms and beliefs are very strong, Kabir et al., found that the mass media is an important means of influencing attitudes and behavior.

Research has established that education, number of living children and current use of contraception were good predictors of mass media exposure to family planning messages. Those women, who had access to any type of mass media message on family planning, are more likely to use contraception. (Kabir et al., 2000).
Similar results were gathered in another study conducted by Bankole et al., 1995 in Nigeria. This study suggests that the media advertisement on family planning has positive association with contraceptive use, by influencing them to have desire of fewer children. He quoted an experience of a participant in his study in order to show the affect of media exposure on contraceptive use and desire of fewer children. The woman claimed:

'After watching a family planning program, I told my husband that I wanted to obtain a family planning methods. He refused to support it... I then went to the hospital without telling him and used a method secretly... (ibid.)

In considering the fertility preference of women, Bankole et al., suggested that mass media has an effective role on family planning health promotion program. Jato et al., 1999 in a Tanzanian study found similarities concerning the mass media influence on the contraceptive behavior of women. The study reveals that media exposure had a positive relationship with women's contraception use. Those women who are more familiar with media messages are more likely to practice contraception. This study further suggests that those women, who recalled only one type of media messages of family planning, were twice as likely to use contraception in comparison with women who didn’t recall any media messages based on family planning. Mass media exposure varies according to a variety of social and demographic characteristics. Exposure is positively related to age, education level, urban residence, and radio and television ownership. The same study reveals that there is no significant difference in exposure based on number of living children or basis of marital status (Jato et al., 1999).
Bankole et al., (1994) found that education has a positive association with media exposure. Those with secondary or above education are 2.5 times more likely to be exposed to media than those respondents who had no formal education. The same study also found a significant relationship between mass media exposures and religion. Christians are less likely to have heard or seen family planning messages in the media after controlling for other socio-economic and demographic variables. He argues that women with traditional religion were the less exposed to media and women who live in urban areas have a higher media exposure.

Research has established that particular religious beliefs have strong association with respondent's attitudes to seek mass media information on family planning and contraception use (Kane et al., 1998). The study found that the media have positive influence on respondents’ likelihood of stating a favorable attitudes or beliefs. He also found that educational level and presence of advertisement on television in the household were both significantly and positively associated to the knowledge of modern contraceptive methods.

Westoff et al., (1993) in Kenya revealed that exposure to media messages increases up to age 22 and then declines, similarly he found that exposure increases with up to six living children but decline after then. Westoff argues that number of living children and exposure to mass media has a U-shape relationship. They also found the significant effects of religion and ethnicity on exposure to family planning messages.
Since, India is a heterogeneous country with a variety of religions, ethnic groups, and languages, socio-economic development is uneven. This diversity has a significant role in the acceptance of media messages among different communities, which influences their attitudes and behaviors to family planning and fertility desire. However, as a whole mass media messages has strong influence on family planning behaviors and fertility preferences.

The decision about the use of contraception and the method chosen are likely to be heavily influenced by various factors, such as demographic, socio-economic, cultural, knowledge, and other related factors. Survey from many countries, including developing nations, have revealed the influence of individual socio-demographic and other related factors like age, education, occupation, religion, number of living children, with contraceptive use (Bulatao et al., 1989). Chamratrithirong and Stephen (1989) have also mentioned that the above factors have relationship with the contraceptive use and can influence the use in various ways.

Hence, the above findings in general show a strong relationship between mass media exposure and use of contraceptives. As it has been mentioned earlier that this study is also making an attempt to find out the factors that influence exposure to mass media and utilization of contraception. For this purpose the findings from previous have been reviewed as well.
2.2. Other factors that influence exposure to mass media

2.2.1. Education

Radio and television are very important sources of media information on family planning, particularly for those women who cannot read and write. The DHS analytical reports (1999) show that in general, illiterate women are somewhat less exposed to the different media than are literate women. In a study in Bangladesh, Kabir and Islam Khan found that the current use of contraception and education have positive relationships to exposure to family planning messages. They found that the education of the respondent has the largest effect on mass media exposure (Kabir et al., 2000).

In the case of utilization of more effective use of contraception, Ainsworth et al., (1996) argue that level of schooling of women is associated with lower fertility preference, which also increases their contraceptive use. She found that educated women are more likely to learn about and practice contraception more effectively than uneducated women, reducing the number of unanticipated pregnancies.

Weinberger, (1987), found a strong variation of contraception use between uneducated groups and the group, which had a few years of school. The contraceptive prevalence was remarkably high among those respondents who had few years of formal education compared to those respondents who had less or none. She found that woman with seven or more years of education are 24 percent more likely to practice contraception than those with less or no education. In many cultures and religions it has been found that women think that child is a gift of god therefore they don't like to
use contraception. However, a study in Latin America by Castro et al., (1995) found that there is a dramatically opposed attitudes towards reproduction, fatalism and control. She found that woman with less fatalistic approach to life has higher command over their fertility. Educated women are less likely to depend on their fate, in implementing their family size desire and have better regulation over their fertility (Martin et al., 1995).

Martin (1995) in her studies, in 26 countries found that, there is a positive relationship between women's education and contraceptive use. She found that women even with few years of education are more likely than others to desire smaller families and hence have a stronger motivation to practice contraception. A study by Gandotra et al., (1998) with Indian population established that fertility differentials by education are also substantial. In the country as a whole, the TFR ranges from 4.0 among illiterate women to 2.3 among women who have completed middle school or more. In relative terms, the TFR is 43 percent lower among women who have completed middle school than among illiterate women.

2.2.2. Residence

Numerous studies have been conducted to evaluate whether there is any differentials according to place of residence and fertility. India's national family health surveys 1992-93 shows that urban rural differential in media coverage are substantial. Family planning messages on radio or television reached 64 percent of women in urban areas compared to 25 percent of women in rural areas. In a study conducted by the International Institute for Population Sciences, Mumbai (1997),
found that women who lived in urban areas were much more likely than rural women to be exposed to electronic media on a regular basis and have heard a family planning message.

Regarding the use and knowledge of contraception, urban women are more likely to know and use the contraception in comparison to rural women. Bangladesh Demographic Health Survey (BDS, 1996-97) shows significant association between place of residence and practice of contraception. Respondents living in urban areas are 52 percent more likely to practice contraception in comparison to rural women. India’s national family health survey revealed the same of result that the ever use of any contraceptive methods is 67 percent higher in urban areas as compared to rural areas (51 percent), Both modern and traditional method found higher in urban areas (NFHS-2, 1998-99).

2.2.3. Age

Many studies have suggested that as the age of women increase the rate of utilization of contraception also rise. According to the Bangladesh Demographic Health Survey (1996-97) there is a negative association between use of contraception and younger age but positive relationship between older age and use of contraception as compared to that of middle age women. National Family Health Survey (NFHS-2), (1998-99), revealed that the use of modern methods increases with women’s age 35-39, and that the peak of contraceptive is 67 percent at this age group. Contraceptive prevalence declines at older age (NFHS-2, 1998-99).
2.2.4. Religion (Hindu/Muslim)

Religion has a strong influence on contraceptive use. This fact has been proven by many previous studies. Therefore, in this study, religion is included for analysis since various religious groups in India are known to differ by fertility level and use of family planning methods. Kulkaran et al., (1998) in a study from eight India states establish that, in Muslim population both wanted and unwanted fertility is higher in comparison to Hindus. With the exception of one state (Madhya Pradesh), Muslims are less likely to use contraception than Hindus or other religions (Kulkaran et al., 1998). There are several studies verifying that Muslims are less likely to use contraception than Hindus. The difference is approximately 75 percent. Muslims tend to prefer non-permanent and natural methods with significantly lower use of both male and female sterilization due to their desired family size (Bhende et al., 1991).

A study in Sri Lanka shows socio-economic effects on method choice versus non-use is also along predicted lines. Sinhalese (the reference group) are more likely to practice contraception than those of any other ethnic groups. In spite of the fact that all other ethnic groups are likely to use traditional methods when compared with the Sinhalese, the Moors (Muslims) are distinguishable for favoring non-use as antagonistic to any method choice, particularly sterilization (Malhotra et al 1991).

