

# ASSESSMENT OF UTILIZATION OF MATERNAL HEALTH CARE SERVICES AMONG WOMEN IN SELECTED URBAN SLUM AREAS OF WEST BENGAL

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## Abstract

Proper utilization of maternal health care services by the women is very much important for good health and better outcome after delivery both for mother and baby. A descriptive study was undertaken to assess the utilization of maternal health care services among women in selected urban slum areas of West Bengal. The objective of the study was to assess the utilization of maternal health care services among women. The conceptual framework of the study was based on Andersen's behavioral model. Non-experimental survey approach and descriptive survey design was adopted to conduct the study among 100 postnatal women in urban slum areas of Naihati, North 24 parganas. The tool selected were semi-structured interview schedule to obtain information on socio-demographic variables and structured interview schedule to obtain information on utilization of ANC and PNC services and record analysis proforma to collect data about ANC and PNC services utilization. Reliability was established by inter rater method and Cronbach's alpha formula. The study findings revealed that 31.81% women received ANC services, 11.8% women received PNC services and 47.61 women received both ANC and PNC services.

The result of computed chi-square indicate that there was statistically significant association between PNC services utilization and education of women. The study also revealed that there was positive association between number of child and utilization of ANC and PNC services. Findings of the study has implication on nursing practice, nursing education, nursing administration and nursing research. A similar study on large sample and with qualitative approach can be done.

## CHAPTER – I

### Introduction:

#### Background of the study:

Some physical and psychological changes take place during the pregnancy and every pregnant woman has experienced all changes during this period. So proper antenatal care (ANC) services helps us to identify the problem of the women during antenatal period and postnatal care (PNC) services helps to identify the problem during postnatal period. It helps us to provide prompt care and treatment to the pregnant women who are at risk. Maternal Health Care is the preventive, promotive, curative and rehabilitative services provided to the mother and child. Maternal health is a major challenge in most developing countries, including India. Motherhood is the most vital position a lady can have in her life but are often a life threatening event also. During pregnancy, any woman can develop serious, life-threatening complications that need medical aid. In the International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, 1992 (ICD-10), For every woman who dies, 30–50 women suffer from injury, infection, or disease. Pregnancy related complications are among the leading causes of death and disability for ladies aged 15–49 in developing countries. The desired outcome of pregnancy is always a healthy mother and a healthy baby.<sup>1</sup>

As nobody can predict which woman will develop pregnancy-related complications, it is essential that all pregnant women have access to high quality obstetric care throughout their pregnancies. Women's difficulties during pregnancy and poor perinatal outcome are mostly associated with non-utilization of antenatal and delivery care services and poor socioeconomic conditions of the mother. Poorer outcomes are seen in unbooked than booked patients. In low and middle income countries, almost half of all pregnant women have a minimum of 4 antenatal care visits.

In India, the R.C.H. programme try to meet a minimum of 4 antenatal checkups which should include a weight and vital sign check, abdominal examination, immunization against tetanus, and iron and folic acid prophylaxis, as well as anaemia management.<sup>2</sup> The maternal mortality ratio in India is reduced by 77%, from 556 per 100000 live births in 1990 to 130 per 100000 live births in 2016 reported by WHO.<sup>3</sup> But the risk of maternal mortality is the highest for adolescent girls under 15 years old. Troubles in pregnancy and childbirth are play key role for death among adolescent girls in most developing countries, including India.<sup>4</sup> Their inadequate knowledge about pregnancy care, nursing and immunization leads them to complications of pregnancy and ill health of infants. This situation is more just in case of primigravida females (pregnant for first time), because they need no previous experience of pregnancy. Their lower educational status and other social factors limit their access to proper ANC care.<sup>5</sup>

Pregnancy is a matter of pride and joy in every woman's life. In this period most important events that take place in the life of Indian women. Periodical antenatal visits may raise the awareness about the need for care at delivery or give women and their families, familiarity with health facilities that enable them to seek help more efficiently during crisis of poor access and utilization of antenatal and other health services continue to contribute to high maternal mortality rate along with other socioeconomic factors. Improving utilization of maternal health care services is a global challenge for the health system in low and middle income countries.<sup>6</sup>

Antenatal care (ANC) is that the care a lady receives throughout her pregnancy so as to make sure that both the mother and child remain healthy. Almost 90% of maternal deaths occur in developing countries and over half 1,000,000 women die annually due to pregnancy and childbirth related causes. The risk of maternal mortality and morbidity also as neonatal deaths are often reduced substantially through regular and proper antenatal care, check-up and delivery under safe and hygienic conditions. Studies showed that the high levels of maternal mortality in developing countries and research revealed causes of maternal death have repeatedly gave importance for the necessity of prenatal care and availability of trained personnel to attend to women during labor and delivery.<sup>7</sup> In developing countries, women often encounter serious health risks during pregnancy either for themselves (e.g. anemia, edema, eclampsia etc) or for their children (e.g. sepsis and pneumonia, birth asphyxia and injuries, tetanus, congenital anomalies, with low birth weight etc). Maternal health services usually are preventive and if there is underuse of services resulting in poor health outcome. <sup>8</sup>

Government of India has launched various health care services to improve the health of the mother and child such as Maternal and Child Health Care Services, Dakshata- PIB, Mother and Child Tracking System, Janani Suraksha Yajana ( JSY). Pradhan Mantri Surakshit Matritva (PMSMA) etc. Currently SBA training has been going on in India to improve the maternal health of the women. The delay in deciding to go to the clinic, delay in actually arriving at the clinic, and delay in getting care at the clinic are the main cause of poor utilization of health services. As per Government of India guideline the services provided to the antenatal mother are early registration, at least 4 antenatal visits, proper antenatal check up i.e. weight, B.P., Pulse, temperature, fetal heart rate monitoring, fundal height measurement, abdominal palpation and routine blood and urine examination. The services provided to the postnatal mother are weight, B.P., Pulse, temperature, pallor check up, height of the uterus measurement at regular interval, also provide home care to the postnatal mother in 7th day, 21st day and 6th week of postnatal period.<sup>10</sup> A community based cross sectional descriptive study carried out from March 2010 to April 2011 in which among the 400 women included in the study, coverage of full Antenatal care (ANC) services was reported by 20% respondents. While 95% women were immunized with Tetanus Toxoid, only 25% women had consumed 100 or more Iron and Folic acid tablets, 79% women had three or more antenatal check-ups and 53% had registered themselves in first trimester of pregnancy. So there is lack of proper utilization of antenatal care services.<sup>11</sup>

Antenatal service is a crucial strategy for improvement of maternal and child health, reduction of maternal mortality and death. But mere presence of this service is not enough. Utilization of the antenatal service is

that the most vital aspect and there are many socio demographic factors that influence the ladies for its utilization. A study carried out to assess the utilization of antenatal services in the urban slums of Jorhat municipality, Assam and the socio - demographic factors affecting it. In this study adequate utilization of antenatal service was only 19% and 5.7% of them did not have any antenatal service at all as compared to 37.5% among illiterates. Among women from the joint families who didn't have any antenatal service was only 4.8% as compared to 19.2% of girls from nuclear families. Majority of women had inadequate utilization of antenatal service in the slum areas and education played a very important role.<sup>12</sup>

Dr. T. Srigouri, Dr T. Nagaraju et. al. conducted a descriptive Cross-sectional study in all notified urban slums of Kurnool town with a population 1,18,587. Out of 270 mothers under study, most 229(84.8%) of the mothers had their first antenatal visit immediately following the missed period .182(67.4%) mothers had antenatal check-ups at Anganwadi canters while . 259 (95.9%) of mothers had complete immunization and only 11 (4.1%) had incomplete T.T. immunization, 237(87.8%) had consumed  $\geq 100$ tablets.<sup>13</sup> Neeta P. N revealed that maternal mortality and morbidity remains high even though national programs exist for improving maternal and child health in India. Many national programs exist for improving maternal and child health in India, maternal mortality and morbidity remains still high. This could be related to several factors, an important one being delay in seeking care of maternal health-care services, especially among the rural poor and urban slum women due to lack of information or access to health-care services, as stated by the investigator.<sup>14</sup>

