Effect of some health educational methods in enhancing the knowledge, attitude and practice about reproductive health of early married women of urban slum

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ESTABLISHED 1996

THESIS

SUBMITTED TO

BABASAHEB BHIMRAO AMBEDKAR UNIVERSITY
(A CENTRAL UNIVERSITY)
LUCKNOW

FOR THE AWARD OF DEGREE OF

Doctor of Philosophy

IN

HOME SCIENCE

Department of Human Development and Family Studies

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ENROLMENT NUMBER: 1484/15

2021

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CERTIFICATE

Under rule 6.2 (ii) of Doctor of Philosophy (Ph.D) Regulation 1999 as amended in 2010, this is to certify that the thesis entitled **"Effect of some health educational methods in enhancing the knowledge, attitude and practice about reproductive health of early married women of urban slum"** submitted by **Mrs. Priyanka Tripathi**, carried out by her is an original work and has not been previously submitted in part or full for the award of any other degree or diploma to this or any other university.

The thesis submitted to Babasaheb Bhimrao Ambedkar University (A Central University) Lucknow is fulfillment of the requirements fit for submission and evaluation for the award of the degree of Doctor of Philosophy in Department of Human development and Family Studies, School for Home Sciences.

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DECLARATION

I Mrs. **Priyanka Tripathi** hereby, declare that the work titled **"Effect of some health educational methods in enhancing the knowledge, attitude and practice about reproductive health of early married women of urban slum"** has been carried out by me under the supervision of Dr. Neetu Singh, Associate Professor, Department of Human Development & Family studies, School for Home Science, Babasaheb Bhimrao Ambedkar (A Central) University, Lucknow for the award of **Ph.D. Degree in Home Science.** This research work is an original work and has not been previously submitted in part or full for the award of any other degree or diploma to this or any other University. The source used in this research work have been acknowledged properly.

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Acknowledgement

This thesis is the end of my journey in obtaining my Ph.D. I have not travel in a vacuum in this journey. This thesis has been kept on track and has been seen through to completion with the support and encouragement of numerous people including my family, well-wishers, friends, colleagues. At the end of my thesis, it is a pleasant task to express my thanks to all those who contributed in many ways to the success of this study and made it an unforgettable experience for me.

My sincere thanks to Hon'ble Vice chancellor ***Prof. Sanjay Singh*** *for his help in providing all the facilities and encouragement to the Department of Human Development and Family Studies, School for Home Science which helped researchers in performing their best.*

I am extremely thankful to ***Prof. Sunita Mishra,*** *Head & Dean, Department of Human Development & Family Studies for providing the necessary facilities during the course of study and research work successfully.*

I would like to deeply express my sincere gratitude to my advisor ***Dr. Neetu Singh,*** *Associate Professor, Department of Human Development and Family Studies, BBAU, for the continuous support for my Ph.D study and research for her patience, motivation enthusiasm and immense knowledge. Her guidance helped in all the time of research and writing of this thesis. I could not have imagined having a better advisor and mentor for my Ph. D study. Her influencing courage and conviction will always inspire me and I hope to continue to work with her noble thoughts.*

I would also express my thanks to ***Dr. (Mrs.) U.V Kiran,*** *Professor in the School for Home Sciences, for their useful suggestions, timely help and moral encouragement throughout this study. Also, my thanks go to all the guest faculty in the department and the non- teaching staff.*

I take this opportunity to sincerely acknowledge the university grant commission, New Delhi for providing financial assistance in the form of Senior Research Fellowship which buttressed me to perform my work comfortably.

I would like to specially acknowledge and thank to ***Mitashree Ghosh Ma'am,*** *Project officer in Family Planning Association of India and* ***Shailesh Singh,*** *Project Manager in Center for Rural Entrepreneurship and Technical Education for his valuable suggestions during data collection and providing any assistance, requested, a special thanks goes to him for his continued moral support, understanding and remitting help. I also would like to thankful to all the peer educators of NGO who helped me in recognizing the study subject and conducting the intervention in their community.*

I am indebted to my many student colleagues for providing a stimulating and fun filled Environment. My thanks go in particular to my juniors ***Anukriti, Madhu and Nidhi****. A*

special mention to my senior ***Dr. Bhawana Dayal*** *with whom I had many rounds of discussions on my thesis that helped me a lot. I am also thankful to* ***Arunima*** *my good friend and more than family for their unflagging love, valuable help and support.*

No appropriate word could be traced in the presently available lexicon to express my full respect and indebtedness to my beloved parents, ***Mr. Prem Prakash Tripathi*** *and* ***Mrs. Gayatri Tripathi****. The love and affection liberally showered on me by my younger sister* ***Akanksha Tripathi****. My younger brother* ***Shivam Tripathi****, my most beloved and adorable son* ***Shubhankar Shukla*** *for their persistent love and sincere encouragement and inspiration throughout my research work and lifting me uphill this phase of life. I owe everything to them. This thesis was simply impossible without them. I have no suitable word that can fully describe their everlasting love to me. Besides this, several people have knowingly and knowingly helped me in the successful completion of this project.*

Priyanka Tripathi

Date: 24/8/2021

Place: Lucknow.

CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF PLATES

ABBREVIATIONS

KAP: Knowledge Attitude and Practice

AIDS: Acquired Immune Deficiency Syndrome

RH: Reproductive Health

SRH: Sexual and Reproductive Health

RR: Reproductive Right

RHR: Reproductive Health Right

FP: Family Planning

STI: Sexually Transmitted Infection

STD: Sexually Transmitted Disease

RTI: Reproductive Tract Infection

FPA: Family Planning Association

FPAI: Family Planning Association of India

RHS: Reproductive Health Services

IEC: Information Education and Communication

PCMA: Prohibition of Child Marriage Act

Chapter-I
Introduction

CHAPTER-I

INTRODUCTION

India is considered to have the most child brides of any country in the world as one in three of the world's child brides live in India. Over half of the Indian child brides live in five states which are Uttar Pradesh, Bihar, West Bengal, Maharashtra and Madhya Pradesh. With 36 million child brides, the largest population, Uttar Pradesh becomes the home of child brides. **(UNICEF, 2019).** Whereas, the incidences of the child marriage are declining nationally but the pace of change remains slow, especially in the age group of 15-18 years, in almost all the states. Uttar Pradesh is one of the states that have cases of child marriage higher than the national average. **(Census, 2011)**.
According to the report of **National Commition for Protection of Child Rights based on NRHM-4, (2018)** while child marriage has long term negative consequences for both boys and girls in terms of educational outcomes as well as transitions to the labour market and family formation - the adverse effects of child marriage on girls are more serious.

The prevalence of girls who were getting married before age 18 years has declined from 47 % to 27 % between 2005-2006 and 2015-2016 but it is still too high and widespread in India. **(UNICEF, 2017).** Percentage of women aged 20 to 24 years who were first married or in union before age 18, is prevalence of child marriage. Approximately, one in four young women (20- 24 years) in India were married or in union before 18 years. **(UNICEF, 2019).**

Child marriage is the outcome of the interplay of economic and social forces. In communities where the practice of marrying a girl as a child, is prevalent. it is part of a group of social norms and attitudes that reflect the low value accorded to the of girls' human rights. **(UNICEF, 2017).** The explanations for child marriage are based on a mix of cultural, social, economic and religious factors. Poverty is observed to be at the

core of decisions and practices related to early marriage, more in low-income societies than in their high-income counterparts, as they lack resources to support healthy alternatives for girls, such as prolonged schooling and skill acquisition to secure their future. The girls in turn have higher chances of being poor and remaining poor and of facing serious social and health consequences inimical to their personal growth and development. **(Adedokun *et. al.*, 2016).**

According to the **CENSUS, (2011)** report in India number of slums has increased significantly over the last decade (2001-11). The increase in slum population is mostly because of migrated people who come to cities to earn their livelihood, though their earning is low so they tend to live at the place which are cheaper, lack basic amenities and prone to numerous ill health. **(Rizvi *et al.*, 2013)**. Though the child marriage is linked with the rural residence more than urban but it is observed that the slums lack basic amenities as well as health care facilities and very less people are known about reproductive behaviour and use of family planning methods in slums. **(Hasan *et al.*, 2017)**. A report of UNICEF says that child brides are more susceptible to domestic violence, exposure to STI including HIV/AIDS and more likely to have children as adolescents. There are more chances of increased risk of delivery complications, maternal mortality and child mortality due to complications during pregnancy and childbirth as they are more prone to malnutrition, limited access to contraception and healthcare. These negative effects may then impact their children, with daughters potentially also marrying young. **(Science Daily, 2017)**. Previous research has associated child or early marriage with a number of adverse health and social outcomes. In India, maternal child marriage has been found to be significantly associated with an increased likelihood of stunting and underweight among children born in the past 5 years **(Raj A. *et al.*, 2010).** A study was carried out by **Maharjan *et al.*, (2019)** in a rural part of Dang District situated in the Mid-western region of Nepal among 17–20 years old women who had married before the age of 18 years. It was found that the pressure to give birth early, limited autonomy, and little knowledge about reproductive health matters make married adolescents exposed to risky pregnancies. Early-married women face a series of barriers to use existing health services including work overload, transport and distance to health care facilities, qualities of services, verbal abuse by health care providers, and shyness and embarrassment. These adverse reproductive

health outcomes have been attributed to a host of factors that includes restricted access to education and health information, limited exercise of informed choices, greater power imbalances between spouses, limited mobility and social communication, and limited access to health care facilities among child brides compared with women who marry at older ages **(Clark *et al.*, 2006 and Santhya *et al.*, 2003)**.

WHO defined reproductive health as a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and to its functions and processes. In other word it that people are able to have a satisfying and safe sex life and that they have the capability to reproduce and the freedom to decide if, when and how often to do so." Furthermore, the reproductive health or sexual health or hygiene, addresses the reproductive processes, functions and system at all the stages of life. It is necessary for every woman to access the accurate information and the safe, effective, affordable and acceptable contraception method of their choice for maintaining their sexual and reproductive health. Women must be informed and empowered to protect themselves from sexually transmitted infections. And when they decide to have children, women must have access to services that can help them have a fit pregnancy, safe delivery and healthy baby. Every woman has the right to make their own choices about their sexual and reproductive health. **(UNFPA).** Thus, sexual and reproductive health is all about having a satisfying (happy) and safe (healthy) sex life. This means protecting women from dangerous situations and being able to access the care and support they need at right time.

However, the Reproductive health is closely linked to issues of women's and children's health, the spread of STDs, poverty, education, gender equality, and human rights. (**United Nations Population Division, 1995**). A women's reproductive health is closely influenced with the age of marriage. **(Gaferi *et al.*, 2018).** It is concluded in a study done by **Maharjan *et al.*, (2019)** that women who marry and become pregnant during adolescence face a number of barriers that limit their access to health care services and they need more attention from the health services and policy makers. More youth friendly health services and education about sexual and reproductive health

should be key elements in strategies to address the health issues of early-married women and adolescent girls too.

Therefore, a safe and satisfied reproductive health should include freedom from risk of sexually transmitted diseases, the right to regulate one's own fertility with appropriate knowledge regarding contraceptive choices, and the capability to control sexuality without being discriminated against because of age, marital status, income, or similar considerations. It is also becoming necessary to discuss that a women's reproductive health status is significantly influenced by the menarche during adolescence, beliefs and attitudes regarding menstruation and more importantly the menstrual practices during their period of menstruation. During menstruation hygiene is an unavoidable part of a woman's life. Numerous aspects such as physiology, pathology and psychology of menstruation have been found to be linked with women's health; hence, it is an important question concerning morbidity and mortality of female population. **(Bachloo *et al*., 2016)**. Adequate menstrual hygiene management as the women and adolescent girls using a hygienic menstrual management material to absorb or collect blood that can be changed in privacy as often as necessary for the duration of the menstruation period, using soap and water for cleaning the body as required, and having access to facilities to dispose of used menstrual management materials. **(Sommer M. & Sahin M., 2013).**

Various researches indicate that a vast information gap is present among adolescent girls regarding prior awareness about menstruation and menstrual hygiene which impacts on the practices during menstruation. Many girls have scanty knowledge about menstruation until their first experience because menstruation is something that is not often talked off in homes **(Patle *et al*., 2014)**. Thus, a key priority for women and girls is to have the necessary knowledge, facilities and the cultural environment to manage menstruation hygienically with dignity. **(Salve *et al.*, 2012)**. lack of knowledge and poor personal sanitary practices during menstruation has been associated with serious ill-health ranging from genital tract infections, urinary tract infections, and bad odor. **(Das Gupta A. & Sarkar M., 2008) (Mudey *et al.*, 2010)**. Learning about menstrual hygiene forms a vital aspect of health education among menstruating women for avoiding the future long-term ill effects of poor menstrual hygiene practices leads to premature births, stillbirths, miscarriages, infertility problems, toxic shock syndrome,

carcinoma cervix as a complication of recurrent reproductive tract infections. **(Bathija *et al.*, 2013)**. Scientific information and healthy menstrual hygiene practices are needed for achieving positive reproductive health. Lack of these primes to taboos and socio-cultural restrictions **(Nazeema *et al.*, 2017).** Thus, increased knowledge about menstruation right from childhood may escalate hygienic practices and may help in modifying the suffering of millions of women. **(Yasmin *et al.*, 2013)**.

Family Planning has been recognized as one of the most cost-effective solutions for achieving gender equality and equity by empowering women with knowledge and agency to control their bodies and reproductive choices by accessing contraceptive methods. **(Starbird *et al.*, 2016)**. **WHO** suggests that approximately 25% of maternal deaths could be averted if all women want to avoid pregnancy and they use modern methods of contraception. A cross-sectional study was carried out in the urban slums of Lucknow among young married women (15-24 years) by **Yadav K. *et al.*, (2017)** that revealed the current use of contraceptives was to be 33.8 % and almost two-thirds (66.2%) of the participants were not using any form of contraceptive method. The principal reasons for non-use of contraception were embarrassment, hesitancy, shyness regarding family planning, lack of knowledge about the contraceptive method or place of availability of services, opposition to contraceptive use by husband or family members and women's willingness to get pregnant. **Taklikar *et al.*, (2012)** discussed about the reasons for not using contraceptives by the couples were: unwillingness of couple 29 (23.77%), recently married couples 28 (22.95%), lactation 12 (9.8%) and lack of knowledge 7 (5.735%). It is concluded by **Hasan *et al.*, (2017)** that family planning needs of young eligible couples living in slums needs to be addressed. Early marriage of females and sex preference is a common practice in slums and needs consistent Social Behaviour Change Communication.

The symptoms of RTI were prevalent higher among the women who were not using any contraceptive method, had history of abortion, with lower educational status, in both urban as well as rural areas. However, the treatment seeking behaviour was also significantly higher among the educated women, contraceptive users, and older age group women in both rural and urban area. Thus, there is a need of providing education to women about the symptoms of RTI/STI, their prevention, and the importance of timely treatment in both urban and rural areas. **(Verma A. *et al.*, 2015).**

It was reported by the **FPI (2019)** that one in four (26.8 %) women age 20-24 years has been married before age 18 years. Apart from various other issues the young people also face significant burden of reproductive and sexual ill-health. Only about 15% of young men and women between the ages of 15-24 years have received sex education. Among the total, urban women are 17.5 percent and rural women are 31.5 percent. Births in the age group of 15-19 years contribute to 17% of the Total Fertility Rate. Among women aged below 20 years, 14 percent pregnancies are unplanned. Over a third (34 percent) of married adolescent girls had experienced physical, emotional, sexual violence by their spouses. Furthermore, three percent of girls and 19 percent of boys who had sex, reported using a condom during their first intercourse. Half of maternal deaths of girls between 15-19 years of age are due to unsafe abortions, while 60 percent girls in this age group anaemic, which is a contributing cause of increased age-specific mortality among female adolescents. Regular health education regarding menstruation, menstrual hygiene, family planning methods, reproductive tract infections to women of the reproductive age group improves the maternal and child health. Reproductive health depends on economic status, education, employment and the living conditions. So, the empowerment of women through education is very important for a good sexual and reproductive health. **(Jain R. *et al.*, 2016).**

"KAP" study measures the knowledge, attitude and practices of a community. It serves as an educational diagnosis of the community. KAP Study explains about what people know about certain things, how they feel and also how they behave. A KAP study measures these three topics that are: Knowledge, Attitude and Practice. The knowledge possessed by a community refers to their understanding of any particular topic, in this case it is reproductive health. Attitude refers to their feelings towards specific subject, as well as any preconceived ideas that they may have towards it. Practice states the ways in which the people demonstrate their knowledge and attitude through their actions. Understanding the levels of knowledge, attitude and practice will enable a more efficient process of awareness creation as it will allow the program to be tailored more appropriately to the needs of the particular community. (**Kaliyaperumal, 2004)**.

KAP survey data are essential to help plan, implement and evaluate. KAP surveys can identify knowledge gaps, cultural beliefs, or behavioural patterns that may facilitate understanding and action, as well as pose problems or create barriers development efforts. KAP surveys may be used to identify needs, problems and barriers in

programme delivery, as well as solutions for improving quality and accessibility of health services. The data collected allow programme managers to set the priorities of programme (e.g. to address the most common problems or to identify specific sub-groups whose needs may differ from other groups), estimation of resources required for various activities, selecting the most effective communication channels and messages, establishing the baseline levels and measure change that results from interventions and for advocacy (e.g. to show the magnitude of a challenge, which in turn, may inform resource needs). Data from the KAP survey can be used to orient resource allocation and project design, and to establish a baseline for comparison with subsequent, post-intervention KAP surveys (**Salahideen ALHAJ, 2018).**

Information Education and Education is an approach which attempts to change or reinforce a set of behaviour in a target audience regarding a specific problem in a predefined period of time. It combines strategies approaches and method that enable individuals, families, groups, organizations and communities to play active role in achieving, protecting and sustaining their own health. Embodied in IEC is the process of learning that empowers people to make decisions, modify behaviours and change social conditions. **(Hawaibam B., 2015).**

A variety of approaches and messages will be needed to promote the movement of individuals and populations along the continuum of behavioural change. Adoption of any behaviour or practice below illustrates the various stages of the behavioural change model shown in figure: 1.1

Initially a person is unaware that a particular behaviour may be dangerous. In this case the basic information regarding the problem through various channels using mass and group media and through interpersonal communication by NGO workers/ health care workers or community-based organizations.

Information must be given in such a way that the audience feels it applies to them i.e. the audience becomes concerned and people are motivated to evaluate their own behaviour. Targeted communication and interpersonal approaches are therefore more useful.

After becoming concerned, the individual may acquire more knowledge by talking to

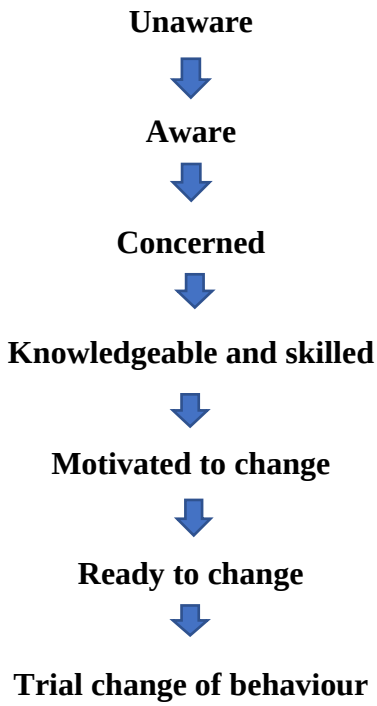


Figure 1.1: Behavioural Change Model

friends, social workers, health care providers about the risk behaviour and method of protection. More interpersonal communication approaches are needed at this stage.

Individual might now seriously begin to think about the need to protect themselves and their loved ones from particular problem. Positive messages from peers are particularly effective. At this stage the mass and targeted media can helpful in providing a supportive environment by showing role models and promoting a positive view of the solution of particular problem.

The results of any trial will be evaluated. If the experience has been too difficult or embarrassing, due to lack of experience and skill, then they may not try again for a long time. Therefore, skills to negotiate use of particular behaviour and to adopt behaviour correctly or inn right way are essential.

Finally, the individual decides to remain following to the particular practice or behaviour as it is good for his/her health. Continuous messages of support and access to messages are still essential at this stage.

For getting the better effective results it is necessary to implement the communication process strategy, that is discussed below:

- Support of community leaders
- Involve target audience

- Establish linkage and relationships with NGO and others
- Interactions between health between health workers and clients
- Multimedia campaign
- Anticipate trouble and crisis and communication plans
- Monitoring and evaluation. **(Hawaibam B., 2015)**.
- It becomes very important to identify the target group for conducting overall IEC programme. So, it should be identified by the criteria such as risk behavior, size of the population and potential for contributing to spread the risk of particular.

For getting the success of IEC programme the message of reproductive health and delivery channels must be tailored for specific target audience. Cultural acceptability, literacy level of the target group and preferred sources of information and infrastructure's availability are necessary to be considered. The communication should be gender sensitive and the messages regarding RH should be delivered by the multi channels which are packaged in different forms. It is also very important that the messages should be developed after accessing the current knowledge, attitude and practices in relation to sexuality and reproductive health.

Development of the materials drafting should be based on the decisions of messages media and channels to be used for the delivery of the messages among the women. The materials may consist TV spots, radio, booklets, handouts, posters etc. tools for use in interpersonal communication is also come in in group of IEC. The teaching materials should be cost effective. At the last, the monitoring and evaluation of the programme should be planned from beginning to the end of the programme for obtaining the effectiveness of IEC programme. See figure 1.2.

It was reported by **Anand E. *et al.*, (2015)** that the hygienic method was higher among women (20%) who have media awareness about personal hygiene as compared to those who did not have (6%) media awareness about personal hygiene. **Jillian G**. ***et al.*, (2016)** suggested that the knowledge can help alone in understanding the risk factors and improving the attitude and practices towards reproductive health. Behavioural communication by using an effective method of teaching methods may enhance the knowledge regarding reproductive health, increase the positive attitude towards the

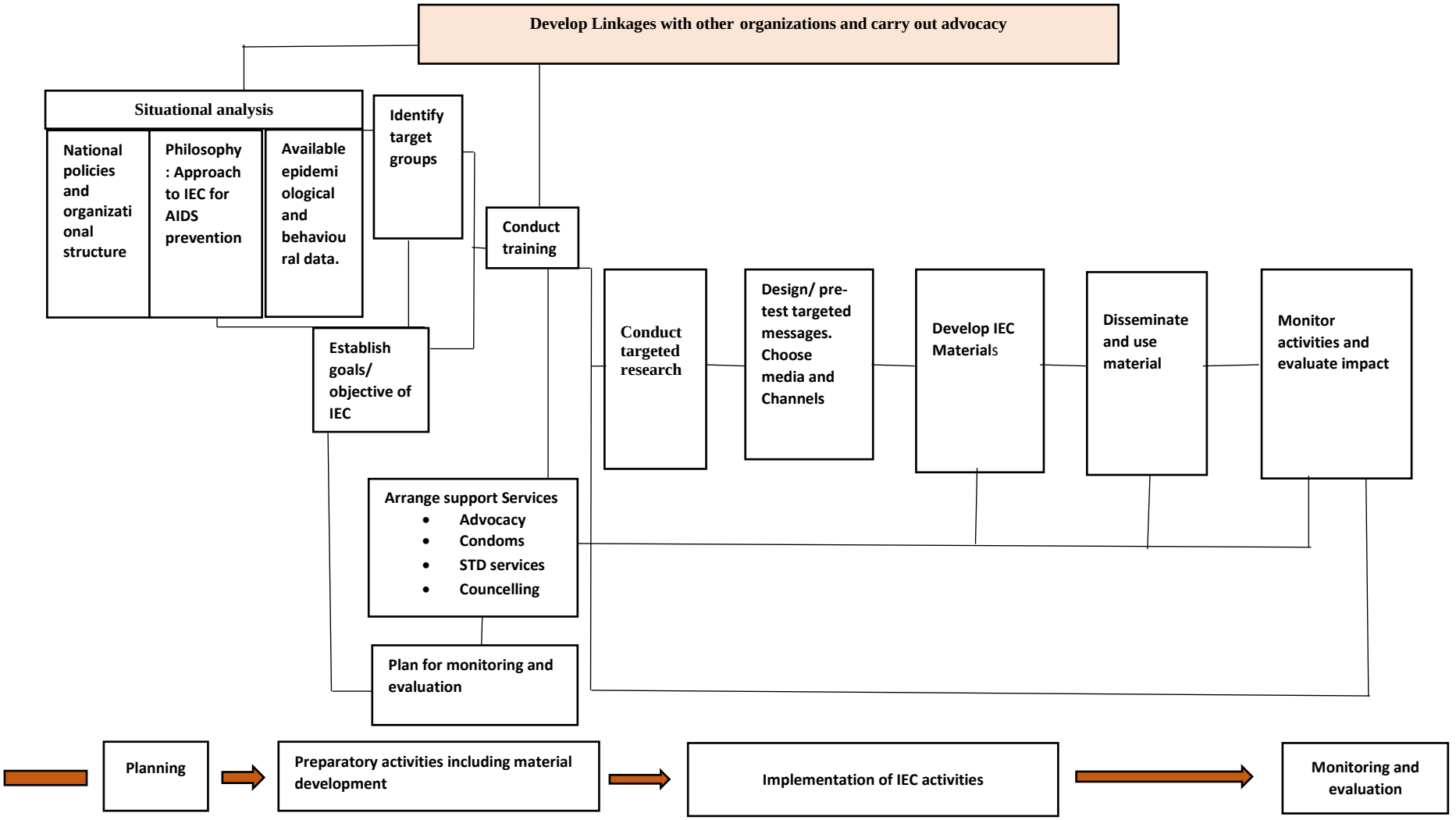


Figure 1.2: IEC frame work

Source: WHO, Project, information, Education and Communication

reproductive health and motivate the women for adopt the healthy practices regarding reproductive health.

1.1 Rational of the study

The women who were married earlier (before legal age) and belonging to poor socio-economic background are more prone to serious reproductive health issues because of lack of knowledge or less information regarding their reproductive health that results poor reproductive health outcomes of women, maternal death or neonatal death. Though the incidences of child marriage are more prevalent in rural area than urban but the poor migrants who are coming from the villages to the cities for earning their bread and butter, they all are tend to live in the slums which are cheaper, lack basic amenities, unhygienic and prone to reproductive ill health due to low income. Thus, the knowledge can help alone in accurately understanding the risk factors, complications and solutions of the problem that will improve the positive attitude towards the reproductive health and healthy practices of reproductive health. IEC program by using an effective method of teaching methods can enhance the knowledge regarding reproductive health, increase the positive attitude towards the reproductive health and motivate the women to adopt the healthy practices regarding reproductive health. That may result better reproductive health outcomes and development of women of slum community. There is no similar study that is assessing the knowledge of reproductive health and the effect of teaching methods on knowledge, attitude and practice of reproductive health of young women (15-24 years). This study would help to understand the baseline KAP of early married women of urban slum and further enhance their awareness towards women reproductive health, thus improving their reproductive health practice.

1.2 Hypothesis

Before starting of the research some null hypotheses were framed that is listed below according to the objectives of the study, as follows:

1.2.1 Demographic and socio-economic status of the respondents

1.2.2 Association of the socio demographic factors of child marriage in the slum of Lucknow city

- H_0: There is no association between the marriage age of the respondents and duration of marriage.

- H0: There is no association between type of marriage with duration of marriage and religion of respondents.

1.2.3 The baseline knowledge, attitude and practice of the respondents regarding their reproductive health.

- H_0: There exists no significant correlation between knowledge score attitude score and practice score of RH.

1.2.4 Association between socio demographic profile of the respondents and level of KAP of the respondent

- H_0: There is no association between caste and level of KAP of RH of respondents.
- H_0: There is no association between religion and level of KAP of RH of respondents.
- H_0: There is no association between education and level of KAP of RH of respondents.
- H_0: There exists no significant association of occupation with KAP level of RH of respondents.
- H_0: There exists no significant relationship between marital status and KAP level of respondents.
- H_0: There is no association between marriage age of respondents' husband and KAP level of RH.
- H_0: There is no association between the size of family and KAP level of RH.
- H_0: There is no association between Socio-economic status of respondents.

1.2.5 Media exposure of the respondents with different type of mass media and their relationship with the KAP score RH

- H_0: Time spent with the print media, TV, audios, mobile/ internet and other media (NGO) to predict the knowledge score of RH is equal to 0.
- H_0: Time spent with the print media, TV, audios, mobile/ internet and other media (NGO) to predict the attitude score of RH is equal to 0.
- H_0: Time spent with the print media, TV, audios, mobile/ internet and other media (NGO) to predict the practice score of RH is equal to 0.

1.2.6 Teaching materials and conduct the intervention among the study subjects

1.2.7 Evaluation of the effectiveness of the intervention

- H_0: There is no change in mean score of KAP of total RH before intervention and after intervention.
- H_0: There is no change in mean score of KAP of menstruation before intervention and after intervention.
- H_0: There is no change in mean score of KAP of FP before intervention and after intervention.
- H_0: There is no change in mean score of KAP of RTI/ STI before intervention and after intervention.
- H_0: There is no change in mean score of KAP of RR before intervention and after intervention.

1.3 Objectives of the study

- To know the Demographic and socio-economic status of the early married women who are living in the urban slums.
- To associate the socio demographic factors of child marriage in the slum of Lucknow city.
- To know the baseline knowledge, attitude and practice of the respondents regarding their reproductive health.
- To know the association between demographic and socio-economic status of the respondents and level of knowledge, attitude and practice of reproductive health.
- To access the media exposure of the respondents with different type of mass media and their relationship with the KAP score RH.
- To make the teaching materials and conduct the intervention among the study subjects.
- To evaluate the effectiveness of the intervention.

1.3 Brief outline of the study

This study was carried out in urban slums of Lucknow. It is a cross sectional and Non-experimental, pre-test / post-test design study. 253 early married women belong to the age 15 – 24 years who were living in the slums of Lucknow were recruited for the study. Simple random sampling and purposive random sampling was applied at the different stages of the study.

Socioeconomic and demographic characteristics were assessed by interviewing the respondents. Knowledge, attitude and practice level of the respondents assessed by the questionnaire method using predesigned and pretested questionnaire. Thus, the pre designed and pre tested questionnaire were applied to collect the data for the study.
Different teaching methods like; lecture method, participatory method and individual method was used in the intervention phase of the study. For this the sets of flash cards on the topic child marriage, risk of child marriage and selected domains of the women reproductive health (menstruation, family planning, RTI/ STI and reproductive rights) were used to provide the education and information by didactic lecture. Two games, Snake & Ladder and Repro- cards (cards game), based on information of women reproductive health were used to conduct the participatory method of teaching. A flip book of 12 pages was distributed among the participants individually as individual method of teaching. For collecting the data of post intervention phase only the questions related to KAP of reproductive health were included in the feedback form. Data was collected, coded and entered in to the SPSS version 20. Initially the association of socio-economic factors of the respondents with the KAP of reproductive health of the respondents was analysed by applying chi- square test. The other appropriate statistical tools incorporated in the study included mean $\pm$ SD, frequency tabulation, chi- square test, correlation, multiple linear regression, and paired t test. The findings arising out of the analysis are presented in chapter IV.

1.4 Scope of the study

The present study besides giving an overview of the socio- economical and demographical profile of the women who were married before the minimum age (18 years) and living in the slum of Lucknow city. Married women who are already married could be prevented from the serious reproductive ill health by giving the right information by using IEC program through appropriate, effective and cost-effective

methods of teaching methods regarding the reproductive health complication, risk factors of reproductive health of women, preventive measurements and treatment etc.

The present study also supports as a document to eradicate such type of problem because of the low prevalence rate prevailed in the urban slum area. This could be also helpful to aware to the child brides and motivate them to adopt healthy and hygienic practices for having healthy reproductive health after intervention in the present study. The present study is also helpful in understanding the factor of child marriage that most of the child marriage exists in the slum of Lucknow because of love marriage so it also indicates that the adolescents as they have very less or no information about the risks of early marriage and reproductive health as the no information regarding their reproductive health and risk of child marriage was being provided to the adolescents. So, the adolescents should be informed about the risks of child marriage and associated reproductive health problems. Mass media has played a positive role in disseminating the reproductive health information among the women. This study also helpful for the NGOs and the people who are working on these types of projects as the present study gives an idea about the teaching methods that can be helpful for the positive change of knowledge, attitude as well as practice that results the betterment of the early married slum women and position of the women in the community.

1.6 Limitations of the study:

1. Findings of the study cannot be generalized for all the reproductive age group of women and all the group of women belonging to the different socioeconomic status. Because the study was conducted among the slum women. Conclusion of the study is not applicable for all the age group of women, living in non- slum area because they were excluded from the study.
2. Specifically, it is important that the while responding the questions related with the sexuality and reproductive health, the women who were lively married and just married and some other women feeling shy to discuss on the particular issues. So, the shyness and the embarrassment of the women was also a barrier of the study.
3. However, for keeping confidentiality the name of the respondent was not revealed in the study. Even though to manage such problems related with women's shy and embarrassment was such a challenging task.

4. In our study husband of the respondents were not included. However, by including the husbands of the respondents in intervention the teaching and learning session might be more effective.

5. This study was not a clinical study. All the RTI/ STI related risks, represented in this study were based on the reporting of the respondents. Whereas the clinical study was not concluded because of paramedical support not taken in the survey.

Chapter-II
Review of Literature

CHAPTER-II

LITERATURE OF REVIEW

The purpose of this review of literature is to identify those studies that relate to the knowledge, attitude and practice regarding reproductive health related problems of the early married women and their help seeking behaviour etc. This will put the present study into context, establishing the aims and proposed hypotheses of the study. The Pertinent review of literature on the subject is given below under the following heads according to the objective of the research work:

2.1 Demographic and socio-economic status

2.2 Socio demographic factors associated with child marriage

2.3 Knowledge, attitude and practice regarding reproductive health

2.4 An association between demographic and socio-economic status of the respondents and level of knowledge, attitude and practice of reproductive health.

2.5 Media exposure of the women with different type of mass media and their relationship with the KAP score RH.

2.6 Teaching materials and conduct the intervention among the study subjects.

2.7 Evaluation of the effectiveness of the intervention

2.1 Demographic and socio-economic status

Kumar *et al.*, (2011) represented the sociodemographic profile of the contraceptive user in his study that more than half, 334 (61.9%) of the women were Hindu and 200(37%) were Muslims. Two third of the women, 367 (68%) belonged to SC/ST caste and one third of the women122 (22.6%) belonged to OBC. A small percentage i.e. only 51(9.4%) belonged to general caste. About one third, 202(37.4%) women belonged to age group 31-35 years and158 (29.3%) belonged to age group 20-25 years. About 89 (16.5%) belonged to 26-30 years of age. About half, 282 (52.2%) were illiterate and153 (28.3%) were educated up to primary level.

A cross sectional study was carried out in the urban slums of Lucknow by **Yadav *et al*., (2017).** It was resulted that the mean age of the study participants was 21.28 ± 1.9 years (Mean ± 2SD). Majority (87.1%) of them belonged to Hindu religion while 12.9% were Muslims. Almost half (48.2%) of the study participants were OBC and about one third (34.4%) were SC / ST. In the present study about two-fifth (41.0 %) of the participants were educated up to High School, 26.3% had Primary level of education and 18.7 % were Illiterate. Few (13.8 %) were educated up to Intermediate and above. Majority (77.8%) of the study participants were unemployed. 19.4 % were Unskilled workers and 2.6% were Semi-skilled workers.

Olaide *et al.*, (2016) done a study on child marriage and maternal health risks among young mothers in Gombi, Adamawa State, Nigeria and reported that majority of the respondents (72.5%) were in the 20–24yrs age and had little exposure to formal education as 60% had attended a primary school while 30% had opportunities to attend and complete secondary school education. All the respondents were young mothers who married early at various ages before 16 years of age and had been married less than 5years (45.0%), 5–9 years (50.0%) and few (5.0%) for more than 10 years. Some of the respondents were engaged in farming (41%), trading (15.5%), salaried workers in the local administrative offices while about one in every three (35.0%) was a full-time housewife. They were more Muslims (59.0%) than Christians (41.0%).

A cross sectional study was carried out in the urban slums of Lucknow by **Yadav *et al.*, (2017).** It was resulted that the mean age of the study participants was 21.28 ± 1.9 years (Mean ± 2SD). Majority (87.1%) of them belonged to Hindu religion while 12.9% were Muslims. Almost half (48.2%) of the study participants were OBC and about one third (34.4%) were SC / ST. In the present study about two-fifth (41.0 %) of the participants were educated up to High School, 26.3% had Primary level of education and 18.7 % were Illiterate. Few (13.8 %) were educated up to Intermediate and above. Majority (77.8%) of the study participants were unemployed. 19.4 % were Unskilled workers and 2.6% were Semi-skilled workers.

Shukla *et al.*, (2015) conducted a study to access the housing and sanitary conditions in slums of Lucknow and reported that Among 384 households included in the study, about four-fifth (79.2%) were of nuclear type, with majority (77.1%) having family members less than or equal to four. Majority (73.6%) of the families belonged to Hindu

religion and about half (52.9%) belonged to scheduled caste/tribe social category. About one-third (35.1%) of the families belonged to upper lower socioeconomic class. Majority (69.5%) were of pukka type, only three houses were of kutcha type. 77.1 % respondents had up to 4 members in the family, 9.9% respondents had 5–6 family members in their family. 20 % study subjects had >6 family members in their family. Moreover, it was stated that majority of the houses (69.5%) were of pukka type, only three houses were of kutcha type. Overcrowding was present in majority (72.1%) of the households. Electricity connection was not present in 35 (9.2%) of the surveyed households. The main source of drinking water supply was the piped water supply through Municipal Corporation (52.8%), followed by hand pumps (32.5%), and submersible/booster (14.7%). About 80% of the households had separate bathroom and almost all the houses had proper drainage system for sullage. Approximately, about half (51.1%) of the households reported open field defecation, whereas 48.9% of the houses were using sanitary latrines.

In a research conducted by the **Taklikar *et al.*, (2012)** among 400 married women between 15 and 45 years of age. The maximum [218 (54.6%)] women were between the age group of 20 and 29 years, 278 (69.5%) belonged to the Hindu religion, 289 (72.35%) secondary or higher secondary school educated, 316 (79%) unemployed, and 239 (59.8%) belonged to joint family; among 238 (59.50%) women, the duration of marriage was more than 8 years, and 224 (56%) of them had one or two children.

Zakaria *et al.*, (2020) showed the socio-demographic characteristics of older adolescent girls and their parents. Of older adolescent girls, 458 (57.8%) were from the humanities group, 229 (28.9%) were from the commerce group, and 105 (13.3%) were students of the science group. There was an equal number (396, 50%) of older adolescent girls from urban and rural areas. With regards to religion, the majority of older adolescent girls (90.3%) were Muslim. Three-quarters of the older adolescent girls acknowledged watching TV regularly, and one-fifth reported their Facebook use. The absolute majority of older adolescent girls' mothers (741, 93.6%) were housewives. More than half of older adolescent girls (58.8%) reported that their mothers watched TV regularly, whereas only 63 (8%) acknowledged their mothers' use of Facebook.

Santhya *et. al.*, (2010) carried out a study among married women belonging to the age 20–24 years living in five Indian states to compare marital, reproductive and other outcomes between young women who had married before age 18 years and those who had married later. It was found that about two-thirds (63%) of women in our sample had married before age 18 (minimum legal age at marriage for females in India). Early married women were less educated living in rural and poor class, nuclear type of family. It was also noticed that those who had married before age 18 were less likely than other women to report having a love marriage.

2.2 Socio demographic factors associated with child marriage

According to **Census report, (2011)** it is reported that the child marriage has been declining slowly over time, but with 12.1 million child marriages in India, the number of girls and boys getting married before their respective legal ages remain large. According to **UNICEF, (2016)** India is home to a third of the world's child brides. Nearly half of Indian women were married before legal age of marriage. Whereas, the incidence of the child marriage are declining nationally but the pace of change remains slow, in almost all the states, especially in the age group of 15-18 years. Uttar Pradesh is one of the states that have an incidence of child marriage higher than the national average.

According to **NFHS-4, (2016)** the prevalence of child marriage amongst 15-19 years old and 20-24 years old is 11.9% and 26.8% respectively for girls in India that shows a declining trend in child marriage. Child marriage prevalence in rural and urban India is 14.1% and 6.9% respectively for age group of 15-19 years and 31.5% and 17.5% respectively for rural and urban areas for age group of 20-24 years.

Child marriage is associated with adverse reproductive health outcomes, and the practice is still alarmingly common. (**Maharjan *et al.*, 2019).** Marriage before the age of 18, a fundamental violation of human rights, often compromises a girl's development by resulting in early pregnancy and social isolation, interrupting her schooling and limiting her opportunities for career and vocational advancement (UNICEF data). **(Global citizen, 2019).**

2.3 Knowledge, attitude and practice regarding reproductive health

2.3.1 Definition of reproductive health

According to United Nations Population Fund, good sexual and reproductive health is a state of complete physical, mental and social well-being in all matters relating to the reproductive system. It implies that people can have a satisfying and safe sex life, the capability to reproduce, and the freedom to decide if, when and how often to do so. **(POPIN/UNFPA, 2007).**

2.3.2 Association between child marriage and reproductive health

Child brides are more susceptible to domestic violence, exposure to STI including HIV/AIDS and more likely to have children as adolescents. There are more chances of increased risk of delivery complications, maternal mortality and child mortality due to complications during pregnancy and childbirth as they are more prone to malnutrition, limited access to contraception and healthcare. These negative effects may then impact their children, with daughters potentially also marrying young. **(Science Daily, 2017)**.

A study was conducted by **Maharjan *et al.*, (2019)** in a rural part of Dang District situated in the Mid-western region of Nepal among 17–20 years old women who had married before the age of 18 years and individual interviews. It was found that pressure to give birth early, limited autonomy, and little knowledge about reproductive health issues make married adolescents vulnerable to complicated pregnancies.

Manjula R. *et al.*, (2012) stated that poor reproductive health is due to lack of knowledge, lack of access and lack of availability of services. **Jose *et al.*, (2019)** suggested that regular health education regarding menstruation, menstrual hygiene, family planning methods, reproductive tract infections to women of the reproductive age group improves the maternal and child health. It was found less than one-fifth (19%) of the women had adequate knowledge on reproductive health. The proportion of women who had adequate knowledge in each of the domains was: marriage and pregnancy (47.5%), menstruation (29.9%), contraception (17.4%) and least being reproductive tract infections (15%).

2.3.3 Component of reproductive health

Change's research *has given three essential components* of sexual and reproductive health care, these are:

- ***Family planning*** – It benefits the health and well-being of women and families. Use of contraception could help to avoid unwanted pregnancies and space births; protect against STDs, including HIV/AIDS; and provide other health benefits to the women.
- ***Sexual health*** – This statement refers having safe and pleasurable sexual experiences which are free of coercion, discrimination or violence.
- ***Maternal health*** – It includes the health of women during pregnancy, childbirth, and the postpartum period.

2.3.3.1 Menstruation

2.3.3.1.1 Menstruation linked with poor reproductive health

Ray S. & Das gupta, (2012) stated that menarche is a milestone in a woman's life as it denotes the starting of reproductive capacity. Unfortunately, there is gross lack of information on menstrual preparedness and management among adolescent girls, a situation made worse by the shyness and embarrassment with which discussions regaring menstruation is treated. **Mudey *et al.*, (2010)** stated that lack of knowledge and poor personal sanitary practices during menstruation has been linked with serious ill-health ranging from genital tract infections, urinary tract infections, and bad odor.

Bathija *et al.*, (2013) reported that unhealthy menstrual practices like washing genitalia regularly, using unclean cloth, etc. Learning about menstrual hygiene forms a vital aspect of reproductive health literacy among menstruating women to avoid future long-term unhygienic effects of poor menstrual hygiene practices leading to premature births, stillbirths, miscarriages, infertility problems, toxic shock syndrome, carcinoma cervix as a complication of recurrent reproductive tract infections etc.

Bathija *et al.*, (2013) reported that women belonging to lower socio-economic class, cannot afford to buy sanitary napkins, use a cotton cloth and use them throughout their periods with infrequent changing. Such unhealthy and unhygienic menstrual practice is

related with many complications of recurrent reproductive tract infections like premature births, stillbirths, miscarriages, infertility problems, carcinoma of cervix, etc. **(Barathalakshmi *et al.*, (2014)** stated that during menstruation a woman is regarded most vulnerable for developing any kind of reproductive tract infections, urinary tract infections, and various sexually transmitted diseases. Menstrual hygiene deals with special healthcare needs and requirements of women during monthly menstruation or menstrual cycle.

A study conducted by **Anand E. *et al.*, (2015)** to know the menstrual hygiene practices and its association with reproductive tract infections and abnormal vaginal discharge among women in India. It was revealed that according to DLHS-III report, 18% of women report symptom of RTI. Women who used hygienic methods during menstruation were less likely to report any symptoms of RTI. It irritation over vulva, pain in lower abdomen, pains during menstruation or defecation and low backache were some of the symptoms experienced more among the women who did not use hygienic method during menstruation. Results of logistic regression presented significant association between practice of hygienic method during menstruation and symptoms of RTI as well as vaginal discharge. The women who used unhygienic method were 1.04 times more likely to have any symptom of RTI (OR = 1.046, $p < 0.001$). Similarly, the women who did not use hygienic method were 1.3 times more likely to report any abnormal vaginal discharge (OR = 1.303, $p < 0.001$). The model was adjusted for socio-economic, demographic and gynecological factors related to RTI and abnormal vaginal discharge.

Prakash Mathiyalagen *et al.*, (2017) noticed a high proportion of respondents reported having at least one reproductive tract problem (88.4%). The commonly reported reproductive morbidity were symptoms of lower abdominal/lower back pain (69.8%), discharge from genitalia (25.2%), itching from genitalia (22.3%), difficulty in micturition (20.7%), and pustules over genitalia (14%). Some of the symptoms suggestive of reproductive tract infections were observed to be more common among the girls who were having unsatisfactory menstrual hygiene practices, and this difference was found to be statistically significant ($P < 0.05$) for itching in genitalia and pustules over genitalia. Statistically significant association was found between perceived reproductive morbidity and poor menstrual hygiene practices. About 88.4%

of the study population reported any one of the reproductive morbidity and only 37.4% sought for medical treatment from a health facility. Unsatisfactory cleaning of the external genitalia was practiced by 12% of respondents. Higher prevalence of dysmenorrhea (82.2%) was mentioned by the respondents; 25.2% reported excessive genital discharge.

Santra S., (2017) found that prevalence of reproductive tract infection was 43.8% among the cloth piece users and 34.6% among the sanitary pad users but this difference was not statistically significant (p=0.28). Reproductive tract infection was also found more among those who washed their external genitalia <4 times/day (78.3%) than those who washed ≥4 times/day (21.7%) and this difference was found statistically significant (p=0.000). It was noticed that some women (37.5%) suffered from reproductive tract infection (RTI) during or just after menstruation. Out of those 60 women suffering from reproductive tract infection, most of them complained of only itching (48.3%), whereas, 18.3% complained of itching and rash and 16.7% complained foul smelling discharge per vagina. Prevalence of RTI was significantly less (p=0.000) among those who used soap and water (18.8%) during washing than those who used only water (81.2%).

A study conducted by **Anand E. *et al.*, (2015)** to know the menstrual hygiene practices and its association with reproductive tract infections and abnormal vaginal discharge among women in India. It was revealed that a majority of women used clothes (90%) during their menstruation to prevent blood stains from becoming evident. The use of sanitary napkins and locally prepared napkins that is considered as hygienic method in that study was 11.2% and 3.9% respectively. There were 1.3% of respondents who did not use any method during menstruation at all.

2.3.3.1.2 Knowledge, attitude and practice of menstruation

Nazeema *et al.*, (2017) reported that scientific information and healthy menstrual hygiene practices are needed for obtaining the positive reproductive health. Lack of these leads to taboos and socio-cultural restrictions**.** It was stated by **Yasmin *et. al.*, (2013)** that menstruation is surrounded by many psychological and religious barriers due to lack of knowledge about the scientific process of menstruation.

Jaiswal *et al.*, (2015) explained that menstrual practices are clouded by taboos and socio-cultural restrictions even today, ensuing ignorance of the scientific facts and hygienic health practices, necessary to maintain positive reproductive health. **Prakash M. *et al.*, (2017)** conducted a school based cross-sectional study in Puducherry among 242 adolescent school girls in the age group of 12–18 years. It was noticed that the mean age for menarche was 12.99 ± 0.9 years.

A community based cross-sectional study was conducted by **Mohite & Mohite, (2016)** among adolescent girls residing in slum area of Karad city. It was reported in the study that mean age at menarche was 12.8 years. All the girls attained menarche by the age of 16 years and of which maximum, 66.9% attained menarche by the age of 13 years.

Prakash M. *et al.*, (2017) reported in their study that 51.7% of respondents were not aware of menstruation before experiencing menarche. **Patavegar *et al*., (2014)** depicted that in Indian society, menstruation is still regarded as something unclean or dirty. Isolation of the menstruating girls/women and restrictions being imposed on them in the family, have reinforced a negative attitude towards this phenomenon of menstruation.

Yasmin *et al.*, (2013) revealed that numerous girls residing in slum areas are unaware of what actually happens during menstrual cycle. Although menstruation is a natural process, it is related with several perceptions and practices within the community, which sometimes may result adverse health outcomes.

Santra S., (2017) carried on a study to assess the of knowledge regarding menstruation and practices relating with the maintenance of menstrual hygiene among the women of reproductive age group in a slum of Kolkata, West Bengal, India and to find out the practice of menstrual hygiene among them. It was noticed that most of the study subjects explained that menstruation occurred to clear impure blood from body (55.6%). A total of 51 (31.9%) women believed that heavy menstrual bleeding is good for health.

Thakur H. *et al.*, (2014) conducted a study to access the knowledge, practices, and restrictions related to menstruation among young women from low socioeconomic

community in Mumbai, India. It was expressed that most common problem faced during menstruation was pain in abdomen followed by backache and body ache. A few complained was about extensive or irregular bleeding.

Santra S., (2017) assessed the knowledge regarding menstruation and practices related to maintenance of menstrual hygiene among the women of reproductive age group in a slum of Kolkata, West Bengal, India and to find out the practice of menstrual hygiene among them. It was noticed that about 97% women opined that sanitary pad is the ideal absorbent to be used during menstruation. Most of the women (65%) used only sanitary pad and 30% used only cloth pieces. Out of total study subjects, 8 women used both sanitary pad and cloth piece during menstruation.

Mohite & **Mohite, (2016)** carried on a community based cross-sectional study among adolescent girls residing in slum area of Karad city in year 2014 among 230 girls to elicit information relating to demographic features, menarche age and menstrual hygiene practices. It was evident that out of total 230 interviewed girls, only 12.6% were practicing disposable adsorbent sanitary napkins; however maximum, 87.3% were using household non-disposable, non-adsorbent cloth (linen) materials.

Prakash M. *et al.*, (2017) conducted a school based cross-sectional study in Puducherry among 242 adolescent school girls in the age group of 12–18 years. 67.4% of respondent perceived on using sanitary pads they felt comfortable, 49.6% perceived that it would not stain clothes, 34.3% felt that it absorbed adequately whereas 24.8% felt that there was no itching with its use. 57.9% adolescent girls perceived it to be expensive, and 28.1% felt that it was not available everywhere. Majority (85.5%) were changing the absorbent 2– 4 times during the menstruation. Most of the girls (82.2%) had abdominal pain during menstruation followed by weakness (40.5%). Most of the girls were disposing the absorbent by burning (64.5%) followed by public dustbin (19.4%). Among cloth users, many were drying it inside the house without sunlight (34%). Majority washed their genitalia using only water (53.7%) during menstruation. It was noticed that the sanitary pad was mentioned as ideal absorbent by 95.5% of the study population. Unsatisfactory cleanliness of external genitalia was reported frequency of washing external genitalia was < 2/day) by 29 (12%) girls So far practices were concerned, 78.1% girls were using sanitary napkin whereas 21.9% girls were

either cloth or mixed users during menstruation. 78.1% used only sanitary pads whereas 21.9% used both old clothes and sanitary pads as the absorbents.

Thakur H., *et al.*, (2014) conducted a study to access the knowledge, practices, and restrictions related to menstruation among young women from low socioeconomic community in Mumbai, India. The views of adult women having young daughters were also included and both views were compared. In addition, the factors influencing the menstrual hygiene practices were also studied. It was noticed that Sanitary napkins (either alone or along with reusable cloth) are used by the majority (74.5%) of the young women. But it is surprising to see that in urban area almost 25% participants are still using cloths. FGDs and KI interviews revealed that the most common advise given to the young women was that they should use sanitary pads/napkins and change it 2–4 times/day. However, quite a few girls were also advised to use cloth. Many girls seemed to start with cloths and move to sanitary napkins later on. Some girls had been told to use cloths when at home and to use sanitary pads when moving outside their home. On the other hand, cloths were said to be better when the bleeding was heavy since it could soak better than the sanitary pads. Health personnel recommend sanitary pads if the woman has economic resources. Otherwise according to them, cloths can be used given that they are carefully washed.

Santra S., (2017) carried out a study to assess the of knowledge regarding menstruation and practices related to maintenance of menstrual hygiene among the women of reproductive age group in a slum of Kolkata, West Bengal, India and found that more than half of the women (53.4 %) used to change napkins ≥3 times per day in first 4 days of menstruation and 87.1% women changed napkins only once/day during scanty bleeding period. Only 4% individuals did not take regular bath during menstruation. Most of the women (95.6%) disposed used napkins in municipal vat. It was also noticed that all of the women were barred from joining any religious event during menstruation whereas, 18.4% avoided sour food and 10.4% compelled to sleep on floor during menstruation.

A community based cross-sectional study was conducted by **Mohite** & **Mohite, (2016)** among adolescent girls residing in slum area of Karad city in year 2014 among 230 girls. It was noticed higher percentage of girls, 55.6% was used 2 - 3 pads / day during

their menstrual period. Further he expressed those practices of personal hygiene including bath during menstrual days and cleaning of external genital parts were followed by 95.2% girls respectively. The reuse of material was practiced by maximum, 87.3% girls and of which only 18.4% were use soap (detergent) and water to clean the cloth material, 88% girls were dried it in sunlight. Higher percentages of girls, 77.3% were practiced an insanitary method of disposal of materials.

It was noted by **Mahon & Fernandes, (2010)** that there are many taboos like menstruating girls is restricted for going to temple, cooking food, attending weddings, etc. There is inadequate knowledge and many misconceptions about menstruation among young women in India before and even after the menarche. This usually leads to undue fear, anxiety, and undesirable menstrual practices. **Rani, (2014)** found Muslim menstruating women are not allowed to pray, fast or have sex while Hindu woman is not allowed to worship and cooking. In some cases, women have to stay away from her family. **Jose *et al.*, (2019)** found that knowledge about hygienic practices during menstruation was high with a majority (99.7%) reporting usage of sanitary napkins, frequent change of sanitary napkins (88.7%), bathing daily (54.5%) and proper disposal of sanitary napkins as hygienic (43.8%).

Thakur H. *et al.*, (2014) conducted a study access the knowledge, practices, and restrictions related to menstruation among young women from low socioeconomic community in Mumbai, India also shows that while 85.4% young women faced restrictions during menstruation, 88.5% adult women felt the same regarding their daughters. Majority of the participants have some kind of restrictions on them during the menstruation and most of these are religious restrictions (97.6%) rather than physical or social restrictions (10.8%). Women are not allowed to carry out religious functions and not supposed to participate in the cooking during these periods. On the third/fourth day of the period, women are supposed to wash their hair. Few girls explicitly said they had been told how to maintain their hygiene during their periods. Girls were also advised to take a bath and wash their hair at the end of the period.

(Chacko et al, 2020), carried out a study among women from urban slums of Kochi, India to assess the prevalence, factors, and patterns of restrictions faced by young women (between 15 and 35 years) regarding menstruation and found that in his study

that 75.2% do not know sanitary pads are more hygienic, 44.8% believe there is less facilities in public toilets for disposing, 44% felt difficulties due to less public toilets and 33.6% do not know about frequency of changing sanitary pads. The majority of them also washed the used sanitary napkins and wrapped them in a newspaper or a plastic bag before disposal. Further they explained that source for restrictions were traditionally followed patterns, patterns taught by elderly mainly mother or mother-in-law and self-imposed restrictions. Reasons for restriction is 14.4% considered it was good and give rest to body. Most religious restrictions are meant for rest but some religious restrictions are based on the belief of uncleanliness. Such restrictions impart a belief to young female that she is unclean 8% women thinks they are unclean. Majority of women (57.6%) fear to disobey religious restrictions. 77.6%women felt these restrictions are necessary, 40.8% felt no need to change. Only two youth among 125 females reported religious restrictions based on the belief of uncleanliness have to be changed and they believe family member should bring the change. Out of 22.4% who felt religious restrictions were unnecessary only 1.6% were affected by religious restrictions. 2.4% felt religious restrictions have to be changed. 8% believe family members should make change and 1.6% believes religious leaders should initiate change. 40.8% young females do not need any change. Only few (8.8%) felt they had restrictions and more than two third had restrictions (88%) and felt these restrictions are necessary (77.6%).

2.3.3.2 Family planning

Family planning refers to the planning of when to have children, and the use of birth control. It allows individuals and couples to anticipate and have their desired number of children, and to achieve healthy spacing and timing of their births. Family planning is achieved through use of contraceptive methods and the treatment of involuntary infertility. **(Save the Children, 2012).** Other techniques commonly used include sexuality education, prevention and management of sexually transmitted infections, pre-conception counselling and management, and infertility management **(WHO Fact sheet, 2012).** Family Planning has been recognized as one of the most cost-effective solutions for achieving gender equality and equity (goal 5) by empowering women with knowledge and agency to control their bodies and reproductive choices by accessing contraceptive methods **(Starbird *et al*., 2016)**. According to **WHO report**, **(2019)**

around 25% of maternal deaths could be averted if all women wishing to avoid pregnancy could use modern methods of contraception.

Knowledge, attitude and practice of family planning

Jose *et al.*, (2019) found that about one fifth (17%) of the study participants had adequate knowledge on contraception. Out of the 345 study samples, only 162 (47%) had heard about family planning. The proportion of women who were aware about the different family planning methods were tubectomy (51.9%), followed by condoms (50.7%), emergency contraceptives (33.3%), copper-T (28.4%), oral contraceptive pills (26.1%), vasectomy (2.9%) and lactational amenorrhea method (1.2%).

Taklikar *et al.*, (2012) noticed that was maximum 325 (81.25%) women awareness regarding oral contraceptive (OC) pills, followed by the male condoms 317 (79.25%), tubectomy 277 (69.5%), intrauterine device (IUD) 274 (68.5%), vasectomy 175 (43.75%), injectables contraceptives among 22(5.5%) women. Very less numbers of women 32 (8.00%) were unaware about any of the methods of contraception.

Makade *et al.*, (2012) conducted a community based cross sectional observational study among 342 married women in reproductive age group, revealed that the 87.7% of women were aware of at least one method of contraception. Majority of the women 68.4% were using a contraceptive at the time of study. 14% women were unaware of any health care facility providing contraceptives in the vicinity.