2.2.5. Number of living children

Number of living children and contraceptive use status has a very strong positive relationship. Ezen et al., (1996), in their study revealed that men with no living children and those with five or more children are most likely to be current user
of a methods of contraception. National Family Planning Health Survey-2 (1998-99) found that there is a very significant relationship between contraceptive use and number and gender of living children. Contraceptive use increase sharply from 5 percent for women with no living children to 68 percent for women with three living children and than falls to 57 percent for women with four or more living children (NFHS-2- India, 1998-99).

NFHS-2 (1998-99) in Uttar Pradesh found that only two percent of ever-married women use contraception when they don't have any living child and another seven percent began using contraception when they have one living child. (NFHS-2-Uttar Pradesh, 1998-99). NFHS-2 (1998-99) in Uttar Pradesh found that only two percent of ever, married women use contraception when they don't have any living child and another seven percent began using contraception when they have one living child. Therefore, in Uttar Pradesh early use of contraception is very rare and overall only 22 percent of ever-married women began using contraceptives when they have three living children.

Malhotra and Thapa (1991) in their study in Sri Lanka found a strong relationship between the number of living children and the use of contraceptives. The study indicated that women with more children were using more contraceptive methods than women having fewer children. In a similar study concerning the unmet need for family planning in Uttar Pradesh, Devi et al. (1996) established that the number of children loss affected the need for family planning because many couple are motivated to replace dead children.
2.2.6. Socio-economic status of the household

Socio-economic status is associated positively with use of contraception. It is evident that higher socio-economic status motivates women to have lower ideal number of children, less desire for additional children. Their need for contraception is generally met (BDHS-1996-97). In a similar study NFHS-2 (1998-99) found that contraceptive use prevalence rages by the standard living index (SLI). For women who are living with low SLI, the contraception prevalence is only 40 percent while women who are living with a high SLI have contraception prevalence of 61 percent. A study in the northern part of India on men’s knowledge with regard to reproductive health, Bloom et al. (2000) found that better household status is associated with greater reproductive knowledge.

2.2.7. Electricity connection

Many studies have revealed a positive relationship between the presence of household electricity and practice of contraception. Women with access to electricity are more likely to practice contraception in comparison with women who have limited or no access to electricity. In contrast, Pullum (1991) in a study in Guatemala found that access to electricity has statistical simulation but it doesn’t imply that it will have immediate influence on contraceptive use behavior. Westoff et al. (1993) in Kenya found that to have electricity is a strong predictor of the practice of contraception.
2.3. Conceptual Framework

Several studies in the context of developing countries like Bangladesh, India and Pakistan and in Latin American countries have established that while mass media does affect the contraceptive use status, there are also other factors that can influence women to practice contraception. The use may be influenced by demographic, socio-economic, cultural and other related factors. Accordingly, four sets of such factors have been used to generate the conceptual framework guiding this research. These are programmatic, demographic, socio-economic, and cultural factors.

The programmatic factors include media exposure, whether women have heard or seen any message about family planning on radio or TV in the last month. The demographic factors include age of the respondent and number of living children. The socio-economic factors include district and residence (urban/rural), respondent’s level of education, number of household asset and electricity connection. The cultural factor is the religion of the respondent. These factors are used as independent variables. The dependent variable of this study is contraceptive use status. The schematic representation for conceptual framework for mass media exposure and contraceptive use is presented as follows:
Conceptual Framework

**Independent variables**

- **Demographic factors**
  1. Age
  2. Number of living children

- **Socioeconomic factors**
  1. District
  2. Residence (urban/rural)
  3. Education
  4. No of household assets
  5. Electricity connection

- **Cultural factors**
  1. Religion

**Dependent variable**

- Mass media exposure
- Contraceptive use (User/non-user)

1) Direct Effect of mass media on contraceptive use
2) Effect of SES on contraceptive use
3) Effect of SES on mass media
4) Effect of mass media after controlling SES
2.4. Hypothesis

1. There is a strong relationship between mass media exposure and utilization of contraception.

2. Mass media exposure and contraception use may vary based on socio-economic and demographic characteristics.
CHAPTER III

METHODOLOGY

3.1. Source of Data

This study used data, collected by PERFORM System of indicators Survey from May to September 1995. The data was collected from 28 districts of Uttar Pradesh covering the population of currently married women between ages 13 and 49. Additionally the data was collected from public and private health facilities and providers. The use of the survey was one component of an overall monitoring and evaluation effort for the Innovations in Family Planning Services (IFPS) Project situated in the state. The objective of the 1995 survey was to provide baseline estimates for the performance benchmarks related to IFPS’s. The three main purposes were:

- Increase access to family planning services
- Improve the quality of those services; and
- Increase the demand for family planning services

The PERFORM System of Indicators Survey was coordinated by the EVALUATION Project of the University of North Carolina at Chapel Hill in collaboration with the Center for Population and Development Studies in Hyderabad, the Marketing and Research Group (MARG), Operations Research Group (ORG) and Indian Institute for Health Management Research at Jaipur (IIHMR/Jaipur).
For analysis this study will use only five districts of—Nainital, Aligrah, Kanpurnager, Gonda, and Banda which represent the state’s five geographical regions, i.e., hilly, western, central, eastern and Bundelkhand respectively. At the time of survey (1995) Nanital district, was the part of Uttar Pradesh, but it later became the part of the newly formed state Uttarakhand. This new state came in existence on November 9, 2000. Since this study is interested in the relationship between media exposure and utilization of contraception in all five reasons. It will use the data from Nanital district as well as the part of hilly character of Uttar Pradesh.

3.2. Sample design

The PERFORM System of Indicator Survey was a stratified, multistage cluster sample survey. Estimates of indicators at the state, regional, divisional and district levels were designed. Using probability-proportional-to-size (PPS) procedure, the first stage of the sample design involved systematically selecting two districts from each of the state’s 14 administrative divisions resulting in a total of 28 districts. At the district level, the total number of households determined sufficient for population-level indicators was 1,500. Urban blocks and the rural village served as the ultimate sampling units, hereafter referred to as the primary sampling units (PSUs), having administrative-political boundaries. Separate sampling procedures were followed for the rural and urban areas.
Selection criteria of rural villages and household

Villages were classified into four strata according to population size:

<table>
<thead>
<tr>
<th>Stratum</th>
<th>Population size of the village</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>100-499</td>
</tr>
<tr>
<td>II</td>
<td>500-1,999</td>
</tr>
<tr>
<td>III</td>
<td>2,000-4,999</td>
</tr>
<tr>
<td>IV</td>
<td>5,000 and above</td>
</tr>
</tbody>
</table>

Villages within the each stratum were arranged according to level of female literacy and the number of villages to be selected from each district was proportionally allocated across the strata. The selection of stratum was carried out using systematic random sampling (SRS).

The sampling formula was: $p_{ij} = \frac{a_j \cdot n_{ij}}{N_j}$

Where:

$p_{ij}$ = The probability of selecting village $i$ from and the $j$-th stratum within a district.

$n_{ij}$ = The number of households in the $i$-th village and the $j$-th stratum.

$a_j$ = The respective number of villages selected.

$N_j$ = The total number of households in the $j$-th stratum.

Selection criteria of urban block and household

Towns in the district were divided into two strata according to population size:

<table>
<thead>
<tr>
<th>Stratum</th>
<th>Population size of town</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>100,000 or more</td>
</tr>
<tr>
<td>II</td>
<td>Less than 100,000</td>
</tr>
</tbody>
</table>

All Towns in Stratum I were selected, while in stratum II all towns were arranged according to population size by using systematic random sampling (SRS). At least two blocks were selected from each town using PPS procedures. All households
selected in the blocks were then listed and mapped, and 15 households were selected from each urban block using SRS.

The sampling formula was, 

\[ u_{ij} = b_j \times x_{ij} / Y_j \]

Where:

- \( u_{ij} \): Probability of selecting the i-th urban block from the j-th town.
- \( b_j \): Number of urban blocks selected in the j-th town.
- \( Y_j \): The number of households in the j-th town.
- \( x_{ij} \): The number of households in the i-th block and j-th town.

3.3. Sample size

The PERFORM System of Indicators Survey employed a stratified, multistage cluster sampling design for households and service delivery points. Two districts for each of the 14 administrative divisions were selected. Fieldwork was carried out in 1,539 villages and 738 urban blocks. Interviews were successfully completed with 40,633 households and 45,262 eligible female residents. This study is using sample size of 7329, currently married women from the age group of 13 to 49 years.