Due to urbanization there are various challenges showed that the public sector urban health delivery system, especially for the poor, has so far been sporadic, far from adequate, and limited in its reach. There are large number of doctors in urban areas per a thousand populations as compared to rural areas (80 percent of the doctors serve in urban areas) and do not face the transport problem as compared to rural areas, yet doctors are functionally not available to a majority of the urban poor population. Cost, timings, distance, attitude of health providers and other factors effects the proper utilization of secondary care and private sector facilities by most of the poor urban residents. The health of the urban poor is considerably worse off than the urban middle and high income groups and is may be even worse than the rural population.<sup>15</sup>

Gaining an appropriate amount of weight during pregnancy has been shown to positively influence fetal and maternal health during pregnancy, immediately postpartum, and well into the longer term . Gestational weight gain (GWG) during a woman's first pregnancy may be a significant predictor of her weight gain during a subsequent pregnancy. Excessive GWG is related to an increased risk for maternal hypertensive disorders and macrosomia for all maternal body mass index (BMI) categories. Two of the Maternal, Infant and Child Health (MICH) objectives listed in Healthy People 2020 are to extend the proportion of girls who gain the recommended amount of weight during pregnancy and to extend the proportion of girls delivering a birth who had a healthy weight before pregnancy. In 2009, the Institute of medicine revealed revised guidance on GWG that took account of the mother's pre-pregnancy BMI for the suggested total GWG and weekly weight gain during the second and third trimester. In 2013 the American College of Obstetricians and Gynecologists endorsed the 2009 IOM GWG by maternal BMI recommendations.<sup>16</sup>

This retrospective study examines data on GWG during a population of girls who received their prenatal health care at Geisinger between 2006 and 2015. The aims of the study are to characterize GWG for singleton term births during this largely non-Hispanic white, rural population, to assess whether there has been any change in the patterns of GWG during this population over the ten-year period in response to the 2009 IOM recommendations and to spot maternal factors related to GWG outside of the IOM recommendations.<sup>17</sup>

A study carried out at Tiagry, Ethiopia 2016, each year 287,000 women die from complications related to pregnancy and childbirth, and about 99% of these deaths occur in developing countries. The first hours, days and weeks after childbirth are a dangerous time for both the mother and neonate. Postnatal care prevents the maternal mortality and child morbidity and mortality. All the facilities scored below 80% showing that the standard of postnatal care offered to clients within the hospitals of Tigray was poor and below standard. Human and material resources were inadequate for provision of comprehensive and quality postnatal care altogether the hospitals. The process of service provision which entails client monitoring and examination wasn't in line with the postnatal women. WHO recommendation thinks to lack of essential equipment and workload. Therefore, to supply quality postnatal services to enhance the maternal and neonatal health the government has got to provide basic infrastructure for the hospitals. In addition, refresher training courses for midwives in maternal and neonatal health with emphasis on postnatal care are recommended.<sup>18</sup>

## Need of the study:

Pregnancy and childbirth are inextricably a part of women's lives. During pregnancy there is progressive anatomical, physiological and biochemical changes both in the genital organs and to whole system of the body. So women need special care and attention for adaptation to the increasing demands of the growing fetus. In postnatal period following childbirth the body tissue, specially pelvic organs revert back approximately to the prepregnant state both anatomically and physiologically. So women need good care and supervision at least upto 42days after delivery.<sup>13</sup> Women were found to seek treatment only when their health problem caused great physical discomfort or when it affected their work performance.<sup>10</sup> Pregnancy being a phenomenon during a women's life, are often assumed that the use of antenatal care are going to be bare minimum during this period among the slum women. Hence it is important to determine the utilization of antenatal services by the women of the slum areas.<sup>12</sup>

The key reasons behind the high Maternal Mortality Rate in the state are low literacy levels among population, difficult geographic terrain in some parts of the state, inadequate availability and lower levels of utilization of emergency obstetric care services along side lower levels of utilization of antenatal care, safe delivery and post natal care services . Inadequate availability of health infrastructure and resources along side huge economic inequity, gender disparities, societal norms and attitudes of community and repair providers could be associated with low levels of utilization of health care services in the state.<sup>15</sup>

Following the population boom, cities become the predominant mode of living and therefore the major challenge for public health within the 21st century. The urban population is projected to reach 66% by 2050. Currently In Africa 40% and in Asia 48% populations live in urban settings. They are urbanizing faster than the other region of the world. In connection with poor housing conditions and lack of access to safe water and sanitation access and utilization of maternal health services remain challenging for some residents of urban settings in the country.<sup>21</sup> Globally, about 830 women die from pregnancy or child related complications around the world every day. It was estimated that in 2015, roughly 303, 000 women have died during and following pregnancy and childbirth. Kaba Mirgissa , Taye Grima et. al. (2017) revealed in their study that inspite of service utilization in urban setting believed to have been better over the years , still owmen in urban settings do not use available maternal health services. Especially women living in slum areas tend to neglect use of available health services.<sup>22</sup>

Rapid urbanization in India is fuelling a growth in urban poverty, particularly in urban slums where the quality of life is extremely poor. There have been limited efforts to capture the health of the population living in urban slums and most severely affected are the women of childbearing age and children.<sup>19</sup> Sharma Nidhi, Kumar Kiran et. al.(2017) had found in their study that 31.0% women had not attending any antenatal visit and 58.4% of respondent women attended at least one antenatal visit , 57.1% women consumed <100 IFA tablets. So the utilization of antenatal care services was found to be poor in study population.<sup>21</sup>

Postnatal period is a vulnerable time , because most maternal and newborn deaths occur during this period , especially immediate after childbirth. So women need immediate postnatal care after 4th stage of delivery upto 42 days. Pandey Dhruvendra ,Meshram Priyanka et. al. (2019) had revealed in their study that 3.3% mother did not receive a single postnatal visit , 35% of mother received 2 PNC visits . So the utilization of postnatal services is still poor in the urban areas even though the physical accessibility was adequate.<sup>24</sup> The researcher felt need to identify the utilization of maternal health care services received by the women in urban slum areas.

## Purpose of the study:

This study is aimed to explore the utilization of maternal health care services during antenatal (ANC) and postnatal (PNC) period.

## Statement of problem:

Assessment of utilization of maternal health care services among women in selected urban slum areas of West Bengal

## Objective of the study:

1. To identify the utilization of maternal health care services.
2. To find out the association between the utilization of maternal health care services with selected demographic variables.

3. To identify the relationship between the utilization of maternal health care services with selected demographic variable

**Variables:**

- **Research variables**
- ✓ Utilization of maternal health care services.
- **Demographic variables:** Age, , age at marriage (in years), age at child birth , parity, educational status, occupation , per month family income, number of living child and distance from the health care facility.

**Delimitations:**

Study will be delimited to the selected urban slum areas of West Bengal.