Taklikar *et al.*, (2012) reported that among the users, 212 (76.25%) were using permanent methods and 66 (23.75%) temporary methods of contraception. Among the temporary methods, male condoms were commonly used, followed by OC pills, IUDs, and natural methods. He also depicted that the history of never use of contraceptives was high among permanent method users than temporary users. Of the 212 permanent method users, 160 couples had never used contraception in the past.

Thulaseedharan, (2018) showed that overall, 118 women were currently using any type of contraceptive method (58%), of which 27 women had opted for female sterilization. Withdrawal method was the most used method, followed by male condoms. Intrauterine device (IUD) was used by only 2% of women and no other

modern methods were reported by women. Totally, 85 women were currently not using any contraceptive methods, but half of them were pregnant or had recently delivered.

A cross sectional study was carried out in the urban slums of Lucknow by **Yadav *et al*., (2017)** reported that about one-third (33.8%) of the women were currently using a contraceptive method. Of them 95.6 % were using a modern contraceptive method. Approximately two-third (66.2%) of the women were not using any of the contraceptive methods. More than two-third of the women who were currently not using contraceptive methods had also expressed no intention to use any contraceptive methods in the future. 55% percent of the study participants had never used any of the contraceptive methods.

(Kumar *et al.*, 2011) noticed that more than half (55.6%) of the women were married before 18 years of age. 63 % of the women know about at least one contraceptive method. The women who know the contraceptive method oral contraceptive pills 95.7%, Nirodh 34.1%, Copper-T 46.8% male sterilization 53.5%, female sterilization 79.7% and injection 1.1%. Further he explained that more than half 226 (66.5%) of the women were currently using contraception and 114 (33.5%) were not using any contraceptive method even having knowledge about them. More than half 54% of the women said that their husband was currently using oral pills as a method of contraception 12.2% of the women husband were using Condom. Whereas, 24.3 % of the women were sterilized and 20.8% were using copper –T. Very few 8.8% women were using other method of contraception i.e. (DMPA/injections).

(Thulaseedharan, 2018) reported that around 84% of women had ever used any method of contraception in which male condoms was the predominantly used reversible method (52%). The opinion of women on factors that can influence the use of contraceptive methods and the number of children.

A community-based cross-sectional study was conducted in Mangalwar Peth slum area of Pune city, Maharashtra, India, with a sample of 400 married women aged between 15 and 45 years by **Taklikar *et al.*, 2012**. The study found prevalence of contraceptive use and the reasons for not using contraceptives among the slum population. It was shown that the prevalence of contraception use among the couples was 69.5%. Among the 122 nonusers of contraception, the reasons for not using were: unwilling, 29

(23.77%) couples; recently married, 28 (22.95%) couples; lactation, 12 (9.8%) couples; and lack of knowledge, 7 (5.735%) couples.

Makade *et al.*, (2012) conducted a community based cross sectional observational study among 342 married women in reproductive age group, Knowledge and practice of Emergency Contraceptive was very low. He concluded that although there is high level of awareness, contraceptive use is not very high. New methods of motivating people to adopt and sustain Family Planning methods should be considered. It was revealed that out of 342 couples, 234 (68.42%) were currently practicing any one of contraceptive methods available. 87.71% were aware about Oral Contraceptive Pills (OCP) and Cu-T, followed by female sterilization and condoms which was known to 80.4% and 77.5% women respectively. Out of 234 couples who were using contraceptives, the practice was maximum for OCP (28.07%), followed by condoms (18.42%), female sterilization (11.98%). Cu T was used by only 9.94 % women in the study group but was the most preferred method of contraception (59.06%).

Thulaseedharan, (2018) conducted a community-based cross-sectional survey in Trivandrum district, Kerala. It was depicted that majority of women reported that the ideal age difference between two children was 3–5 years, and 85% of women who had more than one child were physically and emotionally comfortable with the gap between their two deliveries. **Hasan *et al.*, (2017)** found that although majority i.e. 87% of the pregnant women had the knowledge that ideal gap between subsequent children should be more than or equal to 3 years, however, the mean birth interval between 1st and 2nd child was 2 years and that between 2nd and 3rd child, it was 2.9 years.

WHO Fact sheet, (2012) revealed the benefits of family planning i.e. saving children's lives, healthy spacing of pregnancies, children having children, well-being, prevention of HIV and AIDS, empowering people and enhancing education and reducing adolescent pregnancies. Family planning reduces the need for unsafe abortion. Family planning reinforces people’s rights to determine the number and spacing of their children.

Makade *et al.*, (2012) found a huge gap between the knowledge and willingness to use of MTP (z= 17.86, p= 0.00). The gap is also seen between willingness to use and actual

usage of MTP (z= 24.99, p= 0.00). Such type of knowledge gap is also seen in emergency contraceptives. There is a significant difference between knowledge and readiness to use emergency contraception (z= 5.6, p= 0.00). **Thapa P. *et al.* (2018)** reported that most (54.9%) of the respondents had age gap of the last two children in the range of 2-4 years, followed by 4 or more (33.6%) and 1-2 years (11.5%). Further he said that that 79.3% women know that contraceptive is helpful in avoiding unwanted pregnancy, maintain birth spacing 71.5%, limit the number of births 68.9%, decrease the economic burden of family 46.6%, improve the health of mother and child 59.6%.

2.3.3.3 RTI/ STI

Knowledge , attitude and practices of RTI/ STI

Barousse et al, (2004) reported that the incidences of RTI/STI in women is highest in the age group of 15-24 years and it declines after this age group. The reasons for high incidence in young age group includes low level of protective cervical antibodies, increased sexual activity and new influence of reproductive hormones causing vast changes in tissues that may lead to increased susceptibility to STI/RTIs.

WHO Fact sheet, (2019) reported that when used correctly and consistently, condoms offer one of the most effective methods of protection against STIs, including HIV. Female condoms are effective and safe, but are not used as widely by national programmes as male condoms. **Jose *et al.*, (2019)** found that of the 345 women, 301 (87.2%) had heard about HIV/AIDS. **Prakash M. et al, (2017)** reported that out of the 214 (88.4%) adolescent girls who perceived any reproductive tract morbidity only 89 (41.6%) received treatment for these health problems. Overall, 80 (37.4%) of respondents reported for seeking treatment from any registered medical practitioner. **WHO Fact sheet, 2019** reported that when used correctly and consistently, condoms offer one of the most effective methods of protection against STIs, including HIV.

Verma A et al., (2015) suggested that there is a need to educate women about the symptoms of RTI/STI, prevention, and the importance of treatment at right time in both urban and rural areas. **Ismaem *et al.*, (2020)** carried out a cross-sectional study based on national survey data, reported a total of 16,475 women between 15 and 24 across

India were selected for our study. Between age groups, a greater proportion of women aged 15–19 (26.6%, $p < 0.01$) would prefer waiting 2 years or more for the birth of their first child compared to women aged 20–24 (18.6%, $p < 0.01$). Women living in urban areas (23.4%, $p < 0.01$), Hindu women (22.8%, $p < 0.01$), those not belonging to either a SC/ST nor to an OBC (24.6%, $p < 0.01$), women with higher education (28.8%, $p < 0.01$), wealthier women (23.4%, $p < 0.01$) and women exposed to family planning on the media (22.7%, $p < 0.01$) also reported a longer preferred waiting time for the birth of their first child. Concerning partner characteristics, the higher the education level of the husband, the greater was the proportion of women preferring to delay their first birth 2 years or more. Furthermore, the mean age of the husband (25.01 vs 23.80, $p < 0.01$) as well as the mean age difference (4.59 vs 4.22, $p < 0.01$) were higher among women who wanted to have their first birth within the next 2 years.

Verma A. et al., (2015) concluded that the prevalence of RTI/STI symptoms is high in both urban (42.3%) as well as rural (42%) areas but the prevalence of the symptoms was found to be higher among the study subjects who were not using any contraceptive method, had history of abortion, and belonging to the lower educational status, in both urban and rural areas. The treatment seeking behaviour is better in urban area (73%), as compared to rural area (45.6%). Treatment seeking behaviour was significantly higher among the women who were educated, contraceptive users, and elder in age group women in both rural and urban area.

2.3.3.4 Reproductive Right

World Health Organization (WHO) defines reproductive rights as the recognition of the basic right of all couples and individuals to decide freely and responsibly the number, spacing and timing of their children and to have information to do so, and right to attain the highest standard of sexual and reproductive health. They also include the right of all to make decision concerning reproduction free of discrimination, coercion and violence.

The basic reproductive rights are:

- Right to control one's reproductive function
- Right to access in order to make reproductive choices free of coercion, discrimination and violence

- Right to access education about contraception and sexually transmitted diseases and freedom from coerced
- Sterilization and contraception
- Right to protect from gender-based practices such as female genital cutting and male genital mutilation
- Within India, reproductive rights are considered a collective decision of the family[1], not the decision of the individual women it affect. **(Woman Reproductive Rights in India: A Prospective Future, 2011).**

Knowledge, skills and values necessary for sexual wellbeing. It should improve the quality, range, consistency, accessibility and integration of sexual health services. **(Sathyanarayana *et al.*, 2018).** Those who have children, and undergo sterilization, will sometime have to reverse the operation which is a rare and unsafe procedure often leading women to bleed to death in the event that one of their children dies. Unfortunately, infant deaths are common in some rural areas of India. Worse still, when a mother loses her child, she may subsequently be no longer accepted in the family. She will either have to produce another child or be removed from the family. Most sterilizations occurring in rural areas are performed at camps where dozens of women are sterilized under unsafe conditions. In 2012, a doctor sterilized 53 women on a bench in a school with no electricity in Kaparfora, risking their lives. Despite the recognized dangers associated with the doctor's actions, no charges were laid (**Why India's acclaim for protecting reproductive rights rings hollow, 2013).**

Kumar et al, 2011) showed in the distribution of the source of availing contraceptives by the women. More than one third, 91(40.3%) availed contraceptives from private health facility while, 55(24.3%) availed it from government health facility and local shops. Remaining 25(11.1%) were not having any knowledge regarding source of contraceptives. **Mohite & Mohite, 2016** carried out a community based cross sectional study was conducted in adolescent girls residing in slum area of Karad city in year 2014. It was revealed that 14.3% were utilized health care services for menstruation related problems and of which maximum, 51.5% followed private health care services. The rate of utilization of ICDS and sub-centre services was 16.9% and 27.2% respectively.

FPA, (2019) reported that the Sexual and Reproductive Health & Rights (SRHR) is a concept that Indians, and South Asians are largely ignorant and aloof about. The taboo around topics like sex and sexuality is the root cause for the many issues people, especially women, face daily. In India, 14 per cent of pregnancies amongst women aged under 20 are unplanned. It posits further that over 34 per cent of adolescent married girls admitted to being physically, emotionally, or sexually assaulted. Fifty per cent of maternal deaths among girls from 15-19 years of age occur due to unsafe abortion practices. Only about 15 percent of young men and women between the ages of 15-24 have received sex education. One in four (26.8 %) Women age 20-24 years has been married before age 18 years. Among the total, urban women are 17.5 percent and rural women are 31.5 percent. This early sexual debut results in multiple levels of violation of rights and puts an early reductive burden on young girls, exposing them to early pregnancy, childbirth, infections, sexual violence, and also puts her at higher risk of cervical cancer. Among women aged below 20 years, 14 percent pregnancies are unplanned. Over a third (34 percent) of married adolescent girls had experienced physical, emotional, sexual violence by their spouses. Furthermore, three percent of girls and 19 percent of boys who had sex, reported using a condom during their first intercourse. Half of maternal deaths of girls between 15-19 years of age are due to unsafe abortions, while 60 percent girls in this age group anaemic, which is a contributing cause of increased age-specific mortality among female adolescents. The MTP made abortion legal in India, yet very few women in India know this **(Woman Reproductive Rights in India: A Prospective Future, 2011).**

Makade *et al.*, (2012) depicted that 78.94% of the study subjects were aware of Medical Termination of Pregnancy, 22.51% were willing to use it if necessary and 10.23% of the study population (63.47% to 73.33%). Out of 342 women, 294 (85.96%) were aware and 48 (14.04%) were not aware of any health facilities which they could approach for family planning services in their locality. It was found that the majority of abortions are performed in unsafe conditions; it is estimated 8% of maternal deaths are due to complications related to unsafe abortions. In the state Madhya Pradesh, only 15% of women reported that they knew abortion was legal throughout the country. Many women have to travel eight or more hours on a bus to access safer health services, and do not have the resources or support to make the journey. The stigma of abortion,

lack of knowledge about safer services, and the scarcity of accessible and trained health care workers have led many women to undergo abortions in unsafe environments. Unsafe abortions use methods such as intrauterine insertion of a foreign object (sticks, roots wire), vaginal abortification (herbal preparations or misproscribed medication), or sharp curettage **(Exploring the pathways of unsafe abortion in Madhya Pradesh, India, 2012).**

According to National surveys, which do not include unmarried women, only 22% of symptomatic women will seek treatment due to a lack of resources, a lack of access to clinics and a lack of sexual education. The legal age of marriage is 18, but 60% of women are married before they have reached the legal age. Of those women, 73% have had a child before the age of 18. Those who were married at the age of 14 or younger had a mean age of first pregnancy at 16. Girls entering marriage, especially those who are younger than the legal age, are given very little information on sexual intercourse, contraception or pregnancy. These girls have an increased risk for anemia, unplanned pregnancies, complicated pregnancies, complicated deliveries, premature deliveries, spontaneous abortion and death during pregnancy **(Developments in reproductive health education in India, 2013).**

A paper, based on a community-based cross-sectional survey carried out in Trivandrum district, Kerala using multistage cluster sampling method. Perception regarding the safety of the method was reported to be an important factor that determines the contraceptive use, along with the decision of women as well as their husbands. Women were mostly conscious about their own health and financial status to decide on the number of children they need to have. Ten percent of women reported that the decision on number of children was influenced by family pressure, and 16% reported that the desire for a son or daughter also would affect the decision on number of children. (**Thulaseedharan, 2018).**

Makade *et al.*, (2012) stated that out of 234 couples using contraception, in 41.45% cases decision about family planning was taken mutually by the husband and wife; in 30.77% cases taken independently by the husband, in 26.07% cases by the wife and in 1.71% cases by in-laws. **Olaide *et al.*, (2016)** reported that women's involvement in decisions on family size was only 27.8%. **Maharjan *et al.*, (2019)** concluded in their

study that the women who marry and become pregnant during adolescence face numerous barriers that bound their access to health care services that includes overload of work, transport and long distance to health care facilities, qualities of health services, verbal abuse by health care providers, and shyness and embarrassment. They require more attention from the health services and policy makers. More youth friendly health services and education about sexual and reproductive health should be key elements in strategies to address the reproductive health issues of early-married women and adolescent girls.

2.4 An association between demographic and socio-economic status of the respondents and level of knowledge, attitude and practice of reproductive health

A study was conducted by **Anand E. *et al.*, (2015)** revealed that the practice of hygienic method was higher among women who married after 18 years as compared to women married before 18 years of age. The use of hygienic method was higher among separated/deserted/widowed (18.4%) followed by currently married women (17.8%) as compared to other women. The use of hygienic method was higher among women who were married recently, i.e. married for less than four years (25%). The disparity in use of hygienic method was higher by place of residence. The use of hygienic method was low among women belonging to Hindu and Muslim religion as compared to women following Christianity, Sikhism and other religion. Wealth index was one of the important predictors in the use of hygienic method as the wealth index increased, the prevalence of hygienic methods also increased. The range between poorest to richest varied 1.9% use among the poorest women to 46.4% among the disparity persisted among various caste groups of women of hygienic method among women from scheduled caste was low (10%). A meagre 3.6% of women used hygienic methods that had facility as compared to 36% who had flush toilet.

Santra S., (2017) carried out a study among the women of reproductive age group in a slum of Kolkata, West Bengal, India and to find out the practice of menstrual hygiene among them. It was noticed that with increasing literacy status prevalence of sanitary pad use was found to be increased (36.4% among illiterate vs 88.9% among those educated higher secondary and above) and this difference was statistically significant (p=0.001). With increasing socio-economic status prevalence of sanitary pad use was

also found to be increased (36.7% among class V vs 85.7% among those belonged to class I and II) and this difference was also statistically significant (p=0.000). Most of the study subjects did not use sanitary pad because of high cost (62.5%). About 42% of the cloth piece users reused cloth piece. All who reused cloth pieces washed those with soap and water and 50% of them dried those under sunlight. Mean amount of money spent per month by sanitary pad users was Rs.27.90±8.82. It was noticed that over all prevalence of sanitary pad use was higher (75.0%) among those aged <25 years than those aged ≥35 years (33.3%). This difference was statistically significant (p=0.003). It was noticed that over all prevalence of sanitary pad use was higher (75.0%) among those aged <25 years than those aged ≥35 years (33.3%). This difference was statistically significant (p=0.003).

Mohite & **Mohite, (2016**) conducted a community based cross-sectional study was conducted among 230 adolescent girls residing in slum area of Karad city in year 2014. It was described that age, education, mother's education and economic class 4 are significantly associated with use of sanitary napkins in slum adolescent girls as indicated by chi-square test and p value as 9.2 and 0.009, 10.2 and 0.01, 30.6 and 0.001, 4.7 and 0.02 respectively. Practices of sanitary disposal of materials are significantly associated with age, mother's education and economic class 4 as p values are < 0.05 at 95% confidence interval as 9.9 and 0.006, 14.4 and 0.002, 5.8, 0.01 respectively. The girls' educational status alone has been significantly associated (21.1, and 0.001) with practice of personal hygiene among slum adolescents.

A cross sectional study was carried out in the urban slums of Lucknow by **Yadav *et al.*, (2017).** In this study the majority (95.2% and 89.2%) of the women in the age groups of 15-18 and 18-21 years respectively were currently not using any of the contraceptive methods. Religion was not found to be significantly associated with non-use of contraceptive with similar percentage of non-users among the Hindu's as well as Muslim's (68.4% and 62.3% respectively). Almost three-fourth (72.8%) of the women of SC/ ST category were non-users of contraceptives. This percentage decreased slightly among the OBCs (68.2%) and even further among those of the general category (55.8%). Thus, contraceptive non-use was found to be more in SC / ST and OBC as compared to the general category and this association was found to be statistically significant. Majority (77.6%) of the women with primary level of education or no

education were found to be non-users. Educational status of the women as well as her husband was found to have a statistically significant association with non-use of contraceptive. About three-fourth (71.6%) of the women who were unemployed were non-users of contraceptives and this association was found to be statistically significant. Non-use of contraceptive was found to be decreasing with increase in number of pregnancies of the women and this association was found to be statistically significant. But about half (48.9%) of the women who had three or more living children were also found to be not using any contraceptive methods.

A cross sectional study was carried out in the urban slums of Lucknow by **Yadav *et al.*, (2017)**. It was reported that more than two-third of the women reported unfavourable attitude of the husband towards family planning methods and only about 40% of the women had ever discussed family planning with their husband. Majority (83.9%) of the women whose husbands had an unfavorable attitude towards family planning were non-users. In the study about one-third of the women were motivated to adopt family planning methods either by husbands, other family members / friends / relatives or health care provider. About 70% of the women who were motivated to adopt family planning method were currently using family planning methods. A statistically significant association was observed between motivation to adopt with use of contraceptive. It was found that the majority (95.9%) of the women who had no autonomy in their family were non-users of contraceptives.

Hasan *et al.*, (2017) found in his study that no contraceptive was used in couples with female less than 19 years of age. OCP and IUCD were commonly used contraceptive in couples with age of wife less than 25 year. Interestingly use of barrier contraceptive (condom) was very less among couples with young wife (<25 years age). Use of condom was maximum in women >35 year despite having high failure rate and most women having 2 or more children. Use of emergency contraceptive was not reported by women <25 year of age. It was maximum among females in the age group 25-35 year. Use of DMPA and permanent sterilisation (tubectomy) was higher in couples with age of female >25 year. None of the couples reported vasectomy.

Thulaseedharan, (2018) revealed that though the overall prevalence of female sterilization was 13.3%, it was significantly higher among women aged 25–28 years

than those aged 18–24. years (20% vs 2.6%, p<0.001). A significantly lower prevalence of female sterilization was observed among women with higher levels of education than women with education of 12 years or below 12 years (5.8% vs 19%, p=0.006). The current use of any contraceptive method was also significantly lower among highly educated women compared to women with the education level of 12 years or below 12 years (49.4% vs 64.7%, p=0.030). Preference for tubal occlusion was significantly less among highly educated women than the other group (85% vs 95.7%, p=0.008). It is noted that the bias in the observed significantly low prevalence of female sterilization among highly educated young women. The low prevalence of sterilization among highly educated young women may not be due to their decision to avoid sterilization and to choose some alternatives, but due to the delayed marriage and pregnancy.

Taklikar *et al.*, (2012) found that among the women not using contraception, 69 (56.6%) of them were <24 years of age, and among users, 230 (72.4%) were >25 years of age. The difference was statistically highly significant (p < 0.0001). Among the nonusers, 92 (75.4%) belonged to joint family, 69 (54.9%) showed the duration of marriage to be <4 years and 113 (91.9%) possessed none or 1–2 children. The observed difference among the users and nonuser women according to their type of family, duration of marriage, and number of children was statistically significant (p < 0.0001). The number of children was significantly high among couples with the history of never use of contraception in past (χ 2 = 16.68, p < 0.001). **Kumar *et al.*, (2011)** carried out a study among the married women of reproductive age (15- 45 years) and concluded that the acceptance in family planning is associated with increasing age, nuclear family & level of literacy. IUCD is the most accepted one among all the temporary methods. Vasectomy and newer contraceptives were not at all used.

2.5 Media exposure of the respondents with different type of mass media and their relationship with the KAP score RH

Santra S., (2017) conducted a study to assess the of knowledge regarding menstruation and practices related to maintenance of menstrual hygiene among the women of reproductive age group in a slum of Kolkata, West Bengal, India. It was noticed that the source of information on menstruation was mother in most of the cases (53.1%). A study was conducted by **Anand E. *et al.*, (2015)** revealed that the hygienic method was

higher among (20%) women who have media awareness about personal hygiene as compared to those who did not have (6%) media awareness about personal hygiene.

Jose *et al.*, (2019) reported that the major source of information on menstruation was from family members 335 (97.1%), followed by health personnel 68 (19.7%), friends 64 (18.6%) and media 1 (0.3%). Further he explained that majority 189 (54.8%) reported source of information on family planning methods was from health personnel followed by family members 182 (52.8%), media 70 (20.3%) and friends 53 (15.4%). Moreover, Family members were the major source of information regarding reproductive tract infection 206 (59.7%), followed by media 131 (38%), health personnel 98 (28.4%) and friends 69 (20%). **Thapa P. *et al.* (2018)** included health worker, husband, friend, relatives and mass media as a source of information regarding contraceptives. In which the majority (85.8%) of the respondents had got information of contraception through mass media and few (24.7%) through relatives.

Zakaria *et al.*, (2020) conducted a study to know the knowledge on, attitude towards, and practice of sexual and reproductive health among older adolescent girls in Bangladesh; an institution-based cross-sectional study. It is clear that being a student of the science group ($\beta = 0.294$, $p < 0.001$) and reading about or watching SRH issues on media ($\beta = 0.214$, $p < 0.001$) are significantly associated with older adolescent girls' high level of knowledge in this regard. Furthermore, being a student of the science group ($\beta = 0.169$, $p < 0.001$), urban residence ($\beta = 0.203$, $p < 0.001$), regular SRH communication with other/sister/friend ($\beta = 0.096$, $p = 0.003$), having knowledge on periods before experiencing them ($\beta = 0.069$, $p = 0.040$), and reading or watching any SRH content on media ($\beta = 0.217$, $p < 0.001$) appeared as predictors of older adolescent girls' positive attitude towards SRH issues. Moreover, it is obvious that being a student of the science group ($\beta = 0.072$, $p = 0.048$), urban residence ($\beta = 0.219$, $p < 0.001$), mothers' regular TV watching ($\beta = 0.080$, $p = 0.024$), respondents' regular SRH discussions with a mother/sister/friend ($\beta = 0.090$, $p = 0.005$), pre-knowledge on periods before menarche ($\beta = 0.123$, $p < 0.001$), students whose primary source of reproductive health was their mother ($\beta = 0.082$, $p = 0.012$), reading or watching any SRH content on media ($\beta = 0.180$, $p < 0.001$), and visiting and talking with a doctor or health worker about SRH issues ($\beta = 0.080$, $p = 0.016$) are the most important factors influencing a regular hygienic practice of SRH of older adolescent girls. In addition,

484 (61.1%) older adolescent girls reported that they usually felt at ease when talking about sexual and reproductive health with mothers, relatives, and friends. **Chacko *et al.*, (2020)** explained that others were source of doubt for about 37.6%, friends for 20.8%, both mother and friends for 5.6%, relatives for 17.6%, both friends and relatives for 2.4%, others 3.2%, internet 1.6%, others 3.2% and none 3.2%. Alarmingly health workers were source of doubt only for 8%.

T**aklikar *et al.*, (2012)**, Doctors were the most common source of information about contraceptives in 163 (50.62%) women, followed by health workers among 59 (18.32%), media among 35 (10.86%), others (her own knowledge and husband) reported by 30 (9.31%), mother and mother-in-law among 22 (6.83%), and friends among 13 (4.03%) women.

Zakaria *et al.*, (2020) portrayed the different SRH-related characteristics of older adolescent girls, reporting that more than two-thirds of them (68.6%) did not have prior knowledge of menarche or menstruation. Most of the adolescent girls (65%) acknowledged their mothers as the primary source of knowledge on SRH. Furthermore, more than two-thirds of the older adolescent girls (68%) had regular (at least once in every month) communication regarding SRH issues with their mothers or sisters. Moreover, more than half (52%) of older adolescent girls had read or watched SRH content on media, while 30% had talked with a doctor or health worker about SRH matters. The topics discussed in interpersonal communication were family planning (53%), sexual harassment (39%), STIs (35%), and the childbirth process (29%).

2.6 Teaching materials and conduct the intervention among the study subjects

From all these beliefs, it was clear that education plays a key role in menstruation hygiene management. By educating both men and women regarding menstruation, we can overcome these false beliefs and taboos. Due to cultural expectations and restrictions many girls were not adequately informed about the realities of menstruation. As a result, they feel subnormal, diseased, or traumatized **(Deo *et al.*, 2005).** Therefore, increased knowledge about menstruation right from childhood may escalate safe practices and may help in mitigating the suffering of millions of women **(Yasmin *et al.*, 2013).**

A community-based cross-sectional study was carried out by **Chacko *et al.*, (2020)** among young females of the age 15 to 35 years of urban slums in Kochi Corporation. It was found that the 47.2% of females faced difficulty during menstruation. 40.8% were physical difficulties like pain and 5.6% due to menstrual hygiene maintenance difficulties and 2.4% both physical and hygiene maintenance difficulties. But none reported the difficulty was due to restrictions. 88% avoided religious ceremonies and 87.2% avoided religious place visit .100% of Hindus and Muslims avoided both religious place visit and religious ceremonies, whereas 10% Christians avoided religious ceremonies. Christians didn't avoid religious place visit. Intercourse was avoided by 68%. Certain rooms were avoided by 28% during menstruation. Commonly avoided room is prayer room 27.2% due to the impact of feeling of impurity. It was found that no restrictions were reported by young females regarding co-sleeping with husband or children and discussing about menstruation and its problems. 17.6% avoided food during menstruation. Fat rich food were avoided by 6.4%, gastritis inducing food were avoided by 4% and fish was avoided by 0.8%. About 6.4% avoided other types of food. Commonly avoided other food items during menstruation are sweet food, fat rich food, iron rich foods like dates, green leafy vegetables, papaya, pineapple, gastritis inducing food.

Issac R. C., (2000) stated that the main interventions which could reduce the incidence and prevalence of RTI/STIs include IEC (information, education and communication) campaigns, condom promotion, use of safe microbicides, screening and case finding among vulnerable groups such as pregnant women and sex workers. The challenge is not just to develop new interventions, but also to identify barriers to the implementation of existing tools and to devise strategies for ensuring that effective STI control programmes are implemented in the future.

Sancheti *et al.*, (2014) carried out a study to assess baseline knowledge and attitude of school going adolescents about reproductive health. The study also investigated the effect of audio-visual health education intervention on knowledge and decision-making skills of school going adolescents about reproductive health. An interventional study was carried out in randomly selected 200 school adolescents. Baseline knowledge and attitude was determined by questionnaire method. An audio-visual health education intervention was carried out in these students. Knowledge and attitude were again tested

using same questionnaire. It was found that most of the students were unaware of reproductive organs in human, modes of transmission of HIV, prognosis of AIDS. An audio-visual health education intervention was carried out in these students.

Institute of Health Management, (2018) IHMP works with ASHAs to implement its sexual and reproductive health (SRH) programme. They support married adolescent girls by conducting monthly health needs assessments to identify their health and information needs preparing a monthly plan for each girl detailing her health care needs providing information and counselling that is specific to the needs of married adolescent girls and their families linking adolescent girls with government health providers and primary health care centres facilitating community-based monitoring by village health and sanitation committees (VHSCs) to ensure that the health needs of girls and young married women are addressed on a timely basis.

Shinde *et al.*, (2020) reported that strengthening Evidence base on school-based interventions for promoting adolescent health (SEHER) is a multicomponent, whole-school health promotion intervention delivered by a lay counsellor or a teacher in government-run secondary schools in Bihar, India. The objective of this study is to examine the effects of the intervention after two years of follow-up and to evaluate the consistency of the findings observed over time. We conducted a cluster randomized trial in which 75 schools were randomised (1:1:1) to receive the SEHER intervention delivered by a lay counsellor (SEHER Mitra [SM]) or a teacher (Teacher as SEHER Mitra [TSM]), respectively, alongside a standardised, classroom-based life skills Adolescence Education Program (AEP), compared to AEP alone (control group). The trial design was a repeat cross-sectional study. Students enrolled in grade 9 (aged 13–15 years) in the 2015–2016 academic year were exposed to the intervention for two years and the outcome assessment was conducted at three time points─at baseline in June 2015; 8-months follow-up in March 2016, when the students were still in grade 9; and endpoint at 17-months follow-up in December 2016 (when the students were in grade 10), the results of which are presented in this paper. The primary outcome, school climate, was measured with the Beyond Blue School Climate Questionnaire (BBSCQ). Intervention effects were estimated using mixed-effects linear or logistic regression, including a random effect to adjust for within-school clustering, minimisation variables,

baseline cluster-level score of the outcome, and socio-demographic characteristics. In total, 15,232 students participated in the 17-month survey.

Deoshree *et al.*, (2017) was carried out a study among the Sarna tribal's in Kanke district of Jharkhand. The sample for the study consists of 180 literate Sarna tribal women who were selected on a stratified random basis from rural areas of Namkum and Kanke. There were three age groups namely 15-19 years, 20-24 years and 25-29 years and for each age group 60 literate Sarna tribal women selected on random basis. The research design makes a comparison between two experimental groups and the control group. These 180 subjects are divided into three groups; one control group and two experimental groups. Audio-Visual Reproductive Health Materials consists of colored/black & white photographs and messages. There are 40 photographs (26 cm x 20 cm) for reproductive health scale covering 5 themes and specific message. These photographs and messages depicted scientifically correct information and knowledge on reproductive health information, attitude and practice. The messages are recorded in audio cassette and communicated to the sample through tape recorder. The colored photographs are shown to the subjects one by one and the message related to each photograph is given simultaneously. It was not possible to have photograph regarding some themes of reproductive health, such as reproductive health organs, reproductive system and intimate relationship for such themes. Information about reproductive health practice was obtained from the control and the two experimental groups of literate Sarna tribal women. Initial data obtained from the control as well as the experimental groups was taken as the base line data. There was no intervention for the control group while the two experimental groups were exposed to audio-visual reproductive health educational materials. One experimental group received educational materials without discussion while the other experimental group received educational materials with discussion. After each intervention the reproductive health practice scale was applied to the subjects. For both the experimental groups four interventions are made. There was a gap of ten days between the interventions. One of the experimental groups is just presented audio-visual educational materials whereas the other group not only received educational materials but was also exposed to discussion at each of the four interventions. If the intervention with and without discussion has any differential impact, it would be reflected in the differences between the scores of the two experimental groups.

Gedeon J., *et al.*, (2016) evaluated the impact of an intensive three-day workshop dedicated to improving knowledge of sexually transmitted infections (STIs) among peer educators through didactic, experiential, and skill-building exercises, we administered a pre-, post-, and longitudinal assessment. All 13 participants completed both the pre-test and post-test; 11 of 13 participants (85%) completed the longitudinal evaluation administered three months after the training.

A research was conducted by **Luciana E. H. *et al.*, (2019)** as part of a parent study, Kissa Kahani, among female of ages 15–24 years which used a variety of narrative-based methods to explore the role of gender in the lives of adolescents in Uttar Pradesh, India and its relationship to sexual and reproductive health. Audio recordings of the narratives, responses, and discussion were transcribed verbatim and translated from Hindi into English. This particular study used story circles as narrative-based research method, to explore the effect of gender on the daily life and future expectations of young women in Lucknow city.

2.7 Evaluation of the effectiveness of the intervention

Gedeon J. *et al.*, (2016) conducted a study to evaluate the impact of an intensive three-day workshop dedicated to improving knowledge of STIs among peer educators through didactic, experiential, and skill-building exercises, the results of the study indicated that both individual and aggregate STI knowledge increased from baseline knowledge.

Luciana E. H. *et al.*, (2019) evaluated six story circle sessions Story circles that offer an innovative method for learning about the multiple ways in which young women experience the world and come to understand their place in it given their gender. Use of participatory research methods, such as story circles, enables youth to share information about themselves and communicate about their lives with contextual complexity. Participants' narratives revealed that mobility restrictions, rampant sexual harassment and assault in their communities, limited educational and economic opportunities, and the dominant belief that marriage is the utmost important goal for young women all intersect as mechanisms of gender inequality. It suggested that India's persistent gender inequality will require multi-pronged solutions and interventions addressing social, structural, educational, and economic factors.

A study done by **Institute of Health Management, (2018)** noticed positive impact of the SRH programme on married girls. It was found that the SRH programme for married girls achieved some impressive improvements, including rise in contraceptive use (33.7% at intervention sites compared to 6.4% at control sites); an increase in the median age at first birth, from 16.9 years to 18.1 years in intervention sites versus 16.6 to 17.1 years at the control sites; and greater uptake of minimum standard antenatal care – 56.1% at intervention sites versus 24.3% at control sites. These improvements indicated both an increase in girls' empowerment and suggested shifting norms about the mobility of married adolescent girls and their right to use of reproductive health services.

After giving Intervention it was noticed by **Deoshree *et al.*, (2017)** that the educational intervention improved reproductive health practice of tribal women. Reproductive health education based on discussion as compared to reproductive health education without such discussion is more effective for the enhancement in reproductive health practice. More frequency of intervention stronger the effects on reproductive health practice.

Sancheti *et al.*, (2014) carried out a study to assess baseline knowledge and attitude of school going adolescents about reproductive health. The study also investigated the effect of audio-visual health education intervention on knowledge and decision-making skills of school going adolescents about reproductive health. Results of the study suggested that knowledge regarding reproductive health increased significantly after health education. It may be concluded that health education is important for adolescents to improve their decision-making skills regarding reproductive health.

Chapter-III
Materials and Methods

CHAPTER- III

MATERIALS AND METHODS

In general methodology of research refers to the strategy that outlines the way in which a research project is to be undertaken and, among other things, describes the methods to be used in it. These methods, described in the methodology which define the means or modes of data collection or, sometimes, how a specific result is to be calculated. **(Chinelo Igwenagu, 2016).** In terms of methodology refers in the present study was broadly divided into three parts i.e. preliminary phase, intervention phase and post intervention phase. Each phase had specific method of sampling and data collection to meet out all the objectives of the study. The present study was undertaken in the city of Lucknow under broad category to elicit the information regarding knowledge, attitude and practice of healthy reproductive health as well as to provide health education via developed teaching material. Thus, the present study was divided into these headings as follows-

- Demographic and socio-economic status of the early married women who are living in the urban slums.
- Socio demographic factors associated with child marriage in the slum of Lucknow city.
- Baseline knowledge, attitude and practice of the respondents regarding their reproductive health.
- Association between demographic and socio-economic status of the respondents and level of knowledge, attitude and practice of reproductive health.
- Media exposure of the respondents with different type of mass media and their relationship with the KAP score RH.
- Making teaching materials and conduct the intervention among the study subjects.

- Evaluation of the effectiveness of the intervention.

For describing present study, the background profile of the research area also plays a vital role to give information regarding existing condition of the research area during research period. Hence, the methodology chapter provide a wide range of information of population, demographic profile, health facilities of the slums, basic facilities available in the slums of Lucknow city and so on, from where we found our sample for the present study. Therefore, this chapter further divided in to subheadings, as below:

3.1 location of the study

3.2 Period of the study

3.3 Study design

3.4 Study sample

3.4.1 Study subjects

3.4.2 Study sample size

3.5 Sampling technique

3.6 Tools and Techniques

3.7 Data analysis

3.1 Location of the study

3.1.1 District Profile: Lucknow city is situated in the middle of Gangetic plains and fairly on compact tract of gently undulating land. The Alluvium soils forms the major geological formation. The region is under Composite Tropical climate. The city stands at an elevation of 123.45 meters above the sea level. The city is drained by the river Gomti and its tributaries. The city comes under Seismic Zone-III termed as moderate damage risk zone.

Table 3.1.1: General profile of the Lucknow city

Geographical data		
	Variables	**Value**
	Latitude	26°30' and 27°10'North

	Longitude	80°30' and 81°13'East
	Geographical area	2528 KM^2
	Boundaries in	
	East	Barabanki
	West	Unnao
	South	Raebareli
	North	Sitapur and Hardoi
Climate		
	Winters	December to mid-February
	Maximum temperature	25^0C
	Minimum temperature	$3 - 4^0C$
	Summers	April to mid-June
	Maximum temperature	$<40^0C$
	Minimum temperature	27^0C
	Rainy season	Mid-June to mid-September
	Maximum temperature	32^0C
	Minimum temperature	25^0C
	Average rainfall	1000 mm
Area and administration Divisions		
	Tehsils	
	Districts	Lucknow, Mohanlalganj, Malihabad, Bakshi ka talab Hardoi, Lakhimpur
	Sub- tehsil	Kheri, Lucknow, Raibareli,
	Patwar Circle	Sitapur, Unnao.
	Panchayat samitis	0
	Nagar nigam	-
	Nagar Palika	-
	Nagar panchayats	01
	Revenue villages	Bakshi ka talab, Chinhat.
	Assembly Area	Gosaiganj, Kakori, Mal. Malihabad, Mohanlalganj, Sarojini nagar.

		799 09

Source: *www.lucknow.nic.in***,** *https://en***,** Wikipedia.org/wiki/Lucknow district, *http://www.worldweatheronline.com/*

3.1.2 Lucknow city

Lucknow, the capital city of Uttar Pradesh, is one of the most prominent cities in India in terms of education, commerce, historical, architecture, culture, Urdu literature etc. The city is the 11th largest metropolitan city in the country and after Delhi, it is the 2nd largest city in Northern part of India. It is located in Awadh region, which was known as the granary of India and was important strategically for the control of the Doab, the fertile plain between the Ganga and the Yamuna rivers. The city of Lucknow is situated on the banks of river Gomti, which passes through the middle of the city.

Lucknow is also called as 'City of Nawabs.' It flourished in each and every aspect, including poetry, dance, music and the other finer aspects of the life style of Lucknow.

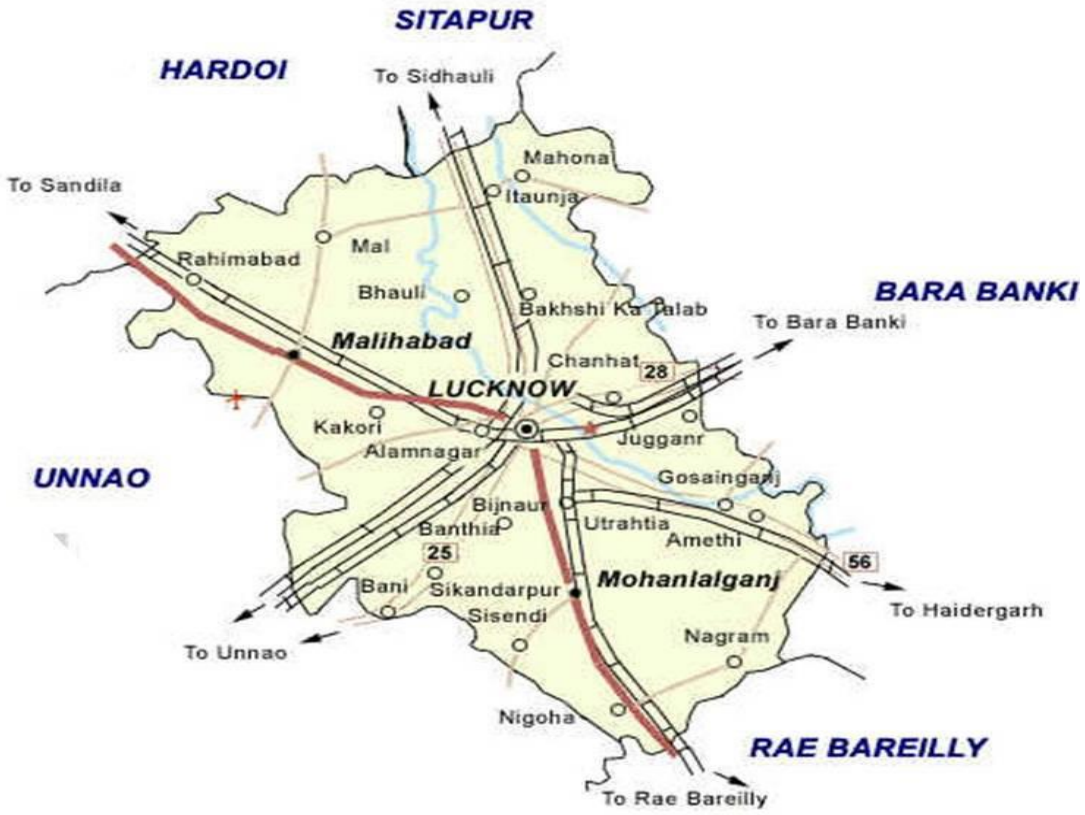


Figure 3.1.2.1: Map of Lucknow City

Source: Google Image (*https://lucknowupindia.weebly.com/the-map.html*)

Table 3.1.2.1: Physical & demographic profile of Lucknow city

Physical and Demographic profile of Lucknow city		
Parameter	**UNIT**	**Value**
Area (Lucknow Nagar Nigam)	Ha	35053
Zones	No	6
Municipal wards	No	110
Population (2011 census)	No	2815601
Household	No	477860
Average household Size	No	5.8
Literacy rate (2011census)	%	84.72
Male literacy rate (2011 census)	%	87.81
Female literacy rate (2011 census)	%	81.36
The average literacy rate in slums	%	72
Sex ratio (2011 census)	No	915
Slum settlements	No	609
Notified slums	No	502
Non -notified slums	No	107
Slum area	Ha	501.64
Percentage of slum area to total area	%	1.5
Slum population	No	772807
Percentage of slum population to total population	%	27
Slum households	No	1,48,117
Average household size	No	5
Percentage of total city households	%	31

Source: Census of India (2001, 2011), RAY primary survey, 2011

3.1.3 Slums of Lucknow city

With increase in population of the city, the needs of the housing grew, which could not be met by formal housing market. Migrant population, which could not avail the facilities of suitable housing and lack of monetary support were forced to satisfy their

needs by occupying both private and public vacant lands and resulted in formation of slums and more number of squatter settlements.

According to National Sample Survey Organization, areas notified as slums by the respective municipalities, corporations, local bodies or development authorities were treated as “notified slums”, they tend to receive higher level of services and those unrecognized by the local bodies were considered as “non-notified slums”. As per DUDA, Lucknow the city is having a total of 609 slums currently in which 502 slums are notified by ULB to avail higher level of basic services.

For administrative propose, the Lucknow city is divided in to 6 zones and 110 municipal wards. Out of 609 slums in the city, 124 slums are located in Zone 5 in southern part of the city situated towards Kanpur Road. About 117 slums are located in zone 1 situated in core area of the city.

Out of 609 slums, 353 were built on land which is belongs to private ownership and 115 slums were situated on land belongs to state government. Of the total 609 slums in the city, 343 slums have existed for more than 50 years. Considering the physical location of the slums, 183 slums are located in Non-hazardous/Non-objectionable sites, 106 slums are located along major transport alignment, 203 slums are located along open and storm water drains, 72 slums are located along river / water body bank and 12 slums are located on hazardous sites. Most of the slum settlements are concentrated around the core area of the city, along the highways and around other dominant location/land use forming larger clusters. 408 slums are sited in the core part of the city, while the other 201 slums in fringe areas. The abutting land use around the slums is predominantly residential in nature.

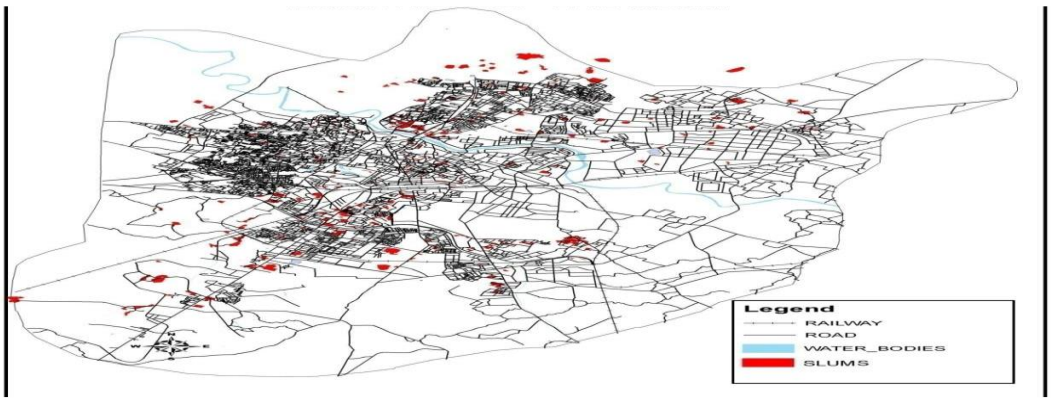


Figure 3.1.3: Slums of Lucknow

Source: Google Images

The living conditions in slums represent the worst of urban poverty. Individuals and communities living in slums face serious challenges in their efforts to survive. For assessing the current situation of slums, appropriate indicators are required to understand the depth of problems, is given below:

Number of households by Health Condition

Poor water and unsanitary conditions cause adverse effects on health of households living in slums. It is quite apparent that slums are characterized by poor/crammed housing conditions, lack of good sanitation and contaminated water supply. Due to contamination of water and outlet of effluents into the river/ water bodies making the households exposed to respiratory problems, chronic and other diseases. It is found that about 0.1% of the slum population is found to be having HIV/AIDS while 0.1% of the population is suffering with Tuberculosis and 0.1% with respiratory problems in slums of Lucknow.

Sanitation

Sanitation and sewerage system are not only the basic necessities of life, but they are also crucial for reaching the goal of "Health for All". Increased sanitation coverage is directly linked to improvement of health status. While, it is worthwhile to note that the proportion of people having access to sanitation in urban areas is considerably greater when compared to their rural counterparts, however the problems are more exacerbated in slums. The health and decency are factors. So, the urban sanitation is perceived as being important. It is noticed that in case of slum the sanitation facilities are worst and in pathetic condition.

Distance of the slums from the nearest Anganwadi and Pre-primary schools

Anganwadi is a part of the Indian public health care system. The Anganwadi workers provide basic health care activities like contraceptive counselling and supply, nutrition education and supplementation, as well as pre-school activities. The access to Anganwadi is very necessary especially in places like slums where children, pregnant women suffer with lack of proper nutritional diet. About 49% of slums have Anganwadi facility within the slum area. For about 27% of slums the facility is located within a nearby distance of 0.5 kms. For the remaining 24% of slums the facility is located at a

distance of 0.5 to 2kms. In total all the slums are having access to Anganwadi with in a distance of 2 kms.

Health facilities

Majority of the health problems in urban slums stem from lack of access to or demand for basic amenities. Basic service provisions are either absent or inadequate in slums. Lack of drinking water, clean, sanitary environment and adequate housing and garbage disposal create series of threats to the health of slum dwellers, especially in women and children as they spend most of their time in and around the unhygienic environment. Inadequate nutritional intake due to non-availability of subsidized ration or availability of poor quality to ration makes the slum dwellers prone to large number of infections and lack of education or information, further aggravates the situation. As per Annexure –I data, 6% of the slums do not have access to any kind of health facilities. Within an accessible distance of 2kms, 77% of slums have primary health centre, 79% of the slums have Government Hospital and 58% of slums have urban health post. For about 95% of slums the private clinics are situated at an accessible distance.

3.2 Period of Study

The total period of work was of five years, in the starting after completing Ph. D course work of six months, an extensive literature review of the study was done by going through various research and review papers in journals and online publications. After reviewing various research papers, the topic of the research was selected and synopsis for research work was prepared. Further the questionnaire was the questionnaire was prepared by the researcher followed by testing of its reliability and validity for making it authentic to be used in the study. Simultaneously the different type of teaching materials which were already popular among the women living in slum to get the information regarding RH were being collected to plan and design new teaching materials for the intervention. The information related to RH were also being collected to be added in the different teaching materials (Flash cards, snake & ladder, card game and flip book) by keeping in mind to add each and every minute detail that could be well understood by the women living in slums. The whole period was divided in to three phases; a time line was prepared where each phase was a certain time period (figure 3.2).

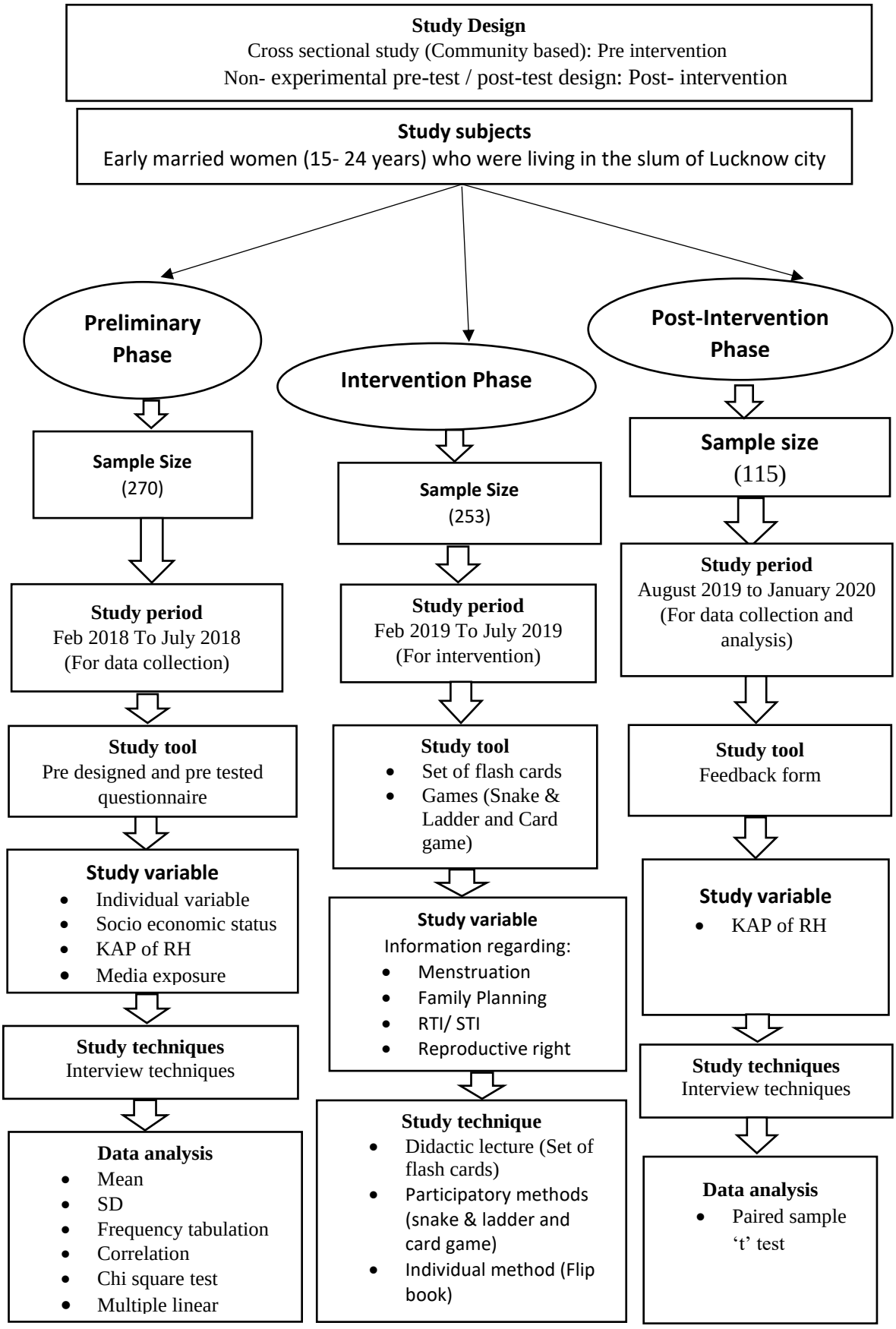


Figure 3.1.4: Conceptual framework of the study

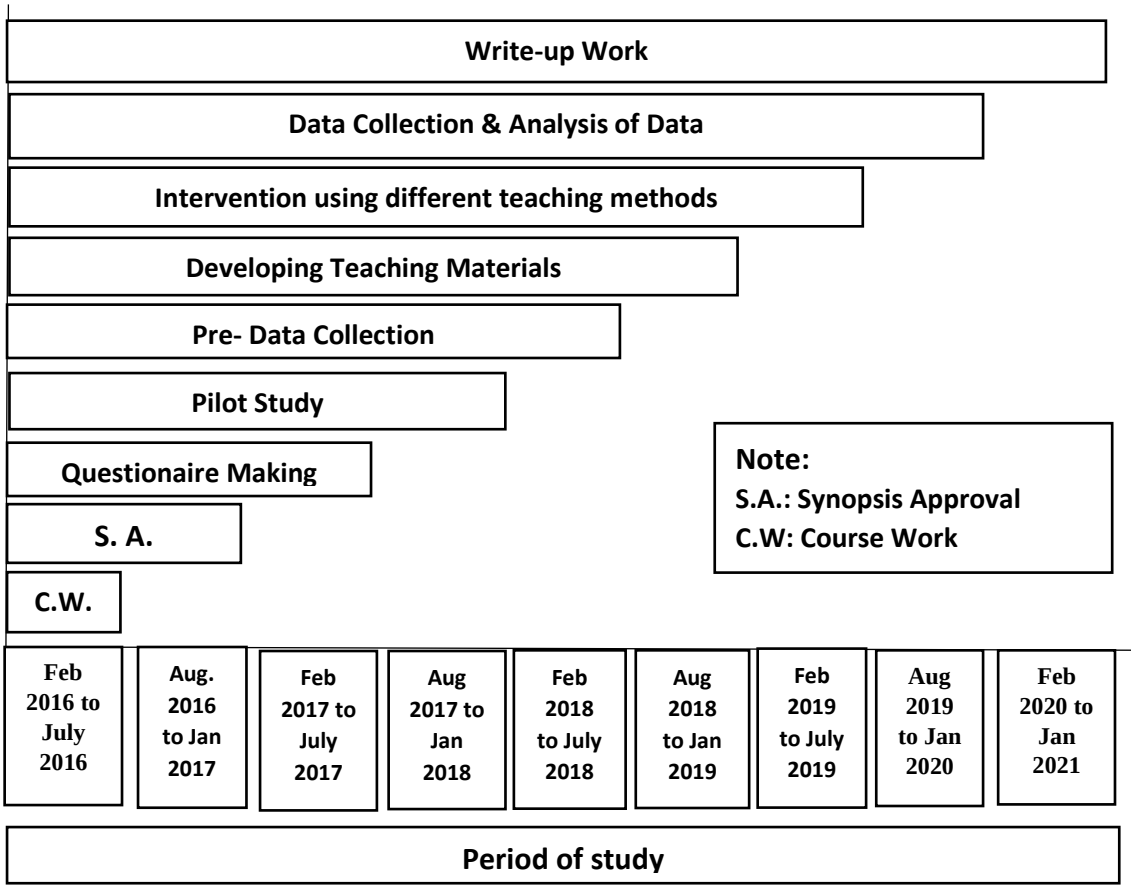


Figure 3.2: Work plan for the present study

a) Pre- intervention Phase

After making some modifications in the questionnaire on the basis of pilot study, for the next months i.e.; February 2018 to July 2018, the data of pre- intervention was collected, entered and analysed to plan the suitable teaching methods for getting maximum positive change in the knowledge, attitude and practices regarding women's reproductive health. At the period of August 2018 to January 2019, the teaching materials i.e., sets of flash cards, games (Snake & Ladder and card game) and flip book were designed to be later used in the intervention phase.

b) Intervention phase

After designing and preparing the teaching materials, the intervention was given to the study subjects. The intervention phase was of 6 months from February 2019 to July 2019 in which the selected different popular teaching methods among the young women, like didactic lecture (through story telling by using sets of flash cards), participatory methods (Snake & Ladder and Repro-cards) and Individual methods (flip

book) were used to teach the study participants and proper time was given to them so that the teaching material could be fully utilized.

c) Post intervention phase

After conducting the intervention, the post intervention data was collected and analysed. At the last six months of the research was thoroughly given to the write up work. The post intervention part was from August 2019 to January 2020 in which the data was collected after giving intervention and feeding and statistical analysis part was done. Remaining months were solely given to the write up work of the thesis.

3.3 Study design

The Study conducted was a Non-experimental Pre-test/ post-test design in which, evaluators survey the intervention group before and after the intervention. While evaluators may observe changes in outcome indicators among the intervention participants, they cannot attribute all these changes to the intervention alone using this design because there is no comparison group.

3.4 The Study sample:

Sample basically constitutes the number of observation or participants that are part of the particular study. While doing a research, it becomes impractical to study the whole population. Thus, a set of participants are selected from the population, they are less in number but are adequate for that population from which they are drawn which makes it possible to draw a true inference for the results gained about that population.