3.4. Research instruments

Seven sets of questionnaires were used for the survey: the female, household, individual agent service delivery point, fixed service delivery point, staff person questionnaire as well as urban blocks and rural villages questionnaire. The study is uses only information related to female and household questionnaire in order to explore women’s exposure to mass media and relationship between other socio-economic and demographic variables and the use of contraceptive.
In the female questionnaire, the eligible women surveyed are those who are currently married and between the age of 13 to 49. The questionnaire covers the information related to respondent’s background, their reproductive health, three-years fertility and contraceptive history, knowledge concerning the availability of family planning services, exposure to family planning promotion activities, current and future use of family planning, and the quality of care they received during their last health and family planning contact.

The household questionnaire covers information relating to the head of the sampled household or another informed adult member, their eligibility status if female, residency status, age, gender, marital status, literacy and level of education. Additionally, the information was collected, in relation to caste, religion, and availability of electricity and household assets.

3.5. Operationalization of variables

A) Dependent variable

For the purpose of this study there is one dependent variable, that is contraceptive use.

Contraceptive use

This variable refers to the current use of contraceptive methods at the time of interview. It is categorized as using or not using. Women were asked whether they are currently using any contraception or not. It was coded as: Yes = 1 and No = 0.
(B) Independent variable

Mass media exposure

This variable refers to what extent that women have heard or seen any messages about family planning in the one month prior to the interview. For the purpose of this study, two sources of media have been used to get the information regarding exposure to that media. These are:

1. Exposure to the radio messages

Women were asked that whether they have heard any message relating to family planning on the radio one month prior to the interview. The answer was coded as Yes = 1 and No = 0.

2. Exposure to the TV messages

Women were asked that whether they have seen any message related to family planning one month prior to the interview. The answer was coded in to Yes = 1 and No = 0.

Demographic factors

Age: This refers to the current age of respondents at the time of interview. The age is a continuous variable.

Number of living children: Refers to the total number of the respondent’s living children at the time of interview. The number of living children is a continuous variable as well.
Socio-economic factors

*Residence:* Refers to respondent’s place of residence at the time of interview. For the purpose of this study it is used as a dummy variable where urban= 1 and Otherwise =0

<table>
<thead>
<tr>
<th>Name of the variables</th>
<th>Operational definition</th>
<th>Measurement scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residence</td>
<td>Place of the residence in where the respondent belongs Urban =1 and Rural = 0</td>
<td>Dichotomous</td>
</tr>
<tr>
<td>Exposed to the Radio Messages</td>
<td>Have respondent heard any message on the radio about family planning, one month prior to interview? Yes = 1 No = 0</td>
<td>Dichotomous</td>
</tr>
<tr>
<td>Exposed to the TV Messages</td>
<td>Have respondent seen any message about family planning on TV one month prior to interview? Yes = 1 No = 0</td>
<td>Dichotomous</td>
</tr>
</tbody>
</table>
District: The five districts of which the data was collected used for the analysis are
categorical variables. Banda =0 (ref. cat.), Gonda =1, Nanital = 2, Kanpur = 3
and Aligarh = 4

Education: Refers to the highest level of education that respondents have completed.
Education is a continuous variable.

Religion: Refers to respondent’s religion at the time of interview (It could change as
results of inter religious marriage or conversion to other religion). For the study two
dummy variables were created for Hindu, and Muslim. While other religions were
reference category, Hindu =1, Muslim =1, and other = 0

Table-2: Operational definition of the Variables

<table>
<thead>
<tr>
<th>Name of the variables</th>
<th>Operational definition</th>
<th>Measurement scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>Current age of the respondents</td>
<td>Continuous</td>
</tr>
<tr>
<td>Number of living children</td>
<td>Number of the children respondents had at the time of Interview</td>
<td>Continuous</td>
</tr>
<tr>
<td>Education</td>
<td>How many years respondents have been spend in the school?</td>
<td>Continuous</td>
</tr>
<tr>
<td>Number of household assets</td>
<td>Number of household belongings as a proxy for the household economical level. The six items are as follows: 1: Clock or watch 2: Fan 3: Radio or transistor 4: Television 5: Bicycle 6: Any motorized vehicles</td>
<td>Continuous</td>
</tr>
<tr>
<td>Electricity connection</td>
<td>Whether the household got electricity connection or not: Yes- 1 and No- 0</td>
<td>Dichotomous</td>
</tr>
<tr>
<td>Religion</td>
<td>Respondents’ religion at the time of interview. For this purpose two dummy variables have been created Hindu =1, Muslim =1, Other = 0</td>
<td>Dichotomous</td>
</tr>
</tbody>
</table>
Number of household assets: This variable is a proxy for household economic level. Possessions in the household were following: 1: clock or watch; 2: Fan; 3: radio or transistor; 4: television; 5: bicycle; 6: any motorized vehicles (motorcycle, scooter, car or tractor). For the purpose of this study it has been used as a continuous variable.

3.6. Data analysis

The data are analyzed with the help of SPSS/PC software package. Descriptive analysis is used to describe the distribution of the sample population’s background characteristics. Bivariate analysis (cross-tabulation) is used to examine the relationship between the dependent and independent variables. Finally, logistic regression is used to re-confirm the significance of the relationship between, independent and dependent variables.

3.7. Limitations of the study

This study is based on secondary data collected by PERFORM System of Indicator Survey from May to September 1995 in Uttar Pradesh, India. Since this study is based on secondary data it is confined within the boundaries of the previous study’s framework. Many problems were found during the analysis of data set, such as the inability to merge the two files. Due to this constraint, the study is unable to utilize the males’ involvement in contraceptive use and the influence of mass media in that regard. In Uttar Pradesh, women have very little autonomy in decision making as it lies primarily with the male in the household, therefore it is also important to consider this aspect.
CHAPTER IV

RESULTS AND DISCUSSIONS

This chapter presents the results of the data analysis, which will be discussed in four sections. The first section describes the extent of the mass media exposure and use of contraception in five districts that have been covered in this study. The second section presents the results of bivariate analysis (cross tabulation) to investigate the percent distribution of the variables, between selected independent and the dependent variable. Independent variables are mass media exposure, districts, religion, household possessions, residence and whether the household has electricity connection and the dependent variable is contraceptive use status. In the third section, the results of multivariate analysis based on the Logistic Regression are presented. For the multivariate analysis, four different models are used, Model 1 examines the effect of mass media exposure and utilization of contraception.

Model 2 examines the effect of mass media on contraceptive use after controlling for other independent variables. Model 3 examines the effect of other independent variables on the use of contraception without using the variable exposure to the mass media. Model 4a and 4b examines the effect of mass media on the other Independent variables such as socio-economic and other demographic variables. Finally in the fourth section, the results from bivariate analysis and multivariate analysis are summarized, and the study hypotheses that “there is a strong relationship between mass media exposure
and utilization of contraception use and mass media exposure and contraception use may vary based on socio-economic and demographic characteristics", are discussed and confirmed whether they are accepted or not.

4.1. The Data

This study is based on parts of the secondary data from the PERFROM System of Indicators Survey conducted in 1995 in Uttar Pradesh, under the auspices of Carolina Population Center. For the purpose of analysis, the study has used five districts in Uttar Pradesh. These five districts are Nanital, Aligarh, Kanpur Nagar, Gonda, and Banda. These districts represent the five regions of Uttar Pradesh that are Hill, Western, Central and Bundelkhand respectively. Analysis has been done with a sample size of 7,329 currently married women of reproductive age.

4.2. Results of univariate analysis

The first section of univariate analysis includes the frequency distribution of mass media exposure among five districts of Uttar Pradesh and the second section of the univariate analysis presents mass media exposure and contraceptive use status by selected demographic and socio-demographic characteristics.

4.2.1. Mass Media exposure in five districts of Uttar Pradesh

Exposure to mass media of women in the five districts of Uttar Pradesh was reported low as 70.6 percent women are not exposed to the messages is shown in Figure.
1, that represents Mass media exposure district wise. The total exposure to mass media messages under study is 29.4 percent and the women who are not exposed to the mass media messages are 70.6 percent of the total 7329 of women. The results of the study show an obvious differential for mass media exposure district wise. As shown in Figure 1, percentage by district ranges from high of 59.2 in Kanpurnagar to a low of 8.8 percent in Gonda district. Message recall was higher among women who reside in developed district like Kanpurnagar and Nanital. Kanpurnagar is a primarily industrial and highly urbanized district and Nanital is a hilly district. Banda and Gonda, are least developed districts. This finding confirms the previous finding, which reveals that economical development and regional differentials affect women’s reproductive behavior.