**Assumption:**

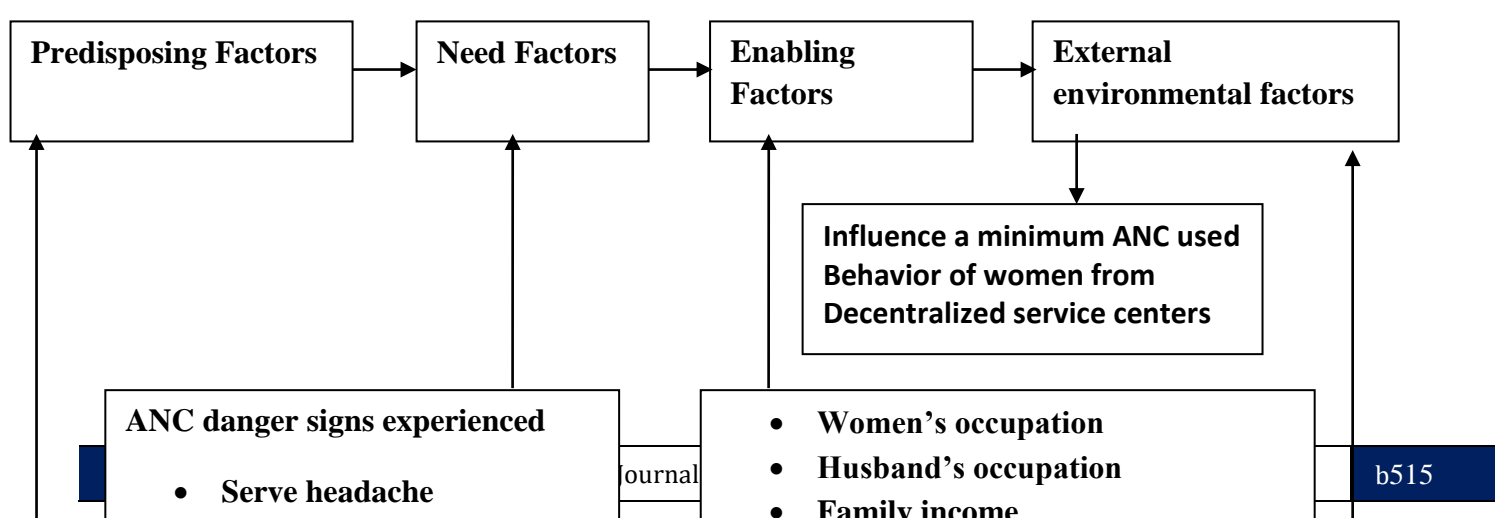
It has assumed that subject responses will reflect the actual fact.

**Operational definitions:**

- **Socio-demographic characteristics:** Socio-demographic characteristics includes age, , age at marriage (in years), age at child birth , parity, educational status, occupation , per month family income, number of living child and distance from the health care facility.
- **Utilization of Maternal health care services:** Utilization of maternal health care services refers to practical and effective use of maternal health care services provided to maintain the health of women during pregnancy and the postpartum period as measured by structured interview schedule.

**Conceptual framework:**

In the present study, based on Andersen’s behavioral model\_of health care utilization theory, age as a two-categorical variable (age at marriage and age of child birth), women’s and husband’s education (college or higher, secondary, primary, no education), parity, number of child and decision making regarding use of household resources (husband only, husband/wife, wife only) were examined as predisposing determinant factors of adherence to the recommended number of visits to ANC clinics. Enabling factors were women’s employment (skilled employee, small business/service, farmer, housewife), husband’s employment (skilled employee, merchant, farmer, other), home visits HEWs (more than one, one, none), distance to ANC (under 30 minutes, 30 minutes or more) and household income. Need factors were severe headache, vaginal bleeding/gush, swelling of hands/face, high fever, severe pain in the abdomen, high blood pressure, and blurred vision, each classified as a binary variable. Using these external factors enabled us to explore differences in ANC utilization across space and to consider the available decentralized health facility type (health post, health center, hospital/clinic) as an enabling factors.



## **Fig-1 Conceptual framework for health-service utilization behavior modified from Andersen's behavioral model**

### **Organization of the report:**

This introductory chapter dealt with Background of the study, Need of the study, Purposes of the study, Statement of the problem, Objectives of the study, Variables, delimitation of the study, assumptions of the study, operational definition and Conceptual framework of the study. The rest of the study will be arranged in the next four chapters.

Chapter –II will present a review of literature with research and non-research articles related with the study.

Chapter-III will explain the research methodology adopted for the study and plan of data analysis.

Chapter- IV will represent the discussion on analysis and interpretation of data.

Chapter-V will describe the major findings, conclusion and limitations of the study along with further recommendations.

The report will be completed with selected references appendixes.

### **Summary:**

The chapter deals with background of the study, Need of the study, Purposes of the study, Statement of the problem, Objectives of the study, Variables, delimitation of the study, assumptions of the study, operational definition and Conceptual framework.

## **CHAPTER- II**

### **Review of Literature:**

The chapter presents the review of detected literature, relevant directly or indirectly to the present study. The review is an important step in the development of research project. Though the literature review the researcher generate a picture of what is known about a particular situation. A literature review is a summary of previous knowledge generated on the topic of study. It is believed by the researcher that research can't be conducted in a vacuum, their studies are undertaken within the context of an existing base of knowledge. It helps the investigator to gain knowledge, insight into the various aspects of the problem under study. It helps

to develop research investigative tools and to improve research methodology. Review of literature is one of the key steps in research process. Literature reviews provide a proper guide to a particular topic.

The literature review was based on extensive survey of books, journals, international nursing studies and data base search which helped the investigator to gain deeper insight into the problem and gain information on what had been done in the past.

The literature reviews for the present study is organized under the following headings:

**A. Literature review related to utilization of antenatal care services.**

**B. Literature review related to utilization of postnatal care services.**

**A. Literature review related to utilization of antenatal care services:**

Pawar P. Sunita et.al. ( 2019 ) conducted a study on existing antenatal care practices and the factors associated with it among 400 women of reproductive age group in urban slums of Nanded city. That was a community based cross sectional descriptive study carried out from March 2010 to April 2011 in which 400 women reporting delivery in past two years. The finding of the study revealed that coverage of full Antenatal care (ANC) services was by 80 (20%) respondents. While 381 (95%) women were immunized with Tetanus Toxoid, only 98 (25%) women had consumed 100 or more Iron and Folic acid tablets, 315 (79%) women had three or more antenatal check-ups and 213 (53%) had registered themselves in first trimester of pregnancy. There was significant association between full antenatal care and woman's education, husband's education and occupation, religion and socio-economic status of family.<sup>11</sup>

Arora Priyanka and Tamber Aeri Bani et. al. (2019) conducted a study on healthy Asian women with a singleton pregnancy which specifically examined fetal-maternal outcomes relative to IOM-2009 guidelines were included. The findings of the study revealed that majority of pregnant Indian women achieved less Gestational Weight Gain (GWG) than the recommendations whereas a mixed trend was noticed among the other Asian pregnant women. Excessive GWG women were found to be due to macrosomia, large for fetal age and cesarean delivery followed by gestational diabetes and hypertension, whereas low birth weight, small for fetal age and preterm birth, was found to be related to low GWG women. The findings highlight the necessity for appropriate GWG limits across the various body mass index levels specifically for Indians and other Asian population.<sup>16</sup>

Yeoh Ping Ling, Hornetz Klaus et. al. (2018) conducted a study on recommended number of ANC visits for uncomplicated multipara. The finding demonstrated the absence of serious differences in terms of pregnancy outcomes between the ladies who had the primary ANC visit by 12 weeks and after 12 weeks. This study found that over half of the women had <80% of the recommended routine ANC content documented in their antenatal records (52% vs 48%). The study also showed that inadequate ANC content is associated with higher prevalence of preterm birth and provides suggestive evidence that inadequate utilization of ANC increases the risk of preterm birth. The study demonstrates relevance of using both utilization and content assessment in evaluating quality of ANC. The findings demonstrated logical consistency as compared with other studies. The initiation and continuous refinement of the evaluation methods will bring about an impetus to address gaps in ANC.<sup>24</sup>

Sharma Nidhi , Kumar Kiran et. al. ( 2017) conducted a cross sectional study in 1600 houses selected randomly in four slum areas of Amritsar city out of which 659 married women in the reproductive age group of 15-49 years who had at least 1 child and had delivered the last child in the last 3 years were found. The findings of the study revealed that 58.4% of respondent women attended at least one antenatal visit during last pregnancy, maximum (43.4%) attended 2 antenatal visits. Majority (64.4%) women had their first antenatal visit in 2nd trimester, (57.1%) women consumed <100 IFA tablets and majority (65.6%) women were fully immunized with 2 doses/booster of TT. Lack of knowledge about ANC services was the reason given by most of the women (31.0%) for not attending any antenatal visit. The utilization of antenatal care (ANC) services by women was found to be significantly associated with their age, education, birth order, socio-economic status and husband's education. The utilization of antenatal care services was found to be poor in study population.<sup>21</sup>