3.4.1 Sample size

The sample size for present study was divided into three parts. In preliminary phase the pilot study was conducted to calculate the sample size **(Auwalu Abdullahi *et al.*, 2016)**, however the sample size determined for data collection, intervention phase was on the basis of inclusion and exclusion criteria after getting the consent of study subjects. Thus, the calculation of sample size finalized in each phase was different (figure 3.4.1). These are given as below:

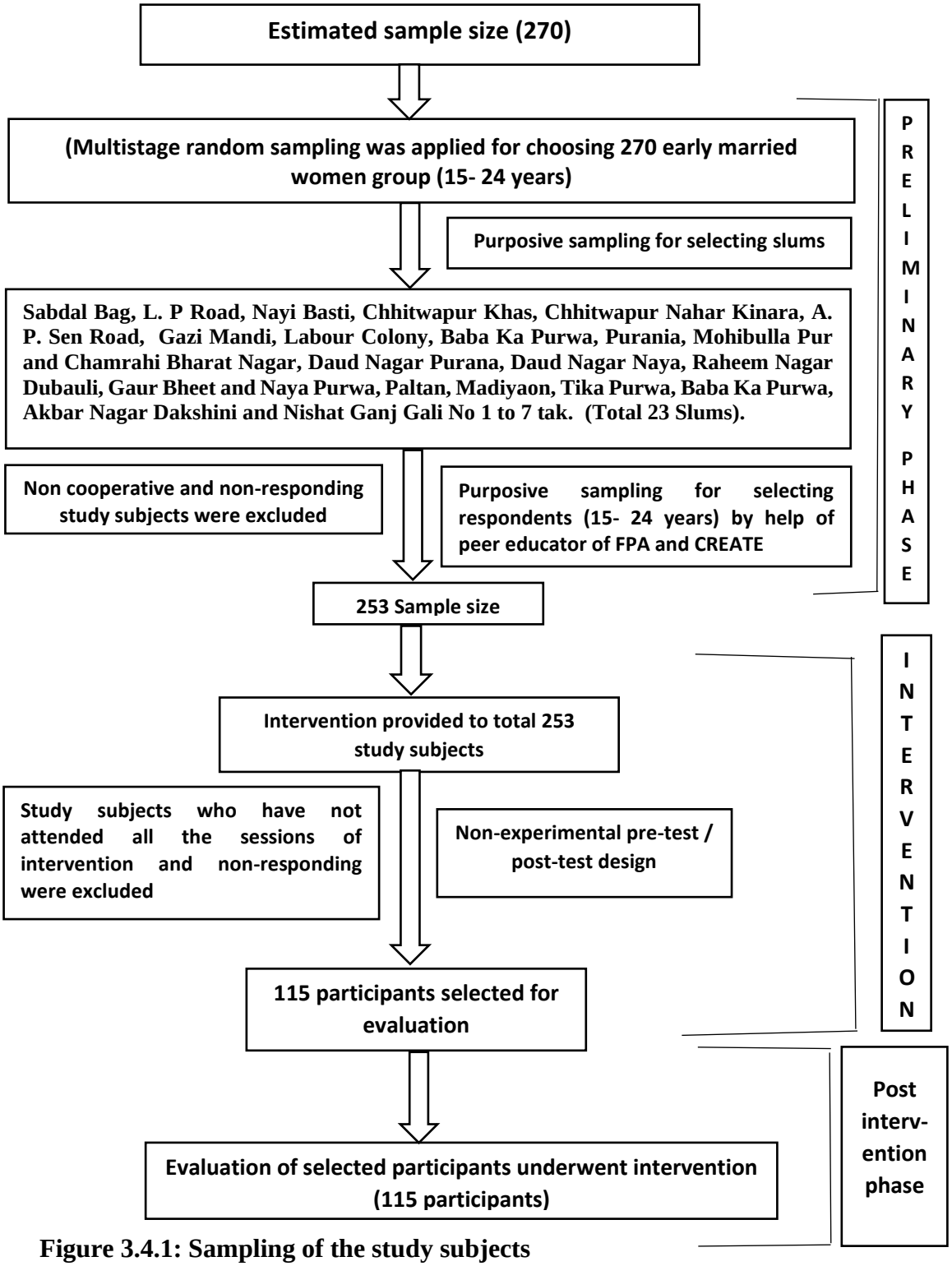


Figure 3.4.1: Sampling of the study subjects

3.4.1.1 Pilot study

The present study was gone through a pilot study after reviewing literature regarding knowledge, attitude and practice about reproductive health of early married women of urban slum. To the best of our knowledge, there was no available literature on previous

work on knowledge, attitude and practice about reproductive health of early married women of urban slum. Hence, a pilot study was done to compute an estimate of the value of p that later was applied to calculate the sample size. In our best effort no literature was available that is why a pilot study was conducted to compute an estimate the value of prevalence (p). It was later applied to calculate the sample size for preliminary work of the present study. Pilot study was done in the Slums Beli Garad Gaon (Bhartendu Harischandra ward). Kabadian Tola and Khadri (Faizullaganj- I ward). Total 40 women were included to participate in the pilot study and was not included in the actual survey.

3.4.1.2 Preliminary phase

After conducting pilot study among 40 women, a concluded sample were drawn for deciding the sample size of preliminary phase. For deciding the sample size of preliminary phase of the present study the overall percentages of knowledge (79%), attitude (80%) and practice (78%) of reproductive health of early married women living in the urban slums that have been calculated from our pilot study. By observing the score of knowledge (79%), attitude (80%) and practice (78%), the attitude score (80%) was noticed as a highest value. Standard values that could be used in this formula to calculate sample size might be either larger or smaller of a better estimate of p. This procedure should be used when someone is unable to arrive at a better estimate of p. **(Wesson D. W, 2006).** The value for p used in this study was (80%). The sample size was estimated based on the single proportion formula:

$$N = \frac{Z^2 pq}{d^2}$$

$$N = \frac{1.96^2 \times 0.80 \times 0.20}{(0.05)^2}$$

$$= 245 + 25\ (10\%)$$

$$= 270$$

Where N is the required sample size, Z is the reliability coefficient at 95 % confidence interval (1.96), p is equal to 1-p, and d is the acceptable error (0.05). **(Barman A, 2015).** The value for p used in this study was 80%, which was obtained from the overall attitude score during the pilot study. The sample size obtained was 270. Only 253

participants were responded. Thus, giving a respond rate of 93% only 253 questions were included in the present study. 17 (7%) questionnaires were not included in the study due to declination of the respondents and missing data. Therefore, the present study sample size where again based on the respond rate of the study subjects. After completing the data collection work the sample size was finally taken 253 respondents. Total sample size for the present study = **253**

3.4.1.2.1 Inclusion criteria: The respondents were recruited for conducting the present study who have fulfilled the conditions as follows:

- Women who were married before 18 years.
- Women belonging to the age of between 15 -24 years.
- The women who were living in urban slums of Lucknow from more than six months.
- Women who had given consent to participate in the present research.
- The respondents who were co-operative during the data collection.
- The respondents who answered all the questions of the questionnaire used in the study to collect the data.

3.4.1.2.2 Exclusion criteria: The respondents excluded from the research who have not fulfilled the following conditions:

- The women who were married after 18 years were excluded from the study.
- The women who were not belonging to the age of between 15 to 24 years.
- Those women who were living in urban slums from less than six months.
- The women who had not given consent to become a part of the study as a study subject.
- The women who were not co- operative during the data collection.
- The respondents who had not answered all the questions of the questionnaire used in study to collect the data.

3.4.1.3 Intervention phase

Before starting the teaching and learning sessions all the respondents (253) who were recruited in the preliminary phase of the study were re - contacted for giving the intervention to the respondents. It was organized at the particular pre decided, nearby,

local area at day and time which was already planned by consulting the study subjects. As the respondents were belonging to the age group 15- 24 years were new brides and had responsibilities of their home.

3.4.1.3.1 Inclusion criteria: The respondents were recruited for conducting the intervention as a part of present study who have fulfilled the conditions as follows:

- The women who had participated in preliminary phase of the study.
- The women who had given consent to participate in teaching and learning session.

3.4.1.3.2 Exclusion criteria: The respondents were excluded from the intervention phase of the study, as follows:

- The women who had not participated in preliminary phase of the study.
- The women who had not given consent to participate in teaching and learning session.

3.4.1.4 Post intervention phase

After completing all the sessions of teaching and learning the data of post-intervention was collected from the women who participated in intervention of IEC program. Only those participants were selected for interview of post intervention phase who had attended all the teaching and learning sessions of IEC program. Only those participants who were co-operative and given answer to all the questions asked in post intervention phase, were included in the analysis for evaluating the effect of teaching methods in enhancing the KAP of the respondents. So total of 115 study subjects who had taken parts in all the activities of teaching and learning sessions and given all the answers of the questions included in questionnaire of post intervention phase were selected for evaluation, finally.

3.4.1.4.1 Inclusion criteria: The respondents were selected for evaluation in the present study who have fulfilled the conditions as follows:

- The woman who had given consent to take participation in the research.
- The women who were co-operative.
- Participation who had attended all the teaching and learning sessions.

- Respondent who had responded to all the answer of questionnaire.

3.4.1.4.2 Exclusion criteria: The respondents were excluded from the evaluation of the present study, as follows:

- The woman who had not given consent to take participation in the research.
- The women who were non-co-operative.
- Respondent had not attended all the teaching and learning sessions.
- The woman who had not given response to all the questions.

3.4.2 Study subject

According to the Prohibition of Child Marriage Act (PCMA) of 2006 the legal age for marriage is 18 years for women, 21 years for men. After considering the prevalence of child marriage, defined by **UNICEF, State of the World's Children, (2017)**, the percentage of women 20-24 years old who were married or in union before age 18 years. **NFHS-4, (2016)** report compared the prevalence of child marriage amongst 15-19 years old and 20-24 years old is 11.9% and 26.8% respectively for girls in India and it was also found that, in India 27% of girls are married before their 18th birthday and 7% are married before the age of 15 years. Thus, the age of the study subjects was decided by considering the prevalence of early married women. However, the respondents who were married before legal age (18 years), belonging to the age of 15 - 24 years and living in the urban slums of Lucknow were targeted for the present study.

3.4.3 Pilot Study

Before initiating the actual research, the pilot study was conducted on 40 subjects who were married before legal age (18 years), from urban slum of Lucknow. For conducting the pilot study 40 women were selected. The questions were personally asked to the respondents. After completing the pilot study, the minor changes that had to be added based on the observing the responses of the subjects were made. The questionnaire was piloted for understanding and difficulty to avoid ceiling and floor effects in scoring.

3.5 Sampling technique

The present study was conducted into three phases. The multi stages simple random sampling were adopted in the present study.

3.5.1 Preliminary phase

Multi stage random sampling was followed in the present study. For arriving at the required sample size, the following stages were involved:

Stage I: The authority of Lucknow Municipal Corporation was contacted to find out the details of Lucknow like; zones, wards, name of the slum etc.

Stage II: Lucknow district is divided into six zones. Out of which, four zones were selected as on the basis of simple random sampling technique. These are listed with their total number of wards (64) along with name of wards as below:

Zone	Location- Ward name/ No	Total no of wards
Zone -1	Mahatma Gandhi, Babu Banarasi Das, J. C. Bose, Maulavi Ganj, Yadunath Sanyal, Rani Lakshmi Bai, Vikramaditya, Vazeer Ganj, Hazratganj, Raja ram Mohan Rai, Nazar bag, Mashakganj, Lalkuan, Ramteerth, Ganeshganj, Golaganj, Aminabad and Basheeratganj.	18
Zone- 2	Ambedkar Nagar, Malaviya Nagar, Rajendra Nagar, Aishbag, Motilal Nehru, Chandrabhanugupt Nagar, Raja Bazar, Labour Colony, Yahiyaganj, Kunwar jyoti Prasad-II, Netaji Subhash and Kundari Rakabganj.	12
Zone- 3	Daliganj, Kadam Rasool, Ayodhyadas, Jai Shankar Prasad, Faizullaganj – I, Faizullaganj- II, Shivani Nagar, Lala Lajpat Rai, Bhartendu Harishchandra, Bajarangbali, Aliganj, Shankar purwa- II, Janaki Puram I, Janaki Puram-II, Mankameshwar, Niralanagar, Mahanagar, Begum Hazarat Mahal, Vivekanandpuri and Lohiya nagar.	20
Zone- 4	Babu Jagjivan Ram, Chinhat, Rajeev Gandhi, Rafi Ahmad Kidvai, Gomti Nagar, Saheed Bhagat Singh, Indira Priyadarshani, Ismayeel ganj, Indira Nagar, Maithili Sharan Gupt, Lal Bahadur Shastri, Paper mill colony, Nishat ganj and Colvin college.	14
Total		**64**

Stage III: After that all listed wards in selected zones was identified by using purposive random sampling on the basis of pilot study done in the present study. To identify number of study subjects available in the concerned wards. The total selected wards were 15 and name as given below:

Zone	Total no. of selected wards	Location- Ward name
Zone -1	03	Yadunath Sanyal, Vazeer Ganj and Lalkuan.
Zone- 2	03	Chandrabhanugupt Nagar, Raza Bazar and Labour Colony.
Zone- 3	06	Ayodhyadas, Jai Shankar Prasad, Faizullaganj – I, Faizullaganj- II, Bhartendu Harishchandra and Janaki Puram-I.
Zone- 4	03	Indira Nagar, Paper mill colony and Nishat ganj.
Total	**15 Wards**	

Stage IV: Further, all selected 15 wards were listed into respective number of slums existed in that territory. These are 88 slums identified and the list are as follows:

Zone	Location- Ward name	Name of Slum	Total no of slums
Zone- I	Yadunath Sanyal	Natkheda, Sabdal bag and Risaldar Park.	3
	Vazeer Ganj	Daliganj Lallumal ka Hata, Mallahi Tola, Laxman Prasad Road, L. P Road, Wazeerganj, Nayi Basti Bano Mandi and Nayi Basti.	7
	Lalkuan.	Chhitwapur Khas, Chhitwapur Nahar kinara, Lalkuan Road Malin Basti, Maqbool Ganj, Bhedi Mandi and Hata Suleman Ka.	6
Zone-II	Chandrabhanugupt Nagar	Durgapuri, Mawaiyya, Kasai Bada, A. P. Sen Road and Lok Manya Ganj.	4

	Raza Bazar	Astabal Yahiya Ganj, Kashyap Nagar, Sobatiya Bag, Punjab Tola, Maulvi Anvar Bag, Bag Makka, Raja Bazar, Pata Nala, Bheem Nagar, Gazi Mandi, Nala Begumganj, Katra Anvar.	12
	Labour Colony	Labour Colony	1
Zone-III	Ayodhyadas	Baba Ka Purwa, Purana Takia, Loni Katra, Zinnati Masjid, Mashalchi Tola, Shiv Nagar, Khadra, Makka ganj, Shukl Gadhaiya, Ramleela Maidan, Madeya Ganj, Rooppur Khadra, Kumharan Tola and Khale ka Purwa.	13
	Jai Shankar Prasad,	Purania, Usman Pur, Indra Nagari and Ahibaranpur.	4
	Faizullaganj – I,	Mohibulla Pur, Godi, Samera Gaon, Faizulla Ganj Gaon, Khadri, Shankar Pur Gaon, Inderganj, Naubasta Khurd, Chamrahi Bharat Nagar and Kabadian Tola.	9
	Faizullaganj- II,	Gazi Pur, Daud Nagar Purana, Daud Nagar Naya, Raheem Nagar Dubauli, Naubasta, Gaytri Nagar, Ghana Ka Purwa, Ali Nagar Khadra, Shiv Nagar Khadra, Badi Pakaria, Gaur Bheet and Naya Purwa	10
	Bhartendu Harishchandra	Beli Garad, Paltan, Katra and Beli Garad Gaon.	4
	Janaki Puram-I	Sultan Pur, Rani Kheda, Radhey Shyam Purwa, Ram Purwa, Chaudhari Purwa, Madiyaon, Khalilabad, Gaderian Purwa	8
Zone-IV	Indira Nagar	Tika Purwa	1

	Paper mill colony	Chakkar Purwa, Baba Ka Purwa, Bhikham Pur, Takia and Akbar Nagar Dakshini	5
	Nishat Ganj.	Nishat Ganj Gali No 1 to 7 tak.	1
Total	**15 Wards**		**88 Slums**

Stage V: The existed number of slums (23) were selected on the basis of presence of early married women in the specific slum community. The purposive sampling technique was adopted for selection of the slums. The slums were identified for the data collection work was 23 in number. Peer educators of the NGOs were contacted to find out the study subjects of the present study. The list of wards is mentioned below:

Location- Ward name	**Name of selected Slum**
Yadunath Sanyal	Sabdal Bag
Vazeer Ganj	L. P Road, Nayi Basti
Lalkuan.	Chhitwapur Khas, Chhitwapur Nahar Kinara.
Chandrabhanugupt Nagar	A. P. Sen Road
Raza Bazar	Gazi Mandi
Labour Colony	Labour Colony
Ayodhyadas	Baba Ka Purwa
Jai Shankar Prasad,	Purania
Faizullaganj – I,	Mohibulla Pur and Chamrahi Bharat Nagar
Faizullaganj- II,	Daud Nagar Purana, Daud Nagar Naya, Raheem Nagar Dubauli, Gaur Bheet and Naya Purwa
Bhartendu Harishchandra	Paltan
Janaki Puram-I	Madiyaon
Indira Nagar	Tika Purwa
Paper mill colony	Baba Ka Purwa and Akbar Nagar Dakshini
Nishat Ganj.	Nishat Ganj Gali No 1 to 7 tak.
Total = 15 wards	**Total =23 Slums**

Stage VI: The details of slums with their total population and total number of households, respectively given in below table.

Location- Ward name	Name of Slum	Slum code	Total population in slum	No of house holds
Yadunath Sanyal	Sabdal Bag	0031	1800	348
Vazeer Ganj	L. P Road,	0050	500	95
	Nayi Basti	0053	2000	468
Lalkuan.	Chhitwapur Khas,	0075	2000	400
	Chhitwapur Nahar Kinara.	0076	2200	450
Chandrabhanugupt Nagar	A. P. Sen Road	0156	100	20
Raza Bazar	Gazi Mandi	0167	2000	400
Labour Colony	Labour Colony	0170	4200	800
Ayodhyadas	Baba Ka Purwa	0201	2200	400
Jai Shankar Prasad	Purania	0214	1500	225
Faizullaganj – I	Mohibulla Pur	0218	1000	150
	Chamrahi Bharat Nagar	0225	3200	500
Faizullaganj- II	Daud Nagar Purana	0228	500	100
	Daud Nagar Naya,	0229	1000	200
	Raheem Nagar Dubauli,	0230	1050	190
	Gaur Bheet	0235	400	80
	Naya Purwa	0236	1000	1000
Bhartendu Harishchandra	Paltan	0246	1100	200
Janaki Puram-I	Madiyaon	0265	6000	1000
Indira Nagar	Tika Purwa	0357	650	125
Paper mill colony	Baba Ka Purwa	0366	2000	400
	Akbar Nagar Dakshini	0369	3650	700

Nishat Ganj.	Nishat Ganj Gali No 1 to 7 tak.	0370	14000	2850
Total Wards =15	**Total slums = 23**		**Total = 55050 Population**	**Total= 11101 house holds**

Stage VII: At last stage total household (11101) were identified out of which 270 samples were selected for the study. The formula was applied for determination of sample size (shown in sample size 3.4.1.2). As we know slums didn't have any household number or identified address. Hence, for recognizing the respondents researcher was keen to take help of peer educators of NGOs (FPA and CREATE) who were working at different slum community and providing the RH services of NGOs to the women. The study subjects were found in above mentioned slums by using a purposive random sampling to meet out 270 samples for the study purpose.

Lastly, each study subject was individually questioned for their knowledge, attitude and practice of regarding reproductive health of women and their mass media exposure.

3.5.2 Intervention phase

Purposive sampling was applied in this phase, keeping in mind the subjects who were willing to be a part of teaching and learning session and were ready to participate in the follow up procedure. For giving intervention all the study subjects were re-contacted by the researcher. In interventional phase purposive sampling was used where for selecting the candidates who were already recruited for preliminary phase of the present study and ready to become the part of teaching and learning sessions of women's reproductive health.

3.5.3 Post interventional phase

In this phase the study subjects were evaluated on the basis of their responses in a pre-designed and pre tested questionnaire which was used in preliminary phase of study. After reducing some questions from the practice section of the RH, the same questionnaire which was used to collect the data in preliminary phase, was used in post intervention phase for data collection. Only 115 data were recorded in this phase

because rest of the women either not completed all the teaching and learning sessions or left the interview in between.

3.6 Tools and Technique of the study

The wording and design of a questionnaire are essential if the researcher is to obtain reliable responses. **Poglar and Thomas (2000)** warn of potential pitfalls, for example, the inclusion of ambiguous, biased or leading questions. Whilst open- ended and closed response are the two major formats adopted in questionnaires, the latter format was adopted as appropriate for meeting the aims of this study. A research is only considered accepted if the tools for that study have been accurately and suitably used. It should be noted that the tools which are being used in the study should be standardized, reliable and valid above all they should meet the requirements of the study.

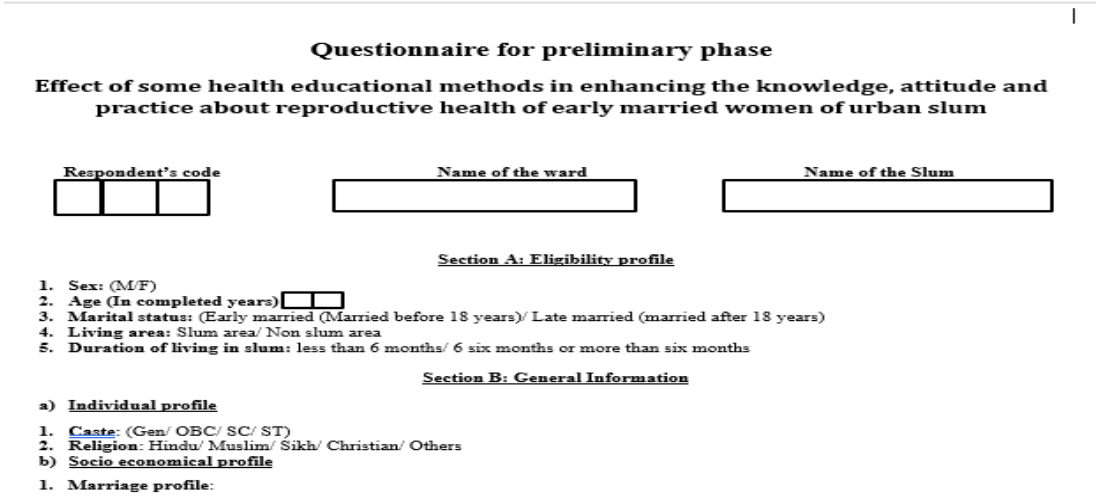
3.6.1 Tools of the study

Various tools have been used in the study according to the need of each phase which has been discussed below:

3.6.1.1 Phase-I Preliminary phase

Women belonging to the age group 15 to 24 were selected after explaining them the motive of the study. If they were willing to participate then the only the interview was conducted. This phase of the study was conducted on the early married women living in the slum by using a pre-designed and pre-tested questionnaire as a tool to access their general as well as specific level information. The general information broadly covers the individual information and socio-economic status of the study subjects whereas the specific information broadly covers the KAP scores regarding women reproductive health and media exposure of the study subjects was accessed. After going through an extensive literature, a questionnaire was administered keeping in mind the aforementioned aim, various published questionnaires were tracked down to get an in-depth knowledge on the types of questions to be required **(WHO questionnaire; Jose *et al.*, (2019); Thapa P. *et al.*, (2018**)). Questionnaire was developed at the institute with the assistance from the faculty members and other experts of women's reproductive health. Which was tested for its reliability and validity and then it was put forth for use. To evaluate the understandability and the applicability of the instruments, prior to the main field work, a pre-test was done on 40 sample size, following the

analysis of the pre-test study data, ambiguous or unclear questions were rephrased to make it more understandable. In this section the questions related to knowledge, attitude and practice regarding women reproductive health were selected. There were total of 18 questions of knowledge, 18 questions of attitude and 18 questions of practice of reproductive health of women. Total four domains of women's reproductive health; menstruation (4 questions), family planning (4 questions), RTI/ STI (4 questions) and reproductive right (6 questions) were selected to evaluate total KAP score of reproductive health of women. Further, some questions were divided in to sub categorized according to the research problems.



Questionnaire for preliminary phase

Effect of some health educational methods in enhancing the knowledge, attitude and practice about reproductive health of early married women of urban slum

Respondent's code | **Name of the ward** | **Name of the Slum**

Section A: Eligibility profile

1. **Sex:** (M/F)
2. **Age (In completed years)**
3. **Marital status:** (Early married (Married before 18 years)/ Late married (married after 18 years)
4. **Living area:** Slum area/ Non slum area
5. **Duration of living in slum:** less than 6 months/ 6 six months or more than six months

Section B: General Information

a) **Individual profile**

1. **Caste**: (Gen/ OBC/ SC/ ST)
2. **Religion**: Hindu/ Muslim/ Sikh/ Christian/ Others

b) **Socio economical profile**

1. **Marriage profile**:

Figure 3.6.1.1: Questionnaire for preliminary phase data collection

In the questionnaire the name of the respondents was not asked for maintaining the confidentiality of the respondents. For this purpose, the code was used at the place of name of the study subject. Initially, in the questionnaire the code of the respondent's, address of the respondents i.e., name of ward, and name of slum was asked. The questionnaire was divided into 3 sections, discussed below:

Section A: Illegibility profile

In this section the information of respondents regarding gender, age, marital status and living area and living duration of the respondents in the slum were asked to check the illegibility of the respondents to be recruited in the present study. The women who were

fulfilling the requirement of the study, only they were included in the present research as study subject.

Section B: General information

This part consists of the individual profile and socioeconomic profile of the respondents. In Individual profile pre-designed and pre-tested questionnaire was used to study caste and religion of the respondents to access the information from the respondents and in Socio economical profile, the marriage profile, family profile and socio-economic status was accessed.

a) **Marriage profile:** To access the marriage profile of the respondents, respondent's and husband's marriage age, their duration of married life, type of marriage and marital status of respondents were asked.

b) **Family profile:** This part consists of name age, sex, education, relation with respondent, occupation and monthly income of the family members, size of family and type of family.

c) **Socio-economic status:** Education, occupation, type of employment, ownership of house, type of house, availability of the basic home amenities at the home of respondent, total family income and per capita income were covered in this part of questionnaire. Modified B. G Prasad Scale (2018) was used to calculate the socio-economic status of the respondents.

Section C: Specific Information

This section includes specific information of the study subjects regarding KAP of RH and media exposure. For evaluating the total KAP of RH of early married women, the four main domains of RH i.e., menstruation, family planning, RTI/ STI and reproductive right were selected.

a) Knowledge about reproductive health

During development of the questionnaire, account was taken of previous KAP related survey on reproductive health (menstruation, family planning, RTI/ STI and

reproductive right). These provide an ongoing source of information about the KAP questions to be intervened to the subjects. In this section questions related to knowledge of the women living in slum on menstruation, family planning, RTI/ STI and reproductive right were asked, for accessing the knowledge of child brides on RH. A total of 53 questions of women reproductive health (14 questions of menstruation, 9 questions of family planning, 11 questions of RTI/ STI and 19 questions of reproductive right) were asked, each question has the responses of never heard and if heard then do you know is further divided in Yes and No.

b) Attitude on reproductive health

In this section the total questions related to attitude of the women's reproductive health (53) including menstruation (14 questions), family planning (9 questions), RTI/ STI (11 questions) and reproductive right (19 questions) were asked. Each question has the responses of Agree, Neutral and Not agree.

c) Practice related to reproductive health

In this section the questions related to practice of the women's reproductive health (menstruation, family planning, RTI/ STI and reproductive right) were asked. A total of 53 questions (14 questions of menstruation, 9 questions of family planning, 11 questions of RTI/ STI and 19 questions of reproductive right) were asked. Each question has the responses of Yes and No. Before conducting pilot study in practice section there were three options as Never, Seldom and Always but it was not applicable on all the questions that's why later it was reframed in to Yes and No for maintaining the clarity and uniformity in all the questions.

d) Media exposure of the respondents to the different mass media

In this section the availability of different media at the respondents' home, time spend/ week by the respondent, preference of media, type of media used to get the information about reproductive health and the most important source of information for the respondent regarding reproductive health were asked.

Reliability and validity of the tools: The reliability was ascertained by pre evaluating the KAP questionnaire and by carrying out the internal consistency of the same.

Pretesting The pre-testing of the questionnaires used for pre-intervention data collection and post intervention data collection questionnaire was undertaken at slums of Beli Garad Gaon (Bhartendu Harischandra ward), Kabadian Tola and Khadri (Faizullaganj- I ward). Selected candidates were individually interviewed for ascertaining any potholes and ascertain the clarity and appropriateness of the tools, as well as its length. Revisions included rewording of certain items to improve the clarity and usage of Yes and No at the place of Never, Seldom and Always in practice section.

Internal consistency: Internal consistency of the questionnaire was calculated using the Cronbach's alpha coefficients for the entire instrument, each KAP scale. The overall Cronbach's alpha for the study questionnaire was .824 (95% CI: 0.802 – 0. 833). Cronbach's alpha scores for the various KAP items are summarized in table 3.6.1. The score of 0.7 and above was considered acceptable (see table: 3.6.1.1).

Table 3.6.1.1: Cronbach's alpha coefficients

KAP scale item	Cronbach's alpha (95% CI)
Knowledge	0.902 (0.893-0.926)
Attitude	0.864 (0.841-0.879)
Practice	0.801 (0.783- 0.814)

3.6.1.2 Phase- II Intervention phase

After completing preliminary phase data collection work use of different mass media by the respondents to get the information about RH and the effectiveness of different mass media channels were analysed. There were several methods could be used in slum settings such as didactic lecture (one way), participatory lecture (two way), audio-visuals, play group discussion, games and distribution of written materials (pamphlets or flip books) etc. in intervention for increasing positive KAP of RH of the study subjects. Looking at the feasibility, cost effectiveness, availability, effectiveness and preference of different mass media among the study subjects, it was though appropriate only three health educational methods namely lecture method (didactic lectures), participatory method and individual method. These three teaching methods were used in six different locations nearby the slums. For providing the information through different teaching methods, various study materials were used by the researcher to

inform study subjects about their RH like; set of flash cards for delivering didactic lectures, games for participatory methods and flip book for individual method. These teaching materials were prepared and designed by the researcher itself. For making the content of teaching materials different teaching materials which were already being used by the NGO workers i.e., flip chart on School AIDS Education Program (UNICEF), Stepping in to adolescence (Mamtahealth institute for mother and child); Margadarshika (FPAI); flip book by NRHM (SIFPSA) was reviewed by the researcher. To prepare the lay out of the teaching material the most important thing was kept in mind was the simple, local language and pictorial presentation which could be easily understood by the respondents. Before finalizing the content for teaching materials, a discussion was held with the experts working in the particular area. The teaching materials were prepared in a form of layout keeping in mind the need of our research problem. A brief description of the teaching methods and teaching materials are given below:

a) **Didactic lecture:** For delivering didactic lecture in intervention phase the six sets of flash cards were prepared.
b) **Participatory method:** for participatory method of teaching two games snake and ladder and card game were prepared.
c) **Individual method:** For individual method of teaching flip book was used (see figure 3.6.1.2).

3.6.1.3 Phase-III Post intervention phase

For evaluating the change in KAP of RH among the participants of intervention the feedback form was used in which the same questions of KAP of RH, asked in preliminary phase were included. Only the questions regarding KAP of RH were included in this feedback form. In case of some questions related to practice of RH, the comparison between responses of pre- intervention and post- intervention was not possible. Thus, some questions belonging to practice section of RH were not included for evaluating the effect of teaching methods on practice of RH and deleted from the questionnaire of post intervention phase. Thus, the total of 53 questions of knowledge of RH, 53 questions of attitude towards RH and 50 questions of practice of RH were included in the questionnaire of post intervention.

Figure 3.6.1.2: Tools for intervention phase

Feedback form for Post intervention

Effect of Some Health Educational Methods in Enhancing the Knowledge, Attitude and Practice about Reproductive Health of Early married Women of Urban Slum

Respondent' code | Name of the ward | Name of the Slum

Knowledge, Attitude and Practice of the respondents:

Sr. no	Health indicator/ Particulars	Knowledge			Attitude			Practice		
		Never heard	If heard do you know		Not Agree	Neutral	Agree	Never	Seldom	Always
			Yes	No						
Menstruation										
1	Age of menarche	Do you know the age of menarche?			Do you believe in the age of menarche is?			At which age you faced menarche?		
	IV. 09-11 V. 12-14 VI. >15									
2	Menstrual symptoms	What are the menstrual Symptoms?			Do you believe in these menstrual symptoms?			Do you face any of these menstrual symptoms while menstruating?		
	VI. Lower abdominal pain/ Lower back ache VII. Vaginal discharge VIII. Vomiting IX. Leg pain									

Figure 3.6.1.3 Feedback form for post intervention phase

3.6.2 Technique of the Study

3.6.2.1 Preliminary phase

Respondents of this study were informed and motivated by the researcher to participate in the study. Further, the participants were explained about the purpose of conducting the study individually prior to the initiation of the recruitment process. The investigators then personally collected the responses by interview questionnaire. The participants were ensured about the strict confidentiality of their data and ensured that this data will be used only for research purpose and will not be divulged or utilized for any other purposes. Then informed and written consent was taken from each of them individually prior to the initiation of the study. The data for the present study was collected by the author itself by questioning the respondents personally and peer educators (working with NGO), living in the particular slum community were assigned to help in finding the required subjects in the particular slum for the study. A brief introduction was given to the respondents by the researcher, apart from the fact that the questions were too straight forward it was kept in mind that the questions were asked in the simplest language so as to avoid any kind of uncertainty with the questions. The study questionnaire was initially translated in the English language, which was translated to Hindi language for better understanding of the participants and back-translated in English language to improve validity (figure 3.6.2.1).

Figure 3.6.2.1: Data collection from respondent during preliminary phase of study

Eligibility profile: For checking the eligibility of the study subjects to be recruited as a study subject. The eligibility profile of the research was accessed (see figure 3.6.2.1.1).

Section A: Eligibility profile

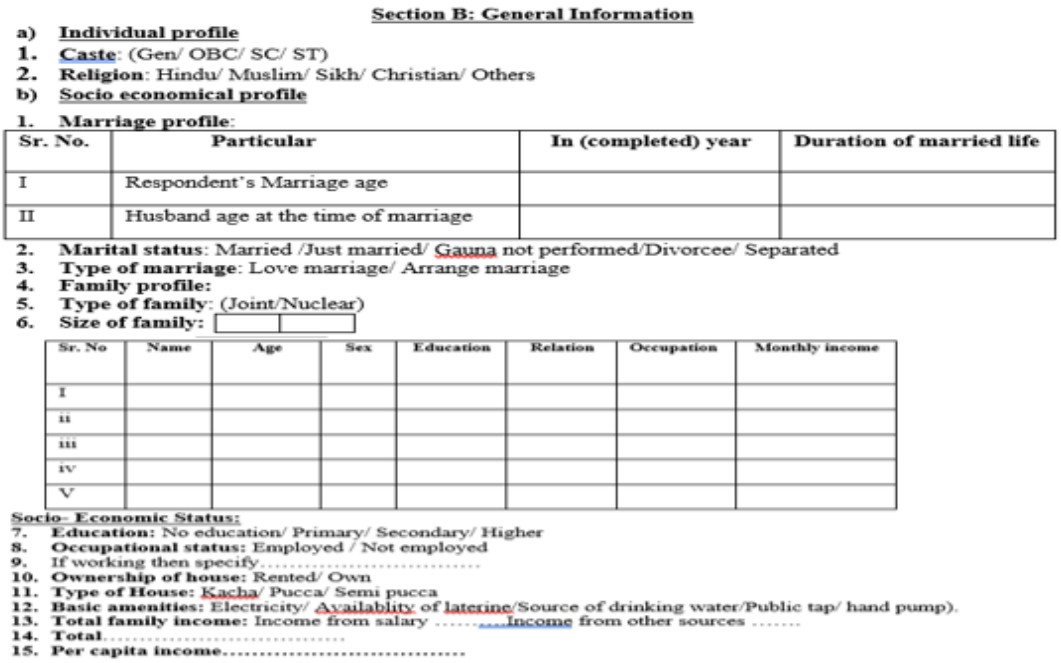
1. **Sex:** (M/F)
2. **Age (In completed years)** ☐☐
3. **Marital status:** (Early married (Married before 18 years)/ Late married (married after 18 years)
4. **Living area:** Slum area/ Non slum area
5. **Duration of living in slum:** less than 6 months/ 6 six months or more than six months

Figure 3.6.2.1.1: Snapshot of eligibility profile of the respondents

- **Gender:** It was categorized into Male and Female. The gender selected for the study was Female.
- **Age (in completed years)**: The age group selected for this study was from 15-24 years. this group is young age group.
- **Marital status:** It was grouped into Early married (married before 18 years) and late married (married after 18 years). Women who were married earlier (before 18 years) were selected for the present study.
- **Living area:** Living area was classified into slum area and non-slum area. The respondents who were living in the slum were selected for the study.

- **Duration of living in slum:** It was grouped as >six month and < six months). The study subjects who were living >six month in slums, were selected for the study.

General Information of the respondents: Independent variable is stable, it is unaffected by any other variable we try to measure, it is systematically manipulated by an investigator to observe its relationship with the phenomena whereas a dependable variable depends on other factors that are measured. These variables are expected to change as a result of an experimental manipulation of the independent variables or variables. It is the presumed effect variables in the present study included gender, age, caste, religion, marriage age of respondent, marriage age of husband, duration of married life, respondent's marital status, type of marriage, details of family members, type of family, size of family, education, occupational status, type of employment, ownership of house, type of house, availability of basic amenities, socio-economic status and media exposure (see figure 3.6.2.1.2).



Section B: General Information

a) **Individual profile**

1. **Caste**: (Gen/ OBC/ SC/ ST)
2. **Religion**: Hindu/ Muslim/ Sikh/ Christian/ Others

b) **Socio economical profile**

1. **Marriage profile**:

Sr. No.	Particular	In (completed) year	Duration of married life
I	Respondent's Marriage age		
II	Husband age at the time of marriage		

2. **Marital status**: Married /Just married/ Gauna not performed/Divorcee/ Separated
3. **Type of marriage**: Love marriage/ Arrange marriage
4. **Family profile:**
5. **Type of family**: (Joint/Nuclear)
6. **Size of family:**

Sr. No	Name	Age	Sex	Education	Relation	Occupation	Monthly income
I							
II							
III							
IV							
V							

Socio- Economic Status:

7. **Education:** No education/ Primary/ Secondary/ Higher
8. **Occupational status:** Employed / Not employed
9. If working then specify .....
10. **Ownership of house:** Rented/ Own
11. **Type of House:** Kacha/ Pucca/ Semi pucca
12. **Basic amenities:** Electricity/ Availablity of laterine/Source of drinking water/Public tap/ hand pump).
13. **Total family income:** Income from salary ..... Income from other sources .....
14. **Total**.....
15. **Per capita income**.....

Figure 3.6.2.1.2: Snapshot of general information of the respondents

a) Individual profile

- **Caste:** The gender was categorized into General, OBC, SC and ST.
- **Religion:** It was grouped as Hindu, Muslim, Sikh, Christian and others.

b) Socio economical profile

Marriage profile

- **Age at the time of marriage:** Age of the respondent and age of the husband at the time of marriage was asked.
- **Duration of married life:** The duration of married life of the respondent and the duration of the married life of the husband was mentioned.
- **Marital status:** The marital status of individual was grouped as married, just married, gauna not performed, divorcee and separated.
- **Type of marriage:** Type of marriage was classified as love marriage and arrange marriage.

Family Profile

- **Details of family members:** The information of age, sex, education, relation with respondent, occupation and monthly income about every family member was collected.
- **Type of family:** It was categorized into Joint and Nuclear**.**
- **Size of family:** Size of the family was taken by counting the number of the family member living together with respondent.

Socio- economic status

- **Education:** It was grouped into No education, Primary, Secondary and Higher education.
- **Occupational status:** It was quoted as Employed and Not employed
- **Type of work (if working):** It consists of Unskilled and Skilled.
- **Ownership of house:** It was grouped as Own and Rented.
- **Type of house:** It was grouped into Kacha, Pucca and Semi pacca
- **Basic amenities:** The availability of the basic home amenities like; electricity, availability of latrine, source of drinking water, public tap, hand pump were classified into Yes and No.
- **Income of the family:** Respondents were asked about the total income of the family from all sources. After calculating per capita monthly income of the family, they were grouped into five socio economic classes (as per consumer price index of

January 2018) by using modified B.G. Prasad's socio-economic classification as below:

Table 3.6.2.1.1: Socio- economic classification

Social class	Per capita monthly income limits (in Rs./month)	
	1961 Base Year	2018 January
Upper	100 and above	6574 and above
Upper middle	50 – 99	3287-6573
Middle	30 – 49	1972-3286
Lower middle	15 – 29	986-1971
Lower	Below 15	985 and Below

$$\text{Multiplication factor} = \frac{\text{Value of current consumer price Index x 4.93}}{100}$$

Calculation of Multiplication Factor for Social classification:

$$\text{For January 2018} = \frac{288^{*} \text{ x } 4.93}{100}$$

(288^{*} = All India Price Index for January 2018)

(Source: Pandey V. K.*et al.*, 2018, Modified BG Prasad's Socio-economic Classification-2018: The need of an update in the present scenario)

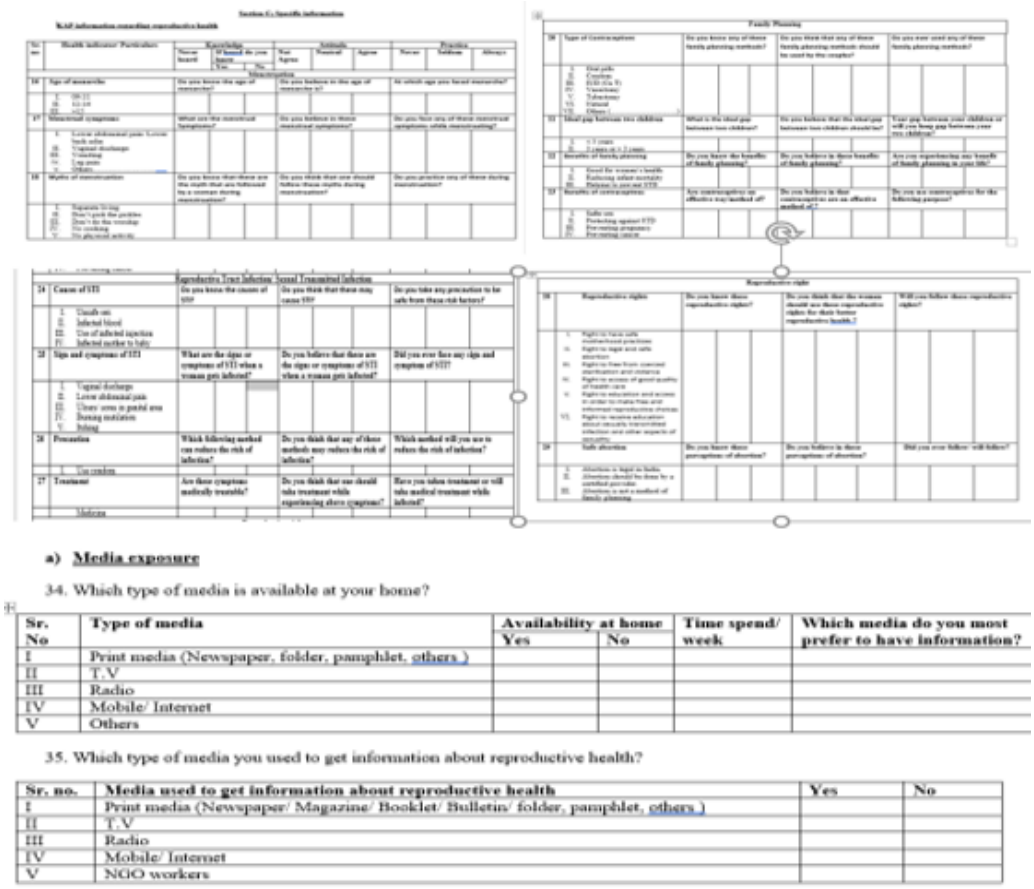
Specific information:

Knowledge, Attitude and Practice questionnaire

The questions asked for knowing the KAP of the reproductive health of the early married women who were living in slum of Lucknow. The KAP of women's reproductive health included the four main areas of the reproductive health of women like; menstruation, family planning, RTI/ STI and reproductive rights. There were 4 questions in menstruation, 4 questions in family planning, 4 questions in RTI/ STI and 6 questions in reproductive right. In each area some of the were even had sub-divisions depending on the need of the research (see figure 3.6.2.1.3).

Operational definitions: Operational definitions to find out the KAP of RH score was as follows:

1. **Knowledge:** This section was divided in to four parts as menstruation, family planning, RTI/ STI and reproductive rights. There was total 53 questions in this part and the respondents were asked regarding their knowledge of reproductive health of women. Menstruation contained 14 questions related to age of menarche,



a) **Media exposure**

34. Which type of media is available at your home?

Sr. No	Type of media	Availability at home		Time spend/ week	Which media do you most prefer to have information?
		Yes	No		
I	Print media (Newspaper, folder, pamphlet, others)				
II	T.V				
III	Radio				
IV	Mobile/ Internet				
V	Others				

35. Which type of media you used to get information about reproductive health?

Sr. no.	Media used to get information about reproductive health	Yes	No
I	Print media (Newspaper/ Magazine/ Booklet/ Bulletin/ folder, pamphlet, others)		
II	T.V		
III	Radio		
IV	Mobile/ Internet		
V	NGO workers		

Figure 3.6.2.1.3: Snap shot of specific information of the respondents

menstrual symptoms, myths of menstruation and hygienic practices during menstruation, FP contained 9 questions regarding type of contraceptive, ideal gap between two children, benefits of FP and benefits of contraceptives. RTI/STI included 11 questions relating with the causes, sign and symptoms, precaution and treatment. In RR there were total 19 questions related to reproductive rights, safe abortion, terms and conditions of legal and safe abortion, govt. services provided to women, complain/ helpline no, decision making. To get the total scores of RH all the positive scores of menstruation, FP, RTI/ STI and RR were added together. Each question contains 1 point for positive response and 0 for negative response. Each question has three choices; Never heard and (if heard) Yes and NO. A positive response was given 1 score where as a 0 score was given for a negative response. The overall knowledge of

the study participants was accessed using the sum score of each outcome based on bloom's cut off point. The scores were classified into 3 levels as follow Bloom's cut off point.

High level Knowledge

a) Menstruation knowledge score that fell above 11 points (80%)
b) FP knowledge score that fell above 7 points (80%).
c) RTI/ STI knowledge score that fell above 8 points (80%).
d) RR knowledge score that fell aboce 15 points (80%).
e) Total RH knowledge score that fell above 42 points (80%).

Moderate level Knowledge

a) Menstruation knowledge score that fell between 9-11 points (60% - 79%).
b) FP knowledge score that fell between 6-7 points (60% - 79%).
c) RTI/ STI knowledge score that fell between 7-8 points (60% - 79%).
d) RR knowledge score that fell between 12-15 points (60% - 79%).
e) Total RH knowledge score that fell between 32-42 points (60% - 79%).

Low level Knowledge

a) Menstruation knowledge score that fell below 8 points (less than 59%)
b) FP knowledge score that fell below 5 points (less than 59%)
c) RTI/ STI knowledge score that fell below 6 points (less than 59%)
d) RR knowledge score that fell below 11 points (less than 59%)
e) Total RH knowledge score that fell below 31 points (less than 59%)

2. **Attitude:** Overall attitude includes 53 items to access the perception or outlook regarding menstruation, FP, RTI/ STI and RR. Age of menarche, menstrual symptoms, myths of menstruation and hygienic practices during menstruation related 14 question in menstruation, 9 questions related with type of contraceptive, ideal gap between two children, benefits of family planning and benefits of contraceptives in FP, 11 questions related to causes, sign and symptoms, precaution and treatment in RTI/ STI and 19 questions of RR, safe abortion, terms and conditions of legal and safe abortion, govt. services provided to women, complain/ helpline no and decision making were added together to get the total scores of RH score. All individual's answers were summed up for having total scores of RH and calculated for means percent. The scores were classified into 3 levels (Positive Attitude, Neutral attitude and Negative Attitude) according to Bloom's cut off Point.

Positive attitude

a) Attitude score of menstruation that fell above 11 points (80%)**.**

b) Attitude score of FP that fells above 7 points (80%).

c) Attitude score of RTI/ STI that fells above 8 points (80%).

d) Attitude score of RR that fells above 15 points (80%).

e) Attitude score of total RH that fells above 42 points (80%).

Neutral Attitude

a) Attitude score of menstruation that fell between 9- 11 points (60% - 79%)

b) Attitude score of FP that fell between 6-7 points (60% - 79%)

c) Attitude score of RTI/ STI that fell between 7-8 points (60% - 79%)

d) Attitude score of RR that fell between 12-15 points (60% - 79%)

e) Attitude score of total RH that fell between 38-42 points (60% - 79%)

Negative Attitude

a) Attitude score of menstruation that fell below 8 points (less than 59%)

b) Attitude score of FP that fell below 5 points (less than 59%)

c) Attitude score of RTI/ STI that fell below 6 points (less than 59%)

d) Attitude score of RR that fell below 11 points (less than 59%)

e) Attitude score of total RH that fell below 31 points (less than 59%).

3. **Practice:** It is the overt behaviour, habit or custom that a woman does, follow up or carry out in her daily life affect her reproductive health. It was measured based on previous health seeking behavior, decisions and action taken that affect the reproductive outcome. It contains 14, 9, 11 and 19 questions of menstruation, FP, RTI/ STI and RR respectively. Though there was total 53 questions of RH in this section but only 50 questions were scored for the evaluation. Only those questions were scored that can be improved by giving the intervention to the study subject. Three questions of age of menarche were not added in scoring for evaluation. Each question contains 1 point for positive life style practice and 0 for negative life style practices. The total response score was 5o point and classified in to 3 according to Bloom's cut off point.

Good Practice

a) Practice score of menstruation that fell above 8 points (80%)

b) Practice score of FP that fell above 7 points (80%)

c) Practice score of RTI/ STI that fell above 8 points (80%)

d) Practice score of RR that fell above 15 points (80%)

e) Practice score of total RH that fell above 40 points (80%)

Fair Practice

a) Practice score of menstruation that fell between 7-8 points (60% - 79%)

b) Practice score of FP that fell between 6-7 points (60% - 79%)

c) Practice score of RTI/ STI that fell between 7-8 points (60% - 79%)

d) Practice score of RR that fell between 12-15 points (60% - 79%)

e) Practice score of total RH that fell between 30-39 points (60% - 79%)

Poor Practice

a) Practice score of menstruation that fell below 6 points (less than 59%).

b) Practice score of FP that fell below 5 points (less than 59%).

c) Practice score of RTI/ STI that fell below 6 points (less than 59%).

d) Practice score of RR that fell below 11 points (less than 59%).

e) Practice score of total RH that fell below 29 points (less than 59%).

Media Exposure

These questions were helpful in deciding the teaching materials to be used in intervention to improve KAP of RH of early married women living in slum.

a) Media availability at home: This question was asked to know the availability of the media at the home of respondents and categorized into Yes and No.

b) Time spend/ week with particular media: It was asked that how much time the respondents spend the time with particular media weekly.

c) Preference of media: In this section the respondents were asked about the preference of the media to get the information on RH.

d) **Media used to get the information about RH:** In this section the respondents were asked about the preference of different media to get the information on women reproductive health. It was divided into Yes and No.

e) **Important source of information to get the information:** In this section the different sources of information was grouped into First important source, second important source and third important source.

3.6.2.2 Intervention phase

The intervention was planned at six different nearby, local places of the slum community, where the respondents were living. So that all the women may attend all the teaching and learning sessions of RH. The teaching and learning session covered in five rounds at each place. Before starting of the intervention every respondent was informed about the place and time of the teaching and learning sessions. The intervention was given to the respondents through lecture methods, participatory method and individual method of teaching. For maintaining the uniformity of the message delivered to the study participants in all the sessions, a single person delivered the talk in intervention. Peer educators appointed in the different slum community by the NGO, introduced the researcher to the women of slum. They were also requested to remain present in the sessions when the educational activity was going on. This was done to seek a better co-operation from the study participants.

Didactic lecture: Didactic lecture was delivered with the help of storytelling by using six sets of flash card on the topics; menstruation, risks of child marriage, RTI/ STI, family planning, reproductive right and early marriage. Study subjects were allowed to ask the questions only after the lecture was over. However, certain clarifications sought during the talk were briefly answered (figure: 3.6.2.2.1).

Main characteristic of the sets of flash cards was that the stories of these six sets of flash cards were interlinked with each other. It is plotted at slum community and moves around the main character Binno (a girl of the age 12 years) who live in a slum community with his family. The set of flash cards contained stories on following topics:

Flash cards on Menstruation: The first story of the set of flash cards belongs to the Binno's friend Rita who was studying with her in same class. It is plotted at the class

Figure 3.6.2.2.1: Delivering didactic lecture using flash card during intervention

of school setting with the main characters Binno, Rita and class teacher. This story gives the information of age of menarche, symptoms of menstruation, healthy practices of menstruation, use of sanitary napkins and myths and truth about menstruation with the help of 11 numbers of cards (figure 3.6.2.2.1.1).

Flashcards on risk of child marriage: In this story the poor reproductive health outcomes caused by early marriage and their solutions, ideal gap between two children and benefits of family planning were discussed the main characters of the story Binno, Sarla (Binno's bua), Kamla (Sarla's friend) and lady doctor. Total 11 cards were used to present this story (figure 3.6.2.2.1.2)

Flash cards on RTI/ STI: This is the story of Rita's mausi who was suffering from STI. By the conversation of Binno, Rita Savita, lady doctor and Suresh the information about RTI/ STI was provided to the participants. 11 cards consist of the information about the symptoms, causes, prevention and treatment of RTI/ STI (figure 3.6.2.2.1.3).

Flash cards on family planning: Binno, Binno's mother, This is the story of Sita and Rajan who came to live as neighbour of Binno. They have a baby and they (Sita and Rajan) want to adopt family planning. Through this story with 11 cards the information regarding types of contraceptives, uses, side effects and their benefits were given to the study subjects (figure 3.6.2.2.1.4).

Flash cards on Reproductive Rights: Total 15 cards were used to explain the women reproductive rights. By the help of Binno, Rita, Sheela (NGO worker) and other friends' discusssion at the slum setting through meeting with NGO worker, the information of

RR was provided to the women. Women reproductive right, meaning of legal and safe abortion, MTP, terms and conditions of MTP and Government services to improve the RH of women were explained by this story (figure 3.6.2.2.1.5).

Flash cards on Child Marriage: It was the set of 10 cards in which with the help of the main characters of the story Binno, Rekha, Rekha's mother, Sarla and Sheela the message was transferred to the respondents that child marriage is illegal and not good for girls development (figure 3.6.2.2.1.6).

Figure 3.6.2.2.1.1: Flash cards on menstruation

Figure 3.6.2.2.1.2: Flash cards on risks of child marriage

Figure 3.6.2.2.1.3: Flash cards on RTI/ STI

Figure 3.6.2.2.1.4: Flash cards on family planning

Figure 3.6.2.2.1.5: Flash cards on reproductive rights

Figure 3.6.2.2.1.6: Flash cards on early marriage

Participatory Method

For imparting information through participatory method, participants were briefed before the start of the play to actively participate. For delivering the information through participatory method two games Snake & Ladder and playing cards were designed. The total time was consumed approximately one and half hour. For delivering the information through participatory method two games Snake & Ladder and playing cards were designed (figure 3.6.2.2.2). The brief description of the games is given as follows:

Figure 3.6.2.2.2: Participants while playing Snake & ladder and card game (Repro cards)

Snake & Ladder (Based on RH of women): For participatory method Snake & Ladder which is quite similar to the traditional basic snake and ladder game. Rules for playing the game were also similar to the traditional basic snake and ladder game. Some changes were made according to the information to be given to the study participants. Game will be started by the dias where at every dimension 1 to 6 dots were pointed. At the place of coin, the small dolls that were representing the young women, were designed. Every player had to play with one doll and it will proceed according to the number of dias come. The game will be played on the rectangle board where there were 100 blocks divided into 10 columns and 10 rows (10x10= 100). At each and every block 1 to 100 numbers were written at the top, left side direction. At some place there was

snake and some place there was a ladder. Ladder shows the positive practice which promote player to the upwards where the ladder's top placed and snake is the symbol of negative practice which moves player to downwards, at the tail point of snake. Practices of RH divided in to five parts and were arranged in 10 rows. The information of menstruation, family planning, RTI/ STI, RR and reliable source of information and helpline to have good RH respectively were arranged from bottom to top, in such a way that two - two rows were assigned for each and every part of the information. Game will commence from no 1 block and proceeds further according to the number come on the dias. It will end at number 100 block and the player who will reach at 100 (the last block) will be winner (figure 3.6.2.2.2.1).

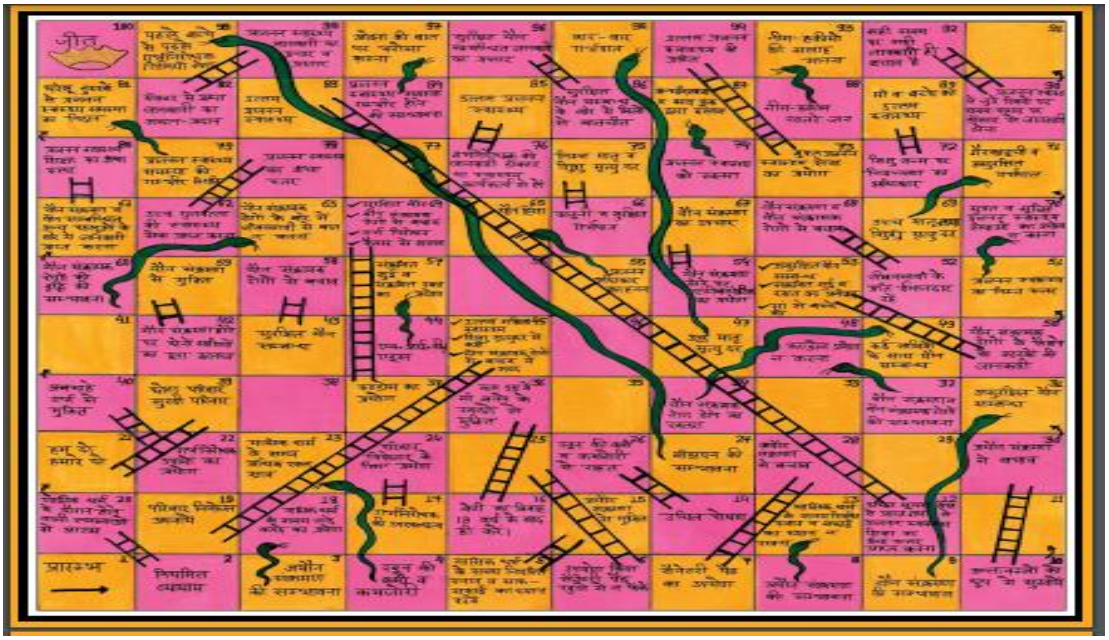


Figure 3.6.2.2.2.1: Snake & Ladder

Card game: It contains of 72 cards and named as Repro Cards. At every card there is a picture both the sides. One side all the cards had same picture and another side of the card either it is healthy RH practice or unhealthy RH practice and right side, at the top there was a smiley. 36 cards had thumbs up smiley which showed positive practice and 36 cards had thumbs down smiley which showed negative practice. It can be played with minimum two player and maximum 4 player. First of all, the cards will be distributed among the player equally. Then every player will show her cards turn wise. At the end all the positive cards will be counted. The player who will have maximum cards having thumbs up smiley will be winner (Figure 3.6.2.2.2.2).

Figure 3.6.2.2.2.2: Card game (Repro cards)

Individual Method: A Flip book was distributed among the study subjects individually for future use. All the information regarding RH (menstruation, FP, RTI/ STI and RR) which is provided to the study subjects during intervention phase was included in brief in the flip book. Flip book of 12 pages that consists of brief information regarding menstruation, family planning, RTI/ STI, reproductive rights and helpline number and services. Two - two pages were alotted for imparting every part of information about RH. It was distributed among the respondents individually for reminding the information provided by the researcher in the teaching and learning sessions and for future use. At first page introduction page and last was showing that by following the healthy habits represented in the middle part of flip book, the women or adolescent girls can achieve healthy reproductive health showing at the last page of the flip book (figure 3.6.2.2.2.3).