NHFS-2 1998-99 indicates that media exposure of women who belong to Bundelkhand region is higher then women who belong to other regions. However, data
analyzed in this study revealed that media exposure among women who belong to Bundelkhand region is lower, then women belongs to other regions. Bundelkhand is one of the least develop regions, therefor the exposure to mass media is substantially lower in this region. This finding is further supported by similar findings in studies conducted in parts of Africa, Bangladesh and Jordan (Kabir et al., 2000, McDivitt et al., 1993, Kincid et al., 1996 and Roger et al., 1999).

Exposure to mass media for women in Aligarh district was reported 30 percent. Exposure to TV family-planning messages was 23.4 percent and exposure to radio family planning messages was 23.4 percent as well. Since, in Aligarh Muslim population is higher, it has been reviewed that Muslim women are less likely to be exposed to the family planning messages in comparison to women from other religion. (Westoff et al., 1997 and Kabir et al., 2000)
The lowest Mass Media exposure was reported in Gonda where only 8.8 percent women were exposed to the TV programs or spots with family planning messages and 13.7 percent women were exposed to radio program or spots with family planning messages. In Banda district, 14.2 percent women were exposed to the TV spots or programs and 23.9 percent were exposed to the radio family planning programs. The highest exposure was recalled in Kanpurnagar where 42.5 percent were recalled to radio family planning messages and 59.2 percent were recalled to TV family planning messages.
4.2.2. Mass media exposure and use of contraceptive use

This section of univariate analysis presents mass media exposure and the contraceptive use status by selected demographic and socio-demographic characteristics (Please see Table-3)

4.2.2.1. Mass media exposure

The exposure to mass media has a significant affect on contraceptive use status. Nearly forty seven percent of women who are using contraception are those who have been exposed to radio family planning messages. Among the women who have been exposed to TV family planning messages the prevalence of contraception is 54.8 percent.

Figure: 3: Mass Media Exposure and Use of Contraception Among Women of Uttar Pradesh

Figure 3 show an obvious effect of mass media on women’s contraceptive use status. It shows that TV has the greatest influence on contraceptive use status. This finding
confirms the previous finding that women who are exposed to mass media family planning messages are more likely practice contraception in comparison to other women who are not exposed to any type of media messages about family planning. It is because mass media communication techniques are an effective way to diffuse information about family planning and to effect changes in attitudes toward and practice of contraception in a variety of populations (Kane et al., 1998).

Table-3: Percent distribution of mass media exposure and Use of contraceptive among women of U.P

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Exposed to Radio messages</th>
<th>Exposed to TV messages</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Contraceptive use status</td>
<td>(927) 46.9%</td>
<td>(1464) 27.5%</td>
<td>2391</td>
</tr>
<tr>
<td>Using</td>
<td>(1051) 53.1%</td>
<td>(3855) 72.5%</td>
<td>4906</td>
</tr>
<tr>
<td>Not using</td>
<td>100%</td>
<td>100%</td>
<td>7297</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contraceptive use status</td>
<td>(1181) 54.8%</td>
<td>(1210) 23.5%</td>
<td>2391</td>
</tr>
<tr>
<td>Using</td>
<td>(976) 45.2%</td>
<td>(3930) 76.5%</td>
<td>4906</td>
</tr>
<tr>
<td>Not using</td>
<td>100%</td>
<td>100%</td>
<td>7297</td>
</tr>
</tbody>
</table>

4.3. Media exposure, contraceptive use status and socio-demographic characteristic

In this section four types of socio-demographic characteristics have been examined. This includes district, whether the household belongs to urban area, number of household possessions (as a proxy of household economical status), whether the household has electricity connection and religion.
4.3.1. Contraception use status among women of five districts

There is an obvious differential in district wise contraceptive use status. Lowest contraceptive use could be noted in Banda and Gonda. Among these districts Gonda has the lowest contraceptive use of 11.3 percent and Banda has 26.8 percent. It has been noted earlier that these districts are known for their poor health service and development. Women who belong to these districts tend to use less contraceptives than other women who belongs to rest of the other districts. The low contraceptive prevalence could be because women from these districts are less exposed to the mass media family planning messages. In Aligarh again, contraceptive percentage declined, only 26.3 percent women are using contraceptives out of a total of 1336 women. This is because majority of women in this district are Muslims and as it has been noted earlier that Muslim women tend to recall mass media family planning messages less then women from other religion. That is why contraception prevalence is low among them.
The total prevalence of contraception is 32.8 percent among the five districts of the state. Out of 7297 women only 2391 women are practicing contraceptive that is very low in comparison to other India regions. The reason behind for this wide gap is, because Nanital and Kanpurnagar are considered as well developed districts with higher literacy rate. Kanpurnagar is basically an industrial district and Nanital is a hilly district populated primarily by ethnic hill tribes. As has been mentioned earlier that tribes are more likely to use contraceptives in compare to other ethnic groups, additionally it has been quoted that economical status and education has significant effect on use of contraception.

4.3.2. Difference in urban and rural settings

Women who live in urban areas, among them the use of contraception is higher than women who live in rural areas. More than forty eight percent of urban women are practicing contraceptive, where only 25.5 percent rural women in the survey are practicing contraception. This difference is because of knowledge about contraceptive and exposure to mass media. As it has been reviewed that women who reside in urban areas their knowledge about contraceptive in higher than women who reside in rural areas, because urban women are more exposed to the mass media family planning message than rural women (Westoff et al., 1999, Martin et al., 1994 and Piotrow et al., 1990).
### Table 4: Percent distribution of socio-demographic characteristic and Use of contraceptive

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Districts</th>
<th>Banda</th>
<th>Gonda</th>
<th>Nainital</th>
<th>Kanpur Nagar</th>
<th>Aligarh</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contraceptive use status</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Using</td>
<td></td>
<td>(480)</td>
<td>(169)</td>
<td>(736)</td>
<td>(654)</td>
<td>(352)</td>
<td>2391</td>
</tr>
<tr>
<td></td>
<td></td>
<td>26.8%</td>
<td>11.3%</td>
<td>50.5%</td>
<td>53.7%</td>
<td>26.3%</td>
<td></td>
</tr>
<tr>
<td>Not using</td>
<td></td>
<td>(1308)</td>
<td>(1325)</td>
<td>(721)</td>
<td>(565)</td>
<td>(987)</td>
<td>4906</td>
</tr>
<tr>
<td></td>
<td></td>
<td>73.2%</td>
<td>88.7%</td>
<td>49.5%</td>
<td>46.3%</td>
<td>73.7%</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>7297</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Contraceptive use status</th>
<th>Residence (Urban)</th>
<th>Yes</th>
<th>No</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Using</td>
<td></td>
<td>(1125)</td>
<td>(1266)</td>
<td>2391</td>
</tr>
<tr>
<td></td>
<td></td>
<td>48.2%</td>
<td>25.5%</td>
<td></td>
</tr>
<tr>
<td>Not using</td>
<td></td>
<td>(1207)</td>
<td>(3699)</td>
<td>4906</td>
</tr>
<tr>
<td></td>
<td></td>
<td>51.8%</td>
<td>74.5%</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>100%</td>
<td>100%</td>
<td>7297</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Contraceptive use status</th>
<th>Household has electricity connection</th>
<th>Yes</th>
<th>No</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Using</td>
<td></td>
<td>(1597)</td>
<td>(794)</td>
<td>2391</td>
</tr>
<tr>
<td></td>
<td></td>
<td>46.3%</td>
<td>20.7%</td>
<td></td>
</tr>
<tr>
<td>Not using</td>
<td></td>
<td>(1850)</td>
<td>(3050)</td>
<td>4900</td>
</tr>
<tr>
<td></td>
<td></td>
<td>53.7%</td>
<td>79.3%</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>100%</td>
<td>100%</td>
<td>7294</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Contraceptive use status</th>
<th>Number of household assets</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Using</td>
<td></td>
<td>(148)</td>
<td>(263)</td>
<td>(301)</td>
<td>(410)</td>
<td>(357)</td>
<td>(357)</td>
<td>(377)</td>
<td>2389</td>
</tr>
<tr>
<td></td>
<td></td>
<td>16.6%</td>
<td>21.6%</td>
<td>22.5%</td>
<td>31.4%</td>
<td>43.5%</td>
<td>43.5%</td>
<td>50.6</td>
<td></td>
</tr>
<tr>
<td>Not using</td>
<td></td>
<td>(744)</td>
<td>(953)</td>
<td>(1037)</td>
<td>(896)</td>
<td>(464)</td>
<td>(521)</td>
<td>(288)</td>
<td>4903</td>
</tr>
<tr>
<td></td>
<td></td>
<td>83.4%</td>
<td>78.4%</td>
<td>77.5%</td>
<td>68.6%</td>
<td>56.5%</td>
<td>49.4%</td>
<td>43.3</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>7292</td>
<td></td>
</tr>
</tbody>
</table>
4.3.3. Number of household possessions