**B. Literature review related to utilization of postnatal care services:**

Chaka E Eshetu , Ahmed A Abdurahman et. all (2019) has conducted a study for assessing utilization and determinants of post natal care services in Ethiopia. In this study, they found that the utilization of postnatal care services in Ethiopia was 32% (95% CI: 21%, 43%) among the studies included. However, the utilization of postnatal care services reported by Ethiopian DHS 2016 was 17%. The difference might be due

to the fact that DHS 2016 reported only on those mothers who received the services in the first 2 days after birth while our study included all those receiving the service with 42 days after birth. They found strong evidence indicating that the use of postnatal care service was relatively high among women who received service from a skilled service provider, had a history of antenatal care utilization, were from an urban area, had access to a health facility in less than 5km and gave birth in health facilities.<sup>29</sup>

Wudineh Gelaye Kihinetu ,Azezu Asres Nigusie et.all. (2018) conducted a study on Postnatal care service utilization and associated factors among women who gave birth in Debretabour town, North West Ethiopia. This study indicated that more than half, 338(57.5%) of the participants had received PNC services with confidence interval of (53.4–61.6).The possible explanation for these differences may be increased governmental focuses from year to year in order to improve maternal and neonatal healths .in health facilities.<sup>30</sup>

Myo Kyi Phyu,Wilaphorn Thinkhamrop et. al. (2018) conducted a community-based cross-sectional study in selected villages of the Magway Region, Myanmar. A total of 500 married women who had children aged under 2 years were selected and interviewed with semi-structured questionnaires. The study showed that full PNC usage depends on mother's educational level of secondary or higher (adjusted odds ratio , belonging to higher income level , having male involvement , being of low birth order and having awareness of postnatal danger signs. Moreover, the presence of misconceptions on postnatal practice was identified as a strong barrier for adequate PNC usage. Out of 500 respondents, nearly half them (48.2%) were within the young adult age bracket of 25 to 35 years. Maximum of the women and their spouses were in primary or below level of education, accounting 72.2% and 63.8% respectively. About 64% of the interviewee had no quite five relations. More than half of the respondents (60.8%) had low incomes. About half of respondents (44.8%) encountered difficulty in reaching their nearest health centers. About 46.8% of the respondents were getting help from their husband regarding maternal care usage, like transportation assistance, and mutual discussion for seeking and receiving maternal healthcare services.<sup>25</sup>

Kardalkar Shruti, Sherkhane S Mayur et.al. (2018) conducted a study which was aimed at assessing the utilization pattern of postnatal care services and also to evaluate the probable factors modifying the utilization pattern. The overall utilization of postnatal care as a whole was 21.58% in the present study. It was found that 54.21% of the women were in the age group of 21-25years and 70% of them were Muslims. In the present study, 30% of the women had taken three or more than three visits, only 20.53% of them continued intake of calcium, iron and folic acid tablet, 64.21% and 85.26% were advised about family planning services and breast feeding practices respectively. The participants had low intake of IFA and calcium tablets, as they believed that these tablets will cause weight gain and will lead to further complications. The utilization of the maternal services was influenced by literacy, parity and socio-economic status.<sup>26</sup>

Kaba Mirgissa ,Taye Girma et. al. (2017) conducted a qualitative study using focus group discussions and in depth interview in six purposively selected urban settings of Ethiopia. A total of 11 Focus Group Discussions and 40 in-depth-interviews were completed with residents of those urban settings. The study findings revealed that 54% participants were 25-44 years of age while 22% were over the age of 45 years. Data also revealed that 13% participants did not have formal education while 15% have tertiary level education. Finding from this study had clearly demonstrated that women who resides in slum part of the urban settings are less likely to consider visit to health facility for A.N.C., delivery in health facilities and consider P.N.C. after delivery.<sup>20</sup>

Basu Mousumi, Chatterjee Sita et.al.(2015) conducted a study showed that 47.11% of the study population were between the age of 20-30 years; 68.95% were Hindu; 55.53% belonged to nuclear family; 60.53% family belonged to rural area; 53.42% women were multipara; 89.47% women were literate; 63.95% women were homemakers; 28.95% belonged to class III. Cent percent registered for ANC; 91.05% took three ANC visits; 65.26% registered during the primary trimester; weight and vital sign was measured in 99.74% and 98.95% respectively; 99.2% had an abdominal examination; 100% received Tetanus Toxoid; 43.96% consumed 100 Iron Folic Acid (IFA) tablets; 97.63% had blood test for Haemoglobin and blood typing; 92.11% had blood test for VDRL; 100% had an urine examination for albumin. All of the subjects were advised about diet and immunization ; 97.89% for rest/sleep; 82.89% for physical activity; 27.89% for personal cleanliness; 27.37% for family planning; 49.21% for breastfeeding and newborn care and 66.05% for warning signs. When we compare between women who went for a minimum of 4 ANC visits and who

didn't significant difference was observed in terms aged , educational level, socio-economic status (SES), timing of registration and parity.<sup>28</sup>

Patel Parimal, Patel Nilesh, Shah Yash et. al. (2015) conducted a study in urban slum area of Ahmedabad city. A total of 495 women, who had delivered within last 1 year, were interviewed and analyzed for the ANC services utilization, delivery practices, and factors affecting them. The study, various socio demographic factors (such as education of mother and father and socioeconomic status of the family) showed a big association with the use of ANC services. Utilization of A.N.C. services more likely to high in proportion as compared to other area. The study findings revealed that out of 495 women 86.1% had at least one ANC visit. 61.7% of mothers had less than four visits and 46.2% of mothers started attending ANC in the second trimester.<sup>23</sup>

Power L. Micheal, Lott. L. Melisa et. al. (2006-2015) had revealed in their study that the pattern of Gestational Weight Gain (GWG) with respect to pre-pregnancy maternal BMI in this population is concerning. Only 25.8% of girls during this population had total GWG within recommendations over the ten years of knowledge, with only 12.9% gaining within recommendations within the trimester. The majority of girls during this population gained above IOM recommendations, especially within the trimester, during which even a majority of girls with a traditional pre-pregnancy BMI gained above recommendations. Though overweight and obese women had numerically lower GWG than did women with normal BMI, this reduced GWG still generally exceeded the GWG recommended by IOM, resulting in an outsized proportion of those women gaining above the IOM recommendations, especially within the trimester (66.4 and 54.6%, respectively). The underweight women were gaining more weight, who disturbingly had a high percentage of GWG below recommendations. It is disconcerting that one third of underweight women gained below IOM recommendations during pregnancy, with almost half gaining below recommendations within the trimester. A concern is that the massive proportion of girls with GWG above recommendations is leading to providers failing to acknowledge women with GWG below recommendations. The majority of girls during this population gained above IOM recommendations, especially in the third trimester, during which even a majority of girls with a traditional pre-pregnancy BMI gained above recommendations. Overweight and obese women were especially likely to gain above recommendations.<sup>17</sup>