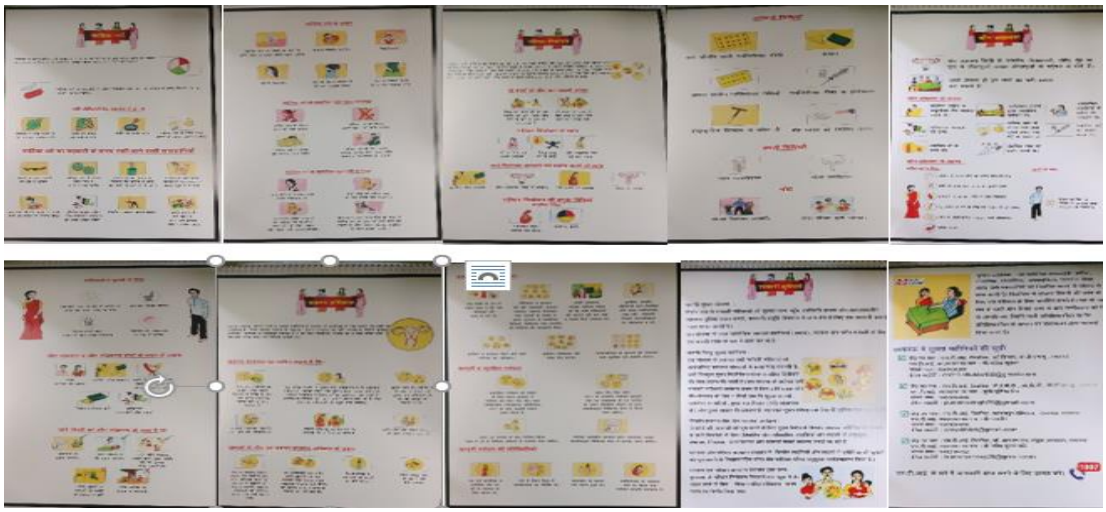


Figure 3.6.2.2.2.3: Snapshot of flipbook pages

Post intervention phase

To record the effectiveness of the teaching methods applied in the intervention phase of the research all the KAP of the study subjects were recorded by using the questionnaire at the last of all the teaching and learning session. The presence of the study subject was recorded at every time. Total 115 respondents had given the feedback after intervention. Some respondents who did not completed all the session of teaching and learning or not given the full feedback were not included in the study. Only those study subjects were included in this phase (post intervention) that had given the consent to participate, completed all the teaching and learning sessions and had given full feedback at the end of the session (figure 3.6.2.2.3).

Figure 3.6.2.2.3: Data collection during post-intervention phase

Feedback form for evaluation

For knowing the effect of different teaching method on KAP score of the respondents the same questionnaire of KAP regarding RH used in the preliminary phase was used in post interventional phase to collect the data. Though in knowledge and attitude part the total response contains 14, 9, 11 and 19, respectively for all the areas of menstruation, family planning, RTI/ STI and reproductive right respectively like preliminary phase. But in practice section only 50 questions of menstruation (11 questions), FP (9 questions), RTI/ STI (11questions) and RR (19 questions) were included. In case of some questions related to practice of RH, the comparison between responses of pre- intervention and post- intervention was not possible. Thus, some questions belonging to practice section of RH were not included for evaluating the effect of teaching methods on practice of RH and deleted from the questionnaire of post

intervention phase. Age of menarche was deleted from the questionnaire used in post intervention phase.

3.6 Data analysis

STATISTICAL TOOL EMPLOYED:

The data was analyzed using Statistical Package for Social Sciences version 20.0. Data has been represented as frequency and percentages for categorical and as mean and standard deviation for continuous variables. The statistical formulae used for the study are as follows:

1. **Mean:** To obtain the mean, the individual observations were first added together and then divided by the number of observations. The operation of adding together or summation is denoted by the sign ε.

The individual observation is denoted by the sign X, number of observations denoted by n, and the mean by x bar.

$$\bar{x} = \frac{(\Sigma x)}{n}$$

Where n= No of observations.

2. **Standard deviation:** The sample standard deviation formula is:

$$s = \sqrt{\frac{\sum(X - \bar{X})^2}{n-1}}$$

Where,

s = sample standard deviation

$\sum$ = sum of...

$\bar{X}$ = sample mean

n = number of scores in sample.

3. **Chi Square test:** A chi-square (χ^2) statistic is a test that measures how a model compares to actual observed data. Chi-square tests are often used in *hypothesis testing*. The chi-square statistic compares the size any discrepancies between the expected results and the actual results, given the size of the sample and the

number of variables in the relationship. For these tests, *degrees of freedom* are utilized to determine if a certain *null hypothesis* can be rejected based on the total number of variables and samples within the experiment. The Formula for Chi-Square is

$$\chi_c^2 = \sum \frac{(O_i - E_i)^2}{E_i}$$

Where C= the *degrees of freedom*.

O= *Observed value*

E = *Expected value*.

Degree of freedom for chi-square test

Df= (c-1) (r-1)

Where c= number of column

R= number of rows

4. **Paired 't' test:** The *t* statistic to test whether the means are different can be calculated as follows:

$$t = \frac{\overline{x}_1 - \overline{x}_2}{\sqrt{(s^2(\frac{1}{n_1} + \frac{1}{n_2}))}}$$

Where,

t is= t-value

x_1 and x_2 are the means of the two groups being compared

s_2 is the pooled standard error of the two groups, and n_1 and n_2 are the number of observations in each of the groups.

A larger *t*-value shows that the difference between group means is greater than the pooled standard error, indicating a more significant difference between the groups.

Correlation: The pearson correlation formula is:

$$r = \frac{\sum(X-\overline{X})(Y-\overline{Y})}{\sqrt{\sum(X-\overline{X})^2}\sqrt{(Y-\overline{Y})^2}}$$

Where, $\overline{X}$ = mean of X variable
$\overline{Y}$ = mean of Y variable

Regression: The formula of multiple linear regression is:

$$Yi = \beta_0+\beta_{1\,+}\, x_{i1}+\beta_2 x_{i2}+\ldots\ldots+\beta_{\,p} x_i p+e$$

Where, for i = n observations:

$Y_{i\,=}$ dependent variable

X i = explanatory variables

$\beta_{0\,=}$ y- intercept (constant term)

β_p = slope coefficient for each explanatory variable

e = the model's error term (residuals)

Level of significance:

p>0.05 Not significant

p<.10 Marginally significant

p<.05 Significant

p<.01 Highly significant

Chapter-IV
Results and Discussion

CHAPTER IV

RESULT AND DISCUSSION

This chapter divulges the answer of the research work. The study has been carried out in to three phases viz. Preliminary phase, Intervention phase and post- intervention phase. The result of the present study has been discussed under the following headings:

4.1 Demographic and socio-economic status of the respondents.

4.2 Socio demographic factor associated with child marriage in the slum of Lucknow city.

4.3 Baseline knowledge, attitude and practice of the respondents regarding their reproductive health.

4.4 Association between demographic and socio-economic status of the respondents and level of knowledge, attitude and practice of reproductive health.

4.5 Media exposure of the respondents with different type of media and their association with the level of knowledge, attitude and practice of reproductive health.

4.6 Teaching materials and conduct the intervention among the study subjects.

4.7 Evaluation and the effectiveness of the intervention.

In most of the researches, of the interest are very much affected by the background characteristics of the study units. Consequently, there is a customary to give a brief description of the general characteristics of the study subjects. In this section an attempt has been made to present a brief description of the selected respondents.

4.1 Demographic and socio-economic status of the respondents

It is found that the child marriage is the outcome of the interplay of economic and social forces. (**UNICEF, 2017).** So, the demographic and socio- economic factors of the child brides were discussed in this section.

4.1.1 Individual profile of the respondents

This section will discuss the background characteristics of the respondents on the basis of various parameters viz: age, religion and caste of the respondents. Early married women living in the urban slums of Lucknow who were belonging to the age group of 15 - 24 years were categorized in to groups 15-19 years and 20- 24 years. **(NFHS-4, 2016).** Religion and attitude toward FP are associated. (**B M Sindhu and M. M. Angadi, 2016).** In religion category we have considered Hindu and Muslim. The caste category was categorized into general, OBC and SC/ ST. **(Rizvi A. *et al,* 2013).** See table 4.1.1.

Table 4.1.1 Distribution of women as per individual characteristics of the respondents

Category	f	%
Age (In completed years)		
15-19	42	16.6
20-24	211	83.4
Total	**253**	**100.0**
Religion		
Hindu	169	66.8
Muslim	84	33.2
Total	**253**	**100.0**
Caste		
Gen	21	8.3
OBC	122	48.2
SC/ ST	110	43.4
Total	**253**	**100.0**

The study results summarized in table 4.1.1 reveals the background characteristics of the respondents. The total number of the women who were early married (married before 18 years) included in the study were two hundred and fifty three (253). Out of which 211 (83.4%) belonged to the age group 20-24 years and 42 (16.6%) belonged to age group 15-19 years. The mean age of the respondents was 21.50$\pm$2.096.

It was found that more than half of the respondents were Hindu 169 (66.8%) and 84 (33.2%) of the respondents were Muslims which was supported by the findings of **(Kumar *et al.*, 2011)** as he found more than half (62.9%) of the women were Hindu and 200 (37%) were Muslims in his study.

A good number sample of early married women who lives in the slum belong to OBC category 122 (48.2%). As many as 110 (43.4%) of the sample respondents belongs to SC/ ST and only General constitutes 21 (8.3%) which is different from the finding of **(Shukla *et al.*, 2015)** as he found OBC (25.2%), SC/ST (52.9%) and General (21.9%).

4.1.2 Socio economic status of the respondents

It is defined that the position that an individual or family occupies with reference to the prevailing average standards of cultural and material possessions, income and participation in group activity of the community, is socio- economic status. **(Park K., 2015)**. In this section marriage profile, family profile and socio-economic profile of the respondent were discussed.

Marriage profile of the respondents

In the table 4.1.2.1 details related to the respondents' marriage viz; type of marriage and marital status of the respondents, marriage age of the respondents, age of the respondents' husband at the time of marriage and duration of marriage was discussed. The type of marriage were divided in to two categories i.e. love marriage and arrange marriage. (**Santhya *et al.*, 2010).** For framing the category of marital status of the early married women who were living in the of urban slums of Lucknow report of **NFHS, (2016)** was considered i.e. never married, currently married, widowed/ divorced/ separated/ widowed but after pilot study according to the study objectives of the study and subject it was reframed and categorized like; married, just married, gauna not performed and separated/ divorced.

It is evident from table 4.1.2.1 that nearly three fourth of the respondents 178 (70.4%) were arranged married and only 75 (29.6%) women were love married. Our findings were rejected the finding of **(Santhya *et al.*, 2010).**

Most of the respondents reported that they were current married 238 (94.1%), very few respondents that they were just married 9 (3.6%), only 4 (1.6%) subjects were separated/ divorcee. There were 4 (1.6%) respondents those gauna was not performed. Only 2 (.8%) respondents were those whom gauna was not performed.

Most of the respondents were married 230 (90.9%) at the age between 15-17 years and only 23 (10.1%) respondents were married at the age of 12-14 years. It supported the finding of **(NFHS- 4, 2016).**

Most of the respondents' husband 141 (55.73%) were also married at the age that is below legal age ranges in between 14-20 years and 112 (44.27%) were married at the legal age or after that ranges between 21- 28 years.

A majority of the respondents 134 (53%) has spent 5-8 years of their married life, it was followed by the respondents 89 (35.2%) who have spent 1-4 years of their married life. 22 (8.7%) women has consumed 9-12 years of marriage and only 8 (3.2%) respondents spent 1-4 years of married life.

Table: 4.1.2.1 Distribution of women as per type of marriage, marital status, marriage age, marriage age of husband and duration of marriage

Detail	f	%
Type of marriage		
Love	75	29.6
Arrange	178	70.4
Total	**253**	**100.0**
Marital status		
Married	238	94.1
Just married	9	3.6
Gauna not performed	2	0.8
Separated/ divorcee	4	1.6
Total	**253**	**100.0**
Marriage age of respondents (In completed years)		
12-14	23	9.1
15-17	230	90.9
Total	**253**	**100.0**
Husband's marriage age (In completed years)		
< legal age of marriage	141	55.73
> legal age of marriage	112	44.27
Total	**253**	**100.0**
Duration of respondent's marriage (In completed years)		
<1	8	3.2
1-4	89	35.2
5-8	134	53.0
9-12	22	8.7
Total	**253**	**100.0**

Family profile of the respondents

Type of the family was categorized in to two types Joint and Nuclear type of family. **(Rizvi A. *et al.*, 2013).** Family members were categorized into three groups like up to 4 members, 5 to 6 members and > 6 members. **(Shukla *et al.*, 2015).**

Table: 4.1.2.2 Distribution of women as per type of family and size of family

Category	f	%
Type of family		
Joint	95	37.5
Nuclear	158	62.5
Total	**253**	**100**
Size of the family		
Up to 4 members	138	54.5
5-8 members	97	38.3
>8 members	18	7.2
Total	**253**	**100**

The type of family in which sample respondents are living is given in table 4.1.2.2 most of the respondents were living in nuclear family 158 (62.5%) and rest of them were living in joint family 95 (37.5%). It was supported by the findings of **Taklikar *et al.*, (2012).**

Most of the respondents' 138 (54.5%) family size was up to 4 members, it was less than the finding of **Shukla *et al.*, (2015)**. In 97 (38.3%) respondents' households 5-8 member are living. The family size of 18 (7.1%) respondents were 8 and above >8 members.

Socio economic profile of the respondents

The socio-economic factors that determine health include: employment, education and income. In this section the Socio-economic profile of the respondent education, occupation, type of employment, housing characteristic of the respondents, socio economic class, and availability of basis amenities of the respondents were discussed.

Education status of the respondents

In the figure 4.1.2.1, the education status of the respondents is shown. There were four options under the category of education of the respondents; no education, primary, secondary and higher. **(Deepali Godha *et al.*, (2013) and Ismael *et al.*, (2020).**

The study results represented in figure 4.1.2.1 shows that in a total of 253 respondents less than half of the respondents (45.1%) were not educated and among the educated respondents most of the respondents obtained secondary education (28.5%), only (19.4%) respondents obtained primary education and very few respondents got higher education (7.1%).

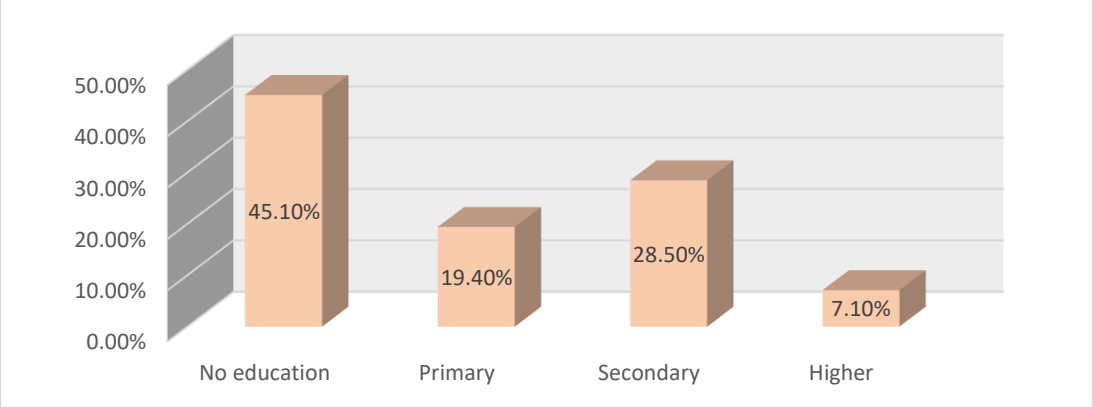


Figure 4.1.2.3.1: Distribution of women as per education status

Occupation and type of employment of the respondents:

Knowledge and practice of FP is significantly associated with woman's occupation. (**Sindhu B. M. & Angadi M. M, 2016**). In the present table the respondents were categorized into employed and unemployed **(NFHS, 2016)** and further the type of employment was discussed as unskilled worker and skilled worker.

Table 4.1.2.3.1: Distribution of women as per occupation and type of employment

Category	f	%
Occupation (n=253)		
Employed	43	17.8
Not employed	208	82.2
Total	**253**	**100**
Type of employment (n= 43)		
Unskilled worker	32	12.6
Skilled worker	13	5.2
Total	**43**	**17.8**

Table: 4.1.2.3.1 shows that there were a good number of the respondents 208 (82.2%) who were not employed and very less amount of the respondents was employed 43 (17.8%). It is similar of the finding **Taklikar *et al.*, (2012)** as he found (79%) women were unemployed in their study. Majority of the respondents were unskilled worker 32 (12.6%) and very few were skilled worker 13 (5.2%). **Yadav *et al.*, (2017)** were found similar finding that most of the women were 19.4 % unskilled workers in their study conducted in slum of Lucknow.

Housing characteristics of the respondents

Under this heading the ownership of house, type of house in which the respondents

Table 4.1.2.3.2: Distribution of women as per ownership of house and type of house

Category	f	%
Ownership of house		
Rented	146	57.7
Own	107	42.3
Total	**253**	**100.0**
Type of house		
Kaccha	47	18.6
Pacca	89	35.2
Semi pacca	117	46.2
Total	**253**	**100.0**

were living were discussed as it is noticed that the housing condition also affect the reproductive health of women. (**Jose *et al.*, 2019).** Ownership of house was classified into rented and own and the type of house were classified into kaccha, pacca and semi pacca. **(Shukla *et al.*, 2015)**.

Table 4.1.2.3.2 expresses that the more than half of the respondents 146 (57.7%) were living in house which was rented followed by the respondents 107 (42.3%) who were living in their own house.

The majority of the households were semi-pacca 117 (46.2%) followed by pacca houses 89 (35.2%) and only 47 (18.6%) households were kuchha house in which the study subjects were living. Our findings of the study were different from the finding of **Shukla *et al.*, (2015)** as he found maximum household were pacca (69.5%), followed by semi pacca (29.6%), very few respondents were living in kachha house (0.7%).

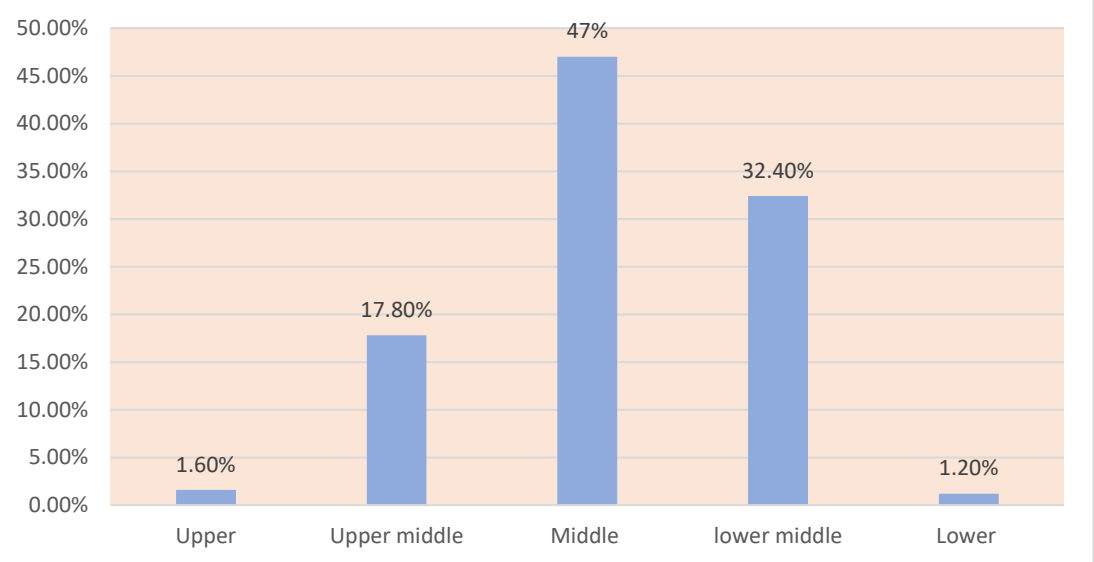


Figure 4.1.2.3.2: Distribution of women as per economic status

Socio-economic class of the respondents

Poverty results in high-risk lifestyles and behaviour and poorer sexual health and vice versa. The bidirectionality of the relationship between economic status and sexual and reproductive health is well acknowledged. **(T. S. Sathyanarayana Rao, 2018)**. In the present figure the economic status of the study subjects was discussed. The socio-economic class of the respondents was determined by using the **BG prasad's socio-economic scale, 2018**. Socio economic classes were categorized in to five sections- upper class, upper middle class, middle class, lower middle class, lower class, as mentioned in figure 4.1.2.3.2. It revealed that majority of the respondents were belonged to middle class 119 (47.0%), followed by lower middle class 82 (32.4), nearly one fifth of the respondents were belonging to the upper middle class 45 (17.8%). Very few respondents belonged to upper class and lower class 4 (1.6%) and 3 (1.2%) respectively which was different from the findings of **Shukla *et al.*, (2015)** as he found that women of slum of Lucknow were belonged to upper middle class 45 (11.7%), lower middle class 102 (26.5), upper lower 135 (35.1%) and lower 102 (26.6%).

The availability of basic amenities at the respondents' home

Women reproductive health is associated with the sanitation and the cleanliness. Thus, the basic home availability of household amenities like availability of electricity, laterine, source of water are discussed here.

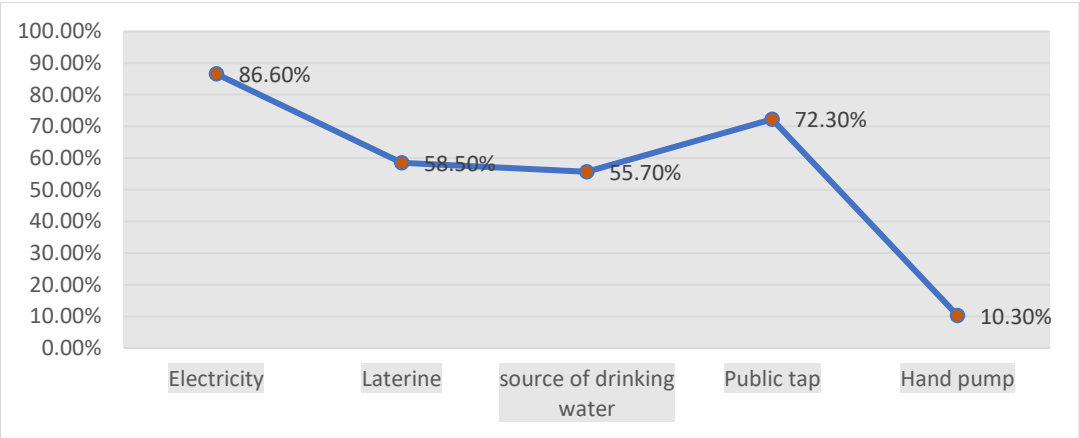


Figure: 4.1.2.3.3 Distribution of women as per the availability of basic amenities at their home

The basic facilities like electric connection, sanitary latrine and source of water was presented in figure 4.1.2.3.3. Most of the household of the respondents were electrified

219 (86.6%). More than half of the sample households 148 (58.5%) had sanitary latrine followed by the respondents had source of drinking water 141 (55.70). Among the 141 (55.7%) household had source of drinking water. It was found that the most of the respondents 183 (72.3%) were getting water from the public tap and only 26 (10.3%) respondents were using the hand pump to get the water. Our findings were similar to the findings of **Shukla *et al.*, (2015)**.

4.2 Socio demographic factors associated with child marriage

An association of age of the marriage with the duration of the marriage

It is estimated that the with the duration of the time the number of child marriages are reduced. The prevalence of child marriage was compared between the 15-19 years old and 20-24 years old girls. **(NFHS, 2016).**

H_0: There is no association between the marriage age of the respondents and duration of marriage.

Table: 4.2.1 Percent distribution of women by marriage age according to duration of the marriage

	Marriage age (In completed years)		**Total**
	12-14	**15-18**	
Duration of the marriage (In completed years)			
<1	0 (0%)	8 (100%)	8 (100%)
1-4	1 (1.1%)	88 (98.9%)	89 (100%)
5-8	9 (6.7%)	125 (93.3%)	134 (100%)
9-12	13 (59.1%)	9 (40.9%)	22 (100%)
Total	23 (9.1%)	230 (90.9%)	253 (100%)
Chi Square Sig	$\chi 2$=75.100***, df =3, P=.000		

****P* < 0.001.

There is a significant association between age of marriage and duration of marriage as the $\chi 2$=75.100, df =3 at the level of p=<.01. Thus, the null hypothesis is rejected. As the time duration of marriage is decreased the number of child marriages were also decreased that indicates with the passage of time the cases of early marriage are decreased in recent years. Our study finding is supported by the finding of **NFHS, 2016) and Census, 2011).**

Association of type of marriage with duration of marriage and religion of respondents

It was noticed that the prevalence of the child marriage is associated with the type of marriage and religion. **(UNICEF, 2019).** The respondents were divided into love marriage and arrange marriage under the type of marriage and the religion was divided into Hindu and Muslim.

The previous studies showed that there is an association between the type of marriage and child marriage.

H0: There is no association between type of marriage with duration of marriage and religion of respondents.

Table: 4.2.2 Percent distribution of women by type of marriage according to duration of the marriage and religion of child brides

	Type of marriage		**Total**
	Love marriage	**Arrange marriage**	
Duration of marriage (In completed years)			
<1	7 (87.5%)	1 (12.5%)	8 (100%)
1-4	36 (40.4%)	53 (59.6%)	89 (100%)
5-8	29 (21.6%)	105 (78.4%)	134 (100%)
9-12	3 (13.6%)	19 (86.4%)	22 (100%)
Total	75 (29.6%)	178 (70.4%)	253 (100%)
Chi Square Sig	χ^2 =24.639***, df=3, P=.000		
	Type of marriage		**Total**
	Love marriage	**Arrange marriage**	
Religion			
Hindu	43 (25.4%)	126 (74.6%)	169 (100)
Muslim	32 (38.1%)	52 (61.9%)	84 (100%)
Total	75 (29.6%)	178 (70.4%)	253 (100%)
Chi Square Sig	4.306**, df=1, p=.038		

$^{***}P < 0.001$, $^{**}P < 0.01$

The present table no 4.2.2 shows the association between type of marriage with duration of marriage and religion of respondents. In our study it was found that there is a significant association between type of marriage and duration of marriage χ^2 =24.639, df=3, P=<.01. It expressed that as the time duration of the marriage was decreased the cases of love marriage were being increased among the early married women. In recent years the love marriage is increased among the early married women.

The analysis between the category of religion of respondents and type of marriage expresses a significant association between type of marriage and religion of the respondents (χ^2= 4.306, df=1, p=<.05). Thus, the null hypothesis is rejected. It represented that among early married women the proportion of the women who did love

marriage belonged to the Muslim religion. Our study rejected the findings of **(Santhya *et al.*, 2010)** as they stated child brides are less likely to love marriage in comparison to other women who married older.

Thus, very interesting it is that in recent years the child marriages are existed among the Muslim community due to love marriage.

4.3 The baseline knowledge, attitude and practice of the respondents regarding their reproductive health.

4.3.1 Knowledge regarding reproductive health among early married women:

Maharjan *et al.*, (2019) found that child marriage is often associated with poor health outcomes of women and the newborns and the combination of pressure to give birth early, limited autonomy, and little knowledge about reproductive health issues makes young married girls vulnerable to risky pregnancies. For calculating the knowledge score of RH of women the four main domains; menstruation, FP, RTI/ STI and RR were considered.

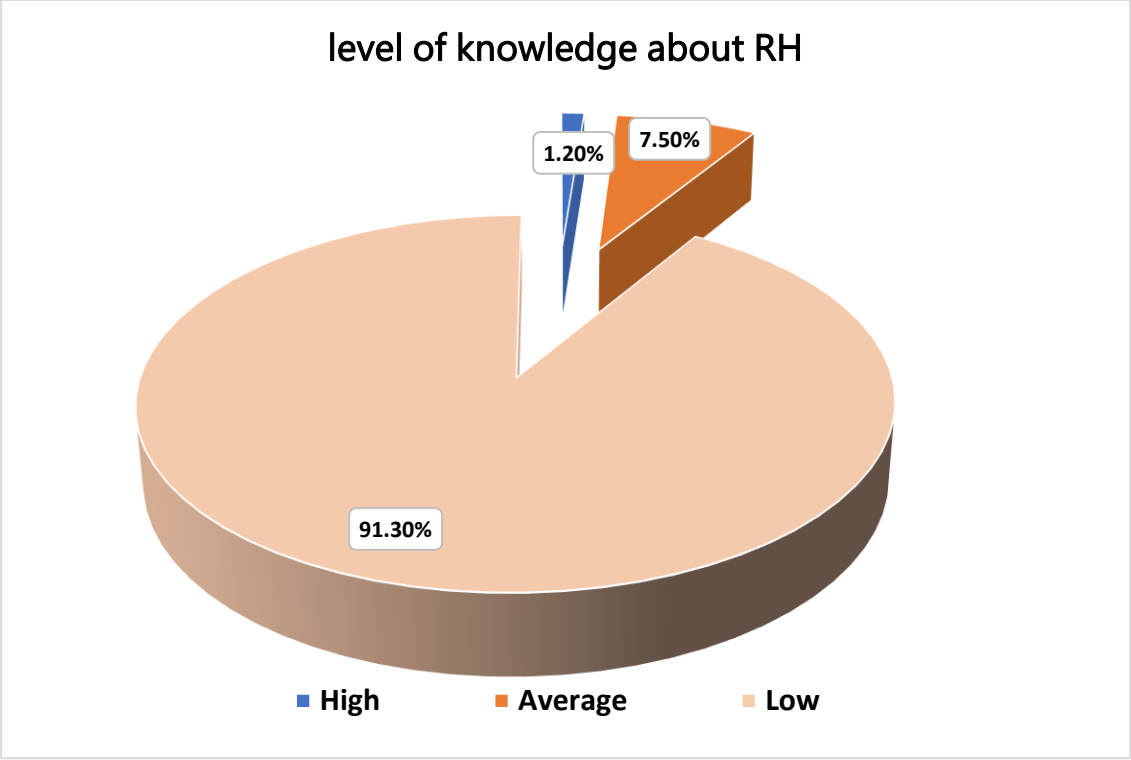


Figure: 4.3.1 Level of knowledge about reproductive health

The knowledge score of RH was (mean= 25.06; SD= 8.017; n =253**).** It was found in our study that the most of the respondents scored in the low level of knowledge 91.30% (n=231), only (19) 7.5% respondents scored average knowledge of RH (n=19). High

level of knowledge was very low 1.2% (n=3). Findings of our study is supported by the findings of **Maharjan et al, (2019).**

4.3.1.1 Knowledge score of Menstruation, FP, RTI/ STI and RR

For obtaining knowledge score of RH of the respondents the four aspects of reproductive health were considered. In this section respondent's knowledge score of the selected areas of women RH (Menstruation, FP, RTI/STI and RR) were compared with each other.

Table 4.3.1.1 Distribution of women as per level of knowledge score of menstruation, FP, RTI/ STI and RR

Particular	Level of knowledge		
	High	Average	Low
Menstruation	8 (3.2%)	81 (32%)	164 (64.8%)
FP	48 (19%)	46 (18.2%)	159 (62.8%)
RTI/ STI	10 (4%)	4 (1.6%)	239 (94.5%)
RR	12 (4.7%)	19 (7.5%)	222 (87.7%)

Table 4.3.1.1 showed that the knowledge score of menstruation was (mean= 11.17; SD= 2.698; n=253). The majority of the respondents had low knowledge of menstruation 164 (64.8%), followed by average knowledge 32% (n=81) and only 3.2% (n=8) respondents had good knowledge of menstruation. Findings of our study was less than the findings of **Jose *et al.*, (2019)** as he found adequate knowledge regarding menstruation is 29.9%.

Family planning (mean=4.48; SD=2.767; n= 253), most of the respondents scored 62.8% (n=159) in the category of low level of knowledge regarding FP, followed by high and average level of knowledge respectively 19% (n=48) and 18.2% (n=46). Our finding was similar with the finding of **Jose *et al.*, (2019)** as he found adequate knowledge regarding contraception (17.4%).

The knowledge score of RTI/ STI (mean=3.57; SD=2.014; n= 253), more than one third study subjects scored in low level of knowledge about RTI/ STI 94.5% (n=239). Only 10 (4.7%) of the respondents had good knowledge of RTI/ STI followed by 1.6% (n=4) respondents had average level of knowledge about RTI/ STI. Our finding was less than the findings obtained by **Jose *et al.*, (2019)** noted reproductive tract infections (15%).

The score of knowledge regarding RR was (mean= 5.89; SD= 4.301; n=253). A good number of respondents scored in low knowledge 87.7% (n= 222), only 7.5% (n=19) respondents had average knowledge on RR and very few had scored in high knowledge of RR 4.7% (n=12).

Knowledge of menstruation

However, menarche is a milestone in a woman's life as it denotes the start of reproductive capacity. There is gross lack of information on menstrual preparedness and management among adolescent girls unfortunately. Lack of scientific information and healthy menstrual hygiene practices leads to taboos and socio-cultural restrictions **(Nazeema et al, 2017).** Due to lack of knowledge about the scientific process of menstruation it is surrounded by various psychological and religious barriers. **(Yasmin *et al.*, 2013)**.

Table 4.3.1.1.1 expresses the knowledge of the respondents regarding age of menarche, menstrual symptoms, myths regarding menstruation and hygienic habits practiced during menstruation. It was found that the majority of the respondents 226 (89.3%) knew that the age of menarche is 12-14 years followed by the respondents 110 (43.5%) who know that the age of the menarche is 9-11 years and only 87 (34.4%) respondents know that the age of menarche is 15-16 years. Similar findings were obtained by **Mohite & Mohite, (2016).**

It was reported that most of the respondents 244 (96.4%) knew that lower abdominal pain and lower back ache is the common symptom of menstruation, followed by the respondents 218 (86.2%) who knew that leg pain is the symptom of the menstruation, more than half of the respondents knew that the vomiting and vaginal discharge 172 (68%) and 163 (64.4%) respectively is the common symptoms of menstruation. Only 142 (56.1%) respondents knew about others symptoms like fever, constipation etc.

More than one fourth of the respondents 72 (28.5%) knew that separate living during menstruation is myth, followed by the respondents 54 (21.3%) who knew that one should not do physical activity during menstruation, only 47 (18.6%) respondents knew that women should not cook food and they should not pick the pickles 23 (9.1%) during

their menstruation, is a myth. Very few respondents 2 (.8%) knew that women should not do worship during their menstrual period is a myth.

Table 4.3.1.1.1. Distribution of respondents as per knowledge regarding age of menarche, symptoms of menstruation, myths and hygienic habits

Particulars	Never heard	No	Yes	Total
Age of menarche (in completed years)				
09-11	46 (18.2%)	97 (38.3%)	110 (43.5%)	253 (100%)
12-14	21 (8.3 %)	6 (2.4%)	226 (89.3%)	253 (100%)
15-16	41 (16.2%)	125 (49.4%)	87 (34.4%)	253 (100%)
Symptoms of menstruation				
Lower abdominal pain/ Lower back ache	4 (1.6%)	5 (2%)	244 (96.4%)	253 (100%)
Vaginal discharge	9 (3.6%)	8 (32%)	163 (64.4%)	253 (100%)
Vomiting	9 (3.6%)	72 (28.5%)	172 (68%)	253 (100%)
Leg pain	6 (2.4%)	29 (11.5%)	218 (86.2%)	253 (100%)
Others	34 (13.4%)	77 (30.4%)	142 (56.1)	253 (100%)
Myths				
Separate living	18 (7.1%)	163 (64.4%)	72 (28.5%)	253 (100%)
Don't pick the pickles	9 (3.6%)	221 (87.4%)	23 (9.1%)	253 (100%)
Dont do the worship	6 (2.4%)	245 (96.8%)	2 (.8%)	253 (100%)
No cooking	22 (8.7%)	185 (73.1%)	46 (18.2%)	253 (100%)
No physical activity	25 (9.9%)	174 (68.8%)	54 (21.3%)	253 (100%)
Hygienic habits				
Regular bath	23 (9.1%)	40 (15.8%)	190 (75.1%)	253 (100%)
Use of Sanitary pad	5 (2%)	28 (11.1%)	220 (87%)	253 (100%)
The absorbent should be used for 2-4 times a day	28 (11.1%)	25 (9.9%)	200 (79.1%)	253 (100%)
After using the absorbent, it should be disposed in the dustbin	12 (4.7%)	41 (16.2%)	200 (79.1%)	253 (100%)

Majority of the respondents 189 (74.7%) knew that they should take regular bath during menstruation because it is a myth not to take during the menstruation. Most of the respondents 220, (87%) knew that the sanitary pad is the best absorbent during menstruation, supported by the findings of **Prakash M. et al, (2017).** Only 28 (11.1%) respondents didn't know that sanitary pad is an ideal absorbent during menstruation followed by the respondents 5 (2%) who have not heard about sanitary pad. Out of 253 respondents most of the women 200 (79.1%) knew that absorbent should be changed 2- 4 times / day during menstruation. Only 41 (16.2 %) of the respondents didn't know that the absorbent should be thrown in the dustbin after using it followed by the respondents who never heard of that the absorbent should be disposed into dustbin after using it.

Knowledge of family planning

Family planning is a practice by which a couple space the number of years between each child they want to give birth to through the use of contraceptive methods. **(Adeyemo A.R. et al, 2012).** In this section knowledge of types of contraceptives, ideal gap between two children, benefits of family planning and benefits of contraceptives were discussed (table-4.3.1.1.2).

Most of the respondents 224 (88.5%) knew about oral pills and only 25 (9.9%) women didn't know about oral pills followed by the respondents 19 (7.5%) who never heard about oral pills. Majority of the respondents knew about condom 209 (82.6%), followed by the respondents who never heard about condom 18 (7.1%) and didn't know about the condom 11 (4.3%). Less than half of the respondents knew about injection 212 (44.3%), followed by the women who didn't know 68 (26.9%) about injection and never heard about injection 74 (29.2%). Near about three fourth of the respondents knew about IUD 187 (73.9%) followed by the respondents who didn't know about the IUD 43 (17%) and never heard about IUD 22 (8.7%). More than half of the respondents knew about Tubectomy 152 (60.1%), followed by the respondents who didn't know about the Tubectomy 76 (30%) and never heard about Tubectomy 25 (9.9%). More than half of the respondents knew about the Vasectomy 151 (59.7%) followed by the respondents who didn't know about the Vasectomy 77 (30.4%) and the respondents who never heard about the Vasectomy 25 (9.9%). About one third of the respondents

knew natural methods of FP 90 (35.6%). Less than half of the study subjects didn't know about the natural methods of the FP 120 (47.4%) followed by the women who never heard about natural methods of FP 43 (17%).

Table 4.3.1.1.2: Distribution of the respondents as per knowledge of contraceptives, ideal gap between two children, benefits of FP and contraceptives

Particulars	Never heard	No	Yes	Total
Types of contraceptives				
Oral pills	19 (7.5%)	25 (9.9%)	209 (82.6%)	253 (100%)
Condom	18 (7.1%)	11 (4.3%)	224 (88.5%)	253 (100%)
IUD	22 (8.7%)	43 (17%)	188 (74.3%)	253 (100%)
Vasectomy	25 (9.9%)	77 (30.4%)	151 (59.7%)	253 (100%)
Tubectomy	25 (9.9%)	76 (30%)	152 (60.1%)	253 (100%)
Natural	43 (17%)	120 (47.4%)	90 (35.6%)	253 (100%)
Injection	68 (26.9%)	74 (29.2%)	111 (43.9%)	253 (100%)
Ideal gap between two children				
3 or > 3 years?	50 (19.8%)	48 (19.0%)	155 (61.3%)	253 (100%)
Benefits of FP				
Good for women health	91 (36%)	16 (6.3%)	146 (57.7%)	253 (100%)
Reducing infant mortality	94 (37.2%)	25 (9.9%)	134 (53%)	253 (100%)
Helping to prevent STD	114 (45.1%)	67 (26.5%)	72 (28.5%)	253 (100%)
Benefits of contraceptives				
Safer sex	81 (32%)	90 (35.6%)	82 (32.4%)	253 (100%)
Protecting against STD	86 (34%)	94 (37.1%)	73 (28.9%)	253 (100%)
Preventing pregnancy	53 (20.9%)	14 (5.5%)	186 (73.5%)	253 (100%)
Preventing Cancer	101 (39.9%)	85 (33.6%)	67 (26.5%)	253 (100%)

Most of the respondent 153 (60.5%) knew about the ideal gap between two children and rest of the respondents 16.6% didn't know about the ideal gap between two

children. Very few respondents 58 (22.9%) never heard about ideal gap between two children.

More than half of the respondents 146 (57.7%) knew that the FP is good for health, it is helpful in reducing infant mortality 133 (52.6%), more than one fourth of the women knew that FP is helping to prevent STD 71 (28.1%).

Majority of the respondents almost three fourth of the respondents 186 (73.5%) knew that contraceptives are preventing pregnancy, almost one third of the women 82 (32.4%) knew that contraceptives provide safer sex, more than one fourth of the study subject 71 (28.1%) knew that contraceptives are helpful in protecting against STD and only 67 (26.5%) respondents knew that contraceptives can prevent them from Cancer.

Knowledge of RTI/ STI

In present table 4.3.1.1.3 causes of STI/ STD, sign and symptoms of RTI/STI, precautionary measure of STI/ STD and mode of treatment are discussed. It was estimated that the majority of the respondents didn't know about the causes of STI/ STD 221 (87.4%). Less than one fifth of the respondents 32 (12.6%) knew that STI/ STD may transmit through mother to baby, only 27 (10.7%) respondents knew that the unsafe sex may cause STI/ STD, few respondents 12 (4.7%) knew that use of infected injection may cause STI/ STD, very few respondents 10 (4.0%) knew that the infected blood may cause STI/ STD.

Most of the respondents didn't know about the symptoms of RTI/ STI 200 (79.4%). Most of the respondents knew about the symptom of RTI is itching 53 (20.6%), vaginal discharge 43 (17%) lower abdominal pain and burning mutilation 42 (16.6%) a smaller number of respondents about the ulcer's sores in genital area 30 (11.9%).

Most of the respondents 102 (40.3%) never heard that Condom is a precautionary measure of STI/ STD. Only 50 (19.8%) respondents knew Condom as a precautionary measure and 49 (19.4%) don't know that Condom is a precautionary measure of STI/ STD. Majority of the respondents 163 (64.4%) knew that if anyone is suffering from RTI/STI she can take medicine as a treatment.

Knowledge of reproductive right

Improved SRHR knowledge can help young people make healthy, informed choices about their reproductive lives. Understanding levels of knowledge among young women can help identify gaps in preparing young women for this important part of life. Table 4.3.1.1.4 expresses the knowledge regarding reproductive right, safe abortion, terms and conditions of legal and safe abortion, Government services provided to women for promoting their reproductive health, decision making and helpline number.

Table 4.3.1.1.3 Distribution of the respondents as per knowledge of causes of STI/ STD, sign and symptoms of RTI/ STI, precaution and treatment of RTI/ STI

	Never heard	No	Yes	Total
Causes of STI/STD				
Unsafe sex	144 (56.9%)	82 (32.4%)	27 (10.7%)	253 (100%)
Infected blood	142 (56.1%)	101 (39.9%)	10 (4%)	253 (100%)
Infected injection	142 (56.1%)	99 (39.1%)	12 (4.7%)	253 (100%)
Mother to baby	149 (58.9%)	72 (28.5%)	32 (12.6%)	253 (100%)
Sign and symptoms of RTI/STI				
Vaginal discharge	166 (65.6%)	45 (17.8%)	42 (16.6%)	253 (100%)
Lower abdominal pain	166 (65.6%)	44 (17.4%)	43 (17%)	253 (100%)
Ulcers/ sores in genital area	167 (66%)	56 (22.1%)	30 (11.9%)	253 (100%)
Burning mutilation	165 (65.2%)	46 (18.2%)	42 (16.6%)	253 (100%)
Itching	164 64.8	37 (14.6%)	52 (20.6%)	253 (100%)
Precaution				
Use of condom	93 (36.8%)	110 (43.5%)	50 (19.8%)	253 (100%)
Treatment				
Taking medicine	67 (26.5%)	23 (9.1%)	163 (64.4%)	253 (100%)

Approximately one fifth of the respondents 47 (18.6%) knew that to have safe motherhood practice is the RR of a women. Less than one fifth of the respondents 40 (15.8%) knew that right to access of good quality of health care is RR followed by the women 38 (15%) who knew that right to education and access in order to make free and informed reproductive choices. Only 37 (14.6%) women knew that right to birth

control. 34 (13.4%) women knew that right to receive education about STI and other aspects of sexuality is the RR of a women. Very less amount of the respondents knew about the right to legal and safe abortion is RR of a women and right to free from coerced sterilization and violence is the RR of a women 29 (11.5%) and 28 (11.1%) respectively.

Approximately one fifth of the respondents 54 (21.3%) knew that abortion should be done by a certified provider. Less than one fifth of the respondents 49 (19.4%) knew that abortion is not a method of FP and only 47 (18.6%) women knew that abortion is legal in India.

Only one fifth of the respondents 53 (20.9%) knew that abortion is legal in case of substantial risk that if the child were born it would suffer from such physical/ mental abnormalities as to be seriously handicapped, followed by the respondents 47 (18.6%) who knew that if continuation of the pregnancy causes injury to mental/ physical health of women, in that case the abortion is legal. Only 46 (18.2%) respondents knew that abortion is legal in case of contraceptive failure.

Table 4.3.1.1.4 Distribution of the respondents as per knowledge of RR, terms and conditions of abortion, Government services, decision making and helpline

	Never heard	**No**	**Yes**	**Total**
Reproductive rights				
Safe motherhood	202 (79.8%)	4 (1.6%)	47 (18.6%)	253 (100%)
Birth control	207 (81.8%)	9 (3.6%)	37 (14.6%)	253 (100%)
Legal and safe abortion	209 (82.6%)	15 (5.9%)	29 (11.5%)	253 (100%)
Free from coerced sterilization and violence	209 (82.6%)	16 (6.3%)	28 (11.1%)	253 (100%)
Access of good quality of health care	203 (80.2%)	10 (4%)	40 (15.8%)	253 (100%)
Get education and access in order to make free and informed reproductive choices	204 (80.6%)	11 (4.3%)	38 (15%)	253 (100%)
Receive education about STI and other aspects of sexuality	207 (81.8%)	12 (4.7%)	34 (13.4%)	253 (100%)
Abortion				
Is legal.	188 (74.3%)	19 (7.5%)	46 (18.2%)	253 (100%)

Should be done by a certified provider.	188 (74.3%)	11 (4.3%)	54 (21.3%)	253 (100%)
Not a method of FP.	187 (73.9%)	15 (5.9%)	51 (20.2%)	253 (100%)
Terms and conditions of legal and safe abortion				
If continuation of the pregnancy causes injury to mental/ physical health of women	195 (77.1%)	11 (4.3%)	47 (18.6%)	253 (100%)
Contraceptive failure	195 (77.1%)	12 (4.7%)	46 (18.2%)	253 (100%)
Substantial risk that if the child were born it would suffer from such physical/ mental abnormalities as to be seriously handicapped	195 (77.1%)	6 (2.4%)	52 (20.5%)	253 (100%)
Government services for RH				
Financial support	63 (24.9%)	7 (2.8%)	183 (72.3%)	253 (100%)
Free health service provided	65 (25.7%)	11 (4.3%)	177 (70%)	253 (100%)
Free food supplements	65 (25.7%)	17 (6.7%)	171 (67.6%)	253 (100%)
Health services at low cost	64 (25.3%)	14 (5.5%)	175 (69.2%)	253 (100%)
Decision Making				
Mutual decision (husband & wife)	9 (3.6%)	37 (14.6%)	207 (81.8%)	253 (100%)
Help line				
Help line no	205 (81%)	27 (10.7%)	21 (8.3%)	253 (100%)

A good number of respondents 183 (72.3%) knew about the financial support given by the Government to the women for promoting their reproductive health, followed by the respondents 180 (71.1%) who knew about the free RHS and the women 179 (70.8%) who knew about the RHS given to the women at low cost and 171 (67.6%) of the respondents knew about the free food supplements that is provided to the respondents to improve their RH.

Most of the women knew that the decisions regarding RH should be taken mutually (husband and wife both) 207 (81.8%). A good number of respondents never heard about the helpline no. to save their RR 205 (81%) followed by didn't know about the helpline no. for saving their RR and only 21 (8.3%) of women knew about the helpline no. to protect their RR.

4.3.2 Level of attitude regarding reproductive health

The level of attitude was classified into three level of attitude i.e., positive level, neutral level and negative level of attitude.

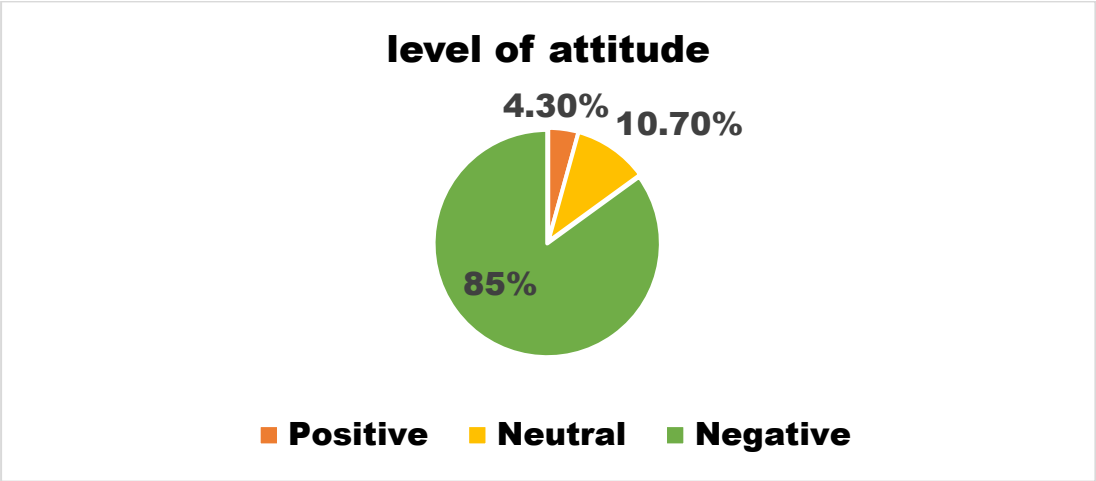


Figure 4.3.2 Level of attitude of reproductive health

The attitude score of total reproductive health (mean= 30.38; SD=9.032; n =253). 85% (n=215) of the respondents scored in the negative attitude, followed neutral 10.7% (n=27). Positive attitude was very low 4.3% (n=11).

4.3.2.1 Attitude score of menstruation, FP, RTI/ STI and RR

For getting the total score of women's attitudes towards their Reproductive Health the four main areas of reproductive health were considered. In this section respondent's attitude score towards the selected areas of women reproductive Health (Menstruation, Family Planning, RTI/STI and Reproductive Right) were compared with each other.

Table 4.3.2.1 Distribution of the respondents as per level of attitude towards Menstruation, FP, RTI/ STI and RR

Particular	Level of attitude		
	Positive	Neutral	Negative
Menstruation	7 (2.8%)	98 (38.7%)	148 (58.5%)
Family Planning	38 (15%)	44 (17.4%)	171 (67.6%)
RTI/ STI	19 (7.5%)	7 (2.8)	227 (89.7 %)
Reproductive Right	23 (9.1%)	52 (20.6%)	178 (70.4%)

The attitude score on menstruation (mean= 13.38; SD= 3.270; n=253). Most of the respondents had negative attitude 58.5% (n=148) towards menstruation, followed by neutral attitude 38.7% (n=98), and only 2.8% (n=7) respondents had positive score.

In family planning (mean=4.15; SD=2.798; n= 253), majority of the respondents belonged to negative attitude 67.6% (n=171). It was followed by the neutral attitude 17.4 % (n=44) and positive attitude15% (n=38).

RTI/ STI (mean=5.22; SD=2.329; n= 253), more than one third study subjects 89.7 % (227) had negative attitude, only study 7.5% (n=19) subjects had positive attitude towards RTI/ STI and very few respondents were belonging to the neutral attitude 2.8% (n=7).

Reproductive Right having (mean= 7.71; SD= 5.511; n=253), the majority of the respondents had negative attitude 70.4% (n= 178), quite more than one fifth respondents 20.6% (n=52) had neutral attitude, only 9.1% (n=23) respondents had positive attitude towards use of reproductive right.

Attitude towards menstruation

in Indian society menstruation is still regarded as something unclean or dirty. Isolation of the menstruating girls or women and restrictions being imposed on them in the family, have reinforced a negative attitude towards this phenomenon **(Patavegar et al. 2014)**. Many girls residing in slum areas are unaware of what actually happens during menstrual cycle. **(Yasmin et al, 2013).**

Table 4.3.2.1.1 shows the attitude on age of menarche, menstrual symptoms and myths and healthy habits during menstruation. It was reported that the majority of the respondents believed in the age of menarche is 12-14 years 224 (88.5%), followed by 9-11 years 107 (42.3%), and only 85 (33.6%) of the respondents believe in that the age of menarche was 15-16 years.

Most of the respondents believed in that lower abdominal pain/ lower back pain 238 (94.1%) and leg pain 215 (85 %) are the normal symptom of menstruation followed by vomiting 170 (67.2%) and vaginal discharge 162 (64%) as a common symptom of menstruation. More than half of the respondents 139 (54.9%) believe that other symptoms like constipation, fever, head ache are the common symptom of menstruation.

A good number of the respondents 234 (92.5%) believed that women should not worship during menstruation and they should not pick the pickle 189 (74.7%). More than half of the respondents believed that they should not cook the food 154 (60.9%)

Table 4.3.2.1.1 Distribution of the respondents as per attitude on age of menarche, menstrual symptoms and myths and healthy habits

Particulars	Disagree	Neutral	Agree	Total
Age of menarche (in completed years)				
09-11	111 (43.9%)	35 (13.8%)	107 42.3	253 (100%)
12-14	5 (2%)	24 (9.5%)	224 88.5	253 (100%)
15-16	119 (47%)	49 (19.4%)	85 33.6	253 (100%)
Symptoms during menstruation				
Lower abdominal pain/ Lower back ache	4 (1.6%)	11 (4.3%)	238 (94.1%)	253 (100%)
Vaginal discharge	69 (27.3%)	22 (8.7%)	162 (64%)	253 (100%)
Vomiting	61 (24.1%)	22 (8.7%)	170 (67.2%)	253 (100%)
Leg pain	22 (8.7%)	16 (6.3%)	215 (85%)	253 (100%)
Others	85 (33.6%)	29 (11.5%)	139 (54.9%)	253 (100%)
Myths				
Separate living	141 (55.7%)	40 (15.8%)	72 (28.5%)	253 (100%)
Don't pick the pickles	189 (74.7%)	27 (10.7%)	37 (14.6%)	253 (100%)
Don't do the worship	234 (92.5%)	15 (5.9%)	4 (1.6%)	253 (100%)
No cooking	154 (60.9%)	32 (12.6%)	67 (26.5%)	253 (100%)
No physical activity	134 (53%)	35 (13.8%)	84 (33.2%)	253 (100%)
Healthy habits				
Regular bath	49 (19.4%)	30 (11.9%)	174 (68.8%)	253 (100%)
Use sanitary pad	20 (7.9%)	13 (5.1%)	220 (87%)	253 (100%)
The absorbents should be changed 2-4 times a day	19 (7.5%)	42 (16.6%)	192 (75.9%)	253 (100%)
Used absorbent should be disposed in the dustbin	40 (15.8%)	18 (7.1%)	195 (77.1%)	253 (100%)

during their menstruation followed by the respondents who believed in that women should live separately 141 (55.7%) and not to do any physical activity 134 (53%) during their menstruation.

Majority of the respondents 174 (68.8%) believed that the regular bath should be taken during menstruation. **Sutanuka Santra (2017)** found the similar finding. Approximately one fifth of the respondents 49 (19.4%) were disagree with that one should take regular bath during their menstruation and only 30 (11.9%) respondents were neutral towards taking regular bath during their menstrual days. More than three fourth of the respondents had the positive attitude towards the use of sanitary pad 220 (87%). Only 20 (7.9%) respondents had negative attitude for using sanitary pad during menstruation followed by the respondents 13 (5.1%) who had neutral towards use of sanitary pad during their menstruation. Our finding is supported by **Prakash Mathiyalagen et al, (2017)** as it was noticed that the sanitary pad was mentioned as ideal absorbent by most of the respondents (95.5%). Most of the respondents believe that absorbent should be used 2-4 times a day during menstruation period 192 (75.9%). 42 (16.6%) respondents had believed that after using the absorbent it should be disposed in the dustbin.

Attitude on family planning

Willingness is also important factor in case of use the contraceptives by the women. So, the attitude towards use of different types of contraceptives were discussed in this section. Table 4.3.2.1.2 discusses the attitude of respondents towards use of contraceptives, ideal gap between children and benefits of family planning and contraceptives.

Most of the respondents 184 (72.7%) believed that condom should be used by the couple to prevent pregnancy followed by oral pills 170 (67.2%) and IUD 157 (62.1%) more than half of the respondents 129 (51%) believe that couple should use tubectomy and 125 (49.4%) believe that couple should use vasectomy, and less than had faith in the use of natural and injection 98 (38.7%). Similar to the study of **Taklikar *et al.*, 2012,** noticed that awareness regarding oral contraceptive (OC) pills, was maximum among 325 (81.25%) women, followed by the male condoms 317 (79.25%), tubectomy 277 (69.5%), intrauterine device (IUD) 274 (68.5%), vasectomy 175 (43.75%), injectables contraceptives among 22(5.5%) women, and 32 (8.00%) women were unaware about any of the methods of contraception. Most of the women 157 (61.7%) had positive attitude that the ideal gap between two children should be three or more than three years.

Most of the women agree with the statement that family planning is good for women health 146 (57.7%), as it reduces the infant mortality 134 (53%) and less than half of the respondents thought that it is helpful to prevent STD 74 (29.2%).