This survey had used number of household possessions as a proxy of household economical status. As it is quite obvious that (Table 4) as number of household possessions increases the prevalence of contraception is also increasing. It suggests that that woman who has higher economical status they are more exposed to the mass media family planning message because they are able to possess TV and radio. As it has been reviewed that economic status is one of the determinant of media exposure. This study reveals that measures of socio-economic status such as owning a clock, radio motorcycle, bicycle and car indicate a direct association with media exposure. Women who are more exposed to mass media family planning messages are more likely to use contraception.

4.3.4 Electricity connection

Forty six percent of women who are living with the facility of electricity are using contraception in contrast women who has no access to electricity, the prevalence of contraception is only 20.7 (n= 794) percent. It reveals that women's living status has influence on the contraceptive use status. This indicates that women who have access to electricity are more knowledgeable about contraception because they are more exposed to the mass media family planning messages through TV and radio program. It also implies that women with access to electricity have better economical status and greater access to the use of TV and radio and they belongs to urban areas in comparison with women who have no access to electricity. Mass media exposure has strong and consistent associations with having electricity in the home particularly for television.
4.3.5. Religion and use of contraception among women of Uttar Pradesh

The following table-5 shows percent distribution of contraceptive use status among different religious groups in Uttar Pradesh in India.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Religion</th>
<th>Hindu</th>
<th>Muslim</th>
<th>Others</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contraceptive use status</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Using</td>
<td></td>
<td>(2047)</td>
<td>34.0%</td>
<td>(252)</td>
<td>22.7%</td>
</tr>
<tr>
<td>Not using</td>
<td></td>
<td>(3982)</td>
<td>66.0%</td>
<td>(857)</td>
<td>77.3%</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>100 %</td>
<td>100 %</td>
<td>100 %</td>
<td>7294</td>
</tr>
</tbody>
</table>

The lowest contraception use prevalence was noted among Muslim women of 22.7 percent, and the highest among other caste women of 59.0 percent. Religion has an obvious affect on contraceptive use status. Women, of other religions, reported with higher contraceptive prevalence comparison to women of Hindu or Muslim religions.

The contraceptive use prevalence reported lowest among Muslim women. As it has been reviewed that Muslim women are less likely to be exposed to be mass media family planning message. Previous finding also reveals that Hindu women are exposed to mass media family planning messages, more than Muslim women, therefore among them the prevalence of contraception is higher then Muslim women. Women from other religions have been found more exposed to mass media family planning message then Hindus and Muslim women. This findings confirms the finding of previous studies that religion do have effect on contraceptive use status (Kabir et al., 2000, Retherford et al., 1997).
4.4. Regression Model

This section presents the results of the binary logistic regression analysis predicting the exposure to mass media and utilization of contraception using various independent variables related to women’s demographic and socio-economic status. Four models have been used here, using three dependent variables—contraception use status, exposure to radio family planning messages and exposure to TV family planning messages. These dependent variables have been used for all women of the selected sample for both urban and rural areas of all five districts. The first model presents the regression model of mass media exposure and use of contraception. The second presents the contraceptive use and exposure to mass media after controlling for other factors. The third model presents the contraceptive use according to the women’s demographic and socio-economic status. The model fourth ‘a’ and fourth ‘b’ presents exposure to mass media according to women’s demographic and socio-economic status.
Table-7: Mass media exposure and contraceptive use among women of Uttar Pradesh- India (Estimates of logistic regression coefficients)

<table>
<thead>
<tr>
<th>DEPENDENT VARIABLES</th>
<th>Model I</th>
<th>Model II</th>
<th>Model III</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>B</td>
<td>B</td>
</tr>
<tr>
<td>Independent Variables</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radio Message * Yes=1</td>
<td>.4293**</td>
<td>.4583**</td>
<td></td>
</tr>
<tr>
<td>TV Message b Yes =1</td>
<td>1.23**</td>
<td>.5399**</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>.0460**</td>
<td>.0441**</td>
<td></td>
</tr>
<tr>
<td>No of living children</td>
<td>.2226**</td>
<td>.2241**</td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>.0510**</td>
<td>.0646**</td>
<td></td>
</tr>
<tr>
<td>Residence</td>
<td>.2890**</td>
<td>.3657**</td>
<td></td>
</tr>
<tr>
<td>Electricity c</td>
<td>.4046**</td>
<td>.4969**</td>
<td></td>
</tr>
<tr>
<td>No of household assets</td>
<td>.0574**</td>
<td>.1301**</td>
<td></td>
</tr>
<tr>
<td>Religion: Hindu</td>
<td>-.57**</td>
<td>-.6158**</td>
<td></td>
</tr>
<tr>
<td>Muslim</td>
<td>-1.40**</td>
<td>-1.4508**</td>
<td></td>
</tr>
</tbody>
</table>

* = p < .05,  ** = p < .01

a: Have respondents heard any messages about family planning on radio one month prior to the interview,

b: Have respondents seen any messages about family planning on TV one month prior to the interview and

c: Whether the household has electricity connection or not

4.4.1. Mass media exposure and use of contraception (Table- 7: Model-I,)

In the model one, the relationship between influence of mass media and contraceptive use status has been examined. According to the regression model women who are exposed to TV family planning messages the odds using contraceptives is nearly three times (Exp.(1.23) = 3.42) more in comparison with women who are not exposed to any TV family planning messages. The empirical
evidence largely indicates that mass media family planning messages have greater affect on women's contraceptive use status. The contraceptive use status of women who are exposed to the TV family planning messages and to the radio family planning messages is higher than among women who are not exposed to any kind of mass media family planning messages. (Jato et al., 1999, and Westoff et al., 1993).

The result also revealed that women who are exposed to radio family planning messages, the affect of messages on their contraceptive use behavior is statistically significant. Women who are exposed to the radio family planning messages are 1.53 times more likely to practice contraception in comparison with women who are not exposed to any kind of radio family planning messages. Regarding exposure to radio and TV family planning messages, TV has more positive effect on women's contraceptive use status. Women who are exposed to TV family planning messages are three times more likely to practice contraception than women who are exposed to radio family planning messages.

4.4.2. Contraceptive use status according to the women's socio-demographic characteristics (Table-7; model II and III)

The model two and three presents the relationship between contraceptive use status according to the selected socio-economic and demographic characteristic. Since one of the basic messages of this analysis is that exposure to media messages about family planning is affected very much as expected, by the usual roster of demographic, and socioeconomic and cultural characteristics of the respondents.
Therefore, it is necessary to control these attributes in this analysis of the association between media exposure and reproductive behavior (contraceptive use).

After controlling factors like demographic and other socio-economic factors, exposure to mass media family planning messages and use of contraceptives show a positive relationship. The odds of TV and radio \( \text{radio exp.} \cdot 4583 = 1.58 \) & \( \text{TV exp.} \cdot 5399 = 1.71 \) family planning messages are the highest in the model two in comparison to other control variables. Women who are exposed to radio family planning messages, among them odds of having positive attitudes towards use of contraception are 58.13 percent \( 100[\exp(4.583) - 1] = 58.13 \) more than that of women who are not exposed to any kind of radio family planning messages.