Sharma Arvind ,Thakur Sing Pritesh , Kasar Kumar Pradeep, et al (2014) conducted a study on 210 mothers. The study findings revealed that 82.4% mother were 15-24 years of age and 71.9% of mother received postnatal check-up within 10 days of delivery. Information related to the number of post-natal check-up, 36.6% of mothers received one postnatal check-up, 18.5% two, 14.7% three and just one .9% received four post natal check-up. 151 (71.9%) mother received post natal check up within 10 days of delivery out of 210. Out of those , 77 (36.6%) received one postnatal check-up, 39(18.5%) two, 31 (14.7%) three and only 4 (1.9%) received four post natal check-up. 142 (67.6%) received first postnatal care within 24 hours of delivery, 6 (2.9%) in 2-3 days and 3 (1.4%) between 4-7 days of delivery. 59 (28.1%) didn't receive any post natal check-up. The 57.6% mothers said that, commonest reason of not receiving post natal check-up was that, they weren't aware of this and no-one visits for this. It was observed that, education of mothers and mother, who were housewives, utilized PNC 2.980 times more .The study also showed that place of delivery and person conducting delivery had a significant effect on PNC services utilization. Mother who used hospital delivery utilized PNC 19.968 times more than the mothers who delivered at home. The mother who knew about the necessity of PNC, utilized PNC 3.404 times more (95%CI: 1.362-8.508) (P=.000). No significant association was found with variables like age of mother, sort of family, family size, income, birth and occupation of husband. Counselling was done on frequent and exclusive breast feeding in 80.1%, asked for fever in 88.0%, asked checked and respond to post-partum haemorrhage in 78.1%, checked perineum for tears. The coverage of new-born care components within 7 days after delivery, weight measured in 90.0%, observed how mother breastfeeds, and helped the mother to improve the technique in 76.8%, checked for condition of cord in 72.8%, and general well-being - assessment for movements, muscle tone, swelling or bruises at the presenting part, congenital malformations – was checked in 66.8%. In 58.9% of new-born it was demonstrated how to keep baby warm with skin-to-skin contact.<sup>27</sup>

Malede Mequanent Sisay, Tesfahun Tadge Geremew et.al. had revealed in their study the prevalence of PNC usage among women was 6.9% . The analysis identified three presumably clusters with low rates of PNC use namely southwestern Ethiopia , southeast Ethiopia and eastern Ethiopia . Women with no education and in the poorest wealth quintile were less likely to use PNC, while women aged 35–49 years and with at least four antenatal care (ANC) visits were more likely to use PNC. Women with low

educational status, old age, being in poorest wealth quantity and history of ANC visits were significantly associated with PNC usage. Hence, it is better to strengthen maternal health programmes that give special emphasis on health promotion with a continuum of care during pregnancy.<sup>31</sup>

### **Summary:**

This chapter deals with review of research , non-research literature related to the present study . This review was carried out by the investigator to be familiar with various utilization of maternal health care service under study. First review literature related to utilization of antenatal care services and second review literature related to utilization of postnatal care services.

## **CHAPTER- III**

### **Research methodology**

Research methodology may be a way of systematically solve the research problem. It may be understood as a science of studying how research is completed scientifically. In it the researcher studies the varied steps that are generally adopted by a researcher in studying his research problem along side the logic behind them. It is necessary for the researcher to understand not only the research methods, techniques but also methodology. All this means that it is necessary for the researcher to design methodology for particular problem as the same may differ from problem to problem.

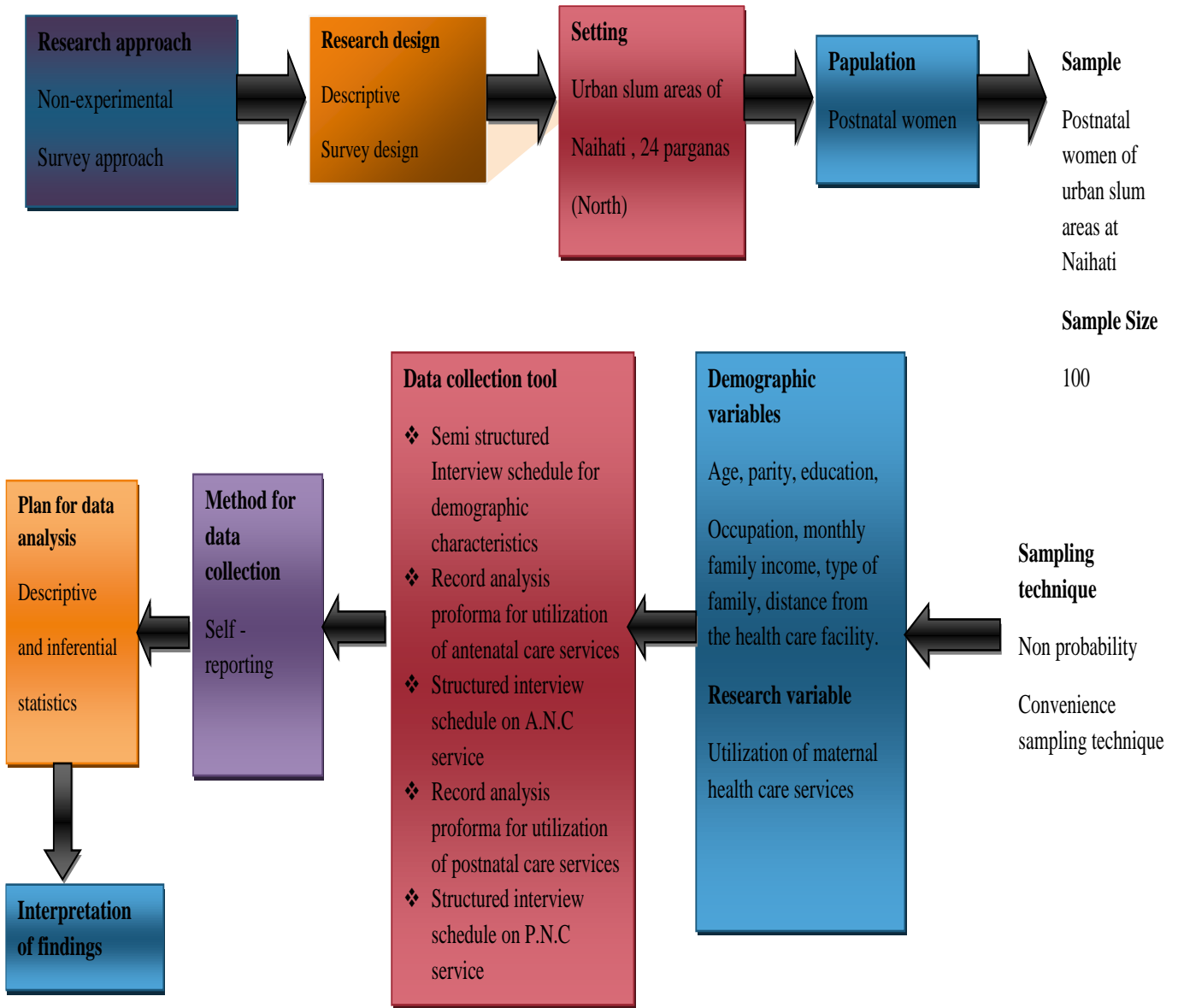
The present study has been conducted to assess the utilization of maternal health care services among women of selected urban slum areas of West Bengal. It presents in detail of the research approach, research design, variables under the study, study setting, study population, sample and sampling technique, data collection technique and tools, content validity, reliability , pilot study, data collection procedure, plan for data analysis.

### **Research approach:**

Research approach indicates the essential procedure for conducting research. The choice of an appropriate method depends on the objectives of the study. In order to achieve the objectives of this study non-experimental survey approach was adopted to assess the utilization of maternal health care services among women in selected urban slum areas of West Bengal.