Table: 4.3.2.1.2 Distribution of the respondents as per attitude on use of contraceptives, ideal gap between children and benefits of family planning and contraceptives

Particulars	Disagree	Neutral	Agree	Total
Use of contraceptives				
Oral pills	33 (13%)	50 (19.8%)	170 (67.2%)	253 (100%)
Condom	26 (10.3%)	43 (17%)	184 (72.7%)	253 (100%)
IUD	40 (15.8%)	56 (22.1%)	157 (62.1%)	253 (100%)
Vasectomy	60 (23.7%)	68 (26.9%)	125 (49.4%)	253 (100%)
Tubectomy	57 (22.5%)	67 (26.5%)	129 (51%)	253 (100%)
Natural	61 (24.1%)	94 (37.2%)	98 (38.7%)	253 (100%)
Injection	72 (28.5%)	83 (32.8%)	98 (38.7%)	253 (100%)
Ideal gap between two children				
3 or >3 years?	40 (15.8%)	57 (22.5%)	156 (61.7%)	253 (100%)
Benefits of family Planning				
Good for women health	22 (8.7%)	85 (33.6%)	146 (57.7%)	253 (100%)
Reducing infant mortality	27 (10.7%)	92 (36.4%)	134 (53%)	253 (100%)
Helping to prevent STD	60 (23.7%)	119 (47%)	74 (29.2%)	253 (100%)
Benefits of contraceptives				
Safer sex	91 (36%)	95 (37.5%)	67 (26.5%)	253 (100%)
Protecting against STD	96 (37.9%)	102 (40.3%)	55 (21.7%)	253 (100%)
Preventing pregnancy	20 (7.9%)	55 (21.7%)	178 (70.4%)	253 (100%)
Preventing Cancer	98 (38.7%)	104 (41.1%)	51 (20.2%)	253 (100%)

Most of the respondents were agree with that contraceptive are preventing pregnancy 178 (70.4%). Less than half of the respondents believed that contraceptives should be used by the women to have safer sex 67 (26.5%). Only 55 (21.7%) respondents had

strong belief that contraceptives are helpful for protecting against STD and preventing cancer it was 51 (20.2%).

Attitude on RTI/STI

Table: 4.3.2.1.3 expresses the attitude towards RTI/ STI of the respondents. Most of the respondents agree with that STI may be transmitted through mother to baby 138 (54.5%), followed by unsafe sex 132 (52.2%) and infected blood and use of infected injection 126 (49.8%).

Nearly one fifth of the total respondents were agree with that itching is the symptom of RTI 49 (19.4%), followed by vaginal discharge 45 (17.8%) is the symptom of RTI/ STI and lower abdominal pain 42 (16.6%) is the symptom of RTI. Only 40 (15.8%) of the respondents believe in that burning mutilation is the symptom of RTI/ STI and 31 (12.3%) of the respondents believe in ulcers/ sores in genital area is the symptom of RTI/ STI.

Very less number of the respondents 41 (16.2%) were agree with that by using of condom during sex the women might be prevented from STI/ STD. Out of 253 respondents majority of the respondents 153 (60.5%) were agreed with that if women were getting infected of the RTI/ STI, she should take medicine.

Attitude towards reproductive rights

It is estimated in table 4.3.2.1.4 that approximately one third of the respondents agreed with that woman should use the right to have safe motherhood practices 89 (35.2%) followed by the women who were agreed that they should use right to access of good quality of health care 83 (32.8%) and right to education and access in order to make free and informed reproductive choices 81 (32%) to healthy RH. Only 76 (30%) of the respondents believe that women should use right to birth control to have better RH. 75 (29.6%) respondents were agreed that every woman should receive education about STI and other aspects of sexuality for achieving the good RH. 68 (26.9%) of the early married women believed that one should use right to free from coerced sterilization and violence and 66 (26.1%) of the study subject agreed that right to legal and safe abortion

Table: 4.3.2.1.3 Distribution of the respondents as per attitude on RTI/STI

Particulars	Disagree	Neutral	Agree	Total
Causes of STI				
Unsafe sex	38 (15%)	132 (52.2%)	83 (32.8%)	253 (100%)
Infected blood	25 (9.9%)	126 (49.8%)	102 (40.3%)	253 (100%)
Use of infected injection	25 (9.9%)	127 (50.2%)	101 (39.9%)	253 (100%)
Mother to baby?	42 (16.6%)	138 (54.5%)	73 (28.9%)	253 (100%)
Sign and symptoms of RTI/STI?				
Vaginal discharge	46 (18.2%)	162 (64%)	45 (17.8%)	253 (100%)
Lower abdominal pain	48 (19%)	163 (64.4%)	42 (16.6%)	253 (100%)
Ulcers/ sores in genital area	56 (22.1%)	166 (65.6%)	31 (12.3%)	253 (100%)
Burning mutilation	49 (19.4%)	164 (64.8%)	40 (15.8%)	253 (100%)
Itching	43 (17%)	161 (63.6%)	49 (19.4%)	253 (100%)
Precaution of STI				
Use of condom	103 (40.7%)	109 (43.1%)	41 (16.2%)	253 (100%)
Treatment				
Take medicine	16 (6.3%)	84 (33.2%)	153 (60.5%)	253 (100%)

for getting better RH.

Near about one fourth of the respondents 63 (24.9 %) believed that abortion should be done by a certified provider followed by the respondents 59 (23.3%) who believed in that abortion is not a method of FP and the respondents who agreed that abortion is legal in India 50 (19.8%). More than one fourth of the respondents 73 (28.9%) agreed that the abortion is legal in case of substantial risk that if the child were born it would suffer from such physical/ mental abnormalities as to be seriously handicapped followed by the respondents who agreed that the abortion is legal if continuation of the pregnancy causes injury to mental/ physical health of women 68 (26.9%), and in case of contraceptive failure 61 (24.1%). Our findings of the study were less than the findings of **(Makade *et al.*, 2012)** as he reported that 78.94% of the study population was aware of Medical Termination of Pregnancy (MTP).

Table: 4.3.2.1.4 Distribution of the respondents as per attitude towards use of RR, perceptions of abortion, terms and conditions of legal and safe abortion, use of Government services, Decision making and helpline

Particulars	Disagree	Neutral	Agree	Total
Use of reproductive rights				
Having safe motherhood practices	45 (17.8%)	119 (47%)	89 (35.2%)	253 (100%)
Birth control	53 (20.9%)	124 (49%)	76 (30%)	253 (100%)
Legal and safe abortion	55 (21.7%)	132 (52.2%)	66 (26.1%)	253 (100%)
Free from coerced sterilization and violence	54 (21.3%)	131 (51.8%)	68 (26.9%)	253 (100%)
Access the good quality of health care	49 (19.4%)	121 (47.8%)	83 (32.8%)	253 (100%)
Education and access in order to make free and informed reproductive choices	51 (20.2%)	121 (47.8%)	81 (32%)	253 (100%)
Receive education about Sexually Transmitted infection and other aspects of sexuality	54 (21.3%)	124 (49%)	75 (29.6%)	253 (100%)
Perceptions of abortion				
It is legal	81 (32%)	122 (48.2%)	50 (19.8%)	253 (100%)
Abortion should be done by a certified provider	72 (28.5%)	118 (46.6%)	63 (24.9%)	253 (100%)
Abortion is not a method of FP	75 (29.6%)	119 (47)	59 (23.3%)	253 (100%)
Terms and conditions of legal and safe abortion				
If continuation of the pregnancy causes injury to mental/ physical health of women	72 (28.5%)	113 (44.7%)	68 (26.9%)	253 (100%)
Contraceptive failure	78 (30.8%)	114 (45.1%)	61 (24.1%)	253 (100%)
If the child were born it would suffer from such physical/ mental abnormalities as to be seriously handicapped	67 (26.5%)	113 (44.7%)	73 (28.9%)	253 (100%)
Use of Govt. services				
Financial support	10 (4%)	57 (22.5%)	186 (73.5%)	253 (100%)
Free RHS	12 (4.7%)	58 (22.9%)	183 (72.3%)	253 (100%)
Free food supplement	16 (6.3%)	59 (23.3%)	178 (70.4%)	253 (100%)
RHS at low cost	18 (7.1%)	51 (20.2%)	184 (72.7%)	253 (100%)
Decision making				
Mutual (husband & wife)	38	6	209	253

	(15%)	(2.4%)	(82.6%)	(100)
Helpline				
Helpline no.	27 (10.7%)	205 (81%)	21 (8.3%)	253 (100%)

Near about three fourth of the women believed in that women should use financial support 186 (73.5%) followed by the RHS at low cost 184 (72.7%) and free RHS 183 (72.3%). Less than three fourth of the respondents 178 (70.4%) believed that women should use free food supplement for improving their RH. It was less than the findings of **Makade *et al.*, 2012** as he revealed that out of 342 women, 294 (85.96%) were aware and 48 (14.04%) were not aware of any health facilities which they could approach for family planning services (FPS) in their vicinity.

Most of the women were aware of that the decisions regarding RH of women should be taken mutually (husband and wife both) followed by the respondents 38 (15%) who were not agree that the decisions regarding RH of women should be taken mutually and the respondents 6 (2.4%) who were neutral about that the decisions regarding RH of women should be taken mutually.

4.3.3 Practice of reproductive health

Four main areas were included in total reproductive health like menstruation, Family planning Reproductive Tract Infection (RTI) and Reproductive Right.

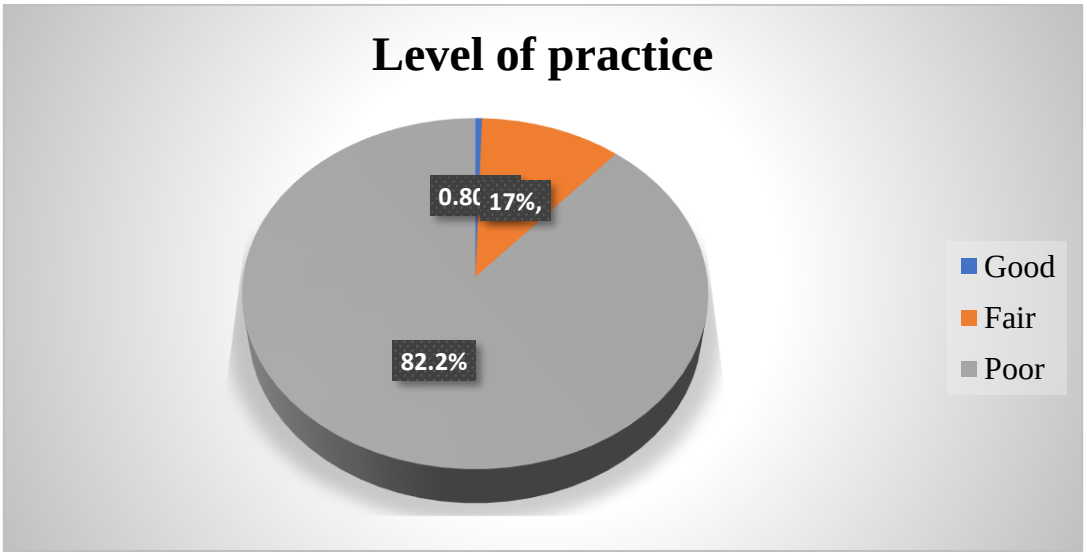


Figure: 4.3.3 Level of practice about RH

The practice score of total reproductive health (mean=24.35; SD= 8.221; n= 253), 82.2 % (n=208) of the respondents scored in the poor practice range while 17% (n=43) followed fair practice. Only .8 % (n=2) fell in the category of good practice.

4.3.3.1 Practice score of Menstruation, FP, RTI/ STI and RR

For obtaining the total practice score of Reproductive Health of the respondents the four aspects of reproductive health were considered. In this section respondent's knowledge score of the selected areas of women reproductive Health (Menstruation, Family Planning, RTI/STI and Reproductive Right) were compared with each other.

Table 4.3.3.1 Practice score of Menstruation, FP, RTI/ STI and Reproductive right

Particular	Level of practice		
	Good	Fair	Poor
Menstruation	24 (9.5%)	120 (47.4%)	109 (43.1%)
Family Planning	49 (19.4%)	26 (10.3%)	178 (70.4%)
RTI/ STI	36 (14.2%)	37 (14.6%)	180 (71.1 %)
Reproductive Right	6 (2.4%)	30 (11.9%)	217 (85.8%)

The practice score of menstruation was (mean= 9.03; SD= 2.574; n=253). Majority of the respondents belonged to fair menstrual practice 47.4% (n=120), followed by poor score of menstrual practice 43.1% (n=109). Good menstrual practice is 9.5% (n=24).

Family planning (mean=3.92; SD=3.100; n= 253). Most of the respondents were belonging to the poor score of the family planning practice 70.4% (n=178). Very less respondents were belonging to the good practice and fair practice of the family planning 19.4% (n=49) and 10.3% (n=26) respectively.

Practice score of the RTI/ STI was (mean=5.95; SD=2.378; n= 253). Majority of the respondents were doing poor practices of RTI/ STI 71.1% (n=180). Only 14.6% (n=37) women were doing fair practices of RTI/ STI that is followed by good practice of RTI/ STI 14.2% (n=36).

Reproductive right (mean= 5.88; SD= 4.579; n=253). A good number of respondents scored poor practice of reproductive right 85.8% (n= 217). It was found that only 11.9% (n=30) of the respondents belonged to fair practices of reproductive right and few respondents were belonging to the good score of reproductive right 2.4% (n=6).

Practice of menstruation

Menstrual hygiene deals with the special health care needs and requirements of women during their menstrual days. **(Lawan et al. 2010).** Although menstruation is a natural process but it is linked with several perceptions and practices within the community, which sometimes may result in adverse health outcomes of women. **(Yasmin et al, 2013)**. In this section **the age of menarche,** menstrual symptoms, myths followed by the women and use of napkin was expressed.

Age of menarche

Table 4.3.3.1.1.1 Distribution of the respondents by the age of menarche

Particulars (in completed years)	**Not experienced**		**Experienced**	
	f	**%**	**f**	**%**
09-11 years	225	88.9	28	11.1
12-14 years	54	21.3	199	78.7
15-16 years	227	89.7	26	10.3
Total	**253**	**100**	**253**	**100**

The present table showed that more than three fourth of the respondents 199 (78.7%) experienced menarche at the age 12-14 years which is similar to the finding of **Prakash M. et al, (2017).** Approximately one fifth of the respondents 28 (11.1%) experienced menarche at the age of 9-11 years followed by 15-16 years 26 (10.6%).

Practice of menstrual symptoms, myths and healthy habits of RH

Menstrual practices are clouded by various taboos and socio-cultural restrictions that is resulting ignorance of the scientific facts and hygienic health practices which is necessary for maintaining positive reproductive health. **(Jaiswal et al, 2015)**. It was reported that the Muslim menstruating women are not allowed to fast, pray or have sex while Hindu women are not allowed to worship and cooking. In some cases, women have to stay away from their family. These restrictions and isolation of menstruating girls impart a negative attitude towards menstruation. **(Rani, 2014).** The symptoms and myths related to menstrual practices are discussed in the present table: 4.3.3.1.1.2.

Majority of the respondents 190 (75.1%) were facing lower abdominal pain/ lower back ache, is similar to the findings of **Harshad *et al.*, (2014).** Less than half of the respondents 117 (46.2%) were experiencing leg pain and more than 66 (26.1%) of the respondents were facing vaginal discharge. Approximately one fifth of the respondents

55 (21.7%) were experiencing vomiting followed by the respondents 48 (19%) who were facing other symptoms like; headache, constipation, fever etc. during their menstrual days.

Table: 4.3.3.1.1.2 Distribution of the respondents as per practice of menstrual symptoms and myths and healthy habits of RH

Particulars	No	Yes	Total
Experience of menstrual symptom while menstruating			
lower abdominal pain/ lower back ache	63 (24.9%)	190 (75.1%)	253 (100%)
Vaginal discharge	187 (73.9%)	66 (26.1%)	253 (100%)
Vomiting	198 (78.3%)	55 (21.7%)	253 (100%)
leg pain	136 (53.8%)	117 (46.2%)	253 (100%)
Other	205 (81%)	48 (19%)	253 (100%)
Practice of myths			
Separate living	178 (70.4%)	75 (29.6%)	253 (100%)
Don’t pick the pickles	160 (63.2%)	93 (36.8%)	253 (100%)
Don’t do the worship	22 (8.7%)	231 (91.3%)	253 (100%)
No cooking	207 (81.8%)	46 (18.2%)	253 (100%)
No physical activity	230 (90.9%	23 (9.1%)	253 (100%)
Healthy habits			
Regular bath	107 (42.3%)	146 (57.7%)	253 (100%)
Use of sanitary pad	146 (57.7%)	107 (42.3%)	253 (100%)
Change the absorbent 2-4 times a day	41 (16.2%)	212 (83.8%)	253 (100%)
Disposal of the napkin in the dustbin after use	188 (74.3%)	65 (25.7%)	253 (100%)

Most of the respondents don’t do worship during menstruation 231 (91.3%), less than half of the respondents 93 (36.8%) don’t pick the pickles followed by the respondents 75 (29.6%) who were living separately while menstruating. Only 46 (18.2%) of the

respondents don't do cooking and no physical activity 23 (9.1%) during menstruation. our finding was supported by **Rani, (2014) and Sutanuka Santra, (2017**).

It is very necessary to follow good hygienic practices such as the use of sanitary pads and adequate washing of the genital area during menstruation. Women and girls of the reproductive age need access to clean and soft, absorbent sanitary products which can work for long time and protect their health. **(Singh AJ, 2006).** Practice regarding regular bath, use of sanitary pad number of absorbent to be changed per day and disposal of napkin after use is discussed in the below table.

More than half of the people take regular bath during menstruation 146 (57.7%) remaining of the respondents don't take bath regularly during menstruation. Our finding was less than **(Mohite & Mohite, 2016)** as he reported that the practices of personal hygiene including bath during menstruation was followed by 95.2% girls. Less than half of the respondents were using the sanitary pad 107 (42.3%) during their menstruation time. Similar finding was obtained by **Mohite** & **Mohite, (2016).** More than three fourth 212 (83.8%) of the women were changing the absorbent 2-4 times per day during their menstruation. **Prakash M. *et al.*, (2017)** found the similar finding as they noticed that the majority (85.5%) were changing the absorbent 2– 4 times during the menstruation. Nearly one fourth of the respondents 65 (25.7%) used to dispose their used absorbent in dustbin. Findings of **Prakash M. *et al.*, (2017)** was lower than our study as the girls were disposing the absorbent public dustbin (19.4%).

Practice of family planning

Table 4.3.3.1.2 shows the practices of FP of respondents. It was noticed that the majority of the respondent were ever used temporary contraceptives. Among them less than half of the respondents ever used condom 79 (31.2%), followed by natural methods of contraceptive 29 (11.5%). Only 25 (9.9%) women used IUD followed by oral pills 24 (9.5%) and injection 17 (5.9%). Very small amount of the respondents 12 (4.7%) were using permanent methods of contraceptives. Among them most of them were selected tubectomy 11 (4.3%) and only one respondent (.4%) selected vasectomy as a method FP.

Most of the respondents 90 (35.6%) have kept the 3 years or more than 3 years gap between two children less than the finding of **Thulaseedharan, (2018).**

Table 4.3.3.1.2 Distribution of the respondents as per use of contraceptive, ideal gap between two children, benefits of family planning and contraceptive

Contraceptives ever used	No	Yes	Total
Oral pills	229 (90.5%)	24 (9.5%)	253 (100%)
Condom	174 (68.8%)	79 (31.2%)	253 (100%)
IUD	228 (90.1%)	25 (9.9%)	253 (100%)
Vasectomy	252 (99.6%)	1 (0.4%)	253 (100%)
Tubectomy	242 (95.7%)	11 (4.3%)	253 (100%)
Natural	224 (88.5%)	29 (11.5%)	253 (100%)
Injection	246 (97.1%)	7 (5.9%)	253 (100%)
Ideal gap between two children			
> 3 years	163 (64.4%)	90 (35.6%)	253 (100%)
Benefits of family planning?			
Good for women health	124 (49.0%)	129 (51.0%)	253 (100%)
Reducing infant mortality	127 (50.2%)	126 (49.8%)	253 (100%)
Helping to prevent RTI/ STI	173 (68.4%)	80 (31.6%)	253 (100%)
Benefits of contraceptive			
Safer sex	175 (69.2%)	78 (30.8%)	253 (100%)
Protecting against STI	174 (68.8%)	79 (31.2%)	253 (100%)
Preventing pregnancy	104 (41.1%)	149 (58.9%)	253 (100%)
Preventing Cancer	173 (68.4%)	80 (31.6%)	253 (100%)

It was found in our study that most of the respondents 129 (51%) who were experiencing benefits of FP as good for women health followed by the respondents 126 (49.8%) who were experiencing that FP is helping to reduce the infant mortality. Near about one third of the respondents were prevented from RTI/ STI 80 (31.6%) because they were using contraceptives to be prevented from RTI/ STI. It was noticed that most of the respondents were prevented from the unwanted pregnancy 149 (58.9%) and

cancer 80 (31.6%). Less than one third of the respondents 79 (31.2%) were protected against STI and enjoyed safer sex 79 (31.2%).

Practice of RTI/ STI

Table 4.3.3.1.3 Distribution of the respondents as per practice of RTI/ STI

	No	Yes	Total
Precautions to be safe from cause of RTI/ STI			
Unsafe sex	172 (68%)	81 (32%)	253 (100%)
Infected blood	168 (66.4%)	85 (33.6%)	253 (100%)
Infected injection	169 (66.8%)	84 (33.2%)	253 (100%)
Mother to baby	173 (68.4%)	80 (31.6%)	253 (100%)
Experience of sign and symptoms of STI			
Vaginal discharge	167 (66%)	86 (34%)	253 (100%)
Lower abdominal pain	165 (65.2%)	88 (34.8%)	253 (100%)
Ulcers/ sores in genital area	222 (87.7%)	31 (12.3%)	253 (100%)
Burning mutilation	195 (77.1%)	58 (22.9%)	253 (100%)
Itching	139 (54.9%)	114 (45.1%)	253 (100%)
Precaution of STI			
Use of condom	208 (82.2%)	45 (17.8%)	253 (100%)
Treatment			
Taking medicine	140 (55.3%)	113 (44.7%)	253 (100%)

Approximately one third of the respondents 85 (33.6%) were taking precaution to be safe from Infected blood followed by the respondents who were taking precaution to be safe from the use of infected injection, unsafe sex and mother to baby respectively 84 (33.2%), 81 (32%) and 80 (31.6%).

Majority of the respondents faced Itching 114 (45.1%), followed by lower abdominal pain 88 (34.8%). Near about one third of the respondents 86 (34%) experienced vaginal discharge and approx. one fifth of the respondents faced burning mutilation it was 58 (22.9%). Only 31(12.3%) of the respondents experienced ulcers/ sores in genital area.

It was found that most of the respondents have taken medicine 113 (44.7%). The similar finding was obtained by **Prakash M. *et al.*, (2017)** as they reported 89 (41.6%) received treatment for the same. Only 45 (17.8%) used condom regularly as precautionary measurement to be safe from STI/ STD.

Practice of reproductive right

Table no 4.3.3.1.4 shows that more than half of the respondents were using right to access of good quality of health care 132 (52.2%) followed by right to have safe motherhood practices 129 (51%). It was noted that less than half of the respondents were getting the education and access in order to make free and informed reproductive choices regularly 120 (47.4%) followed by the respondents who were receiving the education about STI and other aspects of sexuality 96 (37.9%). Our study finding was greater than finding of **FPA, (2019)** as it was stated that only about 15 % of young women between the ages of 15-24 have received sex education.

Only 66 (26.1%) respondents reported that they didn't face coerced sterilization and violence. Only 44 (17.4%) respondents used the right to legal and safe abortion. Only 29 (11.5%) of the respondents reported that their abortion was done by a certified provider and their abortion was not adopted as a family planning method. Abortion is legal in India 26 (10.3%).

Only 28 (11.1%) respondents reported that she may abort fetus in case of Substantial risk that if the child were born it would suffer from such physical/ mental abnormalities as to be seriously handicapped followed by the respondents who reported that they may abort baby if continuation of the pregnancy causes injury to mental/ physical health of women and contraceptive failure it was 25 (9.9%). Similar findings were obtained by **Makade et al, (2012)**

It was reported that more than half of the respondents 133 (52.6%) were using the financial support provided by the government to improve the RH of women. Less than half of the respondents 109 (43.1%) achieved RHS at low cost followed by 106 (41.6%) respondents who used free food supplements and 105 (41.5%) respondents used free health services. Our finding was greater than the finding of **Mohite & Mohite, 2016** as he noticed that 14.3% adolescent girls residing in slum area of Karad city were utilized health care services for menstruation related problems.

Table 4.3.3.1.4 Distribution of the respondents as per use of RR, perceptions of abortion, terms and conditions of legal and safe abortion, use of Govt. services, decision making and helpline

Particular	No	Yes	Total
Use of reproductive rights			
Safe motherhood practices	124 (49%)	129 (51%)	253 (100%)
Legal and safe abortion	209 (82.6%)	44 (17.4%)	253 (100%)
Free from coerced sterilization and violence	187 (73.9%)	66 (26.1%)	253 (100%)
Access good quality of health care	121 (47.8%)	132 (52.2%)	253 (100%)
Get education and access in order to make free and informed reproductive choices	133 (52.6%)	120 (47.4%)	253 (100%)
Receive education about STI and other aspects of sexuality	157 (62.1%)	96 (37.9%)	253 (100%)
Practice according to perceptions of abortion			
Abortion is legal in India	227 (89.7%)	26 (10.3%)	253 (100%)
Abortion should be done by a certified provider	224 (88.5%)	29 (11.5%)	253 (100%)
Abortion is not a method of family planning	224 (88.5%)	29 (11.5%)	253 (100%)
Terms and conditions of legal and safe abortion			
If continuation of the pregnancy causes injury to mental/ physical health of women	228 (90.1%)	25 (9.9%)	253 (100%)
Contraceptive failure	228 (90.1%)	25 (9.9%)	253 (100%)
Substantial risk that if the child were born it would suffer from such physical/ mental abnormalities as to be seriously handicapped	225 (88.9%)	28 (11.1%)	253 (100%)
Use of Government services			
Financial support	120 (47.4%)	133 (52.6%)	253 (100%)
Free health services	148 (58.5%)	105 (41.5%)	253 (100%)
Free food supplement	147 (58.1%)	106 (41.9%)	253 (100%)
Health services at low cost	144 (56.9%)	109 (43.1%)	253 (100%)
Decision making			
Mutual (husband & wife)	93 (36.8%)	160 (63.2%)	253 (100%)
Use of helpline			
Helpline no	237 (93.7%)	16 (6.3%)	253 (100%)

Most of the respondents used to take decision Mutually 160 (63.2%). Our finding was higher than the findings of **Makade et al, 2012** as they stated that out of 234 couples using contraception, in 41.45% cases decision about family planning was taken mutually by the husband and wife. Only 6.3% of the respondents used any helpline no or make a complain to protect their RR.

4.3.4 An association between the KAP scores of RH

H_0: There exists no significant correlation between knowledge score attitude score and practice score of RH.

Table- 4.3.4 Correlation of KAP scores of RH

		Knowledge of RH	Attitude of RH	Practice of RH
Knowledge of RH	Pearson Correlation	1	.832**	.254**
	Sig. (2-tailed)		.000	.000
	N	253	253	253
Attitude of RH	Pearson Correlation	.832**	1	.257**
	Sig. (2-tailed)	.000		.000
	N	253	253	253
Practice of RH	Pearson Correlation	.254**	.257**	1
	Sig. (2-tailed)	.000	.000	
	N	253	253	253
**. Correlation is significant at the 0.01 level (2-tailed).				

As table 4.3.4 illustrates, Pearson's coefficient correlation between knowledge scores of RH and attitude score of RH was found to be strong and highly significant positive linear correlation ($r=0.832$, $p<.01$) along with a weak and significant positive linear correlation with practice score ($r= 0.254$, $p<.01$). Thus, the null hypothesis that was there is no correlation between knowledge score of RH and practice score of RH and there is no correlation between knowledge score of RH and practice score of RH, was rejected. It revealed that if the knowledge score regarding RH will increase the attitude score and practice score will increase in the same direction.

When attitude score of RH was correlated with practice score of RH, a weak, positive and significant linear correlation was observed with the value ($r=0.257$) at $p<.01$significance. There was a positive and significant linear correlation between attitude score of RH and practice score of RH. Thus, rejecting the above -mentioned null hypothesis there is no correlation between attitude score of RH and practice score of RH. It expressed that if the attitude score of RH will increase the practice score of RH will increase.

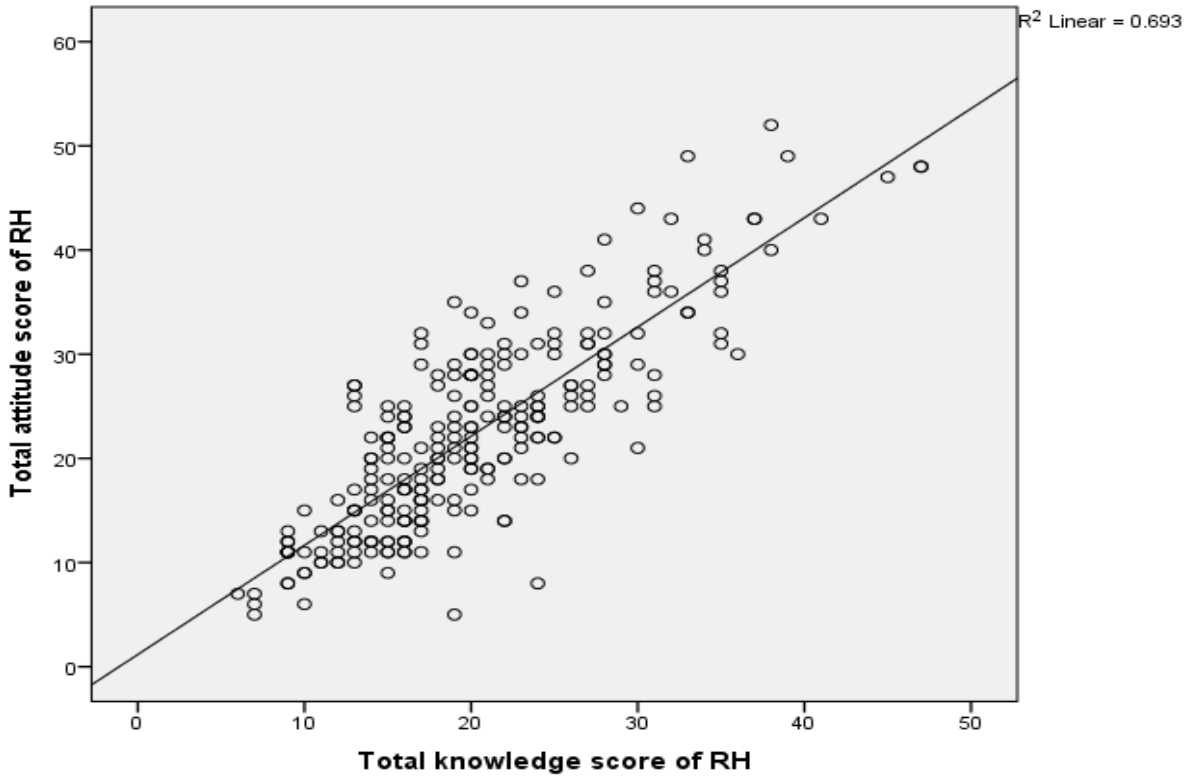


Figure: 4.3.4.1 Correlation between knowledge score and attitude score of RH

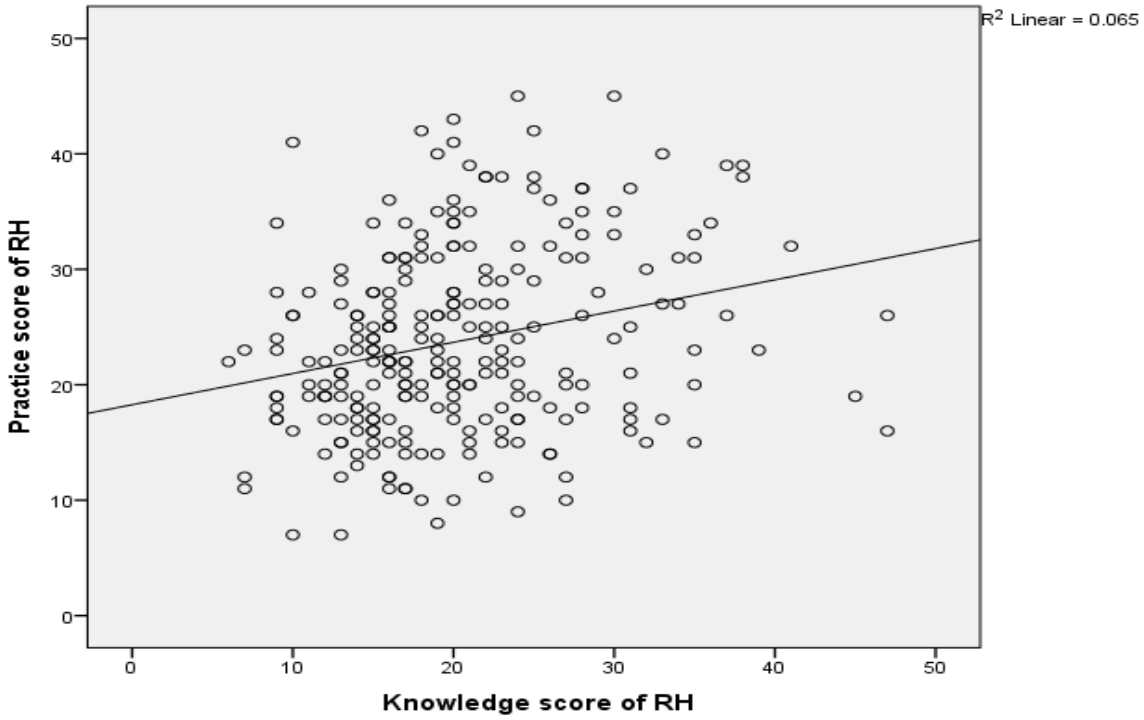


Figure: 4.3.4.2 Correlation between knowledge score and practice score of RH

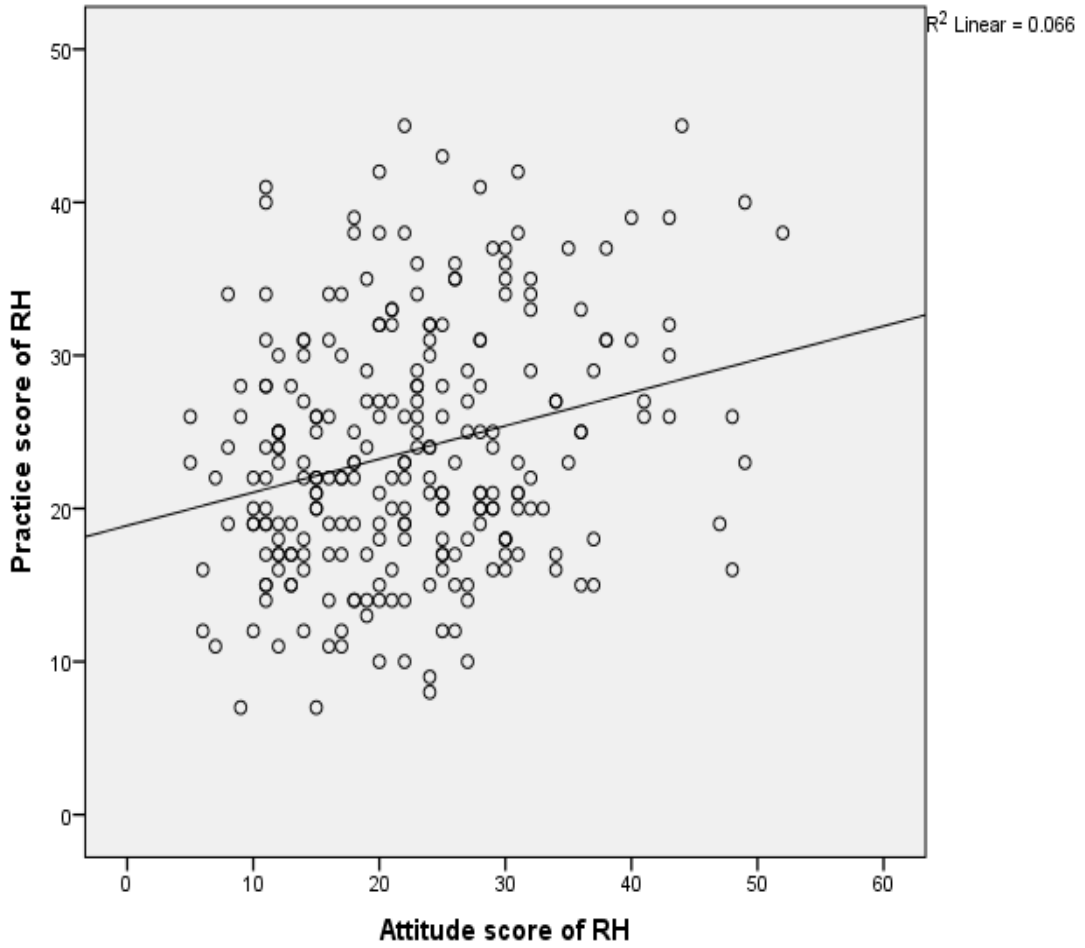


Figure: 4.3.4.3 Correlation between attitude score and practice score of RH

4.3 Association between socio demographic profile of the respondents and level of KAP of the respondent

An association of caste with level of KAP of RH of respondents

H_0: There is no association between caste and level of KAP of RH of respondents.

Our null hypothesis states a non-significant association between caste and level of KAP of RH of respondents. The analysis of the relationship between caste and KAP scores using Pearson's chi square analysis (Table 4.4.1) revealed a statistically significant relationship with practice category (χ^2 =9.180, df=4, P=.05). Our study focused that the majority of the respondents having poor practice level of RH were belonging to the OBC category and SC/ ST category. Whereas the caste is not significantly associated with the knowledge category and attitude scores. So the above mentioned null hypothesis is partially rejected.

Table 4.4.1. Percent distribution of women by caste according to KAP level of RH

	Caste			Total
	Gen	**OBC**	**SC/ST**	
Knowledge category				
High level	0 (0.0%)	2 (66.7%)	1 (33.3%)	3 (100%)
Moderate level	4 (21.1%)	9 (47.4 %)	6 (31.6%)	19 (100%)
Low level	17 (7.4%)	111 (48.1%)	103 (44.6 %)	231 (100%)
Total	21 (8.3%)	122 (48.2%)	110 (43.5%)	253 (100%)
Chi Square Sig	**NS,** χ^2 =5.189, df=4, P=.268			
Attitude category				
Positive	3 (27.3%)	5 (45.5%)	3 (27.3%)	11 (100%)
Neutral	2 (7.4%)	15 (55.6%)	10 (37%)	27 (100%)
Negative	16 (7.4%)	102 (47.4%)	97 (45.1%)	215 (100%)
Total	21 (8.3%)	122 (48.2%)	110 (43.4%)	253 (100%)
Chi Square Sig	**NS,** χ^2 =6.388, df=4, P=.172			
Practice category				
Good	1 (50%)	0 (0%)	1 (50%)	2 (100%)
Fair	1 (2.3%)	26 (60.5%)	16 (37.2%)	43 (100%)
Poor	19 (9.1%)	96 (46.2%)	93 (44.7%)	208 (100%)
Total	21 (8.3%)	122 (48.2%)	110 (43.4%)	253 (100%)
Chi Square Sig	χ^2 =9.180, df=4, P=.05**			

The association of religion and level of KAP score of RH of respondents

H_0: There is no association between religion and level of KAP of RH of respondents.

Data presented in the table 4.4.2 shown that there is a significant association with religion and knowledge scores and practice scores of women RH as the Pearson's chi square analysis shown the relationship between religion and knowledge scores and attitude scores of women RH (χ^2 =5.180, df=2, P=<.10 and χ^2 =4.834, df=2, P=<.10) respectively.

The present table represents that the maximum number of the respondents who belong to the Muslim religion associated with the good knowledge and positive attitude. There

is no significant association between religion and practice scores of the respondents regarding RH.

Table- 4.4.2 Percent distribution of women by religion according to KAP level of RH

	Religion		Total
	Hindu	Muslim	
Knowledge category			
High level	1 (33.3%)	2 (66.7%)	3 (100%)
Moderate level	9 (47.4%)	10 (52.6%)	19 (100%)
Low level	159 (68.8%)	72 (31.2%)	231 (100%)
Total	169 (66.8%)	84 (33.2%)	253 (100%)
Chi Square Sig	χ^2 =5.180, df=2, P=.07*		
Attitude category			
Positive	4 (36.4%)	7 (63.6%)	11 (100%)
Neutral	18 (66.7%)	9 (33.3%)	27 (100%)
Negative	147 (68.4%)	68 (31.6%)	215 (100%)
Total	169 (66.8%)	84 (33.2%)	253 (100%)
Chi Square Sig	χ^2 =4.834, df=2, P=.08*		
Practice category			
Good	1 (50%)	1 (50%)	2 (100%)
Fair	25 (58.1%)	18 (41.9%)	43 (100%)
Poor	143 (68.8%)	65 (31.2%)	208 (100%)
Total	169 (66.8%)	84 (33.2%)	253 (100%)
Chi Square Sig	**NS** χ^2 =2.065, df=2, P=.35		

An association of education with level of KAP of RH of respondents

H_0: There is no association between education and level of KAP of RH of respondents

Table 4.4.3 reveals that the education also revealed a statistically relationship with Knowledge category (χ^2 =32.539, df=6, P=<.01) and attitude category (χ^2 =32.539, df=6, P=<.01)., whereas education is not significantly associated with practice category.

Table- 4.4.3 Percent distribution of women level of education according to KAP level of RH

	Level of education				Total
	No education	Primary	Secondary	Higher	
Knowledge category					
High level	0 (0 %)	0 (0 %)	1 (33.3 %)	2 (66.7%)	3 (100%)
Moderate level	4 (21.1%)	4 (21.1%)	7 (36.8%)	4 (21.1%)	19 (100%)
Low level	110 (47.6%)	45 (19.5%)	64 (27.7%)	12 (5.2%)	231 (100%)
Total	114 (45.1%)	49 (19.4%)	72 (28.5%)	18 (7.1%)	253 (100%)
Chi Square Sig	χ^2 =26.607***, df=6, P=.000				
Attitude category					
Positive	0 (0%)	1 (9.1%)	5 (45.5%)	5 (45.5%)	11 (100%)
Neutral	11 (40.7%)	6 (22.2%)	7 (25.9%)	3 (11.1%)	27 (100%)
Negative	103 (47.9%)	42 (19.5%)	60 (27.9%)	10 (4.7%)	215 (100%)
Total	114 (45.1%)	49 (19.4%)	72 (28.5%)	18 (7.1%)	253 (100%)
Chi Square Sig	χ^2 =32.539***, df=6, P=.000				
Practice category					
Good	0 (0%)	1 (50%)	1 (50%)	0 (0%)	2 (100%)
Fair	17 (39.5%)	9 (20.9%)	11 (25.6%)	6 (14%)	43 (100%)
Poor	97 (46.6%)	39 (18.8%)	60 (28.8%)	12 (5.8%)	208 (100%)
Total	114 (45.1%)	49 (19.4%)	72 (28.5%)	18 (7.1%)	253 (100%)
Chi Square Sig	**NS,** χ^2 =6.332, df=6, P=.387				

It was found that the level of education is associated with the level of knowledge and level of attitude regarding reproductive health as it is found that the maximum amount of the respondents who obtained higher education associated with the high level of knowledge category regarding RH (66.7%) and the maximum number of respondents who were illiterate or obtained no education were fell in the poor level of knowledge category of RH (47.6%).

The results shown in the table 4.4.3 depicted that the positive level of attitude was associated with the level of education as the highest number of the respondents who scored positive attitude belonged to secondary education and higher education (45.5%). and most of the respondents who belonged to negative attitude obtained no education (47.9%). However, the level of the practice of the reproductive health is not associated with the level of education.

An association of occupation with KAP level of RH of respondents

H_0: There exists no significant association of occupation with KAP level of RH of respondents

Table- 4.4.4 Percent distribution of women by employment status according to KAP level of RH

	Employment status		**Total**
	Employed	**Not employed**	
Knowledge category			
High level	0 (0%)	3 (100%)	3 (100%)
Moderate level	6 (31.6%)	13 (68.4%)	19 (100%)
Low level	39 (16.9%)	192 (83.1%)	231 (100%)
Total	45 (17.8%)	208 (82.2%)	253 (100%)
Chi Square Sig	**NS,** χ^2 =3.250, df=2, p=.197		
Attitude category			
Positive	4 (36.4%)	7 (63.6%)	11 (100%)
Neutral	3 (11.1%)	24 (88.9%)	27 (100%)
Negative	38 (17.7%)	177 (82.3%)	215 (100%)
Total	45 (17.8%)	208 (82.2%)	253 (100%)
Chi Square Sig	**NS,** χ^2 =3.421, df=2, p=.181		
Practice category			
Good	0 (0%)	2 (100%)	2 (100%)
Fair	9 (20.9%)	34 (79.1%)	43 (100%)
Poor	36 (17.3)	172 (82.7%)	208 (100%)
Total	45 (17.8%)	208 (82.2%)	253 (100%)
Chi Square Sig	**NS,** χ^2 =.756, df=2, p=.685		

It was reported in previous study that there was an association between the KAP score of RH and occupation. But the statement was rejected by our findings of the study as the p = >.05. The null hypothesis stated that there is no significant association between occupation and KAP score of the respondents, is accepted.

An association between current marital status and KAP level of RH of respondents

H_0: There exists no significant relationship between marital status and KAP level of respondents.

Table 4.4.5. Percent distribution of women by marital status according to KAP level of RH

	Marital status				Total
	Married	**Just married**	**Gauna not performed**	**Divorcee/ Separated**	
Knowledge category					
High level	1 (33.3%)	0 (0%)	0 (0%)	2 (66.7%)	3 (100%)
Moderate level	16 (84.2%)	0 (0%)	0 (0%)	3 (15.8%)	19 (100%)
Low level	221 (95.7%)	5 (2.2%)	4 (1.6%)	1 (.4%)	231 (100%)
Total	238 (94.1%)	5 (2.2%)	4 (1.6%)	6 (2.4%)	253 (100%)
Chi Square Sig	χ^2 =72.671***, df=6, p=.000				
Attitude category					
Positive	7 (62.6%)	0 (0%)	0 (0%)	4 (36.4%)	11 (100%)
Neutral	26 (96.3%)	0 (0%)	0 (0%)	1 (3.7%)	27 (100%)
Negative	205 (95.3%)	5 (2.3%)	4 (1.9%)	1 (.5%)	215 (100%)
Total	238 (94.1%)	5 (2%)	4 (1.6%)	6 (2.4%)	253 (100%)
Chi Square Sig	χ^2 =59.817***, df=6, p=.000				
Practice category					
Fair	2 (100%)	0 (0%)	0 (0%)	0 (0%)	2 (100%)
Average	40 (93%)	0 (0%)	0 (0%)	3 (7%)	43 (100%)
Poor	196 (94.2%)	5 (2.4%)	4 (1.9%)	3 (1.4%)	208 (100%)
Total	238 (94.1%)	5 (2%)	4 (1.6%)	6 (2.4%)	253 (100%)
Chi Square Sig	**NS,** χ^2 =6.610, df=6, p=.358				

The null hypothesis stated that there is no significant association of marital status of the respondents with knowledge, attitude and practice score of the RH. In our study it is observed that there is a significant association of marital status with the knowledge

category (χ^2 =72.67, df=6, p=<.01) and attitude category (χ^2 =59.817, df=6, p=<.01) of reproductive health. In present study there is no significant association of marital status with practice score of reproductive health. Thus the null hypothesis is not fully rejected as there is no significant association of marital status with practice category of reproductive health.

Association of marriage age of husband and KAP level of RH of respondents

H_0: There is no association between marriage age of respondents' husband and KAP level of RH

Table 4.4.6 Percent distribution of women by marriage age of husband according to KAP level of RH

	Marriage age of husband		**Total**
	Below legal age	**Legal age**	
Knowledge category			
High level	1 (33.3%)	2 (66.6%)	3 (100%)
Moderate level	7 (36.8%)	12 (63.2%)	19 (100%)
Low level	133 (57.6%)	98 (42.4%)	231 (100%)
Total	141(55.7%)	112 (44.3%)	253 (100%)
Chi Square Sig	**NS**, χ^2 =3.676, Df=2, P=.159		
Attitude category			
Positive	5 (28.6%)	6 (71.4%)	11 (100%)
Neutral	10 (37%)	17 (63%)	27 (100%)
Negative	126 (58.6%)	89 (41.4%)	215 (100%)
Total	141 (55.7%)	112 (44.3%)	253 (100%)
Chi Square Sig	χ^2 =5.015*, df=2, P=.081		
Practice category			
Good	1 (50%)	1 (50%)	2 (100%)
Fair	20 (46.5%)	23 (53.5%)	43 (100%)
Poor	120 (57.7%)	88 (42.3%)	208 (100%)
Total	141 (55.7%)	112 (44.3%)	253 (100%)
Chi Square Sig	**NS**, χ^2 =1.832, df=2, P=.400		

Table no 4.4.6 expresses that the null hypothesis stated that there is no significant association between marriage age of respondents' husband and KAP score of RH of respondents. The analysis of the relationship between marriage age of respondents' husband and KAP score of RH of respondents using Pearson's Chi square analysis (Table: 4.4.6) revealed a statistically significant relationship with attitude category (χ^2 =5.015, df=2, P=<.10). It is observed in our study that there is no significant association of marriage age of respondents' husband with knowledge and practice. Hence the

results were partially rejecting the null hypothesis. It was found that there is no association between the marriage age of respondents' husband and level of knowledge and practice as the p= >.05. But an association could be seen in between the level of attitude score and the marriage age of respondents' husband. Most of the respondents (71.4%) who were scoring the positive attitude were married with the man of legal age and the women who were scoring negative attitude most of them were married with the men of below legal age (57.7%).

An association between the size of family and KAP level of RH

H_0: There is no association between the size of family and KAP level of RH

The findings expressed in table 4.4.7 that however the family size of the respondents is not associated with the level of knowledge and practice score of the respondents ($\chi^2$4.949, df=4, P=.293) and (χ^2 7.080, df=4, P=.132) respectively. Whereas the attitude score of the respondents were associated with the size of the family (χ^2 9.410, df=4, .052). The majority of the respondents who scored positive level of attitude (81.8%) were belonged to small family with 2-4 members.

Association between Socio-economic status and KAP level of RH

H_0: There is no association between Socio-economic status of respondents and KAP level RH.

The analysis between the category of socioeconomic class and KAP scores depicted (table 4.4.8) a significant association between practice (χ^2 =47.552, df=8) at the level of p=<.01. Thus, the null hypothesis is partially rejected as there is no significant association of socio-economic class and knowledge and attitude scores of RH respectively. However, there was no association found between KAP score and level of knowledge and attitude. It was found that the respondents who scored good level of practice (50%) of women RH belonged to middle and lower socio-economic class and the respondents who scored poor level of practice of women RH belonged to the middle and lower middle socio-economic class of family (50% and 31.7%) respectively.

4.5. Media exposure of the respondents with different type of mass media and their impact on KAP of the respondents regarding RH

Information on the exposure of women and men to mass media is especially important

Table 4.4.7 Percent distribution of women by family size according to KAP level of RH

	Family size			Total
	2-4 members	**5-8 members**	**>8 members**	
Knowledge category				
High level	3 (100%)	0 (0%)	0 (%)	3 (100%)
Moderate level	10 (52.6%)	6 (31.6%)	3 (15.8%)	19 (100%)
Low level	125 (54.1%)	91 (39.4%)	15 (6.5%)	231 (100%)
Total	138 (54.5%)	97 (38.3%)	18 (7.2%)	253 (100%)
Chi Square Sig	**NS,** $\chi^2$4.949, df=4, P=.293			
Attitude category				
Positive	9 (81.8%)	0 (0%)	2 (18.2%)	11 (100%)
Neutral	12 (44.4%)	12 (44.4%)	3 (11.1%)	27 (100%)
Negative	117 (54.4%)	85 (39.5%)	13 (6%)	215 (100%)
Total	138 (54.5%)	97 (38.3%)	18 (7.1%)	253 (100%)
Chi Square Sig	χ^2 9.410**, df=4, .052			
Practice category				
Good	1 (50%)	0 (0%)	1 (50%)	2 (100%)
Fair	25 (58.1%)	14 (32.6%)	4 (9.3%)	43 (100%)
Poor	112 (53.8%)	83 (39.9%)	13 (6.2%)	208 (100%)
Total	138 (54.5%)	97 (38.3%)	18 (7.1%)	253 (100%)
Chi Square Sig	**NS,** χ^2 7.080, df=4, P=.132			

for the development of the educational programs and the dissemination of all types of information, particularly information about family planning, HIV/ AIDS and other important health topics. **(NFHS, 2016).** In this section the availability of the different media at the home of the respondents, time spent weekly with the different media, preference of media, preferred media for getting the information regarding their RH was discussed.

Table- 4.4.8 Percent distribution of women by Socio-economic class according to KAP level of RH

	Socio-economic class					Total
	Upper	**Upper middle**	**Middle**	**Lower middle**	**Lower**	
Knowledge category						
High level	0 (0%)	2 (66.7%)	1 (33.3%)	0 (0%)	0 (0%)	3 (100%)
Moderate level	1 (5.3%)	3 (15.8%)	5 (26.3%)	10 (52.6%)	0 (0%)	19 (100%)
Low level	3 (1.3%)	40 (17.3%)	113 (48.9%)	72 (31.2%)	3 (1.3%)	231 (100%)
Total	4 (1.6%)	45 (17.8%)	119 (47%)	82 (32.4%)	3 (1.2%)	253 (100%)
Chi Square Sig	**NS,** χ^2 =11.687, df=8, P=.166					
Attitude category						
Positive	1 (9.1%)	4 (36.4%)	4 (36.4%)	2 (18.2%)	0 (0%)	11 (100%)
Neutral	0 (0%)	5 (18.5%)	13 (48.1%)	8 (29.6%)	1 (3.7%)	27 (100%)
negative	3 (1.4%)	36 (16.7%)	102 (47.4%)	72 (33.5%)	2 (.9%)	215 (100%)
Total	4 (1.6%)	45 (17.8%)	119 (47%)	82 (32.4%)	3 (1.2%)	253 (100%)
Chi Square Sig	NS, χ^2 =9.474, df=8, P=.304					
Practice category						
Good	0 (0%)	0 (0%)	1 (50%)	0 (0%)	1 (50%)	2 (100%)
Fair	1 (2.3%)	12 (27.9%)	14 (32.6%)	16 (37.2%)	0 (0%)	43 (100%)
Poor	3 (1.4%)	33 (15.9%)	104 (50%)	66 (31.7%)	2 (1%)	208 (100%)
Total	4 (1.6%)	45 (17.8%)	119 (47%)	82 (32.4%)	3 (1.2%)	253 (100%)
Chi Square Sig	χ^2 =47.552***, df=8, P=.000					

Media availability at home

In this section the availability of different media i.e print media, T.V, radio, Mobile/ Internet and other media was discussed.

Table 4.5.1 Distribution of respondents as per availability of different mass media at home (n=253)

Type of media	Available	Not available	Total
Print media	16 (6.3%)	237 (93.7%)	253 (100%)
T. V	138 (54.5%)	115 (45.5%)	253 (100%)
Audio aids	21 (8.3%)	232 (91.7%)	253 (100%)
Mobile/ Internet	186 (73.5)	67 (26.5%)	253 (100%)
Others	10 (4%)	243 (96%)	253 (100%)
Print media	16 (6.3%)	237 (93.7%)	253 (100%)

It was depicted in table 4.5.1 most of the respondents had the internet and/ mobile availability 186 (73.5%) at their home followed by the respondents who had availability of TV 138 (54.5%) at their house. Only 21 (8.3%) women had audio aids and 16 (6.3%) women had availability of print media at their home. Only 10 (4.0 %) women had the availability of other media.

Media preference by the respondents

Table 4.5.2 Distribution of respondents as per media preference for getting the information regarding RH

Type of media	Media preference	
	f	%
None	10	4
Print media	5	2
T. V	16	6.3
Audio aids	2	.8
Mobile/ Internet	43	17
Others	177	70
Total	253	100

It was noticed in table 4.5.2 that a good amount of the respondents used to prefer other sources (NGO worker) 177 (70 %) to get the information regarding RH. Less than half of the respondents preferred mobile/ internet 43 (17%) to get the information regarding RH. Only 5 (2%) of the respondent were preferring print media followed by audio aids (.8%) to get the information about RH.

Use of media to get the information about reproductive health

Table 4.5.3 expressed that the majority of the respondents reported that they were getting information by NGO workers 92 (36.4%) to get the information about RH followed by the respondents who were using mobile/ internet 88 (34.8%) to get the

Table 4.5.3 Distribution of respondents as per use of media to get the information about RH

Type of media	Use of media	
	f	%
Print media (Newspaper, folder, pamphlet, etc.)	11	4.3
T. V	52	20.6
Audio aids	11	4.3
Mobile/ Internet	88	34.8
Others	91	36
Total	253	100

information about RH. Only 52 (20.6%) respondents were getting the information regarding RH through TV. A smaller number of respondents reported that they used to get the information of RH through audio aids 11 (4.3%) and print media 11 (4.3%).

Mean time spend with the different mass media weekly

Table 4.5.4 Distribution of the respondents as per mean of time spend with the different media weekly (n=253)

Type of media	Mean duration in hours	Std. deviation
Print media	.04	.224
TV	.40	.725
Audios	.04	.232
Mobile/ Internet	.41	.770
Other	.07	.300

Table 4.5.4 reveals the man time spent with the different type of mass media. It was noted that the most of the mean time people spent with mobile/internet (.41±.770) followed by T. V. (.40±.224) very less time is spent with the print media (.o4±.224) and audios (.04±.232) by the respondents.

Preference of different source of information to get the information of RH

Thapa P. *et al.* (2018) included health worker, husband, friend, relatives and mass media as a source of information regarding contraceptives. Table 4.5.5 expresses the different sources to get the information of RH. We included NGO worker, mother, relative/ friend, doctors/ health worker, books/ magazine and films and videos.

Table: 4.5.5. Distribution of the respondents as per preference of different source of information to get the information of RH

Type of media	First	Second	Third
NGO worker	115 (45.5%)	98 (38.7%)	40 (15.8%)
Mother	88 (34.8%)	85 (33.6%)	80 (31.6%)
Relative/ Friend	32 (12.6%)	110 (43.5%)	111 (43.9%)
Doctors/ health worker	159 (62.8%)	56 (22.1%)	38 (15%)
Books/ magazines	5 (2%)	10 (4%)	238 (94.1%)
Films/ videos	11 (4.3%)	18 (7.1%)	224 (88.5%)

The table 4.5.5 depicted that the most of the women (45.5%) had given first preference to the NGO worker for getting the information about RH. It was followed by doctors and mothers62.8% and 34.8% respectively. Very low percent of respondents had given the first preference to films and video (4.3%) followed by books and magazine (2.0%).

4.5.6 Relationship between the KAP score of RH and time spent with different media

H_0: Time spent with the print media, TV, audios, mobile/ internet and other media (NGO) to predict the knowledge score of RH is equal to 0.

Table no 4.5.6.1 represents that there is a relationship between the knowledge score of RH and time spent with print media (p=<.01), mobile/ internet (p=<.01) and others (NGO) (p=<.01). Multi regression Use of print media increase in one hour the knowledge regarding RH score will increase 6.523 after controlling time spend with mobile/internet and others (NGO). If one hour of time spend with mobile/ internet will increase the knowledge score of RH will increase in 3.146 after controlling time spend with print media, and others (NGO). After controlling the time spend with print media and mobile/ internet the one hour of time increment with other media (NGO) will increase the knowledge score 5.743.

Relationship between the attitude score of RH and time spend with different media

H_0: Time spent with the print media, TV, audios, mobile/ internet and other media (NGO) to predict the attitude score of RH is equal to 0.