Considering exposure to TV family messages it is also significant that women who are exposed to TV family planning messages are \( \text{TV exp.} \cdot 5399 = 1.72 \) 1.72 time more likely to practice contraception than women who are not exposed to any kind of TV family planning messages. After controlling other factors, religion has a negative relationship towards exposure to mass media and use of contraceptives. Muslim women are 76.54 percent \( 100(1 - \exp^{-1.45}) = 76.54 \) less likely to be exposed to mass media family planning messages and practice contraception in contrast with women from other religions. Hindu women are 45.6 percent \( 100(1 - \exp^{-6.1}) = 45.66 \) less likely to be exposed and practice contraception compared to women from other religions. This finding confirms previous findings that Muslim women are less likely to be exposed to mass media family planning messages and they are less likely to utilize contraceptives. (Kabir et al., 2000, and Retherford et al., 1997). Other than this
Westoff et al., 1993 and Bankole 1994, in their study from Africa found that there are other factors as well that affect the exposure to mass media exposure and utilization of contraceptives.

Table 8: Demographic and Socio-economic determinants of Exposure to Mass media among women (Estimates of logistic regression coefficients)

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Model-IV. a</th>
<th>Model-IV. b</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>-0.0062</td>
<td>-0.0088</td>
</tr>
<tr>
<td>No. of living children</td>
<td>0.0221</td>
<td>0.0890**</td>
</tr>
<tr>
<td>Education</td>
<td>0.0436**</td>
<td>0.1090**</td>
</tr>
<tr>
<td>Residence</td>
<td>0.0546</td>
<td>0.9050**</td>
</tr>
<tr>
<td>Electricity a</td>
<td>0.0836</td>
<td>1.296**</td>
</tr>
<tr>
<td>No of household assets</td>
<td>0.3091**</td>
<td>0.6465**</td>
</tr>
<tr>
<td>Religion: Hindu</td>
<td>0.3672*</td>
<td>-1.121**</td>
</tr>
<tr>
<td>Muslim</td>
<td>0.2201</td>
<td>-1.191**</td>
</tr>
</tbody>
</table>

* = p < .05, ** = p < .01

a. Whether the household has electricity connection or not

4.5. Determinants of Exposure to the Radio and TV family planning messages

4.5.1. Model-IV a

'Model IV a' shows that there is a positive relationship between exposure to the radio family planning messages and number of living children but there is a negative relationship between women's age and exposure to the radio family
planning messages. In order to show how good the relationship is between age and exposure to radio family planning messages, a couple of regression models have been run with selected age groups of women (women less than 22 years and women more than 22). The study found that among women from age group of 22 or less, exposure to radio family planning increases but after that it decreases (more than 22). This finding confirms the findings of Westoff et al., 1994, which age exposure to media messages increases up to age 22 and then declines.

Table 8 shows that there is a positive relationship between exposure to radio family planning messages and education. The odds of education \[100(e^{0.043}-1) = 4.49\], on having positive attitudes towards exposure to the radio family planning messages are four percent more than in comparison with women who are illiterate. Number of living children also shows a substantial affect on exposure to radio family planning messages. It has positive relationship with exposure to radio family planning messages. Exposure to radio family planning increases up to three numbers of children but it declines thereafter. For this purpose a number of regression model have been run with the selected number of children in order to find that how good the relationship is with exposure to radio family planning messages. Numbers of household assets also have a positive affect on exposure to radio family planning messages. The odds of assets for having positive attitudes towards exposure to radio family planning messages is \[100(e^{3.1}-1)=36.34\] 36 percent more than women who have no household assets.
4.5.2. Model-IV b

'Model-IV b' presents the determinants of the exposure to TV family planning messages. The results show that electricity has the highest positive affect (exp.1.29 = 3.65) on exposure to TV family planning messages. Women who have electricity connection in their homes, the odds of having positive attitudes towards exposure to TV family planning messages are three times more than in contrast women who have no electricity connection in their homes. The second highest relationship is with place of residence (exp.9050 = 2.47) - women who live in urban areas the odds of having positive attitudes towards exposure to TV family planning messages are two times more than women living in rural areas. The third highest positive relation could be seen with the number of household assets (exp.6465 = 1.90) and exposure to TV family planning messages. Women with access to all kinds of household assets are 89 percent more likely to be exposed to TV family planning messages [100(e^{64-1}) = 89.64] in comparison with women who have no household assets.

The fourth highest positive effect is education. Increase in every one years of education, increases 10 percent [100(e^{10}-1) = 10.51] of having positive attitudes towards exposure to TV family planning messages. These finding are confirmed by the earlier finding of Westoff et al., 1993, Bankole, 1994, Jato et al., 1999, Westoff et al., 1997 and Kane et al., 1998. These researchers, in their studies in parts of many African countries found that electricity, place of residence, economical status and education do have substantial affect of exposure to TV family planning messages. They also found that electricity had the highest positive affect on exposure to the TV
family planning messages. It is quite obvious as well that in order to use TV we need to have electricity.

4.6. Summary of Results from Bivariate and logistic regression analysis

The results from bivariate analysis discussed above have shown the association of the dependent variable as well as each of the independent variables with mass media exposure among women of Uttar Pradesh, India. In general, the results from bivariate analysis suggest that mass media exposure is one of the prime determinants for contraceptive use status. It is quite evident that women who are exposed to mass media family planning message are more likely to practice contraception in comparison with women who are not exposed or less exposed to the mass media family planning messages.

The results of cross tabulation analysis district wise shows very significant difference between mass media exposure and use of contraception. Women, who belong to Banda, Gonda and Aligarh districts they are less likely to be exposed to the mass media family planning messages. Consequently, they are less likely to use contraceptives. Women of Kanpurnagar and Nanital are more likely to be exposed to the mass media family planning messages, consequently they are more likely to practice contraception. Result of cross tabulation also shows that the use of contraception is related with some other socio-demographic variables, for example residence, household possessions, electricity connection and religion. It shows that women, who reside in rural areas with no access to electricity connection and with no or less household possessions, are less likely to be practicing contraception. This is
because women from rural areas they are less exposed to the mass media family planning messages than urban women. In urban areas there are several means of mass media, therefore, women are exposed to these means very easily. Relationship between number of household assets and use of contraception has also very significant relationship.

Women who have no assets, reflects their low economical status and they are less exposed to the mass media family planning messages. Electricity is significantly associated with mass media family planning exposure for obvious reasons. Hence, the results from bivariate analysis suggest the hypotheses on the association between dependent variable and independent variables, that there is a strong relationship between mass media exposure and utilization of contraception and that mass media exposure and contraception use may vary based on socio-demographic characteristics, are statistically true.

The results from logistic regression analysis also show a positive association between mass media exposure and utilization of contraceptives. The relationship between mass media exposure and utilization of contraception has been found statistically significant. Women who are exposed to media message are two to three times more likely to be practicing contraception in comparison with women who are not exposed to any type of media. After controlling other factors, the affect of mass media has very significant relationship with dependent variable. Electricity has been found to have a very strong affect on women's contraceptive use status; the second highest affect is that of place of residence. This relationship has been found
unchanged in bivariate analysis as well. The effect of control variables included in Model 3 also shows the strong affect of electricity and place of residence on contraceptive use status. With regard to the effect of other socio-demographic variables on the exposure of mass media, the results show an obvious differential according to socio-demographic characteristics for the exposure of TV family planning messages, where electricity is highly significant. However, in relation to exposure to radio family planning messages, the number of household possessions is highly significant. Residence is highly significant for TV mass media family planning message but for radio mass media family planning message residence and electricity are statistically not significant.

The results of binary logistic regression finds its statistically true that there is a strong relationship between mass media exposure and utilization of contraceptives and mass media exposure and contraception use may vary based on socio-demographic characteristics.
CHAPTER V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

The purpose of this chapter is to summarize the major findings of this study and to formulate recommendations for further research on this issue as well as to suggest recommendations for policy formulation and program implementation for enhancing the level of mass media exposure and utilization of contraception in Uttar Pradesh, India. This study has analyzed parts of the secondary data collected by PERFORM System of Indicator Surveys, of 1995 in 28 districts of Uttar Pradesh. The survey interviewed 40,633 households and 45,262 eligible female residents. However, for the purpose of this study only sample size of 7329 currently married women from five districts of Uttar Pradesh, of the age group of 13 to 49 years have been used as base of analysis.