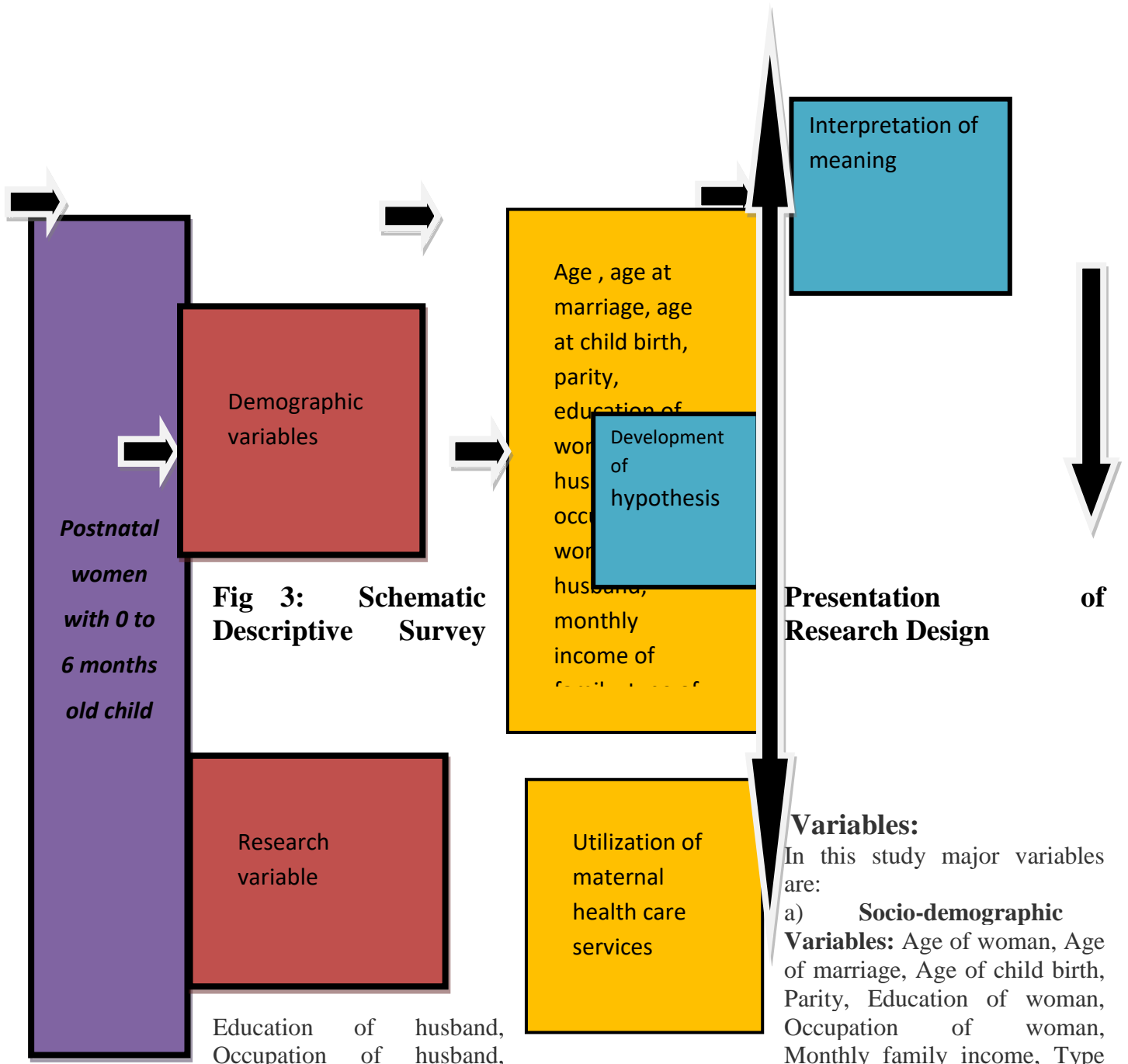
### **Research design:**

Research design may be a set of advance decisions that structure the plan specifying the methods and procedures for collecting and analyzing the needed information. The research design is a critical link that connects the researcher's framework with appropriate types of data. The level of preexisting knowledge in the area of enquiry also helps to determine the research design. In this present study descriptive survey design had been selected.



**Fig:2 Schematic presentation of research methodology**

GROUP	VARIABLE	DESCRIPTION OF VARIABLES	ANALYSIS
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**Fig 3: Schematic Descriptive Survey**

**Presentation Research Design of**

**Variables:**  
 In this study major variables are:  
 a) **Socio-demographic Variables:** Age of woman, Age of marriage, Age of child birth, Parity, Education of woman, Occupation of woman, Monthly family income, Type

of family, Number of child, Distance from the health care facility.  
 b) **Research variable:** Utilization of maternal health care services

**Setting:**

Setting is the physical location or condition in which study is conducted. Present study was planned to conduct in selected urban slum areas of west Bengal.

**Pilot study:** Conducted at urban slum area of Paschim Medinipur.

**Final study:** Conducted at urban slum areas of Naihati.

**The rationales for selecting the setting were as follows:**

- Availability of adequate no of postnatal women.
- Feasibility for conducting the study.
- Familiarity with the setting.
- Local authority approval and cooperation from different level of personnel to conduct the study.

**Population:**

Population is the accumulation of all the units in which a researcher is interested. Population is the set of people to which the result of a research are to be generalized. The target population of this study comprised of postnatal women who have registered their name and have antenatal card with them.

### **Sample:**

Sample consists of subset of unit which comprises the population selected by the investigator to participate in their research project. Postnatal women who have registered their name and have antenatal card with them at urban slum areas of Naihati.

### **Sample size:**

In the present study sample size was 100 postnatal women.

### **Sampling technique:**

Sampling is the process of selecting a part of the assigned population to represent the entire population. Sampling process entails the formulation of specific criteria for the selection, which ensures that the characteristics of phenomena of interest will be present in all the units being studied.

In this study non probability convenience sampling technique had been adopted and all the available subjects within the study period who were meeting the present inclusion and exclusion criteria were picked up.

### **Inclusion criteria:**

- Women who have zero to six months old child
- Women who have antenatal card with them.

### **Exclusion criteria:**

- Women who are physically ill.

### **Data collection tools and techniques:**

An important aspect of any investigation is the collection of appropriate information which provides necessary data to answer the research questions. Data collection means the precise, systematic gathering of information relevant to the research purpose or specific objectives, questions of the study. The selection and development of tools and collection of data was based on the objectives of the present study.

### **Data collection tools and techniques are presented in table 1**

Sl. No.	Variable to be measured	Tool	Technique
1	Socio-demographic variables	Tool-I: Semi Structured interview Schedule for Socio-demographic variables	Interviewing

2.	Utilization of A.N.C. care services	<b>Tool-II:</b>  Part-A- Record analysis proforma Observation of M.C.P.C. Card and other investigations  Part-B-Structured interview  Schedule	Record analysis          Interviewing
3.	Utilization of P.N.C. care services	<b>Tool-III: Part-A - Record analysis proforma</b> Observation of M.C.P.C. Card and discharge certificate  Part-B-  Structured interview schedule	Record analysis          Interviewing

Data are observable and measurable facts that provide information about phenomenon under study. The aim of gathering and summarizing data is to transfer this into meaningful information in order to identify and measure variables , describe behaviour and compute empirical evidences that are objective , reliable and valid.

**Development of the tools**

For development of the tools following steps has been followed:

- An extensive review of research and non-research literature was made
- Guidance of experts was sought
- Professional experience in the clinical field was used
- Peer group discussion was made
- First draft of the tool was developed with the help of guide
- Establishment of content validity. Some modifications were made and some items were rejected according to the suggestion of the experts
- Pre-testing of the tool was made
- Reliability of the tool was computed
- Development of final draft of the tool was done

**Description of data collection tool:**

**The data collection tool consist of:**

**Tool – I:**

This tool had 12 items such as - age, age of marriage, age of child birth, parity, education of woman, education of husband, occupation of women, occupation of husband, monthly family income, type of family, number of child and distance from the health care facility.

**Tool – II:**

Data collection tool-II consist of two parts part-A and part-B

**Part – A**

Record analysis proforma - to collect data about utilization of antenatal care services. It consist of 13 items such as- weeks of registration, injection T.D., measurement of body weight, blood pressure measurement, pulse rate check up, foetal heart rate check up, height of uterus measurement, Hb% check up, urine for sugar and albumin, HIV test , test for syphilis, U.S.G. and thyroid test.

**Part – B**

This tool consists of 13 items such as- oedema check up, anaemia check up, jaundice check up, foetal heart rate check up, fundal height check up, counselling about diet, rest and personal hygiene, monetary help from the health centre, counselling on high risks of pregnancy, selection of hospital for delivery, Nischay yan facility, intake of Iron and folic acid and calcium tablets, privacy during antenatal period and information about the person who conduct delivery.