Table: 4.5.6.1 Relationship between the knowledge score of RH and time spent with different media

	Simple Linear regression			Multiple linear regression		
	Coefficient	**95.0% Confidence Interval for B**	**P value Sig**	**Coefficient**	**95.0% Confidence Interval for B**	**P value Sig**
Print media	5.689	.367- 11.010	.036	6.523	1.947-11.098	.005
T. V	1.188	-276-2.653	.111	-	--	-
Audios	11.58	4.994 - 18.18	.001	3.846	2.080-9.773	.202
Mobile/ internet	6.037	3.787- 8.287	.000	3.146	1.030-5.261	.004
Others	6.231	4.857- 7.604	.000	5.743	4.339- 7.147	.000

a. Dependent variable: Knowledge score

b. Predictors: (Constant): Print media, Television, Radio, Internet/ Mobile and others

Table: 4.5.6.2 Relationship between the attitude score of RH and time spent with different media

	Simple Linear regression			Multiple linear regression		
Type of media	**Coefficient**	**95.0% Confidence Interval for B**	**P value Sig**	**Coefficient**	**95.0% Confidence Interval for B**	**P value Sig**
Print media	9.535	2.879-16.192	.005	9.678	4.111-15.244	.001
T.V	1.158	-690-3.006	.219		-	-
Audio	21.024	12.936-29.113	.000	10.945	3.806-18.083	.003
Mobile/ internet	7.235	4.387-10.083	.000	2.857	.305-5.408	.028
Others	8.350	6.658-10.043	.000	7.415	5.688-9.142	.000

a. Dependent variable: Attitude score

b. Predictors: (Constant): Print media, Television, Audio, Internet/ Mobile and others

In table 4.5.6.2 multi regression was used to know the Relationship between the attitude score of RH and time spent with different media. It was found that there is relationship between the time spend with print media, Audios, mobile/ internet and others as the p= <.01.

Use of print media increase in one hour the attitude regarding RH score will increase 9.678 after controlling time spend with audios, mobile/internet and others (NGO).

With the increment of one hour of audio use to get the information on RH the attitude score of RH will increase 10.945 after controlling time spend with print media, mobile/internet and others (NGO).

If one hour of time spend with mobile/ internet will be increased the attitude score of RH will increase in 2.857 after controlling time spend with audios, print media, and others (NGO).

After controlling the time spend with the print media, audios and mobile/ internet, the one hour of time increment with other media (NGO) will increase the attitude score 7.415.

Relationship between the practice score of RH and time spend with different media

H_0: Time spent with the print media, TV, audios, mobile/ internet and other media (NGO) to predict the practice score of RH is equal to 0.

Multi regression was performed to check the relationship between practice score of respondents and time spent with different media (table: 4.5.8). Time spend with print media and other mass media were significantly related with the practice score of RH as the p value is <.05 and equal =.05.

Use of print media increase in one hour the practice score of RH score will increase 9.242 after controlling time spend with others (NGO). If one hour of time spend with others (NGO) will be increased the practice score of RH will increase in 1.646 after controlling time spend with print media.

4.7 Evaluation of the effectiveness of the intervention

Reproductive health depends on economic status, education, employment and the living conditions. So, the empowerment of women through education is very important for a good sexual and reproductive health. **(Jain R et al., 2016).**

Percentagewise change of KAP of RH through pre- and post-intervention as per feedback form

According to table 4.7.1, it is revealed that the level of knowledge of RH was changed

Table: 4.5.6.3 Relationship between the practice score of RH and time spent with different media

Simple Linear regression				Multiple linear regression		
Type of media	**Coefficient**	**95.0% Confidence Interval for B**	**P value Sig**	**Coefficient**	**95.0% Confidence Interval for B**	**P value Sig**
Print media	5.812	.149-11.475	.044	6.242	.594- 11.890	.030
T.V	-.636	-2.199-.928	.424	-	-	-
Audios	6.583	-.547-13.713	.070	3.771	-3.635- 11.178	.317
Mobile/ internet	.954	-1.565-3.474	.456	-	-	-
Others	1.505	-161-3.171	.076	1.646	-.013-3.305	.052

a. Dependent variable: attitude score and practice score

b. Predictors: (Constant): Print media, Television, Radio, Internet/ Mobile and others

Table: 4.7.1 Pre and post intervention level of change regarding KAP of RH (n=115)

Particular	**Pre- intervention Level**			**Mean ±SD**	**Post- intervention Level**			**Mean ±SD**
	Low %	**Average %**	**High %**		**Low %**	**Average %**	**High %**	
Knowledge	92.2	7.8	-	80.74±21.757	17.4	74.8	7.8	88.00±9.998
Attitude	79.1	18.3	2.6		7.8	80	12.2	
Practice	76.5	21.7	1.7		48.7	41.7	9.6	

from pre to post – intervention. In the context of knowledge, it was observed as low (92.2%) and average (7.8) as the none of the respondent had not attain high score of knowledge during pre - intervention phase having a total mean 80.74±21.757 which was changed into low (17.4%), average score (74.8%) and high average (7.8) with mean 88.00±9.998.

Similarly, women's attitude towards RH before intervention was observed low with the percentage value as low (79.1%), average (18.3%) and high (2.6%) improving to low (7.8%), average (80%) and high (12.2%) after intervention. A noticeable improvement in practice level of RH was noticed from low (76.5%), average (21.7%) and high (1.7%) to low (48.7%), average (41.7%) and high (9.6%).

Percentwise change in KAP of menstruation through pre and post-intervention as per feedback form

For having positive reproductive health there is need to get scientific information and healthy menstrual hygiene practices (**Nazeema et al, 2017)**.

Table: 4.7.1.1 Pre and post intervention level of change regarding KAP of menstruation (n=115)

Particular	Pre- intervention Level			Mean ±SD	Post- intervention Level			Mean ±SD
	Low %	Average %	High %		Low %	Average %	High %	
Knowledge	65.2	33.9	0.9	32.98 ±5.315	-	39.1	60.9	44.02 ±3.522
Attitude	35.7	47	17.4		-	45.2	54.8	
Practice	50.4	37.4	12.2		20	40.9	39.1	

According to table no 4.7.1.1, it is expressed that the level of knowledge, attitude and practice of menstruation was changed from pre to post – intervention. In the level of knowledge, it was observed as low (65.2%), average (33.9%) and high (0.9%) during pre - intervention phase having a total mean 32.98±5.315 which was changed into average (39.1%) and high (60.9 %) level of knowledge with mean 44.02±3.522.

Similarly, women's attitude on menstruation before intervention was noticed low with the percentage value as low (35.7%), average (47%) and high (17.4%). It was improved to average (45.2%) and high (54.8%) level of attitude towards menstruation after intervention. An improvement in practice level of menstruation was also noticed from low (50.4%), average (37.4%) and high (12.2%) to low (20%), average (40.9%) and high (39.1%).

Percentwise change in KAP of FP through pre- and post-intervention as per feedback form

It was expressed in the table no 4.7.1.2, that the knowledge, attitude and practice level of FP was changed from pre to post – intervention. The knowledge level of FP was recorded as low (63.5%), average (14.8 %) and high (21.7%) of knowledge before intervention phase having a total mean 12.89±7.588 which was changed into low (17.4%), average score (74.8%) and high average (7.8) with mean 17.77±5.529.

It was observed that attitude of women towards FP was low before intervention with the percentage value as low (65.2%), average (14.8%) and high (20%) which was

improved in to low (33.9%), average (36.5%) and high (29.6%) after intervention. Practice level of FP was also improved from low (66.1%), average (12.2%) and high (21.7%) to low (60%), average (17.4%) and high (22.6%) level of practice.

Table 4.7.1.2 Pre and post intervention level of change regarding KAP of FP (n=115)

Particular	Pre- intervention Level			Mean± SD	Post- intervention Level			Mean ±SD
	Low %	Average %	High %		Low %	Average %	High %	
Knowledge	63.5	14.8	21.7	12.89± 7.588	34.8	36.5	28.7	17.77± 5.529
Attitude	65.2	14.8	20		33.9	36.5	29.6	
Practice	66.1	12.2	21.7		60	17.4	22.6	

Percentwise change of KAP of RTI/ STI through pre- and post-intervention as per feedback form

Table 4.7.1.3 Pre and post intervention level of change regarding KAP of RTI/ STI (n=115)

Particular	Pre- intervention Level			Mean ±SD	Post- intervention Level			Mean ±SD
	Low %	Average %	High %		Low %	Average %	High %	
Knowledge	90.4	9.6	-	14.92 ±4.519	36.5	54.8	8.7	23.72 ±4.148
Attitude	87.8	12.2	-		17.4	69.6	13	
Practice	64.3	9.6	26.1		51.3	29.6	19.1	

According to table no 4.7.1.3, it is noticed that the level of knowledge of RTI/ STI was increased from before intervention to after – intervention as it was observed as the knowledge level of RTI/STI was as low (90.4%), average (9.6%) and none of the respondent had not get high level of knowledge before intervention with a total mean 14.92±4.519 which was increased as low level (36.5%), average level (54.8%) and high level (8.7%) of knowledge with mean 88.00±9.998.

An increment in the attitude level of RTI/ STI was also seen from before intervention (low (87.8%) and average (12.2%)) to after intervention (low, average and high (17.4%, 69.6% and 13%) respectively. By noticing the percentage distribution of level of practice of RTI/ STI it is found that there is an improvement in the level of practice among the study subjects. During pre-intervention the respondents' practice level was

as low (64.3%), average (9.6%) and high (26.1%) and it was increased after intervention i. e low (51.3%), average (29.6%) and high (19.1%).

Percentwise change of KAP of RR through pre- and post-intervention as per feedback form

Table 4.7.1.4 Pre and post intervention level of change regarding KAP of RR (n=115)

Particular	Pre- intervention Level			Mean ±SD	Post- intervention Level			Mean ±SD
	Low %	Average %	High %		Low %	Average %	High %	
Knowledge	86.1	11.3	2.6	20.17 ±12.741	60.9	28.7	10.4	34.92 ±8.546
Attitude	71.3	16.5	12.2		33.9	54.8	11.3	
Practice	85.2	10.4	4.3		36.5	53.9	9.6	

According to table no 4.7.1.4, it is revealed that the level of knowledge of RR was changed from pre- intervention to post – intervention. In the context of knowledge regarding RR, it was observed as low (86.1%), average (11.3%) and high (2.6%) during pre - intervention phase having a total mean 20.17±12.741which was changed into (low (60.9%), average score (28.7%) and high average (10.4%) with mean 34.92±8.546.

Similarly, attitude of women towards RR after intervention was observed high with the percentage value as low (71.3%), average (16.5%) and high (12.2%) increased to low (33.9%), average (54.8%) and high (11.3%) after intervention. A noticeable improvement in practice level of RR was noticed from low (85.2%), average (10.4 %) and high (4.3 %) to low (36.5%), average (53.9%) and high (9.6%) after giving intervention.

Comparison of the pre- and post- intervention KAP score of RH

H_0: There is no change in mean score of KAP of RH before intervention and after intervention.

After intervention the scores ranged from 25.41±7.670 (knowledge) to 42.51±5.009 (total evaluation) was observed. It was observed that there is a significant value change is seen (p=<0.001). Similarly, mean score of the attitude of RH was also increased from 30.37 ± 9.251 to 43.88 ± 4.816 at p= p=<0.001 and practice score was increased from 24.96 ± 8.610 to 34.04 ± 3.648 at p=<0.001.

Table 4.7.2 Comparison of mean of KAP score of RH before intervention and after intervention (n=115)

Particular	Pre- intervention		Post – intervention		Significance of change
	Mean	SD	Mean	SD	t value
Knowledge	25.41	7.670	42.51	5.009	-47.267***
Attitude	30.37	9.251	43.88	4.816	-19.336***
Practice	24.96	8.610	34.04	3.648	-17.648***

***Sig at 1% level of significance

Comparison of the pre- and post- intervention KAP score of menstruation

H0: There is no change in mean score of KAP of menstruation before intervention and after intervention.

Table 4.7.2.1 Comparison of mean of KAP score of menstruation before intervention and after intervention (n=115)

Particular	Pre- intervention		Post – intervention		Significance of change
	Mean	SD	Mean	SD	t value
Knowledge	11.17	2.692	16.77	1.579	-31.509***
Attitude	13.29	3.504	16.58	1.732	-10.248***
Practice	8.53	2.468	10.66	2.200	-18.030***

***Sig at 1% level of significance

After intervention the scores ranged from 11.17$\pm$2.692 to 16.77$\pm$1.579 in knowledge of menstruation, 13.17$\pm$3.504 to 16.58$\pm$1.732 in attitude and 8.53$\pm$2.468 to 10.66 $\pm$2.200 in practice of menstruation was observed. It was observed that there is a significant value change is seen (p=<0.001) regarding knowledge, attitude and practice of menstruation.

Comparison of the pre- and post- intervention KAP score of FP

H0: There is no change in mean score of KAP of FP before intervention and after intervention.

According to the table 4.7.2.2 it is observed that there is a significant value change is seen in knowledge, attitude and practice of FP as p=<0.001. The FP scores ranged from 4.61$\pm$2.806 to 6.38$\pm$1.958, from 4.44$\pm$2.896 to 6.42$\pm$1.951 and from 3.83$\pm$3.192 to 4.97$\pm$2.724 in knowledge, attitude and practice of FP respectively.

Table 4.7.2.2 Comparison of mean of KAP score of FP before intervention and after intervention (n=115)

Particular	Pre- intervention		Post – intervention		Significance of change
	Mean	SD	Mean	SD	t value
Knowledge	4.61	2.806	6.38	1.958	-17.409***
Attitude	4.44	2.896	6.42	1.951	-12.656***
Practice	3.83	3.192	4.97	2.724	-9.955***

***Sig at 1% level of significance

4.7.2.3: Comparison of the pre- and post- intervention KAP score of RTI/ STI

H0: There is no change in mean score of KAP of RTI/ STI before intervention and after intervention.

Table 4.7.2.3 Comparison of mean of KAP score of RTI/ STI before intervention and after intervention (n=115)

Particular	Pre- intervention		Post – intervention		Significance of change
	Mean	SD	Mean	SD	t value
Knowledge	3.73	2.049	8.05	1.382	-39.992***
Attitude	5.29	2.293	8.96	1.495	-25.597***
Practice	5.90	2.737	6.71	2.131	-3.632***

***Sig at 1% level of significance

It was noticed that after intervention the score of knowledge, attitude and practice regarding RTI/ STI ranged from 3.73$\pm$2.049 to 8.05$\pm$1.382, from 5.29$\pm$2.293 to 8.96$\pm$1.495 and from 5.90$\pm$2.737 to 6.71$\pm$2.131 respectively. A significant value change is seen (p=<0.001) in knowledge, attitude and practice of RTI/ STI. **Gedeon J. et al, (2016)** found the similar results in his study.

Table 4.7.2.4 Comparison of mean of KAP score of RR before intervention and after intervention (n=115)

Particular	Pre- intervention		Post – intervention		Significance of change
	Mean	SD	Mean	SD	t value
Knowledge	6.01	4.297	11.30	2.878	-28.908***
Attitude	7.54	5.766	11.92	3.030	-9.831***
Practice	6.63	4.416	11.70	2.884	-13.846***

***Sig at 1% level of significance

Comparison of the pre- and post- intervention KAP score of RR

H0: There is no change in mean score of KAP of RR before intervention and after intervention.

After intervention a significant value changed in knowledge, attitude and practice of RR as the p= <.001. Thus, the null hypothesis was rejected. Knowledge of RTI/ STI was changed from 6.01±4.297 to 11.30±2.878. Similarly, the attitude and practice of RR was also changed from 7.54±5.766 to 11.92± 3.030 and 6.63± 4.416 to 11.70±2.884 respectively.

Chapter-V
Summary

CHAPTER- V

SUMMARY

Child marriage is still widespread in India, which is home to a third of the world's child brides. About half of Indian women were married before they turned 18. (**UNICEF, 2016).** Whereas the incidence of the child marriage are declining nationally but the pace of change remains slow, in nearly all the states, especially in the age group 15-18 years. Uttar Pradesh is one of the states that have an incidence of child marriage higher than the national average. **(Census, 2011).** Child marriage is associated with adverse reproductive health outcomes, and the practice is still alarmingly common. Together with efforts to end child marriage, it is essential to provide adequate health care to already married adolescents. **(Maharjan *et al.,* 2019).** According to **WHO** "Reproductive health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and to its functions and processes. Reproductive health implies that people are able to have a satisfying and safe sex life and that they have the capability to reproduce and the freedom to decide if, when and how often to do so." Many researches showed that the women and girls belonging to the age (15 to 24 years) are more prone to the reproductive health issues like RTI/ STI, non use of contraceptive, menstrual issues due to lack of knowledge. Interventions focused on the promotion of the knowledge can promote the knowledge and attitude of the respondents as well as practice regarding reproductive health. (**Jillian Gedeon *et al.,* (2016), Thulaseedharan, (2018**).

The whole study was carried out into three phases, these are broadly discussed as follows:-

Objectives of the study

5.1 To know the demographic and socio-economic status of the early married women who are living in the urban slums.

5.2 To associate the socio demographic factors of child marriage in the slum of Lucknow city.

5.3 To know the baseline knowledge, attitude and practice of the respondents regarding their reproductive health.

5.4 To know the association between demographic and socio-economic status of the respondents and level of knowledge, attitude and practice of reproductive health.

5.5 To access the media exposure of the respondents with different type of mass media and their relationship with the KAP score RH.

5.6 To make the teaching materials and conduct the intervention among the study subjects.

5.7 To evaluate the effectiveness of the intervention.

This study was carried out in urban slums of Lucknow. It is a cross sectional and non experimental pre-test / post-test design study. 253 early married women belong to the age 15 – 24 years who were living in the slums of Lucknow were selected for the study. Multi stage random sampling was applied for selecting the respondents from four zones of Lucknow city for present study. Different sampling techniques i.e. simple random sampling, purposive sampling were applied at the different stages.

Socioeconomic and demographic characteristics, knowledge, attitude and practice level of the respondents and media exposure of the respondents for getting the information of reproductive health assessed by the interviewing the respondents, using predesigned and pretested schedule questionnaire. Thus, the pre designed and pre tested schedule questionnaire were applied to collect the data for the study.

After collecting the data of preliminary phase of the study, the availability of the different mass media at the house of respondents, preference of the mass media to attain knowledge regarding reproductive health and effectiveness of different mass media was evaluated. Different teaching methods like; lecture method, Individual method and participatory methods were selected for teaching learning sessions. Six set of flash cards, consisting stories related with the information on menstruation, FP, RTI/ STI, RR, child marriage and risk of child marriage were prepared for lecture method, two games named; Snake & ladder and card game (Repro health) for participatory method and flip book for individual method was prepared. For conducting the teaching learning program the flash cards to tell the different stories on women reproductive health, flip chart to provide the respondents individually as a part of individual method of teaching

and card game (Repro-health) Snake & Ladder games to conduct the participatory method of teaching was used. After including the same questionnaire, the feed back form was used to collect the data after giving the intervention to the respondents. Data was collected, coded and entered in to the SPSS version 20. Initially the association of socio-economic factors of the respondents with the KAP of reproductive health of the respondents was analysed by applying Chi- Square test. The other appropriate statistical tools incorporated in the study included Mean $\pm$ SD, frequency tabulation, correlation, multiple linear regression, and paired 't' test. The purpose of this chapter is to summarize and interpret the findings of the present study, which has been described under the following heads.

Results:

5.1 To know the demographic and socio-economic status of the early married women who are living in the urban slums

1. Out of 253 respondents 211 (83.4%) belonged to the age group 20-24 years and 42 (16.6%) belonged to age group 15-19 years. The mean age of the respondents was 21.50$\pm$2.096.

2. It was found that more than half of the respondents were Hindu 169 (66.8%) and 84 (33.2%) of the respondents were Muslims.
3. A good number sample of early married women who lives in the slum belong to OBC category 122 (48.2%). As many as 110 (43.4%) of the sample respondents belongs to SC/ ST and only General constitutes 21 (8.3%).

4. Nearly three fourth of the respondents 178 (70.4%) were arranged married and only 75 (29.6%) women were love married.

5. Most of the respondents reported that they were current married 238 (94.1%), very few respondents that they were just married 9 (3.6%), only 4 (1.6%) subjects were separated/ divorcee. There were 4 (1.6%) respondents those gauna was not performed. Only 2 (.8%) respondents were those whom gauna was not performed.

6. Most of the respondents were married 230 (90.9%) at the age between 15-17 years and only 23 (10.1%) respondents were married at the age of 12-14 years.

7. Most of the respondents' husband 141 (55.73%) were also married at the age that is below legal age ranges in between 14-20 years and 112 (44.27%) were married at the legal age or after that ranges between 21- 28 years.

8. A majority of the respondents 134 (53%) has spent 5-8 years of their married life, it was followed by the respondents 89 (35.2%) who have spent 1-4 years of their married life. 22 (8.7%) women has consumed 9-12 years of marriage and only 8 (3.2%) respondents spent 1-4 years of married life.

9. Most of the respondents were living in nuclear family 158 (62.5%) and rest of them were living in joint family 95 (37.5%).

10. Most of the respondents' 138 (54.5%) family size was up to 4 members. In 97 (38.3%) respondents' households 5-8 member are living. The family size of 18 (7.1%) respondents were 8 and above >8 members.

11. Less than half of the respondents (45.1%) were not educated and among the educated respondents most of the respondents obtained secondary education (28.5%), only (19.4%) respondents obtained primary education and very few respondents got higher education (7.1%).

12. A good number of the respondents 208 (82.2%) who were not employed and very less amount of the respondents was employed 43 (17.8%). Majority of the respondents were unskilled worker 32 (12.6%) and very few were skilled worker 13 (5.2%).
13. More than half of the respondents 146 (57.7%) were living in house which was rented followed by the respondents 107 (42.3%) who were living in their own house.

14. The majority of the households were semi-pacca 117 (46.2%) followed by pacca houses 89 (35.2%) and only 47 (18.6%) households were kuchha house in which the study subjects were living.

15. Majority of the respondents were belonged to middle class 119 (47.0%), followed by lower middle class 82 (32.4), nearly one fifth of the respondents were belonging to the upper middle class 45 (17.8%). Very few respondents belonged to upper class and lower class 4 (1.6%) and 3 (1.2%) respectively.

16. Most of the household of the respondents were electrified 219 (86.6%). More than half of the sample households 148 (58.5%) had sanitary latrine followed by the respondents had source of drinking water 141 (55.70). Among the 141 (55.7%) household had source of drinking water. It was found that the most of the respondents 183 (72.3%) were getting water from the public tap and only 26 (10.3%) respondents were using the hand pump to get the water.

5.2 To associate the socio demographic factors of child marriage in the slum of Lucknow city.

1. There is a significant association between age of marriage and duration of marriage as the $\chi 2$=75.100, df =3 at the level of p=<.01.
2. In our study it was found that there is a significant association between type of marriage and duration of marriage χ^2 =24.639, df=3, P=<.01.
3. The analysis between the category of religion of respondents and type of marriage expresses a significant association between type of marriage and religion of the respondents (χ^2= 4.306, df=1, p=<.05).

5.3 To know the baseline knowledge, attitude and practice of the respondents regarding their reproductive health.

5.3.1 Knowledge of RH

6 It was found in our study that the most of the respondents scored in the low level of knowledge 91.30% (n=231), only (19) 7.5% respondents scored average knowledge of RH (n=19). High level of knowledge was very low 1.2% (n=3).

7 The majority of the respondents had low knowledge of menstruation 164 (64.8%), followed by average knowledge 32% (n=81) and only 3.2% (n=8) respondents had good knowledge of menstruation.

8 Most of the respondents scored 62.8% (n=159) in the category of low level of knowledge regarding FP, followed by high and average level of knowledge respectively 19% (n=48) and 18.2% (n=46).

9 More than one third study subjects scored in low level of knowledge about RTI/ STI 94.5% (n=239). Only 10 (4.7%) of the respondents had good knowledge of

RTI/ STI followed by 1.6% (n=4) respondents had average level of knowledge about RTI/ STI.

10 A good number of respondents scored in low knowledge 87.7% (n= 222), only 7.5% (n=19) respondents had average knowledge on RR and very few had scored in high knowledge of RR 4.7% (n=12).

5.3.1.1 Knowledge of menstruation

1. Most of the respondents 244 (96.4%) knew that lower abdominal pain and lower back ache is the common symptom of menstruation, followed by the respondents 218 (86.2%) who knew that leg pain is the symptom of the menstruation, more than half of the respondents knew that the vomiting and vaginal discharge 172 (68%) and 163 (64.4%) respectively is the common symptoms of menstruation. Only 142 (56.1%) respondents knew about others symptoms like fever, constipation etc.

2. More than one fourth of the respondents 72 (28.5%) knew that separate living during menstruation is myth, followed by the respondents 54 (21.3%) who knew that one should not do physical activity during menstruation, only 47 (18.6%) respondents knew that women should not cook food and they should not pick the pickles 23 (9.1%) during their menstruation, is a myth. Very few respondents 2 (.8%) knew that women should not do worship during their menstrual period is a myth.

3. Majority of the respondents 189 (74.7%) knew that they should take regular bath during menstruation.

4. Most of the respondents 220, (87%) knew that the sanitary pad is the best absorbent during menstruation.

5. Out of 253 respondents most of the women 200 (79.1%) knew that absorbent should be changed 2- 4 times / day during menstruation.

6. Only 41 (16.2 %) of the respondents didn't know that the absorbent should be thrown in the dustbin after using it followed by the respondents who never heard of that the absorbent should be disposed into dustbin after using it.

5.3.1.2 Knowledge of Family Planning

1. Majority of the respondents knew about condom 209 (82.6%). Almost half of the respondents knew about injection 212 (44.3%), Near about three fourth of the respondents knew about IUD 187 (73.9%). More than half of the respondents knew about Tubectomy 152 (60.1%) and Vasectomy 151 (59.7%).
2. Most of the respondent 153 (60.5%) knew about the ideal gap between two children.
3. More than half of the respondents 146 (57.7%) knew that the FP is good for health, it is helpful in reducing infant mortality 133 (52.6%) and more than one fourth of the women knew that FP is helping to prevent STD 71 (28.1%).
4. Majority of the respondents almost three fourth of the respondents 186 (73.5%) knew that contraceptives are preventing pregnancy, almost one third of the women 82 (32.4%) knew that contraceptives provide safer sex, more than one fourth of the study subject 71 (28.1%) knew that contraceptives are helpful in protecting against STD and only 67 (26.5%) respondents knew that contraceptives can prevent them from Cancer.

5.3.1.3 Knowledge of RTI/ STI

1. It was estimated that the majority of the respondents didn't know about the causes of STI/ STD 221 (87.4%). Less than one fifth of the respondents 32 (12.6%) knew that STI/ STD may transmit through mother to baby, only 27 (10.7%) respondents knew that the unsafe sex may cause STI/ STD, few respondents 12 (4.7%) knew that use of infected injection may cause STI/ STD, very few respondents 10 (4.0%) knew that the infected blood may cause STI/ STD.
2. Most of the respondents didn't know about the symptoms of RTI/ STI 200 (79.4%). Most of the respondents knew about the symptom of RTI is itching 53 (20.6%), vaginal discharge 43 (17%) lower abdominal pain and burning mutilation 42 (16.6%) very less number of respondents about the ulcers sores in genital area 30 (11.9%).
3. Most of the respondents 102 (40.3%) never heard that Condom is a precautionary
4. measure of STI/ STD. Majority of the respondents 163 (64.4%) knew that if anyone
5. is suffering from RTI/STI she will take medicine.

5.3.1.4 Knowledge of RR

1. Approximately one fifth of the respondents 47 (18.6%) knew that to have safe motherhood practice is the RR of a women. Less than one fifth of the respondents 40 (15.8%) knew that right to access of good quality of health care is RR followed by the women 38 (15%) who knew that right to education and access in order to make free and informed reproductive choices. Only 37 (14.6%) women knew that right to birth control. 34 (13.4%) women knew that right to receive education about STI and other aspects of sexuality is the RR of a women. Very less amount of the respondents knew about the right to legal and safe abortion is RR of a women and right to free from coerced sterilization and violence is the RR of a women 29 (11.5%) and 28 (11.1%) respectively.

2. Approximately one fifth of the respondents 54 (21.3%) knew that abortion should be done by a certified provider. Less than one fifth of the respondents 49 (19.4%) knew that abortion is not a method of FP and only 47 (18.6%) women knew that abortion is legal in India.

3. Only one fifth of the respondents 53 (20.9%) knew that abortion is legal in case of substantial risk that if the child were born it would suffer from such physical/ mental abnormalities as to be seriously handicapped, followed by the respondents 47 (18.6%) who knew that if continuation of the pregnancy causes injury to mental/ physical health of women, in that case the abortion is legal. Only 46 (18.2%) respondents knew that abortion is legal in case of contraceptive failure.

4. A good number of respondents 183 (72.3%) knew about the financial support given by the Government to the women for promoting their reproductive health, followed by the respondents 180 (71.1%) who knew about the free RHS and the women 179 (70.8%) who knew about the RHS given to the women at low cost and 171 (67.6%) of the respondents knew about the free food supplements that is provided to the respondents to improve their RH.

5. Most of the women knew that the decisions regarding RH should be taken mutually (husband and wife both) 207 (81.8%).

6. A good number of respondents never heard about the helpline no. to save their RR 205 (81%) followed by didn't know about the helpline no. for saving their RR and only 21 (8.3%) of women knew about the helpline no. to protect their RR.

5.3.2.1 Level of attitude regarding reproductive health

1. 85% (n=215) of the respondents scored in the negative attitude, followed neutral 10.7% (n=27). Positive attitude was very low 4.3% (n=11).
2. Most of the respondents had negative attitude 58.5% (n=148) towards menstruation, followed by neutral attitude 38.7% (n=98), and only 2.8% (n=7) respondents had positive score.
3. Majority of the respondents belonged to negative attitude 67.6% (n=171) of FP. It was followed by the neutral attitude 17.4 % (n=44) and positive attitude15% (n=38).
4. More than one third study subjects 89.7 % (227) had negative attitude, only study 7.5% (n=19) subjects had positive attitude towards RTI/ STI and very few respondents were belonging to the neutral attitude 2.8% (n=7).
5. Majority of the respondents had negative attitude 70.4% (n= 178), quite more than one fifth respondents 20.6% (n=52) had neutral attitude, only 9.1% (n=23) respondents had positive attitude towards use of reproductive right.

5.3.2.2 Attitude towards menstruation

1. It was reported that the majority of the respondents believed in the age of menarche is 12-14 years 224 (88.5%), followed by 9-11 years 107 (42.3%), and only 85 (33.6%) of the respondents believe in that the age of menarche was 15-16 years.
2. Most of the respondents believed in that lower abdominal pain/ lower back pain 238 (94.1%) and leg pain 215 (85 %) are the normal symptom of menstruation followed by vomiting 170 (67.2%) and vaginal discharge 162 (64%) as a common symptom of menstruation. More than half of the respondents 139 (54.9%) believe that other symptoms like constipation, fever, head ache are the common symptom of menstruation.
3. A good number of the respondents 234 (92.5%) believed that women should not worship during menstruation and they should not pick the pickle 189 (74.7%). More than half of the respondents believed that they should not cook the food 154 (60.9%) during their menstruation followed by the respondents who

believed in that women should live separately 141 (55.7%) and not to do any physical activity 134 (53%) during their menstruation.

4. Majority of the respondents 174 (68.8%) believed that the regular bath should be taken during menstruation.

5. More than three fourth of the respondents had the positive attitude towards the use of sanitary pad 220 (87%).

6. Most of the respondents believe that absorbent should be used 2-4 times a day during menstruation period 192 (75.9%).

7. Most of the respondents thought that after using the absorbent it should be buried in ground 199 (78.7%). 42 (16.6%) respondents had believed that after using the absorbent it should be thrown in the dustbin, followed by bathroom 2 (.8%), and reuse the absorbent 2 (.8%).

5.3.2.3 Attitude towards Family Planning

1. Most of the respondents 184 (72.7%) believed that condom should be used by the couple to prevent pregnancy followed by oral pills 170 (67.2%) and IUD 157 (62.1%) more than half of the respondents 129 (51%) believe that couple should use tubectomy and 125 (49.4%) believe that couple should use vasectomy, and less than had faith in the use of natural and injection 98 (38.7%).
2. Most of the women 157 (61.7%) had positive attitude that the ideal gap between two children should be three or more than three years.

3. Most of the women agree with the statement that family planning is good for women health 146 (57.7%), as it reduces the infant mortality 134 (53%) and less than half of the respondents thought that it is helpful to prevent STD 74 (29.2%).

4. Most of the respondents were agree with that contraceptive are preventing pregnancy 178 (70.4%). Less than half of the respondents believed that contraceptives should be used by the women to have safer sex 67 (26.5%). Only 55 (21.7%) respondents had strong belief that contraceptives are helpful for protecting against STD and preventing cancer it was 51 (20.2%).

5.3.2.4 Attitude towards RTI/ STI

1. Most of the respondents agree with that STI may be transmitted through mother to baby 138 (54.5%), followed by unsafe sex 132 (52.2%) and infected blood and use of infected injection 126 (49.8%).

2. Nearly one fifth of the total respondents were agree with that itching is the symptom of RTI 49 (19.4%), followed by vaginal discharge 45 (17.8%) is the symptom of RTI/ STI and lower abdominal pain 42 (16.6%) is the symptom of RTI. Only 40 (15.8%) of the respondents believe in that burning mutilation is the symptom of RTI/ STI and 31 (12.3%) of the respondents believe in ulcers/ sores in genital area is the symptom of RTI/ STI.

3. Very less number of the respondents 41 (16.2%) were agree with that by using of condom during sex the women might be prevented from STI/ STD. Majority of the respondents 153 (60.5%) were agreed with that if women were getting infected of the RTI/ STI, she should take medicine.

5.3.2.5 Attitude towards RR

1. Approximately one third of the respondents agreed with that women should use the right to have safe motherhood practices 89 (35.2%) followed by the women who were agreed that they should use right to access of good quality of health care 83 (32.8%) and right to education and access in order to make free and informed reproductive choices 81 (32%) to healthy RH. Only 76 (30%) of the respondents believe that women should use right to birth control to have better RH. 75 (29.6%) respondents were agreed that every woman should receive education about STI and other aspects of sexuality for achieving the good RH. 68 (26.9%) of the early married women believed that one should use right to free from coerced sterilization and violence and 66 (26.1%) of the study subject agreed that right to legal and safe abortion for getting better RH.

2. Near about one fourth of the respondents 63 (24.9 %) believed that abortion should be done by a certified provider followed by the respondents 59 (23.3%) who believed in that abortion is not a method of FP and the respondents who agreed that abortion is legal in India 50 (19.8%).

3. More than one fourth of the respondents 73 (28.9%) agreed that the abortion is legal in case of substantial risk that if the child were born it would suffer from

such physical/ mental abnormalities as to be seriously handicapped followed by the respondents who agreed that the abortion is legal if continuation of the pregnancy causes injury to mental/ physical health of women 68 (26.9%), and in case of contraceptive failure 61 (24.1%).

4. Near about three fourth of the women believed in that women should use financial support 186 (73.5%) followed by the RHS at low cost 184 (72.7%) and free RHS 183 (72.3%). Less than three fourth of the respondents 178 (70.4%) believed that women should use free food supplement for improving their RH.
5. Most of the women were aware of that the decisions regarding RH of women should be taken mutually (husband and wife both).

5.3.3 Practice of reproductive health

5.3.3.1 Level of practice of RH

1. 82.2 % (n=208) of the respondents scored in the poor practice range while 17% (n=43) followed fair practice. Only .8 % (n=2) fell in the category of good practice.

2. Majority of the respondents belonged to fair menstrual practice 47.4% (n=120), followed by poor score of menstrual practice 43.1% (n=109). Good menstrual practice is 9.5% (n=24).

3. Most of the respondents were belonging to the poor score of the family planning practice 70.4% (n=178). Very less respondents were belonging to the good practice and fair practice of the family planning 19.4% (n=49) and 10.3% (n=26) respectively.

4. Majority of the respondents were doing poor practices of RTI/ STI 71.1% (n=180). Only 14.6% (n=37) women were doing fair practices of RTI/ STI that is followed by good practice of RTI/ STI 14.2% (n=36).

5. A good number of respondents scored poor practice of reproductive right 85.8% (n= 217). It was found that only 11.9% (n=30) of the respondents belonged to fair practices of reproductive right and few respondents were belonging to the good score of reproductive right 2.4% (n=6).

5.3.3.2 Practice of menstruation

1. More than three fourth of the respondents 199 (78.7%) experienced menarche at the age 12-14 years.

2. Majority of the respondents 190 (75.1%) were facing lower abdominal pain/ lower back ache, Less than half of the respondents 117 (46.2%) were experiencing leg pain and more than 66 (26.1%) of the respondents were facing vaginal discharge. Approximately one fifth of the respondents 55 (21.7%) were experiencing vomiting followed by the respondents 48 (19%) who were facing other symptoms like; headache, constipation, fever etc. during their menstrual days.
3. Most of the respondents don't do worship during menstruation 231 (91.3%), less than half of the respondents 93 (36.8%) don't pick the pickles followed by the respondents 75 (29.6%) who were living separately while menstruating. Only 46 (18.2%) of the respondents don't do cooking and no physical activity 23 (9.1%) during menstruation.
4. More than half of the people take regular bath during menstruation 146 (57.7%) remaining of the respondents don't take bath regularly during menstruation.

5. Less than half of the respondents were using the sanitary pad 107 (42.3%) during their menstruation time.

6. More than three fourth 212 (83.8%) of the women were changing the absorbent 2-4 times per day during their menstruation.

7. Nearly one fourth of the respondents 65 (25.7%) used to dispose their used absorbent in dustbin.

5.3.3.3 Practice of Family planning

1. Majority of the respondent were ever used temporary contraceptives. Among them less than half of the respondents ever used condom 79 (31.2%), followed by natural methods of contraceptive 29 (11.5%). Only 25 (9.9%) women used IUD followed by oral pills 24 (9.5%) and injection 17 (5.9%). Very small amount of the respondents 12 (4.7%) were using permanent methods of contraceptives.

2. Most of the respondents 90 (35.6%) have kept the 3 years or more than 3 years gap between two children.

3. It was found in our study that most of the respondents 129 (51%) who were experiencing benefits of FP as good for women health followed by the respondents 126 (49.8%) who were experiencing that FP is helping to reduce the infant mortality. Near about one third of the respondents were prevented from RTI/ STI 80 (31.6%) because they were using contraceptives to be prevented from RTI/ STI.

4. It was noticed that most of the respondents were prevented from the unwanted pregnancy 149 (58.9%) and cancer 80 (31.6%). Less than one third of the respondents 79 (31.2%) were protected against STI and enjoyed safer sex 79 (31.2%).

5.3.3.4 practice of RTI/ STI

1. Approximately one third of the respondents 85 (33.6%) were taking precaution to be safe from Infected blood followed by the respondents who were taking precaution to be safe from the use of infected injection, unsafe sex and mother to baby respectively 84 (33.2%), 81 (32%) and 80 (31.6%).

2. Majority of the respondents faced Itching 114 (45.1%), followed by lower abdominal pain 88 (34.8%). Near about one third of the respondents 86 (34%) experienced vaginal discharge and approx. one fifth of the respondents faced burning mutilation it was 58 (22.9%). Only 31(12.3%) of the respondents experienced ulcers/ sores in genital area.

3. It was found that most of the respondents have taken medicine 113 (44.7%).

4. Only 45 (17.8%) used condom regularly as precautionary measurement to be safe from STI/ STD.

5.3.3.5 Practice of RR

1. More than half of the respondents were using right to access of good quality of health care 132 (52.2%) followed by right to have safe motherhood practices 129 (51%). It was noted that less than half of the respondents were getting the education

and access in order to make free and informed reproductive choices regularly 120 (47.4%) followed by the respondents who were receiving the education about STI and other aspects of sexuality 96 (37.9%).

2. and right to birth control 94 (37.2%), only 66 (26.1%) respondents reported that they didn't face coerced sterilization and violence. Only 44 (17.4%) respondents used the right to legal and safe abortion.

3. Only 29 (11.5%) of the respondents reported that their abortion was done by a certified provider and their abortion was not adopted as a family planning method. Abortion is legal in India 26 (10.3%).

4. Only 28 (11.1%) respondents reported that she may abort foetus in case of Substantial risk that if the child were born it would suffer from such physical/ mental abnormalities as to be seriously handicapped followed by the respondents who reported that they may abort baby If continuation of the pregnancy causes injury to mental/ physical health of women and Contraceptive failure it was 25 (9.9%).

5. It was reported that more than half of the respondents 133 (52.6%) were using the financial support provided by the government to improve the RH of women. Less than half of the respondents 109 (43.1%) achieved RHS at low cost followed by 106 (41.6%) respondents who used free food supplements and 105 (41.5%) respondents used free health services.

6. Most of the respondents used to take decision Mutually 160 (63.2%).

5.3.4 An association between the KAP scores of RH

1. Pearson's coefficient correlation between knowledge scores of RH and attitude score of RH was found to be strong and highly significant positive linear correlation ($r=0.832$, $p<.01$) along with a weak and significant positive linear correlation with practice score ($r= 0.254$, $p<.01$).
2. When attitude score of RH was correlated with practice score of RH, a weak, positive and significant linear correlation was observed with the value ($r=0.257$) at $p<.01$significance. There was a positive and significant linear correlation between attitude score of RH and practice score of RH.

5.4 To know the association between demographic and socio-economic status of the respondents and level of knowledge, attitude and practice of reproductive health.

1. There is a statistically significant relationship with practice category (χ^2 =9.180, df=4, P=.05).

2. There is a significant association with religion and knowledge scores and practice scores of women RH as the Pearson's chi square analysis shown the relationship between religion and knowledge scores and attitude scores of women RH (χ^2 =5.180, df=2, P=<.10 and χ^2 =4.834, df=2, P=<.10) respectively.

3. Education also revealed a statistically relationship with Knowledge category (χ^2 =32.539, df=6, P=<.01) and attitude category (χ^2 =32.539, df=6, P=<.01)., whereas education is not significantly associated with practice category.

4. In our study it is observed that there is a significant association of marital status with the knowledge category (χ^2 =72.67, df=6, p=<.01) and attitude category (χ^2 =59.817, df=6, p=<.01) of reproductive health.

5. The analysis of the relationship between marriage age of respondents' husband and KAP score of RH of respondents using Pearson's Chi square analysis revealed a statistically significant relationship with attitude category (χ^2 =5.015, df=2, P=<.10).
6. The attitude score of the respondents were associated with the size of the family (χ^2 9.410, df=4, .052).

7. The analysis between the category of Socioeconomic class and KAP scores depicted a significant association between practice (χ^2 =47.552, df=8) at the level of p=<.01.

5.5 To access the media exposure of the respondents with different type of media and their association with the level of knowledge, attitude and practice of reproductive health.

1. Most of the respondents had the internet and/ mobile availability 186 (73.5%) at their home followed by the respondents who had availability of TV 138 (54.5%) at their house. Only 21 (8.3%) women had audio aids and 16 (6.3%) women had

availability of print media at their home. Only 10 (4.0 %) women had the availability of other media.

2. A good amount of the respondents used to prefer other sources (NGO worker) 177 (70 %) to get the information regarding RH. Less than half of the respondents preferred mobile/ internet 43 (17%) to get the information regarding RH. Only 5 (2%) of the respondent were preferring print media followed by audio aids (.8%) to get the information about RH.
3. Majority of the respondents reported that they were getting information by NGO workers 92 (36.4%) to get the information about RH followed by the respondents who were using mobile/ internet 88 (34.8%) to get the information about RH. Only 52 (20.6%) respondents were getting the information regarding RH through TV. A smaller number of respondents reported that they used to get the information of RH through audio aids 11 (4.3%) and print media 11 (4.3%).
4. Most of the women (45.5%) had given first preference to the NGO worker for getting the information about RH. It was followed by doctors and mothers62.8% and 34.8% respectively. Very low percent of respondents had given the first preference to films and video (4.3%) followed by books and magazine (2.0%).
5. There is a relationship between the knowledge score of RH and time spent with print media (p=<.01), mobile/ internet (p=<.01) and others (NGO) (p=<.01).
6. It was found that there is relationship between the time spend with print media, Audios, mobile/ internet and others as the p= <.01.
7. Time spend with print media and other mass media were significantly related with the practice score of RH as the p value is <.05 and equal =.05.

5.6 To evaluate the effectiveness of the intervention.

1. After intervention the scores ranged from 25.41$\pm$7.670 (knowledge) to 42.51$\pm$5.009 was observed. Similarly, mean score of the attitude of RH was also increased from 30.37 $\pm$ 9.251 to 43.88 $\pm$ 4.816 at p= p=<0.001 and practice score was increased from 24.96 $\pm$ 8.610 to 34.04 $\pm$ 3.648 at p=<0.001.

2. After intervention the scores ranged from 11.17±2.692 to 16.77±1.579 in knowledge of menstruation, 13.17±3.504 to 16.58±1.732 in attitude and 8.53±2.468 to 10.66 ±2.200 in practice of menstruation was observed.
3. According to the table 4.7.2.2 it is observed that there is a significant value change is seen in knowledge, attitude and practice of FP as p=<0.001. The FP scores ranged from 4.61±2.806 to 6.38±1.958, from 4.44±2.896 to 6.42±1.951 and from 3.83±3.192 to 4.97±2.724 in knowledge, attitude and practice of FP respectively.
4. It was noticed that after intervention the score of knowledge, attitude and practice regarding RTI/ STI ranged from 3.73±2.049 to 2.049±1.382, from 4.61±2.806 to 6.38±1.958 and from 4.61±2.806 to 6.38±1.958 respectively. A significant value change is seen (p=<0.001) in knowledge, attitude and practice of RTI/ STI.
5. Knowledge of RTI/ STI was increased from 6.01±4.297 to 11.30±2.878. Similarly, the attitude and practice of RR was also increased from 7.54±5.766 to 11.92± 3.030 and 6.63± 4.416 to 11.70±2.884 respectively.

Chapter-VI
Conclusion

CHAPTER- VI

CONCLUSION

6.1 To know the Demographic and socio-economic status of the early married women who are living in the urban slums.

- Majority of the respondents belonged to the age group 20-24 years. The mean age of the respondents was 21.50±2.096.
- It was found that more than half of the respondents were Hindu. A good number sample of early married women who lives in the slum belong to OBC category.
- Majority of the respondents were arranged married.
- Most of the respondents reported that they were current married, very few respondents that they were just married, separated/ divorcee.
- Most of the respondents were married at the age between 15-17 years. Most of the respondents' husband were also married at the age that is below legal age.
- Most of the respondents were living in nuclear family. Most of the respondents' family size was up to 4 members.
- Less than half of the respondents were not educated and among the educated respondents most of the respondents obtained secondary education.
- A good number of the respondents were not employed and majority of the respondents were unskilled worker.
- More than half of the respondents were living in house which was rented. The majority of the households were semi-pacca followed by pacca houses.
- Majority of the respondents were belonged to middle class followed by lower middle class. Most of the household of the respondents were electrified. More

than half of the sample households had sanitary latrine followed by the respondents had source of drinking water.

- The study found that in recent years the child marriage was reduced and it is associated with love marriage.
- The analysis between the category of religion of respondents and type of marriage expresses a significant association between type of marriage and religion of the respondents.
- It was found in our study that the most of the respondents scored in the low level of knowledge of RH.
- Most of the respondents knew that lower abdominal pain and lower back ache is the common symptom of menstruation, followed by leg pain.
- More than one fourth of the respondents knew that separate living during menstruation is myth.
- Majority of the respondents knew that they should take regular bath during menstruation.
- Most of the respondents knew that the sanitary pad is the best absorbent during menstruation.
- Most of the women knew that absorbent should be changed 2- 4 times / day during menstruation.
- Very few of the respondents didn't know that the absorbent should be thrown in the dustbin after using it.

6.2 To associate the socio demographic factors of child marriage in the slum of Lucknow city

- There is an association between love marriage and duration of marriage it shows that in Lucknow the love marriage is a significant factor of child marriage.
- Child marriage is associated with religion.

6.3 To know the association between demographic and socio-economic status of the respondents and level of knowledge, attitude and practice of reproductive health.

- Majority of the respondents knew about condom.
- Most of the respondent knew about the ideal gap between two children.
- More than half of the respondents knew that the FP is good for health, it is helpful in reducing infant mortality and more than one fourth of the women knew that FP is helping to prevent STD.
- Majority of the respondents almost three fourth of the respondents knew that contraceptives are preventing pregnancy, almost one third of the women knew that contraceptives provide safer sex, more than one fourth of the study subject knew that contraceptives are helpful in protecting against STD and only respondents knew that contraceptives can prevent them from Cancer.
- It was estimated that the majority of the respondents didn't know about the causes of STI/ STD.
- Most of the respondents didn't know about the symptoms of RTI/ STI.
- Most of the respondents never heard that Condom is a precautionary measure of STI/ STD.
- Majority of the respondents knew that if anyone is suffering from RTI/STI she will take medicine.
- Very less number of respondents know about the reproductive right of women.
- Approximately one fifth of the respondents 54 (21.3%) knew that abortion should be done by a certified provider. Less than one fifth of the respondents knew that abortion is not a method of FP and only women knew that abortion is legal in India.
- Most of the respondents don't know about the legal abortion and the terms of legal abortion.
- A good number of respondents knew about the financial support given by the Government to the women for promoting their reproductive health, followed by the

respondents who knew about the free RHS and the women who knew about the RHS given to the women at low cost.

- Most of the women knew that the decisions regarding RH should be taken mutually.
- A good number of respondents never heard about the helpline no. to save their RR.
- Most of the respondents have negative attitude towards reproductive health.
- It was reported that the majority of the respondents believed in the age of menarche is 12-14 years 224 (88.5%).
- Most of the respondents believed in that lower abdominal pain/ lower back pain and leg pain are the normal symptom of menstruation.
- A good number of the respondents were not aware about the myth related with menstruation.
- Majority of the respondents believed that the regular bath should be taken during menstruation.
- More than three fourth of the respondents had the positive attitude towards the use of sanitary pad.
- Most of the respondents believe that absorbent should be used 2-4 times a day during menstruation period.
- Most of the respondents thought that after using the absorbent it should be buried in ground.
- Most of the respondents believed that condom should be used by the couple to prevent pregnancy followed by oral pills.
- Majority had positive attitude that the ideal gap between two children should be three or more than three years.
- Most of the women agreed with the statement that family planning is good for women health as it reduces the infant mortality and less than half of the respondents thought that it is helpful to prevent STD.

- Most of the respondents were agree with that contraceptive are preventing pregnancy. Less than half of the respondents believed that contraceptives should be used by the women to have safer sex.
- Most of the respondents agree with that STI may be transmitted through mother to baby followed by unsafe sex and infected blood and use of infected injection.
- There was low awareness among the study subjects regarding RTI/ STI symptoms.
- Very less number of the respondents were agree with that by using of condom during sex the women might be prevented from STI/ STD. Majority of the respondents were agreed with that if women were getting infected of the RTI/ STI, she should take medicine.
- Attitude towards RR was very low among the child married women.
- Near about one fourth of the respondents were aware of the legal abortion and terms of legal abortion.
- Near about three fourth of the women believed in that women should use financial support followed by the RHS at low cost and free RHS. Less than three fourth of the respondents believed that women should use free food supplement for improving their RH.
- Most of the women were aware of that the decisions regarding RH of women should be taken mutually (husband and wife both).
- 82.2 % (n=208) of the respondents scored in the poor practice range.
- More than three fourth of the respondents 199 (78.7%) experienced menarche at the age 12-14 years. Majority of the respondents were facing lower abdominal pain/ lower back ache.
- Most of the respondents don't follow the myths regarding menstruation.
- More than half of the people take regular bath during menstruation.
- Less than half of the respondents were using the sanitary pad during their menstruation time.
- More than three fourth of the women were changing the absorbent 2-4 times per day during their menstruation.

- Nearly one fourth of the respondents 65 (25.7%) used to dispose their used absorbent in dustbin.
- Majority of the respondent were ever used temporary contraceptives. Among them less than half of the respondents ever used condom 79 (31.2%).
- Most of the respondents 90 (35.6%) have kept the 3 years or more than 3 years gap between two children.
- It was found in our study that most of the respondents were experiencing benefits of FP as good for women health, helping to reduce the infant mortality. preventing from RTI/ STI. Most of the respondents were prevented from the unwanted pregnancy.
- Majority of the respondents faced Itching 114 (45.1%), followed by lower abdominal pain. Near about one third of the respondents experienced vaginal discharge. It was found that most of the respondents have taken medicine.
- Only used condom regularly as precautionary measurement to be safe from STI/ STD.
- More than half of the respondents were using reproductive right.
- Only one fifth of the respondents reported that they followed the terms legal abortion or will follow if will be needed in future.
- It was reported that near about half of the respondents were using the financial support provided by the government to improve the RH of women, achieved RHS at low cost followed by respondents who used free food supplements and respondents used free health services.
- Most of the respondents used to take decision Mutually.
- Our study found that knowledge scores of RH and attitude score of RH was to be strongly and highly significantly correlation. But a weak and significant positive linear correlation seen with practice score. When attitude score of RH was correlated with practice score of RH, a weak, positive and significant linear correlation was observed.

6.4 To know the association between demographic and socio-economic status of the respondents and level of knowledge, attitude and practice of reproductive health.

- There is a significant association with religion and knowledge scores and practice scores of women RH.
- Education also revealed a statistically relationship with knowledge category and attitude category. Whereas education is not significantly associated with practice category.
- In our study it is observed that there is a significant association of marital status with the knowledge category and attitude category of reproductive health.
- The analysis of the relationship between marriage age of respondents' husband and KAP score of RH of respondents revealed a statistically significant relationship with attitude category.
- The attitude score of the respondents were associated with the size of the family.
- The analysis between the category of socioeconomic class and KAP scores depicted a significant association between practice.

6.5 To access the media exposure of the respondents with different type of mass media and their relationship with the KAP score RH.

- Most of the respondents had the internet and/ mobile availability 186 (73.5%) at their home followed by the respondents who had availability of TV 138 (54.5%) at their house.
- A good amount of the respondents used to prefer other sources (NGO worker) 177 (70 %) to get the information regarding RH.
- Majority of the respondents reported that they were getting information by NGO workers 92 (36.4%) to get the information about RH followed by the mobile/ internet.
- Most of the women (45.5%) had given first preference to the NGO worker for getting the information about RH.
- There is a relationship between the knowledge score of RH and time spent with print media (p=<.01), mobile/ internet (p=<.01) and others (NGO) (p=<.01). It was

found that there is relationship between attitude and the time spend with print media, Audios, mobile/ internet and others as the p= <.01. Time spend with print media and other mass media were significantly related with the practice score of RH.

6.7 To evaluate the effectiveness of the intervention.

- After intervention the scores ranged from 80.74±21.757 (knowledge) to 88.00±9.998 (total evaluation) was observed. Similarly, mean score of the attitude of RH was also increased from 30.37 ± 9.251 to 43.88 ± 4.816 at p= p=<0.001 and practice score was increased from 24.96 ± 8.610 to 34.04 ± 3.648 at p=<0.001.
- After intervention the scores ranged from 11.17±2.692 to 16.77±1.579 in knowledge of menstruation, 13.17±3.504 to 16.58±1.732 in attitude and 8.53±2.468 to 10.66 ±2.200 in practice of menstruation was observed.
- According to the table 4.7.2.2 it is observed that there are a significant value change is seen in knowledge, attitude and practice of FP as p=<0.001. The FP scores ranged from 4.61±2.806 to 6.38±1.958, from 4.44±2.896 to 6.42±1.951 and from 3.83±3.192 to 4.97±2.724 in knowledge, attitude and practice of FP respectively.
- It was noticed that after intervention the score of knowledge, attitude and practice regarding RTI/ STI ranged from 3.73±2.049 to 2.049±1.382, from 4.61±2.806 to 6.38±1.958 and from 4.61±2.806 to 6.38±1.958 respectively.
- Knowledge of RTI/ STI was increased from 6.01±4.297 to 11.30±2.878. Similarly, the attitude and practice of RR was also increased from 7.54±5.766 to 11.92± 3.030 and 6.63± 4.416 to 11.70±2.884 respectively.

Chapter-VII
Recommendation

CHAPTER- VII

RECOMMENDATIONS

7.1 This study further enhanced in to a hospital base study.

7.2 Reproductive health management can be provided to the women through organizing different health related camps.

7.3 Periodic free check -up camps can be organized by the NGO's working on SRH.

7.4 Adolescent girls also should be addressed by the NGO's to provide the knowledge regarding RH before the marriage.

7.5 The country health management team should provide the health facilities with information, education and communication (IEC) materials to adolescents for enhancement of the knowledge regarding RH.

7.6 NGO workers should motivate the women to adopt the healthy practices regarding RTI/ STI, FP and Reproductive Right of women.

7.7 Women have very less knowledge regarding RTI/ STI. Government and NGO's should take the initiatives to provide sufficient knowledge to the respondents.

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Abstract

Abstract

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Enrollment No:	**1484/15**
Title of the thesis:	**Effect of some health educational methods in enhancing the knowledge, attitude and practice about reproductive health of early married women of urban slum**
Degree to which it is submitted:	**Degree of Philosophy**
Department :	**Human Development and Family Studies**
School:	**Home science**
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University:	**Babasaheb Bhimrao Ambedkar University, Lucknow.**

Introduction

Child marriage is still widespread in India, which is home to a third of the world's child brides. About half of Indian women were married before they turned 18. (**UNICEF, 2016).** Whereas the incidence of the child marriage are declining nationally but the pace of change remains slow, in nearly all the states, especially in the age group 15-18 years. Uttar Pradesh is one of the states that have an incidence of child marriage higher than the national average. **(Census, 2011).** Child marriage is associated with adverse reproductive health outcomes, and the practice is still alarmingly common. Together with efforts to end child marriage, it is essential to provide adequate health care to already married adolescents. **(Maharjan *et al.*, 2019).** According to **WHO** "Reproductive health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and to its functions and processes. Reproductive health implies that people are able to have a satisfying and safe sex life and that they have the capability to reproduce and the freedom to decide if, when and how often to do so." Many researches showed

that the women and girls belonging to the age (15 to 24 years) are more prone to the reproductive health issues like RTI/ STI, non use of contraceptive, menstrual issues due to lack of knowledge.

Interventions focused on the promotion of the knowledge can promote the knowledge of the attitude as well as practice regarding reproductive health. (**Jillian Gedeon *et al.*, (2016), Thulaseedharan, (2018)**)

The whole study was carried out into three phases, these are broadly discussed as follows:

- To know the demographic and socio-economic status of the early married women who are living in the urban slums.
- To associate the socio demographic factors of child marriage in the slum of Lucknow city.
- To know the baseline knowledge, attitude and practice of the respondents regarding their reproductive health.
- To know the association between demographic and socio-economic status of the respondents and level of knowledge, attitude and practice of reproductive health.
- To access the media exposure of the respondents with different type of mass media and their relationship with the KAP score RH.
- To make the teaching materials and conduct the intervention among the study subjects.
- To evaluate the effectiveness of the intervention.

This study was carried out in urban slums of Lucknow. It is a cross sectional and Non experimental pre-test / post-test design study. 253 early married women belong to the age 15 – 24 years who were living in the slums of Lucknow were selected for the study. Random sampling and purposive sampling were applied at the different stages of the study.