The main objective of this study was to identify the relationship between exposure to mass media family planning messages and contraceptive use status among women of the Uttar Pradesh. The study found that exposure to mass media family planning messages is the one of the important factors to effect the contraceptive use status among women of Uttar Pradesh. Additionally, there are some other important factors that influence contraceptive use among women of Uttar Pradesh such as socio-economic and demographic factors.
A total of 9 variables were selected for the study under the broad categories of demographic, socio-economic, and cultural factors. Both for cross tabulation analysis and for the logistic regression all nine variables have been used. The analysis establishes the notable affect of mass media exposure on contraceptive use status.

5.1. Summary of the findings and conclusion

The result of cross tabulation shows that women who are exposed to the TV family planning message are more likely to use contraception in comparison to women who are exposed to radio family planning messages. It shows us that TV is one of the most effective sources of media to disseminate family planning messages.

It also shows an obvious differential district wise contraception practice. It shows that women in Nanital and Kanpur are more likely to use contraception in comparison with those of other three districts. This is because Nanital is basically a hilly district and Kanpur is an industrial district. As it has been reviewed that socio-economic development is one of the key determinant of exposure to mass media. Aligarh is Muslim dominated district therefore contraceptive use status has drop down in this region. Banda and Gonda are socially and economically least developed districts with history of lower contraceptive use prevalence.

For logistic regression, the model-four shows that mass media does have a strong relationship with contraceptive use status. Additionally electricity, number of
living children and residence also has highly significant effects on exposure to mass media and use of contraception practice.

The analysis shows increase in the mass media exposure with the increase in the age of women and among women with higher number of living children, reaching the highest in the age group 22 years and those with 3 living children, and thereafter, showing a gradual decline. The relationship between electricity connection and the exposure to the mass media family planning have been found significant. Electricity is found highly significant with the exposure to the TV family planning messages. The household assets have also been found significantly associated with the exposure to the mass media family planning messages and the use of contraception.

The understanding of these factors seems to be of utmost importance in bringing improvements in the family planning program in order to reduce maternal and infant mortality and to achieve the goal of population stabilization in the state and in the country as a whole.

5.2. Recommendations

Many policy makers and program managers are interested in increasing the practice of contraception in order to control fertility in the state and for the betterment of maternal and child health in Uttar Pradesh. Based on the findings of the study, the recommendations are as follows:
(1) As the results of this study show, exposure to mass media family planning messages has a very positive relationship with the use of contraception. Therefore, this study emphasizes that the Government of Uttar Pradesh should promote more family planning messages on radio and TV. These messages should not only talk about the methods of contraception it should also educate women to improve and sustain their own and their child’s health through birth spacing methods.

(2) As mentioned in the first chapter, in Uttar Pradesh, knowledge of family planning is nearly universal, but only 32 percent of currently married women are using contraception. Therefore, this study recommends that the further in-depth research must be conducted in order to find out the relationship between mass media exposure and utilization of contraception. It should try to find out that what kind of mass media family planning messages have a positive effect on the utilization of contraception among women of Uttar Pradesh.

(3) As the results show, although exposure to mass media is greater among urban women, still it is not much pronounced in the rural areas of this state. The government should make an attempt to reach these parts of the state and try to educate women. The government should introduce more alternative methods for contraception and enlist the help of local health practitioners and Dais (Traditional Birth Attendant) to provide these counselling and introduction services.
(4) Contraceptive use is taboo among certain religious groups as is quite obvious from the finding that Muslim women are less likely to be exposed to the mass media family planning and practice of contraception. Policy makers should not use the word “birth control” for those women who belong to specific religions. They could instead introduce the word “birth spacing”, and raise awareness of these women on the positive effects of birth spacing in improving maternal and child health.

(5) As the research has revealed, women in Uttar Pradesh tend to marry at a very early age. However, we find a very low level of contraceptive use prevalence among young women (only 13 percent age group of 15-24). Mass media family planning messages would be effective if their primary targets are such young women because in Uttar Pradesh 50 percent women from age group of 15-19 are already married. The messages should more designed for them with idea that younger age is good to enjoy happy family life, there is no need to rush for having child. Having children at the correct age will help to ensure better child and maternal health.

(6) For the past several years, the government programme emphasis has been on sterilization. There are many other methods that women might like to use but because of lack of knowledge many misconceptions exist about other methods. Women and men opt for sterilization whenever they reach their desired family size (could be more than three children). Therefore, the TFR remains the same. In
order to control the high TFR there should be campaign on other methods too and the attempt to make sterilization not the only alternative.

(7) The study showed that household electricity connection has an influence on the contraceptive use. The high percentages of women whose houses have no electricity connection were found to relate to the reluctance to the practice of contraception. Therefore, some serious steps need to be taken to reach these women through other mediums and means and to try to improve infrastructure that will enable electricity connection in these communities.

(8) According to this study, the contraceptive use in rural areas is still very low. Since, majority of the population (about 80 percent) reside in rural areas, more inputs on family planning should be directed towards rural areas in order to fill up the gap between the urban and the rural population. The quality and coverage of family planning services should be monitored on regular basis in order to improve the contraceptive prevalence rate, especially in rural areas.

(9) For the improvement of family planning programs, the mass media messages about family planning should emphasize the involvement of men. As it has been noticed that women have very little autonomy in the state, they are dependent on the older members of the household, and men who are not always aware of or taking positive roles in the well being of women’s reproductive health as a result of their choice of contraception practice.
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APPENDIX- A

LOCATION OF UTTAR PRADESH IN INDIA

PAKISTAN

CHINA

JAMMU & KASHMIR

UTTARANCHAL

NEPAL

BHUTAN

ARABIAN SEA

BAY OF BENGAL

Map not to Scale

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APPENDIX – B

UTTAR PRADESH (District Map)

1. Muzaffarnagar 48. Kaushambi
2. Bijnor 49. Pratapgarh
3. Meerut 50. Ambedkar Nagar
4. Baghpat 51. Sant Kabir Nagar
5. Ghaziabad 52. Maharajganj
6. Bulandshahr 53. Allahabad
7. Jyoti Phule Nagar 54. Jaunpur
8. Moradabad 55. Azamgarh
9. Rampur 56. Gorakhpur
10. Aligarh 57. Deoria
11. Budaun 58. Kushinagar
12. Bareilly 59. Sant Ravidas Nagar
13. Pilibhit 60. Mirzapur
15. Hathras 62. Ghazipur
16. Etah 63. Mau
17. Shahjahanpur 64. Chandauli
18. Lakhimpur 65. Sambhadra
19. Agra 66. Lalitpur
20. Firozabad 67. Saharanpur
21. Mainpuri 68. Gaetam Buddha Nagar
22. Farrukhabad 69. Banda
23. Hardoi 70. Basti
24. Sitapur
25. Bahraich
26. Etawah
27. Kanpur
28. Auraiya
29. Kanpur (Rural)
30. Kanpur (Urban)
31. Unnao
32. Lucknow
33. Barabanki
34. Gonda
35. Shravasti
36. Baharampur
37. Jalaun
38. Jhansi
39. Hamirpur
40. Faizabad
41. Raebareilly
42. Sultanpur
43. Faizabad
44. Basti
45. Sidhharthnagar
46. Mahoba
47. Chitrakut

Map not to Scale

- State Capital
- International Boundary
- State Boundary

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APPENDIX –C

(Note: This questionnaire has been adapted from the PERFORM System of Indicators Survey 1995-96)

PERFORM SYSTEM INDICATORS SURVEY IN UTTAR PRADESH
HOUSEHOLD QUESTIONNAIRE
IDENTIFICATION

1: Type of schedule __________
2: Name of the district __________
3: Name of the tehsil/town__________
4: Name of the village/urban block__________
5: PSU number__________
6: Household number__________
7: Name of the head of the household__________

Information on household

8: Religion of the head of the household
   Hindu__________1
   Sikh__________2
   Christian______3
   Buddhist_______4
   Jain___________5
   Muslim________6
   Other (specify)____7

9: Does the head of the household belong
to a schedule tribe?
   Yes__________1
   No__________2

10: To which caste the head of the household
    belong to?
       Schedule castes____1
       Backward castes__2
       General castes____3
       Not applicable____4

11: Has this household got electricity
    connection?
       Yes__________1
       No__________2

12: Does this household own any of the
    Followings:
       A clock or watch? 1 2
       A fan? 1 2
       A radio or transistor? 1 2
       A television? 1 2
       A bicycle? 1 2
       A motor cycle or scooter or car or tractor? 1 2
### Women's schedule

#### Background characteristics

13: What is your birth date?