### **Tool – III**

Data collection of tool-III consist of two parts part-A and part-B

#### **Part – A**

This tool had a six point rating scale. It consist of 6 items such as - body weight measurement, pulse rate check up, blood pressure measurement, temperature check up, pallor check up and height of uterus measurement. Minimum score was 0 and maximum score was 6 for each item. Higher score signified better utilization of postnatal care service. The scale was modified by the investigator and validated by the experts to make it applicable to the subjects in study settings and that was used in this study.

#### **Part – B**

This tool consist of 7 items such as- counseling about family planning, breast examination after delivery, home services after delivery, early initiation of breast feeding, newborn care, contraception for birth spacing and counseling regarding breast feeding. Responses to each item were rated on a rating scale i.e. yes and no. The minimum score was 0 and maximum score was 7. Higher score indicates the better utilization of postnatal care services.

### **Content validity of tool**

In order to establish content validity, the tools were given to five experts along with criteria checklist to ensure content validity. The experts were chosen on the basis of their expertise, and their opinions and suggestions on accuracy and appropriateness of items were duly incorporated. Out of five experts two were from the department of obstetrics and gynecological nursing and three were from obstetrics and gynecology medicine. Validation also from the specialists on obstetrics and gynecology. Necessary modification in tool was done as per their suggestions. Language validity of the tools was established by language experts in English and Bengali.

### **Language validity:**

Bengali version of semi structured interview schedule (tool I), structured interview schedule (tool II, Part-B), structured interview schedule (tool III part - B) were prepared by translating these into Bengali from English with the help of a language proficient. Language validity was obtained from expert, an Assistant Teacher of Bengali language and an Head Teacher of English Language of Benapur High School, Kharagpur, Paschim Medinipur. There was no ambiguity in the language.

### **Pre-testing of the tools**

The tools were pretested to-

- Check the clarity and feasibility of the items.
- Check the ambiguity of the statement.
- Determine the time taken to take history of the women.
- Check many other difficulties felt by the investigator or expressed by the respondents related to tools.

Pretesting of the tool was done by administering the tool among 20 postnatal women at Lebugola urban slum area of Baliaghata Road, Kolkata -10 to test its clarity, ambiguity, feasibility and time required for completing the data collection. The subject characteristics were similar like final study subjects, all items were well understood by the postnatal women and the average time taken for interview schedule 25 minutes and for record analysis 5 minutes. Some modifications of statement in tool were done.

### **Reliability of the tool**

The reliability of Tool II part A, was computed by Inter rater method to establish equivalency of the tool by administering the tool to the twenty subjects by two different investigators simultaneously and independently on the same day. The reliability of the tool was found 1. So, the tool was considered as reliable. Part – B was computed by using Cronbach's alpha formula. Reliability value of Tool II part-B was 0.711

Reliability of Tool III part A was computed by Inter rater method to establish equivalency of the tool by administering the tool to the twenty subjects by two different investigators simultaneously and independently on the same day. The reliability of the tool was found 1. So, the tool was considered as reliable. Part – B was computed by using Cronbach's alpha formula. Reliability value of Tool III part-B was 0.722

### **Ethical consideration:**

The study was approved by the ethical committee of I.D. & B. G. Hospital, Kolkata-10. Administrative permission was taken from DME (Director of Medical Education, DHS (Director of Health Service) and joint DHS (Nursing) of West Bengal. Permission was taken from Principal, Government College of Nursing, I, D. & B.G. Hospital, Kolkata-10. Formal permission was taken from councilor of Naihati, 24 parganas north. Informed consent was taken from each participant.

### **Pilot study:**

Pilot study was conducted at Kharagpur, Paschim Medinipur on 17.12.2019 to 19.12.2019 with the local authority permission. The objective of the pilot study was to assess the feasibility and practicability of conducting the study and also to assess the availability of study subjects. Sample size was 10. Sample was selected as per sampling criteria through non probability convenience sampling technique. Self-introduction was given to the subjects and explained the purpose of the study. Confidentiality was maintained and informed written consent was taken from the respondents before the application of interview schedule. Then planned for statistical analysis of data. Data was tabulated, analyzed and statistically calculated with the help of descriptive and inferential statistics. No problem was faced during data collection period. The research tool were found feasible practicable and acceptable. After gaining the experiences, it was decided to proceed to the main study.

### **Procedure for final data collection:**

Ethical clearance was obtained from Chairman, Institutional Ethical Committee, I.D. & B.G. Hospital, Beliaghata Road, Kolkata-10. Formal administrative permission was taken from DME (Director of Medical Education), DHS ( Director of Health Services ), and Joint DHS (Nursing) of West Bengal. Formal permission taken from Principal, Government College of Nursing, I.D. & B.G. Hospital, Kolkata. Formal permission was taken from councillor of Naihati, 24 Parganas North.

- On the approval from councillor of Naihati, 24 parganas north the final data was collected from 09/01/2020 to 09/02/2020.
- Data was collected from the subjects Monday and Friday between 9:00 am to 3:00pm at urban slum areas of Naihati.
- After explaining the purpose of the study, women were selected according to the inclusion criteria by using non probability purposive sampling technique.
- Self-introduction was given and established rapport with the subjects.
- Addressed terms of confidentiality. Data were collected maintaining privacy and subjects were assured that information would not be used for any other purposes except for this study.
- Informed consent was taken from each subject.
- Separate code number was given to each subject.
- The researcher took those samples one by one in one corner of a room and provided screen to maintain privacy.
- Demographic data was first collected by using semi structured interview schedule on socio-demographic characteristics by interview method.
- Everyday data was collected from 6 samples from 9am to 3 pm.
- Each subject took approximately 30 minutes of time.

The investigator provided grateful thanks to each subjects before terminating the data collection procedure for their participation and cooperation. The interview schedule

Tool I contain 12 items, record analysis proforma Tool II Part A contain 13 items, Part B, interview schedule contain 13 items, The record analysis proforma Tool III Part A contain 6 items, Part B, interview schedule contain 7 items .

### **Plan for data analysis:**

Plan for data analysis was chalked out by using both descriptive inferential statistics.

The plan for data analysis was as follows:

**Section I:** To find out the demographic variables of the women.

**Section II:** To find out the utilization of A.N.C.(antenatal) services.

**Section III:** To find out the utilization of P.N.C. (postnatal) services.

**Section IV:** To find out the association between utilization of maternal health care service with selected demographic variables.

**Section V:** To identify the relationship between utilization of maternal health care services with selected demographic variables.

### **Summary:**

This chapter of methodology dealt with research approach, research design, variables, setting of the study , population, sample and sampling technique , development and description of the tool , pretesting of the tool, reliability, content validity, pilot study ,data collection procedure and plan for data analysis.

## **CHAPTER –IV**

### **Analysis and interpretation of data**

This chapter deals with the analysis and interpretation of data collected from the women in a selected urban slum areas of West Bengal, to assess the utilization of ANC and PNC services. The purpose of analysis is to reduce the data in an interpretable form, so that research problem can be studied.

The collected data were coded, tabulated and summarized in a master sheet and then analyzed and interpreted by using descriptive and inferential statistics. Analysis and interpretation of the data is based on the objective of the study.

### **Objectives of the study were:**

1. To identify the utilization of maternal health care services.
2. To find out the association between the utilization of maternal health care services with selected demographic variables.
3. To identify the relationship between the utilization of maternal health care services with selected demographic variable

**Period of data collection:** From 09.01.2020 to 09.02.2020

### **Organization and presentation of the study findings:**

Presentation, analysis and interpretation of the data are based on the objectives of the study and organized in the following sections:

**Section I:** To find out the demographic variables of the women

**Section II:** To find out the utilization of ANC (antenatal) services.

**Section III:** To find out the utilization of PNC (postnatal) services.

**Section IV:** To find out the association between utilization of maternal health care service with selected demographic variables.

**Section V:** To identify the relationship between utilization of maternal health care services with selected demographic variables.