Socioeconomic and demographic characteristics were assessed by interviewing the respondents. Knowledge, attitude and practice level of the respondents assessed by the questionnaire method using predesigned and pretested questionnaire. Thus, the pre designed and pre tested questionnaire were applied to collect the data for the study.

Different teaching methods like; lecture method, Individual method and participatory method was used in the intervention phase. For this the Flash cards to tell the different stories on women reproductive health, flip chart to provide the respondents individually as a part of individual method of teaching and card and Snake & Ladder games to conduct the participatory method of teaching was used. The feedback form having same questions regarding KAP of RH, was used to collect the data after giving the intervention to the respondents. Data was collected, coded and entered in to the SPSS version 20. Initially the association of socio-economic factors of the respondents with the KAP of reproductive health of the respondents was analyzed by applying Chi-Square test. The other appropriate statistical tools incorporated in the study included Mean $\pm$ SD, frequency tabulation, Chi- square test, correlation, multiple regression, and student 't' test. The purpose of this chapter is to summarize and interpret the findings of the present study, which has been described under the following heads.

Results:

1. **Demographic and socio-economic status of the early married women who are living in the urban slums**

- Out of 253 respondents 211 (83.4%) belonged to the age group 20-24 years and 42 (16.6%) belonged to age group 15-19 years. The mean age of the respondents was 21.50$\pm$2.096.

- It was found that more than half of the respondents were Hindu 169 (66.8%) and 84 (33.2%) of the respondents were Muslims.
- A good number sample of early married women who lives in the slum belong to OBC category 122 (48.2%). As many as 110 (43.4%) of the sample

- Nearly three fourth of the respondents 178 (70.4%) were arranged married and only 75 (29.6%) women were love married.

- Most of the respondents reported that they were current married 238 (94.1%), very few respondents that they were just married 9 (3.6%), only 4 (1.6%) subjects were separated/ divorcee. There were 4 (1.6%) respondents those gauna was not performed. Only 2 (.8%) respondents were those whom gauna was not performed.

- Most of the respondents were married 230 (90.9%) at the age between 15-17 years and only 23 (10.1%) respondents were married at the age of 12-14 years.
- Most of the respondents' husband 141 (55.73%) were also married at the age that is below legal age ranges in between 14-20 years and 112 (44.27%) were married at the legal age or after that ranges between 21- 28 years.
- Most of the respondents were living in nuclear family 158 (62.5%) and rest of them were living in joint family 95 (37.5%).
- Most of the respondents' 138 (54.5%) family size was up to 4 members. In 97 (38.3%) respondents' households 5-8 member are living. The family size of 18 (7.1%) respondents were 8 and above >8 members.
- Less than half of the respondents (45.1%) were not educated and among the educated respondents most of the respondents obtained secondary education (28.5%), only (19.4%) respondents obtained primary education and very few respondents got higher education (7.1%).
- A good number of the respondents 208 (82.2%) who were not employed and very less amount of the respondents was employed 43 (17.8%). Majority of the respondents were unskilled worker 32 (12.6%) and very few were skilled worker 13 (5.2%).
- More than half of the respondents 146 (57.7%) were living in house which was rented followed by the respondents 107 (42.3%) who were living in their own house.
- The majority of the households were semi-pacca 117 (46.2%) followed by pacca houses 89 (35.2%) and only 47 (18.6%) households were kuchha house in which the study subjects were living.
- Majority of the respondents were belonged to middle class 119 (47.0%), followed by lower middle class 82 (32.4), nearly one fifth of the respondents were belonging to the upper middle class 45 (17.8%). Very few respondents belonged to upper class and lower class 4 (1.6%) and 3 (1.2%) respectively.

- Most of the household of the respondents were electrified 219 (86.6%). More than half of the sample households 148 (58.5%) had sanitary latrine followed by the respondents had source of drinking water 141 (55.70). Among the 141 (55.7%) household had source of drinking water. It was found that the most of the respondents 183 (72.3%) were getting water from the public tap and only 26 (10.3%) respondents were using the hand pump to get the water.

2. To associate the socio demographic factors of child marriage in the slum of Lucknow city.

- There is a significant association between age of marriage and duration of marriage as the $\chi 2=75.100$, df =3 at the level of p=<.01. In our study it was found that there is a significant association between type of marriage and duration of marriage χ^2 =24.639, df=3, P=<.01.

- The analysis between the category of religion of respondents and type of marriage expresses a significant association between type of marriage and religion of the respondents (χ^2= 4.306, df=1, p=<.05).

3. To know the baseline knowledge, attitude and practice of the respondents regarding their reproductive health.

- It was found in our study that the most of the respondents scored in the low level of knowledge 91.30% (n=231) of RH.
- Maximum number of study subjects scored in low level of knowledge about RTI/ STI 94.5% (n=239). A good number of respondents scored in low knowledge (87.7%) of RR. More than half of the respondents had low knowledge of menstruation followed by FP (62.8%).

- Most of the respondents 244 (96.4%) knew that lower abdominal pain and lower back ache is the common symptom of menstruation, followed by the respondents 218 (86.2%) who knew that leg pain is the symptom of the menstruation, more than half of the respondents knew that the vomiting and vaginal discharge 172 (68%) and 163 (64.4%) respectively is the common symptoms of menstruation. Only 142 (56.1%) respondents knew about others symptoms like fever, constipation etc.

- More than one fourth of the respondents 72 (28.5%) knew that separate living during menstruation is myth, followed by the respondents 54 (21.3%) who knew that one should not do physical activity during menstruation, only 47 (18.6%) respondents knew that women should not cook food and they should not pick the pickles 23 (9.1%) during their menstruation, is a myth. Very few respondents 2 (.8%) knew that women should not do worship during their menstrual period is a myth.

- Majority of the respondents 189 (74.7%) knew that they should take regular bath during menstruation. Most of the respondents 220, (87%) knew that the sanitary pad is the best absorbent during menstruation. Out of 253 respondents most of the women 200 (79.1%) knew that absorbent should be changed 2- 4 times / day during menstruation. Only 41 (16.2 %) of the respondents didn't know that the absorbent should be thrown in the dustbin after using it.

- Majority of the respondents knew about condom 209 (82.6%). Almost half of the respondents knew about injection 212 (44.3%), More than half of the respondents knew about Tubectomy 152 (60.1%) and Vasectomy 151 (59.7%).

- Most of the respondent 153 (60.5%) knew about the ideal gap between two children. More than half of the respondents 146 (57.7%) knew that the FP is good for health, it is helpful in reducing infant mortality 133 (52.6%) and more than one fourth of the women knew that FP is helping to prevent STD 71 (28.1%).

- Majority of the respondents almost three fourth of the respondents 186 (73.5%) knew that contraceptives are preventing pregnancy, almost one third of the women 82 (32.4%) knew that contraceptives provide safer sex, more than one fourth of the study subject 71 (28.1%) knew that contraceptives are helpful in protecting against STD and only 67 (26.5%) respondents knew that contraceptives can prevent them from Cancer.

- It was estimated that the majority of the respondents didn't know about the causes of STI/ STD 221 (87.4%). Less than one fifth of the respondents 32 (12.6%) knew that STI/ STD may transmit through mother to baby, only 27 (10.7%) respondents knew that the unsafe sex may cause STI/ STD, few respondents 12 (4.7%) knew

that use of infected injection may cause STI/ STD, very few respondents 10 (4.0%) knew that the infected blood may cause STI/ STD.

- Most of the respondents didn't know about the symptoms of RTI/ STI 200 (79.4%). Most of the respondents knew about the symptom of RTI is itching 53 (20.6%), vaginal discharge 43 (17%) lower abdominal pain and burning mutilation 42 (16.6%) very less number of respondents about the ulcers sores in genital area 30 (11.9%).

- Most of the respondents 102 (40.3%) never heard that Condom is a precautionary measure of STI/ STD. Majority of the respondents 163 (64.4%) knew that if anyone is suffering from RTI/STI she will take medicine.

- Approximately one fifth of the respondents 47 (18.6%) knew that to have safe motherhood practice is the RR of a women. Less than one fifth of the respondents 40 (15.8%) knew that right to access of good quality of health care is RR followed by the women 38 (15%) who knew that right to education and access in order to make free and informed reproductive choices. Only 37 (14.6%) women knew that right to birth control. 34 (13.4%) women knew that right to receive education about STI and other aspects of sexuality is the RR of a women. Very less amount of the respondents knew about the right to legal and safe abortion is RR of a women and right to free from coerced sterilization and violence is the RR of a women 29 (11.5%) and 28 (11.1%) respectively.

- Approximately one fifth of the respondents 54 (21.3%) knew that abortion should be done by a certified provider. Less than one fifth of the respondents 49 (19.4%) knew that abortion is not a method of FP and only 47 (18.6%) women knew that abortion is legal in India.

- Only one fifth of the respondents 53 (20.9%) knew that abortion is legal in case of substantial risk that if the child were born it would suffer from such physical/ mental abnormalities as to be seriously handicapped, followed by the respondents 47 (18.6%) who knew that if continuation of the pregnancy causes injury to mental/ physical health of women, in that case the abortion is legal. Only 46 (18.2%) respondents knew that abortion is legal in case of contraceptive failure.

- A good number of respondents 183 (72.3%) knew about the financial support given by the Government to the women for promoting their reproductive health, followed by the respondents 180 (71.1%) who knew about the free RHS and the women 179 (70.8%) who knew about the RHS given to the women at low cost and 171 (67.6%) of the respondents knew about the free food supplements that is provided to the respondents to improve their RH.

- Most of the women knew that the decisions regarding RH should be taken mutually (husband and wife both) 207 (81.8%).

- A good number of respondents never heard about the helpline no. to save their RR 205 (81%) followed by didn't know about the helpline no. for saving their RR and only 21 (8.3%) of women knew about the helpline no. to protect their RR.

- 85% (n=215) of the respondents scored in the negative attitude regarding RH. More than one third study subjects 89.7 % (227) had negative attitude, only study 7.5% (n=19) subjects had positive attitude towards RTI/ STI and very few respondents were belonging to the neutral attitude 2.8% (n=7). Majority of the respondents had negative attitude 70.4% (n= 178), quite more than one fifth respondents 20.6% (n=52) had neutral attitude, only 9.1% (n=23) respondents had positive attitude towards use of reproductive right.

- It was reported that the majority of the respondents believed in the age of menarche is 12-14 years 224 (88.5%), followed by 9-11 years 107 (42.3%), and only 85 (33.6%) of the respondents believe in that the age of menarche was 15-16 years.

- Most of the respondents believed in that lower abdominal pain/ lower back pain 238 (94.1%) and leg pain 215 (85 %) are the normal symptom of menstruation followed by vomiting 170 (67.2%) and vaginal discharge 162 (64%) as a common symptom of menstruation. More than half of the respondents 139 (54.9%) believe that other symptoms like constipation, fever, head ache are the common symptom of menstruation.

- A good number of the respondents 234 (92.5%) believed that women should not worship during menstruation and they should not pick the pickle 189 (74.7%). More than half of the respondents believed that they should not cook the food 154 (60.9%) during their menstruation followed by the respondents who believed in that women

should live separately 141 (55.7%) and not to do any physical activity 134 (53%) during their menstruation.

- Majority of the respondents 174 (68.8%) believed that the regular bath should be taken during menstruation. More than three fourth of the respondents had the positive attitude towards the use of sanitary pad 220 (87%). Most of the respondents believe that absorbent should be used 2-4 times a day during menstruation period 192 (75.9%).

- Most of the respondents thought that after using the absorbent it should be buried in ground 199 (78.7%).

- Most of the respondents 184 (72.7%) believed that condom should be used by the couple to prevent pregnancy followed by oral pills 170 (67.2%) and IUD 157 (62.1%) more than half of the respondents 129 (51%) believe that couple should use tubectomy and 125 (49.4%) believe that couple should use vasectomy, and less than had faith in the use of natural and injection 98 (38.7%).
- Most of the women 157 (61.7%) had positive attitude that the ideal gap between two children should be three or more than three years. Most of the women agree with the statement that family planning is good for women health 146 (57.7%), as it reduces the infant mortality 134 (53%) and less than half of the respondents thought that it is helpful to prevent STD 74 (29.2%).

- Most of the respondents were agree with that contraceptive are preventing pregnancy 178 (70.4%). Less than half of the respondents believed that contraceptives should be used by the women to have safer sex 67 (26.5%). Only 55 (21.7%) respondents had strong belief that contraceptives are helpful for protecting against STD and preventing cancer it was 51 (20.2%).

- Most of the respondents agree with that STI may be transmitted through mother to baby 138 (54.5%), followed by unsafe sex 132 (52.2%) and infected blood and use of infected injection 126 (49.8%).

- Nearly one fifth of the total respondents were agree with that itching is the symptom of RTI 49 (19.4%), followed by vaginal discharge 45 (17.8%) is the symptom of RTI/ STI and lower abdominal pain 42 (16.6%) is the symptom of RTI. Only 40 (15.8%) of the respondents believe in that burning mutilation is the symptom of

RTI/ STI and 31 (12.3%) of the respondents believe in ulcers/ sores in genital area is the symptom of RTI/ STI.

- Very less number of the respondents 41 (16.2%) were agree with that by using of condom during sex the women might be prevented from STI/ STD. Majority of the respondents 153 (60.5%) were agreed with that if women were getting infected of the RTI/ STI, she should take medicine.

- Approximately one third of the respondents agreed with that women should use the right to have safe motherhood practices 89 (35.2%) followed by the women who were agreed that they should use right to access of good quality of health care 83 (32.8%).

- Near about one fourth of the respondents 63 (24.9 %) believed that abortion should be done by a certified provider followed by the respondents 59 (23.3%) who believed in that abortion is not a method of FP and the respondents who agreed that abortion is legal in India 50 (19.8%).

- More than one fourth of the respondents 73 (28.9%) agreed that the abortion is legal in case of substantial risk that if the child were born it would suffer from such physical/ mental abnormalities as to be seriously handicapped followed by the respondents who agreed that the abortion is legal if continuation of the pregnancy causes injury to mental/ physical health of women 68 (26.9%), and in case of contraceptive failure 61 (24.1%).

- Near about three fourth of the women believed in that women should use financial support 186 (73.5%) followed by the RHS at low cost 184 (72.7%) and free RHS 183 (72.3%). Less than three fourth of the respondents 178 (70.4%) believed that women should use free food supplement for improving their RH.
- Most of the women were aware of that the decisions regarding RH of women should be taken mutually (husband and wife both).

- 82.2 % (n=208) of the respondents scored in the poor practice range while 17% (n=43) followed fair practice. Only .8 % (n=2) fell in the category of good practice. Majority of the respondents belonged to fair menstrual practice 47.4% (n=120). Most of the respondents were belonging to the poor score of the family planning practice 70.4% (n=178).

- Majority of the respondents were doing poor practices of RTI/ STI 71.1% (n=180). Only 14.6% (n=37) women were doing fair practices of RTI/ STI. A good number of respondents scored poor practice of reproductive right 85.8% (n= 217). It was found that only 11.9% (n=30) of the respondents belonged to fair practices of reproductive right and few respondents were belonging to the good score of reproductive right 2.4% (n=6).

- More than three fourth of the respondents 199 (78.7%) experienced menarche at the age 12-14 years.

- Majority of the respondents 190 (75.1%) were facing lower abdominal pain/ lower back ache, Less than half of the respondents 117 (46.2%) were experiencing leg pain and more than 66 (26.1%) of the respondents were facing vaginal discharge. Approximately one fifth of the respondents 55 (21.7%) were experiencing vomiting followed by the respondents 48 (19%) who were facing other symptoms like; headache, constipation, fever etc. during their menstrual days.
- Most of the respondents don't do worship during menstruation 231 (91.3%), less than half of the respondents 93 (36.8%) don't pick the pickles followed by the respondents 75 (29.6%) who were living separately while menstruating. Only 46 (18.2%) of the respondents don't do cooking and no physical activity 23 (9.1%) during menstruation.
- More than half of the people take regular bath during menstruation 146 (57.7%) remaining of the respondents don't take bath regularly during menstruation. Less than half of the respondents were using the sanitary pad 107 (42.3%) during their menstruation time. More than three fourth 212 (83.8%) of the women were changing the absorbent 2-4 times per day during their menstruation. Nearly one fourth of the respondents 65 (25.7%) used to dispose their used absorbent in dustbin.

- Majority of the respondent were ever used temporary contraceptives. Among them less than half of the respondents ever used condom 79 (31.2%), followed by natural methods of contraceptive 29 (11.5%). Only 25 (9.9%) women used IUD followed by oral pills 24 (9.5%) and injection 17 (5.9%). Very small amount of the respondents 12 (4.7%) were using permanent methods of contraceptives.

- Most of the respondents 90 (35.6%) have kept the 3 years or more than 3 years gap between two children.

- It was found in our study that most of the respondents 129 (51%) who were experiencing benefits of FP as good for women health followed by the respondents 126 (49.8%) who were experiencing that FP is helping to reduce the infant mortality. Near about one third of the respondents were prevented from RTI/ STI 80 (31.6%) because they were using contraceptives to be prevented from RTI/ STI.

- It was noticed that most of the respondents were prevented from the unwanted pregnancy 149 (58.9%) and cancer 80 (31.6%). Less than one third of the respondents 79 (31.2%) were protected against STI and enjoyed safer sex 79 (31.2%).

- Approximately one third of the respondents 85 (33.6%) were taking precaution to be safe from Infected blood followed by the respondents who were taking precaution to be safe from the use of infected injection, unsafe sex and mother to baby respectively 84 (33.2%), 81 (32%) and 80 (31.6%).

- Majority of the respondents faced Itching 114 (45.1%), followed by lower abdominal pain 88 (34.8%). Near about one third of the respondents 86 (34%) experienced vaginal discharge and approx. one fifth of the respondents faced burning mutilation it was 58 (22.9%). Only 31(12.3%) of the respondents experienced ulcers/ sores in genital area.

- It was found that most of the respondents have taken medicine 113 (44.7%). Only 45 (17.8%) used condom regularly as precautionary measurement to be safe from STI/ STD.

- More than half of the respondents were using right to access of good quality of health care 132 (52.2%) followed by right to have safe motherhood practices 129 (51%). It was noted that less than half of the respondents were getting the education and access in order to make free and informed reproductive choices regularly 120 (47.4%) followed by the respondents who were receiving the education about STI and other aspects of sexuality 96 (37.9%).

- and right to birth control 94 (37.2%), only 66 (26.1%) respondents reported that they didn’t face coerced sterilization and violence. Only 44 (17.4%) respondents used the right to legal and safe abortion.

- Only 29 (11.5%) of the respondents reported that their abortion was done by a certified provider and their abortion was not adopted as a family planning method. Abortion is legal in India 26 (10.3%).

- Only 28 (11.1%) respondents reported that she may abort foetus in case of Substantial risk that if the child were born it would suffer from such physical/ mental abnormalities as to be seriously handicapped followed by the respondents who reported that they may abort baby If continuation of the pregnancy causes injury to mental/ physical health of women and Contraceptive failure it was 25 (9.9%).

- It was reported that more than half of the respondents 133 (52.6%) were using the financial support provided by the government to improve the RH of women. Less than half of the respondents 109 (43.1%) achieved RHS at low cost followed by 106 (41.6%) respondents who used free food supplements and 105 (41.5%) respondents used free health services.

- Most of the respondents used to take decision Mutually 160 (63.2%).
- Pearson's coefficient correlation between knowledge scores of RH and attitude score of RH was found to be strong and highly significant positive linear correlation ($r=0.832$, $p<.01$) along with a weak and significant positive linear correlation with practice score ($r= 0.254$, $p<.01$).
- When attitude score of RH was correlated with practice score of RH, a weak, positive and significant linear correlation was observed with the value ($r=0.257$) at $p<.01$significance. There was a positive and significant linear correlation between attitude score of RH and practice score of RH.

4. **To know the association between demographic and socio-economic status of the respondents and level of knowledge, attitude and practice of reproductive health.**

    - There is a statistically significant relationship with practice category ($\chi^2 =9.180$, df=4, P=.05).

    - There is a significant association with religion and knowledge scores and practice scores of women RH as the Pearson's chi square analysis shown the

relationship between religion and knowledge scores and attitude scores of women RH (χ^2 =5.180, df=2, P=<.10 and χ^2 =4.834, df=2, P=<.10) respectively.

- Education also revealed a statistically relationship with Knowledge category (χ^2 =32.539, df=6, P=<.01) and attitude category (χ^2 =32.539, df=6, P=<.01)., whereas education is not significantly associated with practice category.
- In our study it is observed that there is a significant association of marital status with the knowledge category (χ^2 =72.67, df=6, p=<.01) and attitude category (χ^2 =59.817, df=6, p=<.01) of reproductive health.
- The analysis of the relationship between marriage age of respondents' husband and KAP score of RH of respondents using Pearson's Chi square analysis revealed a statistically significant relationship with attitude category (χ^2 =5.015, df=2, P=<.10).
- The attitude score of the respondents were associated with the size of the family (χ^2 9.410, df=4, .052).
- The analysis between the category of Socioeconomic class and KAP scores depicted a significant association between practice (χ^2 =47.552, df=8) at the level of p=<.01.

5. **To access the media exposure of the respondents with different type of media and their association with the level of knowledge, attitude and practice of reproductive health.**

- Most of the respondents had the internet and/ mobile availability 186 (73.5%) at their home followed by the respondents who had availability of TV 138 (54.5%) at their house. Only 21 (8.3%) women had audio aids and 16 (6.3%) women had availability of print media at their home. Only 10 (4.0 %) women had the availability of other media.
- A good amount of the respondents used to prefer other sources (NGO worker) 177 (70 %) to get the information regarding RH. Less than half of the respondents preferred mobile/ internet 43 (17%) to get the information regarding RH. Only 5

(2%) of the respondent were preferring print media followed by audio aids (.8%) to get the information about RH.

- Majority of the respondents reported that they were getting information by NGO workers 92 (36.4%) to get the information about RH followed by the respondents who were using mobile/ internet 88 (34.8%) to get the information about RH. Only 52 (20.6%) respondents were getting the information regarding RH through TV. A smaller number of respondents reported that they used to get the information of RH through audio aids 11 (4.3%) and print media 11 (4.3%).

- Most of the women (45.5%) had given first preference to the NGO worker for getting the information about RH. It was followed by doctors and mothers62.8% and 34.8% respectively. Very low percent of respondents had given the first preference to films and video (4.3%) followed by books and magazine (2.0%).
- There is a relationship between the knowledge score of RH and time spent with print media (p=<.01), mobile/ internet (p=<.01) and others (NGO) (p=<.01).

- It was found that there is relationship between the time spend with print media, Audios, mobile/ internet and others as the p= <.01.

- Time spend with print media and other mass media were significantly related with the practice score of RH as the p value is <.05 and equal =.05.

7. To evaluate the effectiveness of the intervention.

- After intervention the scores ranged from 25.41$\pm$7.670 (knowledge) to 42.51$\pm$5.009 was observed. Similarly, mean score of the attitude of RH was also increased from 30.37 $\pm$ 9.251 to 43.88 $\pm$ 4.816 at p= p=<0.001 and practice score was increased from 24.96 $\pm$ 8.610 to 34.04 $\pm$ 3.648 at p=<0.001.
- After intervention the scores ranged from 11.17$\pm$2.692 to 16.77$\pm$1.579 in knowledge of menstruation, 13.17$\pm$3.504 to 16.58$\pm$1.732 in attitude and 8.53$\pm$2.468 to 10.66 $\pm$2.200 in practice of menstruation was observed.
- According to the table 4.7.2.2 it is observed that there is a significant value change is seen in knowledge, attitude and practice of FP as p=<0.001. The FP scores ranged from 4.61$\pm$2.806 to 6.38$\pm$1.958, from 4.44$\pm$2.896 to 6.42$\pm$1.951

and from 3.83±3.192 to 4.97±2.724 in knowledge, attitude and practice of FP respectively.

- It was noticed that after intervention the score of knowledge, attitude and practice regarding RTI/ STI ranged from 3.73±2.049 to 2.049±1.382, from 4.61±2.806 to 6.38±1.958 and from 4.61±2.806 to 6.38±1.958 respectively. A significant value change is seen (p=<0.001) in knowledge, attitude and practice of RTI/ STI.

- Knowledge of RTI/ STI was increased from 6.01±4.297 to 11.30±2.878. Similarly, the attitude and practice of RR was also increased from 7.54±5.766 to 11.92± 3.030 and 6.63± 4.416 to 11.70±2.884 respectively.

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Contact no: 6307889904

Career Objectives:

- To be a member of that concern where there is demand of creative and innovative mind, dedication and honesty and to achieve the heights of success with hard work.
- To find a challenging position to meet my competencies, capabilities, skills, education and experience.

Educational qualifications:

- Ph. D: Pursuing
- M. A in Home science (Specialization in extension education)
- B. A in Home Science, Sociology and English, Netaji Subhash Chandra Bose Girls Degree College, Lucknow.
- Intermediate (10+2): Home Science, Hindi, English, Civics and Sociology, UP board, 2006.
- High School (10): Home Science, Hindi, English, Science, Social Science and Arts, UP Board, 2004.

Qualification	Board/ University	Subject	% of marks/ Grade	Year	Division
M.A	University of Lucknow	Home science	71.20%	2012	First
B. A	NSCBGDC/ University of Lucknow	Home Science, Sociology and English	60.77 %	2009	First
Intermediate	UP board	Home Science, Hindi, English, Civics and Sociology	68.20%	2006	First
High school	UP board	Home Science, Hindi, English,	66 %	2004	First

		Science, Social Science and Arts			
Others	EFLU, Lucknow	Advance diploma in French	A+	2012	First

Other activities:

- Participated in the Quiz On Myth & Faith In Covid -19 Situation, organized by N.S.S., Maharana Pratap P.G. Collage Jungledhusar held on 6/3/2020.
- Participated in COVID-19 Pandemic General Awareness Quiz, organized by dept. of RISE, Chandigarh group of College on 12.4.2020.
- Participated in Swa-rachit Kavita Lekhan Competition on the topic "Corona yodhao ke roop me mahilaon ki Bhoomika", organised by Gender Champions Committee, Babasaheb Bhimrao Ambedkar University, Lucknow on 15 June 2020.
- Participated in online marketing quiz organized by AMS School of Informatics, organized by AMS SCHOOL OF INFORMATICS approved by AICTE, Affiliated to Osmania University on 3/5/2020.
- Participated in ladies corner during National Sugar fest-2012 held at the Indian Institute of Sugarcane Research, Lucknow.
- Presented a dance program at annual day program organized by NSCBGDC, Lucknow.
- Won 1st prize in arts competition, organized by NSCBGDC, Lucknow.
- Won 1st prize in dance competition, organized by NSCBGDC, Lucknow.
- Won 3rd prize in Swarachit Kavita organized by NSCBGDC, Lucknow.
- Won 1st prize in Filmy dance competition organized by Lucknow Mahotsav.
- Participated in march past program held on 26 January 2005, UP.
- Participated in Mumkin Hai Abhiyan orgased to stop violence against women.
- Participated in a run to eliminateviolence against women organized by the campaign "We Can".
- Participated in Ramcharitmanas Pariksha organized by bhai ji shri hanuman prasad Poddar smriti samaroh samiti, Lucknow.
- Won 1st prize in Sanskrit play, organized by Bhartiya Shrividya Parishad UP.

Language Proficiency: Hindi, English and French

Awards:

- UGC NET/ JRF- July 2016 qualified
- UGC NET- June 2013 qualified

Teaching experience:

- One year and six months, KMC at Urdu Arabi Farsi University, Lucknow as a guest faculty.

Chapters in book:

- Tripathi P. and Singh N. 2021. Role of ICT to Promote Health Literacy among Women, Research Trends in Home Science and Extension, *AkiNik Publications,* New Delhi, Volume -6, page no. 01-11.
- Tripathi P. and Singh N. 2021. Sexual and reproductive health problems among young married women, Recent advances in Scientific Research, LAP LAMBERT Academic Publishing, ISBN: 978-620-3-92493-0.
- Tripathi P. and Singh N. 2021. Role of Women in Food Security, Food and Nutritional Security: An Indian Perspective, *AkiNik Publications,* New Delhi, Volume – 2, page no. 57-69, ISBN: 978-93-90846-15-3.

Research paper published:

- Tripathi P & Singh N. 2021, Effectiveness Of Teaching Methods In Enhancing The Knowledge Regarding Reproductive Health Of Early Married Women Of Slum, International Journal Of Scientific Research, Vol. 10, (08).
- Tripathi P & Singh N. 2021, An Association between Socio - Economic Status and KAP of Reproductive Health of the Early Married Women, Annals of R.S.C.B., ISSN: 1583-6258, Vol. 25, Issue 1, Pages. 5473 – 5479, 2021.
- Tripathi P. & Singh N. 2020. Knowledge and Attitude towards RTI/STI among Early Married Women Living in Urban Slums of Lucknow, Uttar Pradesh. Journal of Critical Reviews. VOL. 7, ISSUE 04, 2020. ISSN- 2394-5125.
- Tripathi P. & Singh N. 2020. Knowledge, attitude and practices of reproductive health among early married women of urban slums of Lucknow, Uttar Pradesh. International Journal of Psychosocial Rehabilitation, Vol. 24, Issue 03, 2020 ISSN: 1475-7192.
- Tripathi P. & Singh N. 2019, A STUDY ON MENSTRUAL SYMPTOMS AND RELATED PERSONAL HYGIENE PRACTICES AMONG WOMEN, Journal of Emerging Technology and Innovative Research, Volume 6, Issue 5, ISSN-2349-5162.
- Tripathi P. and Singh N., 2017, Promoting Rural Entrepreneurship Through Skill Development for Decent Livelihood: A Review, IJCRR. Vol 9. Issue 15. Page no 21- 25, ISSN: 0975-5241.

Professional membership:

- Life membership of Home Science association of India (HSAI-2019-UP-275-LF).

Attended seminar/ conference/ webinar/workshop:

1. Participated in one day webinar on "Home Science for Being Self Reliant: Challenges and Opportunities" Organized by Department of Home Science, Isabella Thoburn College, Lucknow on 23 May 2020.
2. Attended a national FDP on "Technology Enabled Teaching and Remote Learning" organized by Department of Business Management on 30 May 2020.
3. Participated in the webinar on the topic "How to stay happy in uncertainty" on 4 June 2020 organized by Internal Quality Assurance Cell, Delhi School of professional studies and Research, New Delhi.
4. Attended a seven days National workshop on Research methodology from 9 June 2020 to 15 June 2020 organized by NAS PG College Meerut, UP in association with IGNOU Regional Centre, Noida.
5. Attended a national webinar on Apparel and Fashion World: Post pandemic Perspectives, organized by Department of textiles and apparel designing (TAD), Ethelind College of Home Science, Sam Higginbottom University of Agriculture, Technology and Sciences on 27 July 2020.
6. Participated in E-Learning nutritional education programme on Anemia, Mother Health and Nutrition, Non-Communicable Disease, Infant and Young Child Feeding, Wash, Immunization, Basic Nutrition, Food Fortification, Physical Activity (Yoga) under the POSHAN Abhiyaan conduct by ministry of women and child development and ICMR-national institute of nutrition.
7. Attended a one hour webinar on recovery of Covid-19 patients: The impact of nutritional intervention on health outcomes.
8. Attended a national symposium on "Empowering Girl Child For Better Tomorrow", held on 24 Jan, 2020, organized by the department of HD&FS, BBAU, Lucknow.
9. Attended an Integrated workshop on "Publication ethics and patenting" held on 10 February 2020 organized by Department of Energy and Environment, School of Environmental Sciences, BBAU, Lucknow.
10. Attended seven days national workshop on 'Research Methodology' on 8 -14 March 2019, organized by Department of Rural Management, School of Management Studies, BBAU, Lucknow.
11. Attended workshop cum awareness campaign on "Consumption of Foods high in fat, salt and sugar (HFSS) for young and adolescents" held on 31 March 2017, organized by BBAU, Lucknow.
12. Attended national workshop on "Bakery Technology and Product Preparation" held on 9th April 2017, organized by the Department of Food Science & Technology, BBAU, Lucknow.
13. Attended National seminar on the "professional ethics and standard for the evaluation of the community" held on 20 & 21 February 2016, organized by Gautam Buddha Degree College, Lucknow.
14. Participated at the Pre- XL Indian Social Science Congress symposium, organized by Indian Academy of Social Sciences in association with King

George's Medical University and State Takmeel ut- Tib College & Hospital, held on September 24, 2016 at Lucknow.

15. Participated A national Workshop on "Life cycle approaches for better nutrition" on the occasion of "National Nutrition Week" from 1- 7 September, 2016, organized by BBAU, Lucknow.

16. Attended a seven days national workshop on Choice Based Credit System & Examination Reforms", held on 26- 4 March 2015, organized by National Post Graduate College, Lucknow.

17. Attended workshop of electronic media on 3- 5 February 2012, organized by the Department of Hindi and Modern Indian languages.

18. Attended The Home Science Association of India Lucknow Chapter, 29th biennial National Conference on Innovative Horizons & Emerging Challenges for Home Scientists" held on 4-6 November 2011, organized by School for Home Sciences, BBAU, Lucknow.

Presented paper in seminars/ conferences

1. Presented paper on "Role of social media during pandemic of Covis-19" in a two days national webinar on the topic corona calamity: its social and economic consequences on India, held on 20- 21 April 2020, jointly organized by Department of Commerce, Department of Economics and Department of Sociology, DAV PG College, Varanasi.
2. Presented a paper on "A study on Menstrual Symptoms & Related to Personal Hygiene Practices among Women" held on 12 February 2019, organized by Maharaja Bijli Pasi Govt. P. G. College, Ashiana, Lucknow.
3. Presented a paper on "Scope of government Programme for betterment of Reproductive Health and Child Health", at National food conference on Agriculture and Technology: Innovation for Nutritional Security, held on 9-10 February 2018 organized by Allahabad University.
4. Presented a poster on "Wellness Tourism: an effective approach to wellness and preventive care" at National Conference on Tourists and green Spaces: Healthier Life style approaches from nature Wellness Tourism, held on 15-16 July 2017, organized by BBAU, Lucknow.
5. Presented paper on Impact of Sexual coercion on reproductive health of early married women at national seminar on Youth empowerment: Issues, challenges, & concerns held on 22- 23 February 2017, organized by KMC Urdu Arbi Farsi university.
6. Presented a poster presentation on topic "A need for Maternal Health Literacy to Promote Maternal and Neonatal Health" at National conference on Science and technology and Innovations for sustainable development, held on 3&4 March 2017.
7. Presented paper on the topic "Print media as an effective media to promote reproductive health literacy among women" at national seminar on Feminist methodology in social sciences, held on 8 &9 March 2016, organized by KMC Urdu Arbi Farsi University, Lucknow.

8. Presented poster in the International Congress on Post – Harvest technologies of Agricultural produce for Sustainable Food and nutritional Security on 10-12 November 2016, held at Integral University, Lucknow.
9. Presented poster paper in the National Conference on Nutrition and Health: issues and challenges in Global Perspectives" held on 27 & 28 March, 2015, organized by Department of Home Science at Isabell Thoburn College, Lucknow.
10. Presented oral presentation on "Role of Electronic Media for Changing the Knowledge, Attitude and Practice of Girls", at National Conference on Technological Empowerment of Women at the Grass Roots, organized by Department of Home Science Extension education & Communication Management College of Home Science, C. S. Azad University of Agriculture & Technology, Kanpur.
11. Presented paper on "A study on electronic media as a channel for health communication among the girls" at National seminar on Empowerment of Youth: Issues and Challenges on 8- 9 February 2014, hosted by Department of Home Science, NSCB Govt Girls P. G. College, Aliganj, Lucknow.

Personal Information:

Date of birth: 06 / 12/ 1989
Gender: Female
Marital Status: Married
Father's name: Mr. Prem Prakash Tripathi
Mother's name: Mrs. Gayatri Tripathi
Hobbies: Arts and craft activities.
Nationality: Indian
Corresponding address: Priyanka Tripathi c/o Prem Prakash Tripathi, ES1/ 108, Sector A Sitapur road Yojna, Jankipuram, Lucknow, UP, 226021.

Reference:

Dr. Neetu Singh
Associate professor
Department of HD&FS, School for Home Sciences, BBAU, Lucknow.
Mob. No. 09336458933
Email id: bhu_ns@yahoo.co.in

Declaration:

I, Priyanka Tripathi hereby declare that the above information given by me is true to the best of my knowledge.

(Priyanka Tripathi)

ANNEXURE- I

Questionnaire for preliminary phase

Effect of some health educational methods in enhancing the knowledge, attitude and practice about reproductive health of early married women of urban slum

Respondent's code	Name of the ward	Name of the Slum

Section A: Eligibility profile

1. **Sex:** (M/F)
2. **Age (In completed years)** ☐☐
3. **Marital status:** (Early married (Married before 18 years)/ Late married (married after 18 years)
4. **Living area:** Slum area/ Non slum area
5. **Duration of living in slum:** less than 6 months/ 6 six months or more than six months

Section B: General Information

a) Individual profile

1. **Caste**: (Gen/ OBC/ SC/ ST)
2. **Religion**: Hindu/ Muslim/ Sikh/ Christian/ Others

b) Socio economical profile

1. **Marriage profile**:

Sr. No.	Particular	In (completed) year	Duration of married life
I	Respondent's Marriage age		
II	Husband age at the time of marriage		

2. **Marital status**: Married /Just married/ Gauna not performed/Divorcee/ Separated
3. **Type of marriage**: Love marriage/ Arrange marriage
4. **Family profile:**

Sr. No	Name	Age	Sex	Education	Relation	Occupation	Monthly income
I							
ii							
iii							
iv							
V							

5. **Type of family**: (Joint/Nuclear)

6. **Size of family:** ☐☐

Socio- Economic Status:

7. **Education:** No education/ Primary/ Secondary/ Higher
8. **Occupational status:** Employed / Not employed
9. If working then specify……
10. **Ownership of house:** Rented/ Own
11. **Type of House:** Kacha/ Pucca/ Semi pucca
12. **Basic amenities:** Electricity/ Availablity of laterine/Source of drinking water/Public tap/ hand pump).
13. **Total family income:** Income from salary …….Income from other sources ……..

14. **Total**…….

15. Per capita income……

Section C; Specific information

a) KAP information regarding reproductive health

Sr. no	Health indicator/ Particulars	Knowledge			Attitude			Practice		
		Never heard	If heard do you know		Not Agree	Neutral	Agree	Never	Seldom	Always
			Yes	No						
Menstruation										
16	**Age of menarche**	**Do you know the age of menarche?**			**Do you believe in the age of menarche is?**			**At which age you faced menarche?**		
	I. 09-11 II. 12-14 III. >15									
17	**Menstrual symptoms**	**What are the menstrual Symptoms?**			**Do you believe in these menstrual symptoms?**			**Do you face any of these menstrual symptoms while menstruating?**		
	I. Lower abdominal pain/ Lower back ache II. Vaginal discharge III. Vomiting IV. Leg pain V. Others……..									
18	**Myths of menstruation**	**Do you know that these are the myth that are followed by a woman during menstruation?**			**Do you think that one should follow these myths during menstruation?**			**Do you practice any of these during menstruation?**		
	I. Separate living II. Don't pick the pickles III. Don't do the worship IV. No cooking									

	V. No physical activity										
19	**Hygienic practices during menstruation**	**Do you know about these hygienic practices are good?**			**Do you believe that these practices are good for reproductive health of women?**			**Do you follow these practices during your menstrual days?**			
	I. Regular bath II. Use of Sanitary pad III. The absorbent should be used for 2-4 times a day IV. After using the absorbent, it should be disposed in the dustbin.										
Family Planning											
20	**Type of Contraceptives**	**Do you know any of these family planning methods?**			**Do you think that any of these family planning methods should be used by the couples?**			**Do you ever used any of these family planning methods?**			
	I. Oral pills II. Condom III. IUD (Cu T) IV. Vasectomy V. Tubectomy VI. Natural VII. Others (……)										
21	**Ideal gap between two children**	**What is the ideal gap between two children?**			**Do you believe that the ideal gap between two children should be?**			**Year gap between your children or will you keep gap between your two children?**			
	I. < 3 years II. 3 years or > 3 years										
22	**Benefits of family planning**	**Do you know the benefits of family planning?**			**Do you believe in these benefits of family planning?**			**Are you experiencing any benefit of family planning in your life?**			
	I. Good for women's health II. Reducing infant mortality III. Helping to prevent STD										
23	**Benefits of contraceptives**	**Are contraceptives an**			**Do you believe in that**			**Do you use contraceptives for the**			

		effective way/method of?			**contraceptives are an effective method of ?**			**following purpose?**		
	I. Safer sex II. Protecting against STD III. Preventing pregnancy IV. Preventing cancer									
Reproductive Tract Infection/ Sexual Transmitted Infection										
24	**Causes of STI**	**Do you know the causes of STI?**			**Do you think that these may cause STI?**			**Do you take any precaution to be safe from these risk factors?**		
	I. Unsafe sex II. Infected blood III. Use of infected injection IV. Infected mother to baby									
25	**Sign and symptoms of STI**	**What are the signs or symptoms of STI when a woman gets infected?**			**Do you believe that these are the signs or symptoms of STI when a woman gets infected?**			**Did you ever face any sign and symptom of STI?**		
	I. Vaginal discharge II. Lower abdominal pain III. Ulcers/ sores in genital area IV. Burning mutilation V. Itching									
26	**Precaution**	**Which following method can reduce the risk of infection?**			**Do you think that any of these methods may reduce the risk of infection?**			**Which method will you use to reduce the risk of infection?**		
	I. Use condom									
27	**Treatment**	**Are these symptoms medically treatable?**			**Do you think that one should take treatment while experiencing above symptoms?**			**Have you taken treatment or will take medical treatment while infected?**		
	Medicine									
Reproductive right										
28	**Reproductive rights**	**Do you know these reproductive rights?**			**Do you think that the women should use these reproductive rights for their better**			**Will you follow these reproductive rights?**		

					reproductive health ?					
	I. Right to have safe motherhood practices II. Right to legal and safe abortion III. Right to free from coerced sterilization and violence IV. Right to access of good quality of health care V. Right to education and access in order to make free and informed reproductive choices VI. Right to receive education about sexually transmitted infection and other aspects of sexuality									
29	**Safe abortion**	**Do you know these perceptions of abortion?**			**Do you believe in these perceptions of abortion?**			**Did you ever follow/ will follow?**		
	I. Abortion is legal in India. II. Abortion should be done by a certified provider. III. Abortion is not a method of family planning									
30	**Terms and conditions of legal and safe abortion**	**Do you know these terms and conditions of legal and safe abortion?**			**Do you believe in these terms and conditions of legal and safe abortion?**			**Do you follow/ will follow these terms and conditions of abortion?**		
	I. If continuation of the pregnancy causes injury to mental/ physical health of women. II. Contraceptive failure III. Substantial risk that, if the									

	child were born, it would suffer from such physical/ mental abnormalities as to be seriously handicapped									
31	**Govt. services provided to women**	**Do you know these Govt. services?**			**Do you think that the women should use these Govt. services for the betterment of their reproductive health of?**			**Do you avail any of these Govt. services that is beneficial for your reproductive health?**		
	I. Financial support **II. Free health services** **III. Free food supplement** **IV. Health services at low cost**									
32	**Decision making**	**The decisions regarding reproductive health of a woman should be taken by?**			**What do you think that the decisions regarding reproductive health of a woman should be taken by?**			**Who take the decisions regarding your reproductive health?**		
	i. Mutual (Husband and wife)									
33	**Helpline**	**Do you know any helpline no to for your RR?**			**Do you think that women should use helpline no to protect improve RR?**			**Did you ever used any helpline no for RR?**		
	I. **Helpline no**									

b) <u>Media exposure</u>

34. Which type of media is available at your home?

Sr. No	**Type of media**	**Availability at home**		**Time spend/ week**	**Which media do you most prefer to have information?**
		Yes	**No**		
I	Print media (Newspaper, folder, pamphlet, others)				
II	T.V				
III	Radio				

IV	Mobile/ Internet				
V	Others				

35. Which type of media you used to get information about reproductive health?

Sr. no.	**Media used to get information about reproductive health**	**Yes**	**No**
I	Print media (Newspaper/ Magazine/ Booklet/ Bulletin/ folder, pamphlet, others)		
II	T.V		
III	Radio		
IV	Mobile/ Internet		
V	NGO workers		

36. What is the most important source of information for you on the topic of reproductive Health?

Sr. no.	**Source of information**	**1st Most important**	**2nd Most important**	**3rd Most important**
I	NGO worker			
II	Mother			
III	Relatives / friends			
IV	Doctors / health worker			
V	Books/ magazines			
VI	Films/Videos			
VII	Others, specify…….			

ANNEXURE-II

Feedback form for Post intervention

Effect of Some Health Educational Methods in Enhancing the Knowledge, Attitude and Practice about Reproductive Health of Early married Women of Urban Slum

Respondent' code | | | |

Name of the ward

Name of the Slum

Knowledge, Attitude and Practice of the respondents:

Sr. no	Health indicator/ Particulars	Knowledge			Attitude			Practice		
		Never heard	If heard do you know		Not Agree	Neutral	Agree	Never	Seldom	Always
			Yes	No						
Menstruation										
1	**Age of menarche**	**Do you know the age of menarche?**			**Do you believe in the age of menarche is?**			**At which age you faced menarche?**		
	IV. 09-11 V. 12-14 VI. >15									
2	**Menstrual symptoms**	**What are the menstrual Symptoms?**			**Do you believe in these menstrual symptoms?**			**Do you face any of these menstrual symptoms while menstruating?**		
	VI. Lower abdominal pain/ Lower back ache VII. Vaginal discharge VIII. Vomiting IX. Leg pain									

	Others……..										
3	**Myths of menstruation**	**Do you know that these are the myth that are followed by a woman during menstruation?**			**Do you think that one should follow these myths during menstruation?**			**Do you practice any of these during menstruation?**			
	VI. Separate living VII. Don't pick the pickles VIII. Don't do the worship IX. No cooking X. No physical activity										
4	**Hygienic practices during menstruation**	**Do you know about these hygienic practices are good?**			**Do you believe that these practices are good for reproductive health of women?**			**Do you follow these practices during your menstrual days?**			
	V. Regular bath VI. Use of Sanitary pad VII. The absorbent should be used for 2-4 times a day VIII. After using the absorbent, it should be disposed in the dustbin.										
Family Planning											
5	**Type of Contraceptives**	**Do you know any of these family planning methods?**			**Do you think that any of these family planning methods should be used by the couples?**			**Do you ever used any of these family planning methods?**			
	VIII. Oral pills IX. Condom X. IUD (Cu T) XI. Vasectomy XII. Tubectomy XIII. Natural XIV. Others (……)										
6	**Ideal gap between two children**	**What is the ideal gap**			**Do you believe that the ideal gap**			**Year gap between your children or**			

		between two children?			**between two children should be?**			**will you keep gap between your two children?**		
	III. < 3 years IV. 3 years or > 3 years									
7	**Benefits of family planning**	**Do you know the benefits of family planning?**			**Do you believe in these benefits of family planning?**			**Are you experiencing any benefit of family planning in your life?**		
	IV. Good for women's health V. Reducing infant mortality VI. Helping to prevent STD									
8	**Benefits of contraceptives**	**Are contraceptives an effective way/method of?**			**Do you believe in that contraceptives are an effective method of ?**			**Do you use contraceptives for the following purpose?**		
	V. Safer sex VI. Protecting against STD VII. Preventing pregnancy VIII. Preventing cancer									
Reproductive Tract Infection/ Sexual Transmitted Infection										
9	**Causes of STI**	**Do you know the causes of STI?**			**Do you think that these may cause STI?**			**Do you take any precaution to be safe from these risk factors?**		
	V. Unsafe sex VI. Infected blood VII. Use of infected injection VIII. Infected mother to baby									
10	**Sign and symptoms of STI**	**What are the signs or symptoms of STI when a woman gets infected?**			**Do you believe that these are the signs or symptoms of STI when a woman gets infected?**			**Did you ever face any sign and symptom of STI?**		
	VI. Vaginal discharge VII. Lower abdominal pain VIII. Ulcers/ sores in genital area IX. Burning mutilation X. Itching									
11	**Precaution**	**Which following method can reduce the risk of**			**Do you think that any of these methods may reduce the risk of**			**Which method will you use to reduce the risk of infection?**		

		infection?			**infection?**						
	II. Use condom										
12	**Treatment**	**Are these symptoms medically treatable?**			**Do you think that one should take treatment while experiencing above symptoms?**			**Have you taken treatment or will take medical treatment while infected?**			
	Medicine										
Reproductive right											
13	**Reproductive rights**	**Do you know these reproductive rights?**			**Do you think that the women should use these reproductive rights for their better reproductive health ?**			**Will you follow these reproductive rights?**			
	I. Right to have safe motherhood practices II. Right to legal and safe abortion III. Right to free from coerced sterilization and violence IV. Right to access of good quality of health care V. Right to education and access in order to make free and informed reproductive choices VI. Right to receive education about sexually transmitted infection and other aspects of sexuality										
14	**Safe abortion**	**Do you know these perceptions of abortion?**			**Do you believe in these perceptions of abortion?**			**Did you ever follow/ will follow?**			
	IV. Abortion is legal in India. V. Abortion should be done by a certified provider.										

	VI. Abortion is not a method of family planning									
15	**Terms and conditions of legal and safe abortion**	**Do you know these terms and conditions of legal and safe abortion?**			**Do you believe in these terms and conditions of legal and safe abortion?**			**Do you follow/ will follow these terms and conditions of abortion?**		
	IV. If continuation of the pregnancy causes injury to mental/ physical health of women. V. Contraceptive failure VI. Substantial risk that, if the child were born, it would suffer from such physical/ mental abnormalities as to be seriously handicapped									
16	**Govt. services provided to women**	**Do you know these Govt. services?**			**Do you think that the women should use these Govt. services for the betterment of their reproductive health of?**			**Do you avail any of these Govt. services that is beneficial for your reproductive health?**		
	V. Financial support **VI. Free health services** **VII. Free food supplement** **VIII. Health services at low cost**									
17	**Decision making**	**The decisions regarding reproductive health of a woman should be taken by?**			**What do you think that the decisions regarding RH of a woman should be taken by?**			**Who take the decisions regarding your reproductive health?**		
	ii. Mutual (Husband and wife)									
18	**Helpline**	**Do you know any helpline no to for your RR?**			**Do you think that women should use helpline no to protect improve RR?**			**Did you ever used any helpline no for RR?**		
	I. Helpline no									

Annexure – III

Distribution of KAP score

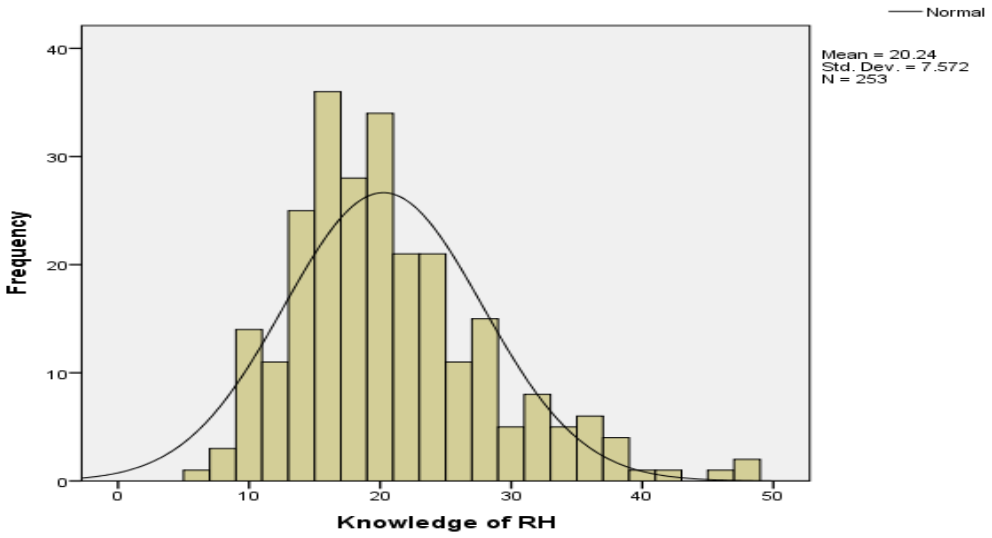

Figure 1: Distribution of knowledge score

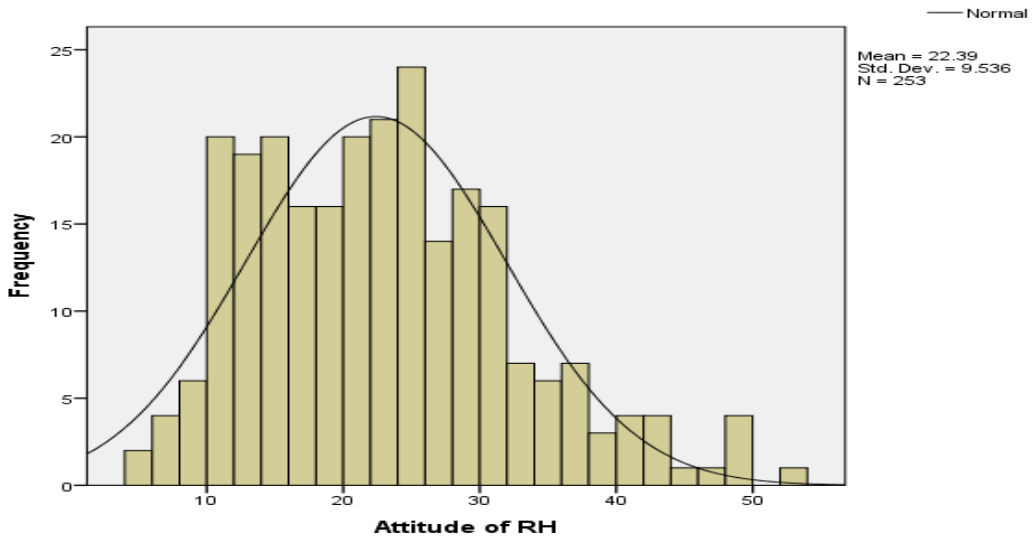

Figure 2: Distribution of attitude score

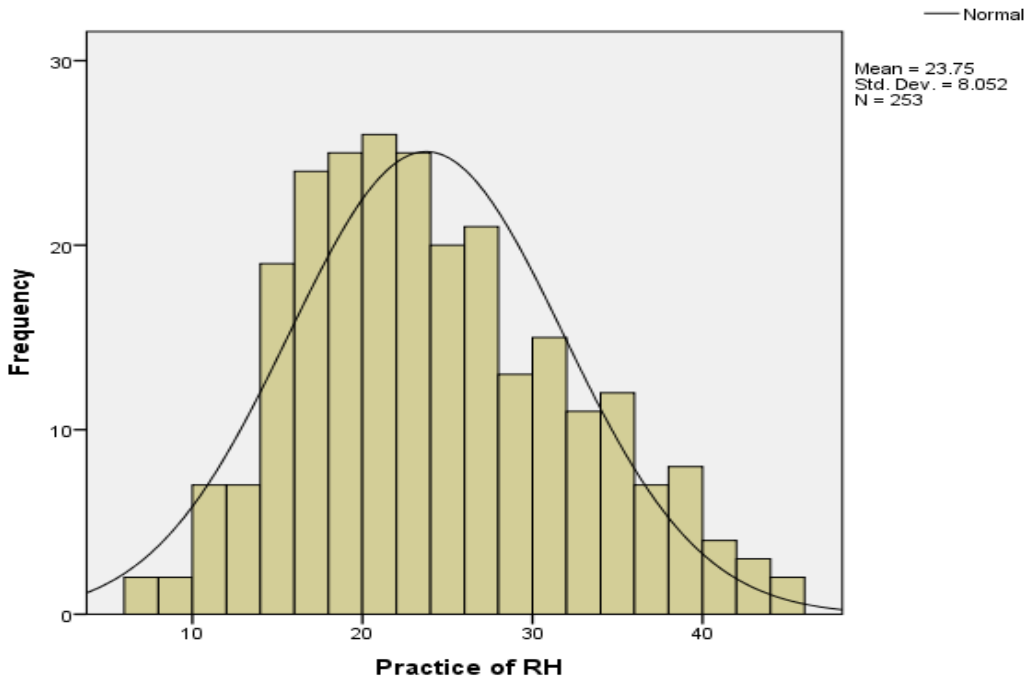

Figure 3: Distribution of practice score

Annexure-IV

Significant factors of KAP of RH of slum women

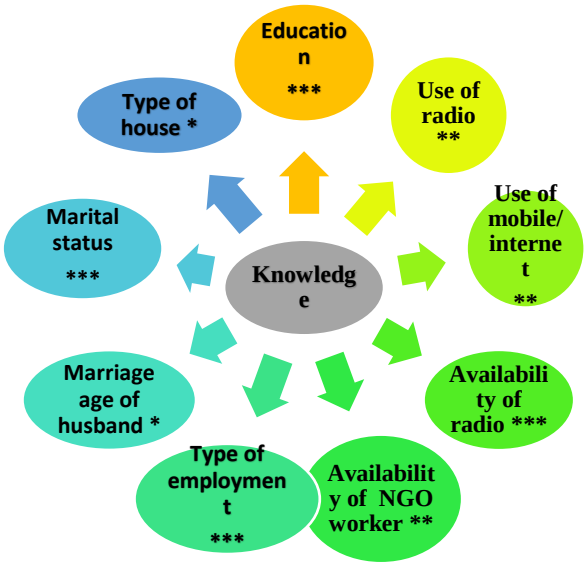

Figure 1: Significant factors affecting Knowledge of RH

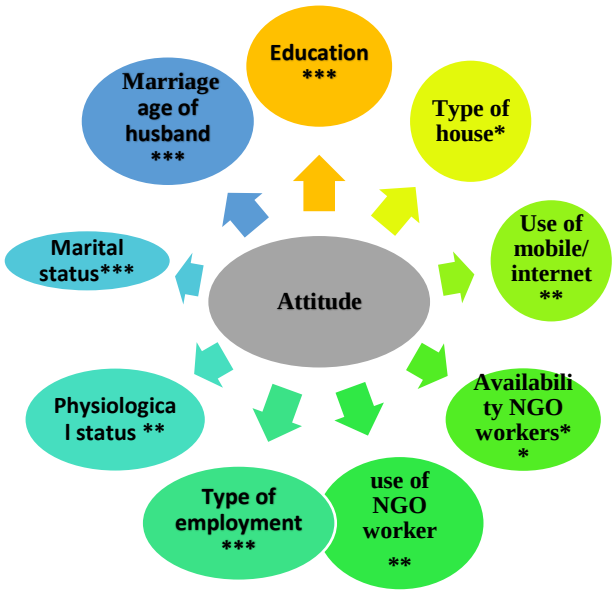

Figure 2: Significant factors affecting attitude of RH

Figure 3: Significant factor affecting practice of RH

Annals of R.S.C.B., ISSN: 1583-6258, Vol. 25, Issue 1, 2021, Pages. 5473 - 5479
Received 15 December 2020; Accepted 05 January 2021.