- Month: ________
- DK month

14: What is your current marital status?

- Currently married
- Separated
- Widowed
- Divorced
- Never married

15: Have you ever-attended school?

- Yes ________
- No ________

16: Can you read or write?

- Yes ________
- No ________

17: How many years of schooling have you completed? Years of schooling: ________

18: How many live births have you had? Total birth: ________

19: How many are now surviving? Total surviving: ________

20: How many are not surviving? Total not surviving: ________

21: When was your last live birth? Month: ________

### Information about current use of family planning

22: Are you currently using a family planning method? Yes ________ No ________

### Information on media exposure

23: Have you heard or seen any messages about family planning in the last month?

- Yes ________
- No ________

24: Where did you hear or seen any messages about family planning in the last month?

- Interpersonal visit
- Group meeting
- Mahil Mandel
- Youth club
- Orientation
- Training camps
- Mass Media
- Radio
- Television
- Cinema/film
- Print material
- Hoarding
- Wall paintings
- Other (specify)
APPENDIX-D

WOMEN'S CONDITION IN UTTAR PRDESH

Marriage is virtually universal in Uttar Pradesh and marriage in rural areas take place at relatively young ages. At age 15-19, 32 percent of women in Uttar Pradesh are married. Additionally eight - percent reported that they are married but gauna\(^1\) has yet to perform. The proportions of ever married at age 15-19 are much lower in urban areas (16 percent) than in rural areas (47 percent). Marriage at very young ages has been declining dramatically over time. The proportion marrying by age 13 declined from 37 percent in the 45-49-age cohort to less than 1 percent in the 13-14-age cohort. Similarly, the proportion marrying by age 15 decline from 59 percent in the 45-49-age cohort to 21 percent in the 15-19 age cohort. Marriages below age 15 have been virtually eliminated in the urban areas. The median age at marriage has been rising in both urban and rural areas, but the rate of increase has been considerably faster in urban areas. Urban women now marry more than four years later than rural women do.

Differences by religion are notable, with Muslims (who are more concentrated in urban areas) marrying about one and half years later than Hindus. The lower median age at marriage is exhibited by the scheduled caste group, in which half the women have married by age 14. Even in the group, however' the median age at marriage is beginning to rise (Source: National Family Health Survey 1992-93).

Considering women's autonomy in Uttar Pradesh, research finding (Bloom et al., 2001, NFHSSR-1997 and Bloom et al., 2000) show that women in this state have very little independence. They are totally reliant on their husband and the elderly of the household in regard to their personal choice of seeking health care. Bloom et al., argues that in Uttar Pradesh, if individual who have power to make decision don't understand when medical attention is needed, women may not get the necessary care in time to save their lives. Women in Uttar Pradesh tend to marry at an early age. Thirty two percent of women aged 15-19, are already married, and an additional eight percent report that they are married but gauna\(^1\) has yet to be performed. In rural areas, almost half of the women age 15-19 have already married (NFHS-2 Uttar Pradesh 1998-99).

\(^{1}\) gauna is the ceremony to celebrate the attainment of puberty by young married girls. It also indicates that she is ready to become a mother. It is the official going away ceremony of the bride to her husband's house. But in reality there have been many cases that girls are sent away to their husband's house before they reach to puberty.

Girls who are sent away to their husband's house before reaching puberty, conceive at very young age, the consequences of the immature pregnancy is not good for these girls as well as for their infants. A mother's health affects the health of her children. To survive the vulnerable first few days and year, children need a good start in life. Women who are immature, have poor health or poorly nourished are more likely to deliver unhealthy babies. Additionally, it has been seen that very young mother cannot provide adequate care to their babies that diminish the chance of their child survival and thrive. Teenage girls who are not physically mature are at the risk of abstracted labour
and complications during delivery. A study in Bangladesh shows that when a mother dies after giving birth, her newly born has a very little chance of surviving until his first birthday. (PPR, 2000)

How family planning protects the health of the mother and child?

Family planning dramatically improves the health and chances of survival of both mothers and children. The main advantages of family planning are as follows:

- Family planning is good for girls who are under 18 and women who are over 35 years of their age, and those who already have health problems. It can prevent high-risk pregnancies and on top of that it could prevent at least one-quarter of maternal deaths (PPR, 2000).

- Due to unwanted pregnancies, 50 million abortions occur, many of them performed under unsafe conditions. Each year about 75,000 women die from unsafe abortions. With the help of family planning, many deaths from unsafe abortions could be prevented (Solo et al., 1999).

- Birth spacing improves child health. The timing of birth has powerful impact on a child's chances of survival. Over the past two decades, surveys have shown that children born less than two years after the previous birth are twice as likely to die by year one than children born two to four years apart (PPR, 2000).

- No spacing of birth harms the health of the mother and baby during pregnancy and forces her children to complete for nourishment and maternal care.

- When a woman conceives soon after her previous delivery, she has had no time to fully recover from the previous pregnancy. The new baby often develops too slowly and is born underweight or premature, increasing its chances of dying in infancy.
APPENDIX-E

Percent distribution of age of the women and Use of contraceptive among women of U.P.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Age</th>
<th></th>
<th></th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>15-24</td>
<td>25-34</td>
<td>35+</td>
<td></td>
</tr>
<tr>
<td>Contraceptive use status</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Using</td>
<td>(288)</td>
<td>(1035)</td>
<td>(1068)</td>
<td>2391</td>
</tr>
<tr>
<td></td>
<td>13.2%</td>
<td>36.6%</td>
<td>47.2%</td>
<td></td>
</tr>
<tr>
<td>Not Using</td>
<td>(1901)</td>
<td>(1794)</td>
<td>(1193)</td>
<td>4888</td>
</tr>
<tr>
<td></td>
<td>86.8%</td>
<td>63.4%</td>
<td>52.8%</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>7279</td>
</tr>
</tbody>
</table>

Contraceptive use status according to women's age

![Bar chart showing contraceptive use status by age](chart.png)
APPENDIX-F

RESULT OF REGRESSION ANALYSIS AGE WISE

(Radio)

<table>
<thead>
<tr>
<th>Age less than 22</th>
<th>β</th>
<th>S.E.</th>
<th>sig.</th>
<th>Exp. (β)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.077</td>
<td>.029</td>
<td>.0068</td>
<td>1.08</td>
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<tr>
<td>Age more than 22</td>
<td>-.0044</td>
<td>.0041</td>
<td>.2835</td>
<td>.9956</td>
</tr>
</tbody>
</table>

Here two different regression models have been run. The study first selected women who are less than 22 and after that the study selected those women who are more than 22 years of their age. In order to find out the odds of their age and exposure to the mass media family planning messages, both of the two models have been run without controlling of other factors.

Exposure to radio family planning messages among women of Uttar Pradesh

![Bar chart showing exposure to radio family planning messages](chart.png)
Here two different regression models have been run. The study first selected women who are less than 22 and after that the study selected those women who are more than 22 years of their age. In order to find out the odds of their age and exposure to the mass media family planning messages, both of the models have been run without controlling of other factors.

**APPENDIX-G**

**RESULT OF REGRESSION ANALYSIS AGE WISE (TV)**

<table>
<thead>
<tr>
<th>Age less than 22</th>
<th>β</th>
<th>S.E.</th>
<th>sig.</th>
<th>Exp. (β)</th>
</tr>
</thead>
<tbody>
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<td>.1559</td>
<td>.0320</td>
<td>.0000</td>
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<tr>
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<td>.0039</td>
<td>.2788</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Exposure to TV family planning messages among Women of Uttar Pradesh
BIOGRAPHY

Name: Sunita Singh

Date of Birth: 1st Sept 1972

Place of Birth: Varanasi, India

Institutions Attended:
- Bachelor of Arts (History Hons) 1990-94, Banaras Hindu University, Varanasi, India
- Masters of Arts (Ancient Indian History) 1994-96, Banaras Hindu University, Varanasi, India
- Masters of Arts (Population and reproductive health) Institute for Population and social research (IPSR) 2000-01, Mahidol University, Thailand

Fellowship: MEASURE (USAID) Evaluation Project
- Carolina Population Center

Position: Assistant Researcher