An Association between Socio - Economic Status and KAP of Reproductive Health of the Early Married Women

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Abstract: ***Background:*** *Previous researches show that the women who are married before legal age, living in poor communities, belonging to the age group 15 to 24 years, face more reproductive health problems due to lack of information on reproductive health.* ***Objective:*** *To knowthe association between the socio- economic status of the early married women who were living in the urban slums.* ***Method:*** *A cross sectional study was conducted among 253 early married women of theage 15- 24 years in the slums of Lucknow district.* ***Results:*** *Out of 253 majority of the respondents 119 (47%) were belonging to the III class of socio-economic status. Most of the respondents had low level of knowledge (91.7 %), negative attitude (79.1%) and poor practice (81.8%) regarding their reproductive health.In present study it was foundthatthere is an association between the score of practice and socio - economic status of the respondents.* ***Conclusion:****It can be concluded that there are an association between the socio-economic status of the respondents and their reproductive health practices but interestingly it is found that no association existed between the knowledge and attitude.*

Keyword: Early married women, Reproductive health, socio economic status, knowledge, attitude and practice**.**

Introduction:

UNICEF, 2016 reported that the child marriage is still widespread in India, which is home to a third of the world's child brides. About half of theIndian women were married before they turned 18 years.It was noticed in the report of Census, 2011 that the incidences of the child marriage are being declining nationally but the pace of change remains slow, in nearly all the states, especially in the age group of 15-18 years. Uttar Pradesh is one of the states that have an incidence of child marriage higher than the national average. Many researches showed that child marriage is associated with the adverse reproductive health outcome of women. (Santhya et al (2010), Raj A. et al (2010), Maharjan et al (2019). It was found that a women's reproductive health status is greatly influenced by the menarche during adolescence, beliefs and attitudes regarding menstruation and more importantly the behavior during the menstrual period (Fetohy et al, 2007) and the women, married before legal age are more prone to face the violence, exposure to RTI and become pregnant as adolescent that results increased risk of delivery complications, maternal mortality and child mortality.(UNICEF, 2016)Child marriage prevalence is the percentage of women 20-24 years old who were married or in union before they were 18 years old. (UNICEF State of the World's Children, 2017). It was revealed in NFHS, 2016 report that the prevalence of child marriage amongst 15-19 years old and 20-24 years old girls of India. Socio-economic status is an important factor affecting the health condition of an individual or a family and health behavior of an individual or a community is interdependent on their socio-economic status. (Sharma R, 2013). Therefore, the objective of the study is to access the association between the socio- economic status of the early married women who are living in the urban slums.

Annals of R.S.C.B., ISSN: 1583-6258, Vol. 25, Issue 1, 2021, Pages. 5473 - 5479
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Research Methodology:A cross sectional study was conducted among the early married women who were living in the urban slums of Lucknow. According to NFHS-4 the prevalence of child marriage amongst 15-19 years old and 20-24 years old girls were found. Thus, by considering the prevalence of early marriage, the respondents who were belonging to the age between 15-24 years and married before 18 years were recruited for the study.Modified BG Prasad scale, 2018was used for determining the socio-economic status of early married women, living in urban slums of Lucknow.

Sample size: For estimating the sample size following formula was used:

$$N = \frac{Z^2 pq}{d^2}$$

$$N = \frac{1.96^2 \times 0.80 \times 0.20}{(0.05)^2}$$

$$= 245 + 25\ (10\%)$$

$$= 270$$

Where N is the required sample size, Z is the reliability coefficient at 95 % confidence interval (1.96), p is equal to 1-p, and d is the acceptable error (0.05) (Barman A, 2015).
To the best of our work there was no previous data on the KAP regarding reproductive health of the early married women living in the slums of Lucknow. Hence for deciding the value of p the overall percentages of knowledge (79%), attitude (80%) and practice (78%) of reproductive health of early married women who were living in the urban slums that have been calculated from the pilot study and later applied to calculate the sample size of the present study. By observing the scores of knowledge (79%), attitude (80%) and practice (78%), it was noticed that the attitude score (80%) was the highest value. This procedure should be used when someone is unable to arrive at a better estimate of p. The value for p used in this study was 80%. (Wesson DW, 2006)The sample size obtained was 270 but only 253 participants were responded. Therefore, giving a respond rate of 93% only 253 questions were included in the present study. 17 (7%) questionnaires were not included in the study due to declination of the respondents and missing data.

Sampling design: When it is difficult to access subjects with the target characteristics, the snow ball sampling is applied. In this method, the existing study subjects recruit future subjects among their acquaintances. Sampling continues until data saturation. (Burns N & Grove SK 1993). Early married women of the age 15-24 years were a hard-to-reach population.Hence a well-recognized NGO which focus on the all sexual and reproductive health issues of the women of reproductive age and also run outreach teams and are in regular contact with a number of early married women living in slum throughout the city, was contacted for the collection of data. The potential participants were recruited with the support of the volunteers of that NGO who were working in the different communities of the city. Snowball sampling techniques were used to recruit the participants for the study.

Study instruments:
An interview schedule was used to collect the quantitative data for the study.B. G Prasad scale was used to determine the socio-economic status of the study subjects. It was developed at the Institute with the assistance from the faculty members and other experts of women's reproductive health. The pilot study was conducted among early married women who were living in the urban slum and the questions were modified accordingly. The reliability of the questionnaire was checked by calculating the Cronbach alpha (α) test. The respondents were asked about their knowledge, attitude and practice regarding the reproductive health of women.

Annals of R.S.C.B., ISSN: 1583-6258, Vol. 25, Issue 1, 2021, Pages. 5473 - 5479
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To get the score of knowledge, attitude and practice of total reproductive health the questions in the scheduled questionnaire addressed four main areas; menstruation, family planning, RTI and reproductive right. Schedule questionnaire used in the study was translated to Hindi for better understanding of the participants of the study and back translated in English.

Focus Group Discussion: At the end of research, an FGD was organized with the main target group was to verify, disprove, modify or differentiate the study's provisional finding.

Operational definitions to find out the KAP score of women's reproductive health:

Knowledge: There were 63 questions in this part and the respondents were asked regarding their knowledge of reproductive health of women. Each question has two choices; Yes and No. A correct answer was given 1 score where as a 0 score was given for a wrong answer. The overall knowledge of the study participants was accessed using the sum score of each outcome based on bloom's cut off point. The scores were classified into 3 level as follow Bloom's cut off point, high level knowledge if the score was above 51 points (80%), moderate if the knowledge score was 38-50 points (60% - 79%) and low if the score was less than 37 points (< 59%).

Attitude: Overall attitude included 63 itemsto access the perception or outlook regarding reproductive health problems, causative factors and preventive measures ofreproductive health issues. All individual answers were summed up for total scores and calculated for means percent. The scores were classified into 3 levels (positive attitude, neutral attitude and negative attitude) according to Bloom's cut off pointthe positive attitude score that fell above 50 points (80%), neutral attitude score that fell between 38-50 points (60% - 79%) and negative attitude score that fell below37 points (less than 59%).

Practice: It is the overt behavior, habit or custom that a person does, follow up or carry out in her daily life in prevention of reproductive health issues. 55questions were used to access the experience and action of the respondent. Each question contains 1 point for positive practice and 0 for negative practices. The total response score was 55 point and classified in to 3 according to Bloom's cut off point as practice score that fell above 43 points (80%) is good practice,practice score that fell between 33- 43 points (60% - 79%) is fair practice and practice score that fell below 32 points (less than 59%) is poor practice.

Data collection procedure:
Informed consent was taken from each of the study subject prior to the initiation of the study. The participants were explained about the purpose of conducting the study individually prior to the initiation of the recruitment process.

Inclusion criteria: Early married women aged 15 – 24 years who were living in urban slums from more than six months were included in the study.

Exclusion criteria: The women who have not given consent for being the participant of the study and the women who were non-co-operative were not recruited.

Statistical analysis used: The data was entered into SPSS, version 20 sheets and analyzed. Data was presented in the form of tables. Frequency, mean, Standard deviation and chi square test was used for the analysis of data.

Annals of R.S.C.B., ISSN: 1583-6258, Vol. 25, Issue 1, 2021, Pages. 5473 - 5479
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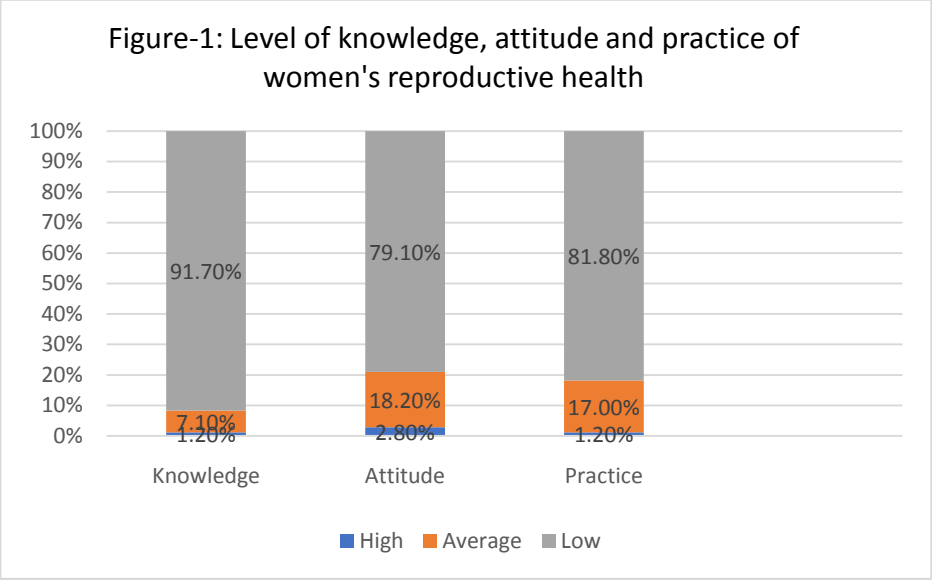
Results:

Socio- economic status of the respondents:

Table-1: Socio- economic status of the respondents		
Socio-economic class	**Frequency**	**Percentage**
I	4	1.6
II	45	17.8
III	119	47.0
IV	82	32.4
V	3	1.2
Total	**253**	**100.0**

Socio-economic status has been defined as "The position that an individual or family occupies with reference to the prevailing average standards of cultural and material possessions, income and participation in group activity of the community". (Park K., 2015). The socio-economic status of the respondents was determined by using the BG prasad socio-economic scale, 2018. Table-1, depicts that the majority of the respondents 119 (47%) were belonging to the III class followed by IV class 82 (32.4) and less than one fifth sample population 45 (17.8%) was belonging to II class followed by I class 4 (1.6%).



Level of knowledge, attitude and practice score of reproductive health:

Knowledge possessed by a community refers to their understanding of any given topic reproductive health in this case. Attitude refers to their feelings towards this subject, as well as any preconceived ideas that they may have towards it. Practice refers to the ways in which they demonstrate their knowledge and attitude through their actions. (K. Kaliyaperumal, 2004). Figure-1expresses the level ofknowledge, attitude and practice of the early married women who live in the slums of Lucknow city. The knowledge Score of total reproductive

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health (mean = 25.06; SD=8.017; n =253) 91.7 (n=232) of the respondents scored in the low knowledge, followed by average Knowledge 7.1% (n=18). High level of knowledge was very low 1.2% (n=3). The attitude Score of total reproductive health (mean = 30.38; SD= 9.032; n =253). 79.1% (n=200) of the respondents scored in the negative attitude, followed neutral 18.2% (n=46). Positive attitude was very low 2.8% (n=7). The practice score of total reproductive health (mean=24.35; SD= 8.221; n= 253), 81.8 % (n=207) of the respondents scored in the poor practice range while 17% (n=43) followed fair practice. Only 1.2 % (n=3) fell in the category of good practice.

Table-2: Association between Socio-economic status and the level of KAP of respondents' reproductive health

	Socio-economic status					Total	Chi Square Sig
	I	II	III	IV	V		
Knowledge category							
High level	0	2	1	0	0	3	χ^2 =10.752 Df=8 P=.216
	0.0%	66.7%	33.3%	0.0%	0.0%	100.0%	
Moderate level	1	3	5	9	0	18	
	5.6%	16.7%	27.8%	50.0%	0.0%	100.0%	
Low level	3	40	113	73	3	232	
	1.3%	17.2%	48.7%	31.5%	1.3%	100.0%	
Total	4	45	119	82	3	253	
	1.6%	17.8%	47.0%	32.4%	1.2%	100.0%	
Attitude category							
Positive	0	4	2	1	0	7	χ^2 =9.558 Df=8 P=.297
	0.0%	57.1%	28.6%	14.3%	0.0%	100.0%	
Neutral	1	10	20	15	0	46	
	2.2%	21.7%	43.5%	32.6%	0.0%	100.0%	
Negative	3	31	97	66	3	200	
	1.5%	15.5%	48.5%	33.0%	1.5%	100.0%	
Total	4	45	119	82	3	253	
	1.6%	17.8%	47.0%	32.4%	1.2%	100.0%	
Practice category							
Good	1	0	1	0	1	3	χ^2 =49.410*** Df=8 P=.000
	33.3%	0.0%	33.3%	0.0%	33.3%	100.0%	
Fair	0	10	18	15	0	43	
	0.0%	23.3%	41.9%	34.9%	0.0%	100.0%	
Poor	3	35	100	67	2	207	
	1.4%	16.9%	48.3%	32.4%	1.0%	100.0%	
Total	4	45	119	82	3	253	
	1.6%	17.8%	47.0%	32.4%	1.2%	100.0%	

$***P< 0.001$.

Association between Socio-economic status and KAP scores of reproductive health:
Table-2 revealed that there is no association between Socio-economic status and knowledge and attitude level of the respondents. There is a statistical association was found between Socio-economic status of the respondents and practice score of reproductive health (χ^2 =49.410, df=8, p=<.001) of respondents.

Discussion:

In our study it was found that the early married women living in the slums majority of them belong to the lower socio-economic class and having low level of knowledge, negative attitude and poor practices regarding their reproductive health. It is supported by the NFHS (2016), UNICEF (2017), Maharjan et al (2019) as stated that the child marriage is associated with the poor socio-economic status and poor reproductive health outcomes due to lack of information regarding their reproductive health. There is an association found between the poor reproductive health practices of the respondents and their low socio- economic status. The same findings were reported in the research done by Jose M J et al, 2019. It was also showed in previous researches that the low level of knowledge regarding reproductive health and the socio- economic status of the women is also associated. (Jose M J et al, 2019). But our study rejected the findings of the previous researches as it is expressed no association between the respondents' knowledge level of reproductive health and socio-economic status of the respondents.This difference occurs because the data collected from the slum community by the help of NGO workers where the volunteers of NGO were already providing the knowledge to have safe and healthy reproductive health. But it was noticed that the respondents have not much information about the government's financial servicesthat are provided to the women,for improving their reproductive health.

Conclusion: In conclusion the present study estimated that the low level of knowledge is associated with the early marriage. Whether there is an association between the poor reproductive health practices and socio-economic status but there was no relation between the knowledge and socio- economic status of the respondents. It is why that the NGO's were already working to promote the knowledge of reproductive health among the respondents. It is noticeable that the respondents have very little information and lack of awareness about the Government's financial supports regarding their reproductive health. Thus,it can be suggested that if the NGO's or local reproductive health providers do work to improve the knowledge regarding financial services of women reproductive health, the improvement in the reproductive health of the women can be seen.

Acknowledgement: The authors of this study express their sincere thanks and gratitude to the university (BBAU, Lucknow) that provided appropriate facilities for the research.

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Annals of R.S.C.B., ISSN: 1583-6258, Vol. 25, Issue 1, 2021, Pages. 5473 - 5479
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International Journal of Psychosocial Rehabilitation, Vol. 24, Issue 03, 2020
ISSN: 1475-7192

Knowledge, attitude and practices of reproductive health among early married women of urban slums of Lucknow, Uttar Pradesh.

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Abstract:

Background: Previous researches show that the women who are married before legal age , living in poor communities, belonging to the age group 15 to 24 years, face more reproductive health problems due to lack of sufficient knowledge. Objective: To know about the socio- demographic profile of target population. To access knowledge, attitude and practice level regarding reproductive health and association between knowledge, attitude and practice scores of the women who are living in the urban slums of Lucknow. Method: A cross sectional study was conducted among 253 early married women of the age 15- 24 years in the slums of Lucknow district. Results: Out of 253 respondents the majority of the respondents 211 (83.4%) were belonging to the 21-24 years age group, 230 (90.9%) were married at the age between 15-17 years, 169 (66.8%) Hindu, 122 (48.2%) OBC, 114(45.1%) illiterate, 208 (82.2%) home maker,nuclear family 158 (62.5%),146 (57.7%) were living on rent in the semi-pacca house 117 (46.2%). Majority of the respondents 119 (47%) were belonging to the III class. Majority of the women had low level of knowledge (91.7 %), negative attitude (79.1%) and poor practice (81.8%). There is an association between the score of knowledge and attitude (r=0.708, p<.01), knowledge and practice (r= 0.616, p<.01) and attitude score is associated with practice score (r=0.480, p<.01). Conclusion: There is low level of knowledge, attitude and practice of reproductive health among the study subjects.

Keyword: *Reproductive health, knowledge, attitude and practice***.**

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I. Introduction:

According to World Health Organization, "*Reproductive health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and to its functions and processes. Reproductive health implies that people are able to have a satisfying and safe sex life and that they have the capability to reproduce and the freedom to decide if, when and how often to do so*."For maintaining Women's sexual and reproductive health, it is need to access the accurate information and the safe, effective, affordable and acceptable contraception method of their choice. They must be informed and empowered for protecting themselves from sexually transmitted infections. They must have right to take decision on when to have children, have access to services that can help them for having a fit pregnancy, safe delivery and healthy baby [UNFPA].A women's reproductive health status is greatly influenced by the menarche during adolescence, beliefs and attitudes regarding menstruation and more importantly the behavior during the period [Fetohy et al, 2007]. Hence the reproductive health addresses the main key areas, menstruation, family planning, RTI and reproductive health respectively. Another aspect of the reproductive health is the age of marriage [Gaferi et al, 2018].In India, with nearly half of brides married as girls. Women who are married before legal age are more prone to face the violence, exposure to RTI and become pregnant as adolescents that results increased risk of delivery complications, maternal mortality and child mortality [UNICEF, 2016]. Whereas the incidence of the child marriage are declining nationally but the pace of change remains slow, in nearly all the states, especially in the age group 15-18 years. Uttar Pradesh is one of the states that have an incidence of child marriage higher than the national average [Census, 2011].Though Uttar Pradesh is considered as one of the less urbanized states of India but it has second largest urban population in the country. About 22% of the population lives in urban areas in Uttar Pradesh, which constitute more than 44 million. According to the statistics of committee on Slum Statistics/Census, 2011, Government of India, about 10.8 million urban population of Uttar Pradesh is living in slums, which constitute about 24% in urban population.Child marriage is linked with poverty and level of education. Slums lack basic amenities and health care facilities. Very little is known about reproductive behavior and use of family planning methods in slums [Hasan et al, 2017].One property that may drive this inference process is the degree to which the content of knowledge on which the attitude is based is directly relevant to the goal of the behavior [Fabrigar et al, 2006].Therefore the objectives of the present study wereto know about the socio- demographic profile of target population. To access knowledge, attitude and practice level regarding reproductive health and association between knowledge, attitude and practice scores of the women who are living in the urban slums of Lucknow.

Study design:A cross sectional study was conducted in the slums of Lucknow district.

Target population: Respondents who were married before legal age (18 years) and living in the Slums of Lucknow were targeted for the study. The age of the study subjects was decided by considering the prevalence of early married women as Child marriage prevalence is the percentage of women 20-24 years old who were married or in union before they were 18 years old (UNICEF, 2017) and the reproductive age of a women is 15-49 years (WHO, Report). Thus the study was conducted among 253 women, aged (15- 24 years) of urban slum who were married earlier (before 18years).

Sample size: The sample size was estimated based on the single proportion formula:

$$N=\frac{Z^2pq}{d^2}$$

$$N=\frac{1.96^2 \times 0.80 \times 0.20}{(0.05)^2}$$

= 245 + 25 (10%)

= 270 sample size

Where N is the required sample size, Z is the reliability coefficient at 95 % confidence interval (1.96), p is equal to 1-p, and d is the acceptable error (0.05).To the best of our work there is no available literature on previous work on KAP of reproductive health of early married women living in slums. Hence a pilot study was conducted to compute an estimate of the value of the p that later was applied to calculate the sample size.The followingshows the overall percentages of knowledge (79%), attitude (80%) and practice (78%), that have been calculated from our pilot studies. The value for p used in this study was (80%). Pilot study was not included in the actual survey. 25 women were included in the pilot study.

The value for p used in this study was 80%, which was obtained from the overall attitude score during the pilot study. The sample size obtained was 269. Only 253respondents were responded, giving a respond rate of 93%. 17 (7%) questionnaires were not included in the study due to missing data.

Sampling design: Early married women of the age (15-24 years) were a hard-to-reach population.Since localNGOs had established a relationship of trust with early married women of slums, hence a local and well-recognized NGO was contacted for the collection of data. The potential participants were recruited with the support of NGO. These organizations focus on the all Sexual and reproductive health issues of the women of reproductive age. They also run outreach teams and are in regular contact with a number of early married women living in slum throughout the city. A combination of convenience and snowball sampling techniques were used to recruit the participants in this study.

Study instruments: The data collection tool used for the study was an interview schedule that was developed at the Institute with the assistance from the faculty members and other experts of women's reproductive health. The pilot study was conducted among early married women who were living in the urban slum from more than six months and the questions were modified accordingly. The reliability of the knowledge, attitude and practice measuring items were checked by calculating the Cronbach alpha (α) test. The questionnaire was made up of four parts. In part I, questions were directed towards gaining information regarding Socio-demographic characteristics, while in part II, III and IV respectively, questions were asked regarding their KAP on the reproductive Health of women. Modified B. G. Prasad socio economic scale (2018) was used to measure the socio- economic status of the respondents.The respondents were asked about their knowledge, attitude and practice regarding thereproductive health of women. To get the Knowledge, attitude and practice score of total reproductive health the questions in the

scheduled questionnaire addressedfour main areas; Menstruation, Family Planning, RTI and Reproductive Right.The study questionnaire was initially translated in the English language, which was translated to Hindi for better understanding of the participants and back-translated to improve validity.

II. Operational definitions to find out the KAP score

Part II; Knowledge

There were 63 questions in this part and the respondents were asked regarding their knowledge of reproductive health of women. Each question contains 1 point for positive response and 0 for negative response. Each question has two choices; Yes and NO. A correct answer was given 1 score where as a 0 score was given for a wrong answer. The overall knowledge of the study participants was accessed using the sum score of each outcome based on bloom's cut off point. The scores were classified into 3 level as follow Bloom's cut off point, High level Knowledge if the score was above 51 points (80%), Moderate if theknowledge score was 38-50 points (60% - 79%) and Low if the score was less than 37 points (< 59%).

Part III; Attitude:

Overall attitude included 63 itemsto access the perception or outlook regarding reproductive health problems, causative factors and preventive measures ofreproductive health. All individual answers were summed up for total scores and calculated for means percent. The scores were classified into 3 levels (Positive Attitude, Neutral attitude and Negative Attitude) according to Bloom's cut off pointthe positive attitude score that fell above 50 points (80%), neutral attitude score that fell between 38-50 points (60% - 79%) and negative attitude score that fell below37 points (less than 59%).

Part IV; Practice:

It is the overt behavior, habit or custom that a person does, follow up or carry out in her daily life in prevention of reproductive health. It was measured based on previous health seeking behavior, decisions and action taken to prevent Sexual and reproductive health, 55questions were used to access the experience and action of the respondent. Each question contains 1 point for positive practice and 0 for negative life style practices. The total response score was 55 point and classified in to 3 according to Bloom's cut off point as practice score that fell above 43 points (80%) is good practice,practice score that fell between 33- 43 points (60% - 79%) is fair practice and practice score that fell below 32 points (less than 59%) is poor practice.

Data collection procedure: The investigator of this study informed and motivated the individuals to participate in the study. Further, the participants were explained about the purpose of conducting the study individually prior to the initiation of the recruitment process. The investigators then personally collected the responses by interview schedule. The participants were ensured about the strict confidentiality of their data and

ensured that this data will be used only for research purpose and will not be divulged or utilized for any other purposes. Then informed consent was taken from each of them individually prior to the initiation of the study.

Inclusion criteria: Early married women aged 15 – 24 years who were living in urban slums from more than six months were included in the study.

Exclusion criteria: Non consenting, non-co-operative women were not recruited in this study.

Statistical analysis used: The collected data was entered into SPSS, version 20 sheets and analyzed. Data was presented in the form of tables. Frequency, mean Standard deviation and correlation were used for the analysis of data.

III. Results:

Table-1 expresses that out of 253 early married women living in the urban slum, the majority of the respondents 211 (83.4%) were belonging to the 21-24 years age group and very less 42 (16.6%) in the age group of 15-20 years. The mean age of the respondents was 21.50$\pm$2.096. Majority of the women 230 (90.9%) were married at the age between 15-17 years with mean score (16.9$\pm$1.128). Most of the women were OBC 122 (48.2%) followed by SC 96 (37.9) and very less 14 (5.5%) were ST. Most of the women were belonging to Hindu 169 (66.8%) and rest of them were Muslim 84 (33.2%); a good number were not educated 114(45.1%) who were mainly home maker 208 (82.2%). Most of the respondents were belonging to the nuclear family 158 (62.5%). Majority of the respondents146 (57.7%) were living on rent in the semi-pacca house 117 (46.2%) followed by pacca house 89 (35.2%). Majority of the respondents 119 (47%) were belonging to the III class followed by IV class 82 (32.4) and very less no of the respondents 3 (1.2%) were belonging to the V class.

Table-1: Socio- demographic Profile of the Respondents

Item	**Category**	**Number**	**Percentage**
Age	15-20	42	16.6
	21-24	211	83.4
Marriage age	12-14	23	9.1
	15-17	230	90.9

Caste	Gen	21	8.3
	OBC	122	48.2
	SC	96	37.9
	ST	14	5.5
Religion	Hindu	169	66.8
	Muslim	84	33.2
Education	No education	114	45.1
	Primary	49	19.4
	Secondary	72	28.5
	Higher	18	7.1
Occupation profile	Working	45	17.8
	Home maker	208	82.2
Type of family	Joint	95	37.5
	Nuclear	158	62.5
Ownership of house	Rented	146	57.7
	Own	107	42.3
Type of house	Kaccha	47	18.6
	Pacca	89	35.2
	Semi pacca	117	46.2
Socio-economic class	I	4	1.6
	II	45	17.8

	III	119	47.0
	IV	82	32.4
	V	3	1.2

Table-2: Level of Knowledge, Attitude and Practice score of reproductive health

	High	**Average**	**Low**	**Mean**	**Std. deviation**
Knowledge	3 1.2%	18 7.1%	232 91.7%	25.06	8.017
Attitude	7 2.8%	46 18.2%	200 79.1%	30.38	9.032
Practice	3 1.2%	43 17.0%	207 81.8%	24.35	8.221

Table- 2 reveals theknowledge, attitude and practice level.The knowledge Score of total reproductive health(mean= 25.06;SD=8.017; n =253) 91.7 (n=232) of the respondents scored in the low knowledge, followed by average Knowledge 7.1% (n=18). High level of knowledge was very low 1.2% (n=3). The attitude Score of total reproductive health (mean= 30.38;SD=9.032; n =253). 79.1% (n=200) of the respondents scored in the negative attitude, followed neutral 18.2% (n=46). Positive attitude was very low 2.8% (n=7). The practice score of total reproductive health (mean=24.35; SD= 8.221; n= 253), 81.8 % (n=207) of the respondents scored in the poor practice range while 17% (n=43) followed fair practice. Only 1.2 % (n=3) fell in the category of good practice.

Table-3 illustrates, Pearson's coefficient correlation between knowledge and attitude was found to be highly significant (r=0.708, p<.01) along with a strong and significant association with practice (r= 0.616, p<.01). When attitude score was correlated with knowledge score and practice score a significant positive correlation was observed with the value (r=0.708 and r=0.480) respectively at p<.01significance. There was a strong and significant association with knowledge, attitude and practice.

Table-3: Correlation between total knowledge attitude and practice score of reproductive health

		Knowledge	Attitude	Practice
Knowledge	Pearson Correlation	1	.779**	.440**
	Sig. (2-tailed)		.000	.000
	N	253	253	253
Attitude	Pearson Correlation	.779**	1	.396**
	Sig. (2-tailed)	.000		.000
	N	253	253	253
Practice	Pearson Correlation	.440**	.396**	1
	Sig. (2-tailed)	.000	.000	
	N	253	253	253

**. Correlation is significant at the 0.01 level (2-tailed).

Table- 4: Association between practice of Menstruation, Family Planning, RTI and Reproductive Right

		Practice of Menstruation	Practice of Family Planning	Practice of RTI	Practice of Reproductive Right
Practice of Menstruation	Pearson Correlation	1	.063	.166**	-.100
	Sig. (2-tailed)		.320	.008	.111

	N	253	253	253	253
Practice of Family Planning	Pearson Correlation	.063	1	.349**	.302**
	Sig. (2-tailed)	.320		.000	.000
	N	253	253	253	253
Practice of RTI	Pearson Correlation	.166**	.349**	1	.392**
	Sig. (2-tailed)	.008	.000		.000
	N	253	253	253	253
Practice of Reproductive Right	Pearson Correlation	-.100	.302**	.392**	1
	Sig. (2-tailed)	1	.063	.166**	-.100
	N	253	253	253	253
**. Correlation is significant at the 0.01 level (2-tailed).					

Table- 4, depicts, Pearson's coefficient correlation between practice of menstruation and practice of RTI was found to be highly significant (r=0.166, p<.01). In our study it was observed that there is a strong and significant association with practice of Family Planning with RTI and practice of reproductive right (r= 0.349, p<.01 and r=0.302, p=<.01) respectively. When practice of Reproductive Right score was correlated with practice score of RTI a significant positive correlation was observed with the value (r=0.392) at p<.01significance. However no significant association was found between the practices of reproductive right and practices of menstruation.

IV. Discussion:

No similar study was conducted like present study. According toCensus, 2011 there is an association between education and child marriage. Most of the women who are early married were illiterate. The age of marriage is increased as the level of education is increased. Almost similar findings were observed in our study as more than half of the study population is not educated and very few were obtained higher education. In our study no

participant was married before age of 15 years. This finding is supported by the report of Girls Not Brides organization, 2019that the Indian girls are marrying before the age of 15 year, rates of marriage have increased for girls between ages 15 to 18. Gaferi, 2018, conducted a study among female adolescents to knowknowledge, attitude and practice related to reproductive health, concluded that female adolescents had unsatisfactory knowledge, inadequate hygiene practices, and positive attitudes toward reproductive health.In our study it was reported that the respondents' level of knowledge, attitude and practice regarding reproductive health was very low.It is also noticed that the knowledge, attitude and practice regarding reproductive health is associated with one another.There is a strong correlation between practices of RTI and practices of family planning. The similar findings were recorded by Ratnaprabha et al 2015, Kafle and Bhattarai, 2016 and Chaudhary et al, 2019. Menstrual practices and RTI practices are associated significantly. Studies conducted by Anand et al 2015, Ratnaprabha et al 2015 and Torondel et al, 2018 have given the similar findings in their study.

V. Conclusion:

To summarize, the present study provides a picture of the level of knowledge, attitude and practice reproductive health of early married women who are living in urban slums of Lucknow. There was low level of knowledge, attitude and practice regarding reproductive health among early married women. There exists an association between knowledge, attitude and practices of reproductive health. In present study an association between practice of menstruation andpractice of RTI, practice of family planning with practice of RTI and reproductive right is recorded. This emphasizes the need formore activities that can increase knowledge and promote positive practices of reproductive health among early married women who are living in slums.

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ISSN- 2394-5125 VOL 7, ISSUE 04, 2020

KNOWLEDGE AND ATTITUDE TOWARDS RTI/STI AMONG EARLY MARRIED WOMEN LIVING IN URBAN SLUMS OF LUCKNOW, UTTAR PRADESH.

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Abstract: Background:Reproductive Tract Infections (RTIs) including Sexually Transmitted infections (STIs) are silent epidemics and are recognized as public health problem and are the cause loss of healthy life among women of reproductive age. The problem of RTI/STI morbidity in women exists largely due to ignorance, low level of Knowledge and awareness regarding sexual and reproductive health. Prevalence of RTI/ STI is high among the young women living in lower community like slums. Thus, it is very essential to understand the knowledge and attitude regarding various aspects of RTI/STI among the early married women living in urban slums. Objective: to know about the Knowledge, and Attitude towards the RTI of the early married women who are living in the urban slums of Lucknow. Method:A community based cross sectional study was conducted in slum area of District Lucknow from March 2016 to December 2016. Early married women of 15-24 years were selected and convenience and snow ball sampling was performed for the recruitment of the respondents. A total of 253 early married women were interviewed using questionnaire schedule. Results:In our study, the majority of women were in the age group of 21-24 years (83.4%), illiterate (45.1%) and belonged to nuclear families 62.5%. 87.4% women had never heard about RTI/STIs. Conclusion:Overall the knowledge and awareness were poor among the early married women of slums. There is a need for imparting awareness regarding the transmission and prevention of RTI/STIs.
Keywords: Early married women, Urban slum, Reproductive tract infection, Knowledge, Awareness**.**

Introduction

Reproductive Tract infections (RTIs) in women is one of the wide spread health concerns (Farokhzadian et al, 2005). Reproductive tract infections, sexually transmitted infections and HIV have significantly known as serious global health problems. Both men and women suffer from RTIs but their consequences are more damaging and broader for women (Neshat et al, 2014). A wide variety of infectious diseases affect the female genital tract which can be divided into two main groups- (1) Sexually transmitted diseases and (2) Infectious diseases that arises due to normal flora (Ryan, 1999). RTI, entails a heavy toll on women, if untreated can cause serious consequences of infertility, ectopic pregnancy, cervical cancer, menstrual disturbances, and pregnancy wastage and low birth weight babies (WHO, 2001). STI often go undiagnosed and untreated due to lack of knowledge or non-availability of health care facilities (Neshat et al, 2014). On statistical analysis it was found that those women married below 19 years of age are likely to have 43.3% RTI symptoms as compared to those married at or above 19 years of age(Kafle and Bhattarai, 2016). In slum women, the prevalence of RTI/STI was maximum, i.e., in 71% (Chaudhary et al, 2019). Thus the objective of the study was to know the socio-demographic background of the respondents and to access the knowledge and attitude towards the RTI of the women who married before legal age (18 years) and living in the slum. Thus the objective of the study was to know about the Knowledge, and Attitude towards the RTI of the early married women who are living in the urban slums of Lucknow.

Material and Methods

Settings and design: A community based cross-sectional study was carried out in the urban slum areas of Lucknow city. The Slums were selected according to the list of slums as per Rajeev Awas Yojna Report, Municipal Corporation, Lucknow, 2016.

ISSN- 2394-5125 VOL 7, ISSUE 04, 2020

Study period: The study was conducted in the month of January to June 2018.

Participants: In this study, 253 respondents were recruited of the age 15-24 years who were married before legal age (18 years). The age of the study subjects was decided by considering the prevalence of early married women as Child marriage prevalence is the percentage of women 20-24 years old who were married or in union before they were 18 years old (UNICEF State of the World's Children, 2017) and the reproductive age of a women is 15-49 (WHO, Report).

Sampling design: The study was conducted among the women aged (15- 24 years) of urban slum who were married earlier (before 18years). Early married women of the age (15-24 years) were a hard-to-reach population.Since local NGOs had established a relationship of trust with early married women of slums, the potential participants were recruited with the support of NGO. These organizations focus on the all Sexual and reproductive health issues of the women of reproductive age. They also run outreach teams and are in regular contact with a number of early married women living in slum throughout the city. A combination of convenience and snowball sampling techniques were used to recruit the participants in this study.

Study instruments: The data collection tool used for the study was an interview schedule that was developed at the Institute with the assistance from the faculty members and other experts of sexual and reproductive health. The pilot study was conducted among early married women who were living in the urban slum from more than six months and the questions were modified accordingly. The reliability of the knowledge and attitude measuring items were checked by calculating the Cronbach alpha (α). The questionnaire contained questions relating to the information on social demographic profile of the respondents like; current age, age at the marriage, education, occupation, family characteristics like residence, type of family, monthly income. Modified B. G. Prasad socio economic scale (2018) was used to measure the socio- economic status of the respondents.The respondents were asked about their knowledge and attitude regarding the causes of RTI/ STI, symptoms of Reproductive Tract infection, prevention of STI/ STD and the treatment of RTI/ STI. The study questionnaire was initially translated in the English language, which was translated to Hindi for better understanding of the participants and back-translated to improve validity.

Data collection procedure: The investigator of this study informed and motivated the individuals to participate in the study. Further, the participants were explained about the purpose of conducting the study individually prior to the initiation of the recruitment process. The investigators then personally collected the responses by interview Schedule. The participants were ensured about the strict confidentiality of their data and ensured that this data will be used only for research purpose and will not be divulged or utilized for any other purposes. Then informed consent was taken from each of them individually prior to the initiation of the study.

Inclusion Exclusion criteria: Early married women aged 15 – 24 years who were living in urban slums from more than six months were included in the study. Women who have not given consent for participating in the study were not recruited in this study.

Statistical analysis used: The data was collected and entered into SPSS, 20 version sheets and analyzed. Data was presented in the form of tables.

Results:

Socio demographic profile:

Out of 253 early married women living in the urban slum, the majority of the respondents 211 (83.4%) were belonging to the 21-24 years age group and very less 42 (16.6%) in the age group of 15-20 years. Majority of the women 230 (90.9%) were married at the age between 15-17 years. Most of the women were OBC 122 (48.2%) followed by SC 96 (37.9) and very less 14 (5.5%) were ST. Most of the women were Hindu 169 (66.8%); a good number were not educated 114(45.1%) who were mainly home maker 208 (82.2%). Most of the respondents were belonging to the Nuclear family 158 (62.5%). Majority of the respondents 146 (57.7%) were living on rent in the semi-pacca house 117 (46.2%) followed by pacca house 89 (35.2%). Majority of the respondents 119 (47%) were belonging to the III class followed by IV class 82 (32.4) and very less no of the respondents 4 (1.6) were belonging to I class and V class 3 (1.2%) (Table 1).

ISSN- 2394-5125 VOL 7, ISSUE 04, 2020

Knowledge Regarding Reproductive Tract Infection:
Regarding basic knowledge, 87.4% respondents were never heard of any cause of Reproductive Tract Infections/ Sexually Transmitted Infection. 12.6% knew that it can be transmitted through mother to baby, only 10.7 % knew that it can be transmitted through unsafe sex and surprisingly only 4.7% knew through infected injection and 4.7% through infected blood (Table 2).

Very few could respond correctly the signs and symptoms of RTI/STI viz. Itching (20%), Vaginal discharge (17%), Lower abdominal pain (16.6%), Burning mutilation (16.6%) and Ulcers/ sores in Genitals (11.9%). Only 19.8% respondents knew that use of the condom can prevent them from RTI/STI. Most of the respondents responded that they may seek treatment at Govt. hospital (89.7%), followed by private hospital (85%), CHC (47%) and very few know about home remedies (7.9%) (Table 2).

Attitude towards RTI/ STI: Majority was aware of the cause of RTI/STI viz; mother to baby 54.5%, unsafe sex 52.2%, infected blood 49.8% and use of infected injections 49.8%. Respondents have very less awareness towards signs and symptoms of RTI/STI like Itching (19.4%), vaginal discharge (17.8%), lower abdominal pain (16.6%), burning mutilation (15.8%) and ulcers/ sores in genital area (12.3%). Very few respondents were aware of using condom (16.2%) is the precaution of the RTI. Most of the women were aware of the treatment and believe that a person who got infected by RTI/STI may seek treatment at Govt. Hospital (89.3%), (86.2%) at private hospital, (42.3%) in Community Health Center, and very few believe in the home remedies (7.1%) (Table3).
According to the symptoms reported by the respondents Maximum respondents complained that that they faced itching (45.1%), followed by lower abdominal pain (34.2%) and vaginal discharge (34%), burning mutilation (22.9%), and very less ulcers sores in genital area (12.3%) (Table 4).
Discussion: Knowledge is a logical prerequisite to the intentional performance of health-related behaviors. The Knowledge-Attitude-Behavior (KAB) (Flegal, 1996) model proposes that behavior changes gradually. As knowledge accumulates in a health behavior domain, changes in attitude are initiated. Over some period of time, changes in attitude accumulate; resulting in behavioral change. This study was undertaken among early married women who are living in slums, to assess their awareness about RTI/ STI. It is a well-established fact in medical literature that prevention of RTI cannot be obtained unless the population including high-risk groups knows how to protect themselves. The main objective of the study was to know about the knowledge, and attitude towards the RTI of the early married women who are living in the urban slums of Lucknow district. A study done by Vidya Rani et al, 2016 showed nearly half of the early married women living in rural area were suffering from at least one symptom of RTI due to low level of awareness and perception about symptoms of reproductive morbidity. Our study also revealed the similar findings. A study done by Quansar et al, 2018 found that 30.30% women didn't have any knowledge regarding symptoms of RTI/STI. It was noticed in the present study that, 87.4% respondents had no any knowledge about any symptom of RTI/ STI. The knowledge regarding symptoms of RTI is less than the previous study. Our study revealed that the very few respondents know about the symptoms of RTI/STI. The common symptoms they know was Itching (20%), Vaginal discharge (17%), Lower abdominal pain (16.6%), Burning mutilation (16.6%) and Ulcers/ sores in Genitals (11.9%). In a study by Quansar et al, 2018 the foul smelling discharge (21.2%) was reported as a common symptom. Other symptoms reported were itching in the genital region (13.3%), curdy white discharge (11.1%) and abdominal pain (12.12%). In present study the prevalence of RTI is higher (64%) than the studyconducted among the women belonged to reproductive age (14.5%) by Ravi et al, 2013 and 9.7% (Chaudhary et al, 2019). In present study the prevalence of RTI is higher because the subjects recruited for the study were belonged to the age 15- 24 years, majority were illiterate (45%), home maker (82.2%) and belonged to the age group 21-24 years. A study conducted by Chaudhary et al, 2019 reported that the prevalence of RTI was maximum (51.6%) in the age group of 18–25 years, (74.2%) in illiterate women, (45.2%) in unemployed women and 71% in women, living in slums. Our study participants represent almost similar picture of socio- demographic profile and high prevalence of RTI symptoms as reported by the study subjects. According to a study done by Shethwala and Mulla, 2014 prevalence was higher (88.7%) in home makers than women working outside the home (11.3%). The most common symptoms complained by the women was itching (45.1%), followed by lower abdominal pain (34.2%) and vaginal discharge (34%), burning mutilation (22.9%), and very less ulcers sores in genital area (12.3%). In previous study done by Chaudhary et al, 2019 most common presentation was genital discharge, i.e., in 52.8% of women followed by 45.2% lower abdominal pain, 31.7% itching of genitalia, 27% burning micturition, 26.8% increase frequency of micturition, 24.2% erythema of genitalia, and 22% backache. In another study conducted by Shethwala and Mulla, 2014 it was represented that the common symptom of RTIs/STDs was vaginal discharge (98%) followed by lower abdominal pain (76%). According to Kamini et al., (2014), vaginal discharge was the most common symptom and found in 69% of the study population. According to

ISSN- 2394-5125 VOL 7, ISSUE 04, 2020

Balamurugan et al. (2014), the majority of women, i.e., 32.7% complained of abnormal vaginal discharge followed by lower backache in 31.4% and lower abdominal pain in 23.5% of women only.

Strength of the study

This is the novel study on the assessment of knowledge and awareness in the district of Uttar Pradesh among early married women living in the urban slums. The outcome of the study has helped us to organize behavior change communication, teaching modules for sustainable changes in cognitive domain of early married women and their caregivers.

Limitations of the study

We had several limitations in present study. Firstly, only early married women belonging to a specific age group were limited. Secondly, some participants could not be enrolled for the study due to time barrier. This was a self-funded cross-sectional study and the data collection was based on only symptoms reported by early married women.

Future directions of study:

The research group of this study feels that similar studies in different locations in other districts are required with a larger and appropriate sample size to make the results truly representative of our state for which we are planning for extramural funding.

Conclusion

To summarize, the present study provides a picture of the current scenario of knowledge and awareness of Reproductive Tract Infections/ Sexually Transmitted Infections. There was poor knowledge and awareness regarding prevention and complications in majority of the study participants. This emphasizes the need for more awareness activities in the form of mass campaigns in the urban slum areas of India.

Recommendations

In this study, certain deficit areas in knowledge regarding Reproductive Tract Infections/ Sexually Transmitted Infections were identified which needs to be addressed through a well planned community based awareness program focusing on behavior change.

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Table- 1: Socio- demographic Profile of the Respondents

Item	Category	Number	Percentage
Age	15-20	42	16.6
	21-24	211	83.4
Marriage age	12-14	23	9.1
	15-17	230	90.9
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	Muslim	84	33.2
Caste	Gen	21	8.3
	OBC	122	48.2
	SC	96	37.9
	ST	14	5.5
Education	No education	114	45.1
	Primary	49	19.4
	Secondary	72	28.5
	Higher	18	7.1
Occupation profile	Working	45	17.8
	Home maker	208	82.2
Type of family	Joint	95	37.5
	Nuclear	158	62.5
Ownership of house	Rented	146	57.7
	Own	107	42.3
Type of house	Kaccha	47	18.6
	Pacca	89	35.2
	Semi pacca	117	46.2
Socio-economic class	I	4	1.6

ISSN- 2394-5125 VOL 7, ISSUE 04, 2020

	II	45	17.8
	III	119	47.0
	IV	82	32.4
	V	3	1.2

Table-2: Knowledge Regarding RTI/ STI

Item	Category	Response Yes	
		Number	%
Do you know about the cause of RTI/ STI?	Unsafe sex	27	10.7
	Infected blood	10	4.0
	Infected injection	12	4.7
	Mother to baby	32	12.6
Do you know about the Signs and symptoms of RTI/ STI?	Vaginal Discharge	43	17
	Lower abdominal pain	42	16.6
	Ulcers/ sores in Genitals	30	11.9
	Burning Mutilation	42	16.6
	Itching	52	20.6
Do you know the precaution of STI?	Use Condom	50	19.8
	Take medicine	165	65.2
Where the patients of STI/ STD may seek treatment?	CHC	119	47.0
	Govt. Hospital	227	89.7
	Private hospital	215	85.0
	Home remedies	20	7.9

Table: 3 Attitude towards RTI/ STI

Item	Category	Response agree	
		Number	%
Do you think that one should be aware of these as these may cause RTI/STI?	Unsafe sex	132	52.2
	Infected blood	126	49.8
	Use of infected injection	126	49.8
	Mother to baby	138	54.5
Do you believe that one should go for treatment if she faces these signs and symptom of RTI/STI?	Vaginal discharge	45	17.8
	Lower abdominal pain	42	16.6
	Ulcers/ sores in genital area	31	12.3
	Burning mutilation	40	15.8
	Itching	49	19.4
What do you think about these precautionary measures of RTI/STI?	Use condom	41	16.2
	Take medicine	153	60.5
Do you think that the infected person may seek treatment at these places?	Community Health Center	107	42.3
	Govt. Hospital	226	89.3
	Private hospital	218	86.2
	Home remedies	18	7.1

Table- 4: Prevalence of RTI/ STI

ISSN- 2394-5125 VOL 7, ISSUE 04, 2020

Item	Category	Response Yes	
		Number	%
	Don't have	91	36.0
Did you have any sign and symptom of STI?	Vaginal discharge	86	34
	Lower abdominal pain	88	34.8
	Ulcers/ sores in genital area	31	12.3
	Burning mutilation	58	22.9
	Itching	114	45.1

A STUDY ON MENSTRUAL SYMPTOMS AND RELATED PERSONAL HYGIENE PRACTICES AMONG WOMEN

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Abstract: Menstruation is the normal vaginal bleeding that occurs as part of a woman's monthly cycle. Due to the hormonal changes and ovarian changes PMS symptoms, ovulation, period pain and other symptoms occur. Menstrual hygiene is an issue that is insufficiently acknowledged.
Objectives: This study focuses on the menstrual symptoms of women, factors that affect menstruation and their practices during menstruation.
Methods: A descriptive, cross-sectional study was conducted among 250 women of urban slum area of Lucknow.
Results: Out of 250 respondents, Most of the women of slums 48% complained lower back pain, 42.8% women of slums complained lower abdominal pain. Most of the respondents 66.4 were using cloth at the time of menstruation. 82.8% women of slum used to take daily bath during menstruation.
Conclusions: Most of the women use cloth during their menstruation except sanitary pads at the time of their periods. Most of the women taking regular bath but ignore some works such as worship God, not having pickles and live separately.

Keywords: Menstruation, Early married women of slum.

Introduction

Menstruation is a physiological process, which is associated with the ability to reproduce. The name "menstruation" comes from the Latin "menses" meaning moon, with reference to the lunar month and lasting also approximately 28days long. Its onset profoundly changes a young woman's life. Menstruation has always been surrounded by different perceptions throughout the world. Nowadays, there is some openness toward menstruation, but differences in attitude still persist between different populations (Cronje HS & Kritzinger IE, 1991) Menarche is a milestone in a woman's life as it denotes the start of reproductive capacity. Unfortunately, however, there is gross lack of information on menstrual preparedness and management among adolescent girls, a situation made worse by the shyness and embarrassment with which discussions about menstruation is treated. (Ray Sudeshna & Dasgupta Aparajita, 2012) It is a right of women and girls to have necessary knowledge, facilities and environment for managing menstruation hygienically with their dignity. In Indian context, there are scare data on menstrual practices among adolescent girls due to population diversity and cultural practices. It was therefore considered as relevant to investigate the menstruation hygiene practices and utilization of health care services by adolescent girls specially residing in slum area. The data obtained are beneficial for planning a program for improving the awareness and hygienic practices during menstruation for promoting quality of life in slum women and girls populations.

Menstruation is surrounded by various psychological and religious barriers due to lack of knowledge about the scientific process of menstruation. Many girls residing in slum areas are unaware of what actually happens during menstrual cycle. Although menstruation is a natural process, it is linked with several perceptions and practices within the community, which sometimes may result in adverse health outcomes.(Yasmin S. et al, 2013) Hygiene during menstruation is an inevitable part of woman's life. Various aspects such as physiology, pathology and psychology of menstruation have been found to associate with health and well-being of women; hence, it is an important issue concerning morbidity and mortality of female

population. (Bachloo T. et al, 2016) During this period a woman is regarded most vulnerable for developing any kind of reproductive tract infections, urinary tract infections, and various sexually transmitted diseases. Menstrual hygiene deals with special healthcare needs and requirements of women during monthly menstruation or menstrual cycle. (Barathalakshmi J et al, 2014) Particularly in poor countries, girls and women face substantial barriers to achieving adequate menstrual management. (Kuhlmann A S et al, 2017) Therefore, increased knowledge about menstruation right from childhood may escalate safe practices and may help in mitigating the suffering of millions of women. (Yasmin S et al, 2013)

Objectives

1. To identify the issues and challenges of menstruation encountered by the early married women living in slums of Lucknow.
2. To identify the menstrual symptoms of women living in slum and factors that affect menstruation.
3. To determine the existing practices of menstrual hygiene among women living in slum.

Methodology

A cross sectional descriptive study was conducted in the slum of Lucknow city. Participants belonging to the age group of 15-30 years who were early married were selected for the study. Purposive sampling was applied for selecting the subjects in the desired age group. A total of 250 sample size was selected for this study in the Lucknow Region.

Inclusive Criteria: Selected individuals belonging to the age group of 15-30 years.

Exclusive criteria: Women belonging to schedule tribes were excluded from participating in the study.

A structured questionnaire was developed based on the literature review on various studies already conducted to assess the Symptoms of menstruation and related personal hygiene practices of early married women of slum (Rajanbir Kaur et al (2018), Tanvi Nitin Deshpande et al (2018)). A predesigned and pretested questionnaire was applied for data collection. After pretesting, necessary modifications were made in the questionnaire. The data were collected by house to house visit of the study subjects. Each study subject was briefed about the purpose of the study. The participants were assured of confidentiality and a verbal consent was sought from each of them before initiating the interview. This was followed by collection of data by interviewing study subjects regarding different socio demographic variables, awareness about menstruation, source of information regarding menstruation, practices followed related to menstrual hygiene.

Data analysis: The data were analyzed using IBM SPSS (version 20). The results were expressed mostly in frequencies and percentages.

Result and discussion

Table 1: Socio economic status of the respondents

Characteristics	Details	Frequency	Percentage
Age	15-20	70	28
	21-25	119	47.6
	26-30	61	24.4
Religion	Hindu	209	83.6
	Muslim	41	16.4
Caste	General	50	20
	OBC	128	51.2
	SC	72	28.8
Education	Illiterate	142	56.8
	Primary	90	36
	Middle	6	2.4
	High school	4	1.6

	Intermediate	6	2.4
	Graduate/PG	2	.8
Marital Status	Married	222	88.8
	Divorced	15	6.0
	Widow	9	3.6
	Separate	2	.8
	Gauna not performed	2	.8
Employment	Working	150	60
	House wife	100	40
Monthly income	0-5000	97	38.8
	5001-10000	100	60
	10001-15000	53	21.2
Type of Family	Joint	30	12
	Nuclear	220	56.8
	Extended	78	31.2

Table 1 depicts that 47.6 % women were belonging to 21-25 years group followed by 28 %. Only 24.4 % respondents were belonging to 26-30 age group. 83.6 % respondents were Hindu and 16.4 % respondents were Muslim. Most of the respondents 51.2 % were OBC followed by 28.8 % were SC and only 2o% women were General. Most of the women were illiterate 56.8% followed by 36% respondents got primary education. 2.4% respondents were middle, 2.4% respondents were intermediate, 1.6% respondents were high school and only .8 % respondents were Graduate or Post graduate. Most of the respondents were married and living with their husband. 6% respondents were divorced 3.6% respondents were widow, Very few respondents .8 % were separate and .8 % respondents' gauna was not performed. 60 % respondents were working and occupied in such profession as home maid, selling vegetables, cooking food etc and rest of the respondents 40 % were house wife. Mostly respondents 60% were belonging to 5001-10000 rupees monthly income group followed by 38.8 % respondent were belonging to 0-5000 rupees monthly income group and only 21.2 % respondents were belonging to 10001-15000 rupees monthly income group. Most of the respondents were belonging to the nuclear family followed by extended family 31.2 and only 12 % respondents were belonging to joint family.

Table 2 availability of home amenities

Characteristics	Yes		No	
	Frequency	Percentage	Frequency	Percentage
Radio	100	40	150	60
DVD	21	8.4	229	91.6
TV	176	70.4	74	29.6
Tape recorder	27	10.8	223	89.2
Mobile	203	81.2	47	18.8
Freeze	67	26.8	183	73.2
Cooler	81	32.4	167	66.8
Fan	140	56	110	44
Washing Machine	7	2.8	243	97.2
Heater	219	87.6	31	12.4
Grinder	11	4.4	239	95.6

It is noticed in table 2 that mostly respondents had low cost home amenities at their home. 87.6 % respondents had heater, 81.2% respondents had mobile, 70.4 % respondents had TV, 56 % had fan, 40 % had radio, 32.4 % had cooler, 26.8 % respondents had freeze, 10.8 % had tape recorder, 8.4% had DVD, 4.4 had grinder and only 2.8 % respondents had washing machine.

Table 3 Other home amenities

Characteristics	Yes		No	
	Frequency	Percentage	Frequency	Percentage
Electricity	201	80.4	49	19.6
Latrine	190	76	60	24
Drinking water	130	52	120	48
Public tap	116	46.4	134	53.6
Cycle	231	92.4	19	7.6
Scooter	33	13.2	217	86.8

It is reported in table 3 the most of the respondents 92.4 % had cycle, followed by 80.4 % had electricity, 76% respondents use latrine, 52 % respondents had drinking water, 46.4% had public tap and only 33% had scooter at their home.

Table: 4 Type of absorbent utilized during the menstruation period

Details	Frequency	Percentage
Use of cloth	166	66.4
Use of cotton	48	19.2
Use of Sanitary pads	36	14.4

Table 4 depicts that most of the respondents 66.4 were using cloth at the time of menstruation due to low income followed by 19.2 % women use cotton and only 14.4 % women use sanitary pads during menstruation period.

Table 5 Consequences of menstruation

Details	Never		Seldom		Always	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Lower abdominal pain	46	18.4	97	38.8	107	42.8
Lower back pain	43	17.2	87	34.8	120	48
Vaginal discharge	91	36.4	101	40.4	58	23.2
Vomiting	95	38	104	41.6	51	20.4

Table 5 shows that most of the women of slums 48% complained lower back pain during their menstruation period, 42.8% women of slums complained lower abdominal pain followed by 23.2% complained vaginal discharge and only 20.4% women complained vomiting during their every menstruation. 41.6 % women complained vomiting, 40.4 % women complained vaginal discharge, followed by 38.8 % respondents complained lower abdominal pain and 34.8 % complained lower abdominal pain during their some menstruation period and sometimes not.

Table 6: Factors affecting Women's menstrual cycle

Details	Never		Seldom		Always	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Stress	82	32.8	66	26.4	102	40.8
Extreme emotion (Good/ Bad)	119	47.6	69	27.6	62	24.8
Weight change	121	48.4	80	32	49	19.6
Excessive physical activity	122	48.8	70	28	58	23.2
Travelling	121	48.4	80	32	49	19.6

Table 6 reports that 40.8 % respondents complained that stress affect their menstruation followed by 24.8 % women complained that extreme emotions (good/bad) affect their menstruation, 23.2 % women complained that excessive physical activity affect their menstruation, 19.6% complained that travelling affect their menstruation and 19.6% complained that extreme emotions (good/bad) affect their menstruation frequently. 32 % respondents complained that travelling affect their menstruation, 32 % women complained that weight change affect their menstruation, followed by 28 % women complained that excessive physical activity affect their menstruation, 27.6% complained that extreme emotions (good/bad) affect their menstruation and 26.4% complained that stress affect their menstruation some times.

Table 7: Hygiene practices during menstruation

Details	Never		Seldom		Always	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Daily bath	19	7.6	24	9.6	207	82.8
Separate living	31	12.4	14	5.6	205	82
Not have pickles	35	14	17	6.8	198	97.2
Not to worship God	18	7.2	9	3.6	221	89.2

It is noticed in table 7 that 82.8% women of slum used to take daily bath during menstruation, 9.6 % respondents sometimes take bath and sometimes not and 7.6 % women never take bath during their menstruation period. 82% women always live separate from their husband during their menstruation period. 5.6% slum women sometimes live separately from their husband during their menstruation whereas 12.4 % slum women don't live separately from their husband during their menstruation. Most of the women 97.2 % do not have pickles or sour food items during their menstruation, 6.8 % of slum women sometimes don't have pickles or sour items during their menstruation and only 14 % slum women never used to have pickles during their menstruation period. Most of the slum women never worship God during their menstruation period, 3.6 % slum women sometimes not to worship God during their menstruation time whereas 7.2% slum women always worship God even during their menstruation.

Conclusion

The present research paper shows that Most of the women living in slums follow unhygienic practices. Most of the women living in the slums are using cloth or cotton cloth during their menstruation time. Very less respondents use sanitary pads during their menstruation. Mostly women faced lower back pain and lower abdomen pain during their menstruation. Mostly women don't worship God, live separate from their husband and not have pickles during their menstruation. Most of the respondents take daily bath during their menstruation.

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