### **Section I: To find out the demographic variables of the women.**

Table 1 Frequency and percentage distribution of women according to their age and parity  
n=100

Variables	fr.	%
Age(years)		
19-23	43	43
24-28	32	32
29-33	16	16
Parity		
Primipara	64	64
Multipara	36	36

Data presented in table 1 revealed that maximum number of women 43(43%) belong to the age group of 19-23 years, 32(32%) women belong to the age group of 24-28 years and 16(16%) women belong to the age group of 29-33 years.

Data also reveal that maximum number of women 64(64%) are primipara and 36(36%) are multipara.

Table 2 Frequency and percentage distribution of women and husbands according to their educational status

n=100

Variables	fr.	%
Women's Education		
Illiterate	3	3
Primary school certificate	43	43
Middle school certificate	26	26
H.S. certificate	20	20
Graduate	6	6
Professions or Honors	2	2

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Husband's Education

Illiteracy	3	3
Primary school certificate	39	39
Middle school certificate	27	27
H.S. certificate	18	18
Graduate	12	12
Professions or Honors	1	1

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Data presented in table 2 reveal that majority of women 43(43%) has primary school level of education, 26(26%) women has middle school level of education, 20(20%) H.S., 6(6%) graduate and 2(2%) professions level of education. Out of which 3(3%) women are illiterate.

Data also reveal that maximum number of husbands 39(39%) has primary school level of education, 27(27%) husband has middle school level of education, 18(18%) H.S. , 12(12%) graduate and 1(1%) husband has professions level of education. Out of which 3(3%) husband are illiterate.

Table 3 Frequency and percentage distribution of women and husbands according to their occupation

n=100

Variables	fr.	%
Occupation of women		
Homemaker	100	100
Occupation of husband		
Elementary Occupation	34	34
Plant and machine operators	1	1
Skilled workers and shop and market Sales worker	59	59
Technicians and associate Professionals	1	1
professionals	9	9

---

Data presented in table 3 reveal that maximum number women 100(100%) were unemployed.

Data also revealed that maximum number of husband 59(59%) are skilled workers, 34% has elementary occupation, 9% are professionals and 1% are plant and machine operators, technicians and associate professionals.

Table 4 Frequency and percentage distribution of women according to their monthly family income and type of family

n=100

Variables	fr.	%
Monthly family income		
3,908-11,707	94	94
11,708-19,515	1	1
19,516-29,199	5	5
Type of family		
Nuclear	33	33
Joint	67	67

Data presented in table 4 reveal that income of maximum number of family 94(94%) range between 3,908 and 11,707 per month, 5(5%) family income ranges between 19,516 -29,199 and 1(1%) family income ranges between 11,708-19,515.

Data also reveal that maximum number of women 67(67%) are from joint family and 33(33%) were from nuclear family.

Table 5 Frequency and percentage distribution of women according to their number of living child and distance from the health care facility

n=100

Variables	fr.	%
Number of children		
One child	62	62
Two child	34	34
More than two child	4	4
Distance from the health care facility		
<1km	87	87

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$\geq 1\text{km}$	13	13
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Data presented in table 5 reveal that maximum number of women 62(62%) has one child, 34(34%) has two child and 4(4%) has more than two child.

Data also reveal that maximum number of women 87(87%) has <1km distance from health care facility and 13(13%) has  $\geq 1\text{km}$  distance from health care facility.

**Section II: To find out the utilization of ANC (Antenatal care) services.**

Table 6 Frequency and percentage distribution of women according to the utilization of ANC services n=100

Variables	fr.	%
<b>Registration</b>		
>12 weeks	36	36
<12 weeks	64	64
<b>H.I.V. screening</b>		
Yes	100	100
No	0	0
<b>Syphilis test</b>		
Yes	100	100
No	0	0
<b>Thyroid test</b>		
Yes	100	100
No	0	0
<b>Injection T.D.</b>		
Yes	100	100
No	0	0

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Data presented in table 6 reveal that maximum number of women 64(64%) has done their registration within 12 weeks of pregnancy and 36(36%) women has done their registration after 12 weeks of pregnancy

Data also reveal that maximum number of women 100(100%) has done their H.I.V. screening, syphilis test, thyroid test and has taken 2 doses of injection T.D. during antenatal period.

Table 7 Frequency and percentage distribution of women according to their utilization of ANC service n=100

Variables	fr.	%
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<b>Weight</b>		
≥4 times	34	34
<4 times	66	66
<b>B.P.</b>		
≥4 times	34	34
<4 times	66	66
<b>Pulse rate</b>		
≥4 times	29	29
<4 times	71	71
<b>Foetal Heart Rate</b>		
≥4 times	25	25
<4 times	75	75
<b>Hb%</b>		
≥4 times	0	100
<4 times	0	100
<b>Urine for sugar and albumin</b>		
≥4 times	0	100
<4 times	0	100
<b>U.S.G.</b>		
≥4 times	60	40
<4 times	60	40
<b>Fundal Height</b>		
≥4 times	22	22
<4 times	78	78

Data presented in table 7 reveal that maximum number of women 100(100%) has done their blood for Hb% test and urine for sugar test less than 4 times.

Data also reveal that maximum number of women 66(66%) has received weight check up less than 4 times and 34(34%) has received weight check up more than 4 times , maximum number of women 78(78%) has received fundal height check up less than 4 times and 22(22%) has received fundal height check up more than 4 times , maximum number of women 75(75%) has received foetal Heart Rate check up less than 4 times and 25(25%) had received foetal Heart Rate check up more than 4 times , maximum number of women 71(71%) has received pulse rate check up less than 4 times and 29(29%) women has received pulse rate check up more than 4 times and maximum number of women 60(60%) has done U.S.G. more than 4 times and 40(40%) women has done U.S.G. less than 4 times.

### Section III: To find out the utilization of PNC (postnatal) services.

Table 8 Frequency and percentage distribution of women according to their utilization of PNC services  
 n=100

Variables	Postnatal service									
	1 <sup>st</sup> day		3 <sup>rd</sup> day		7 <sup>th</sup> day		6 <sup>th</sup> week		None	
	fr.	%	fr.	%	fr.	%	fr.	%	fr.	%
Weight	27	27	8	8	4	4	0	0	61	61

Pulse	26	26	50	50	17	17	2	2	0	0
B.P.	18	18	59	59	20	20	2	2	1	1
Temperature	18	18	7	7	4	4	0	0	71	71
Pallor	59	59	15	15	5	5	1	1	20	20
Height of uterus	58	58	19	19	6	6	1	1	16	16

Data presented in table 8 reveal that maximum number of women's 61(61%) weight has not checked, 27(27%) women's weight checked on 1<sup>st</sup> postnatal day, 8(8%) women's weight checked during 3<sup>rd</sup> postnatal period. Data also reveal that maximum number of women's 59(59%) pallor checked on 1<sup>st</sup> postnatal day, 15(15%) woman's pallor checked on 3<sup>rd</sup> postnatal day, 5(5%) women's pallor checked on 7<sup>th</sup> postnatal day, 1(1%) woman's pallor checked on 6<sup>th</sup> week of postnatal period and 20(20%) woman's pallor has not checked at all. 59(59%) woman's B.P. had checked on 3<sup>rd</sup> postnatal day, 18(18%) woman's B.P. checked on 1<sup>st</sup> postnatal day, 20(20%) woman's B.P. checked on 7<sup>th</sup> postnatal day, 2(2%) woman's B.P. checked on 6<sup>th</sup> week of postnatal period and 1(1%) woman's B.P. has not checked at all. Maximum number of women's 58(58%) height of uterus had checked on 1<sup>st</sup> postnatal day, 19(19%) checked on 3<sup>rd</sup> postnatal day, 6(6%) checked on 7<sup>th</sup> postnatal day. 1(1%) checked on 6<sup>th</sup> week of postnatal period and 16(16%) woman's height of uterus has not checked at all. Maximum number of women's 50(50%) pulse has checked on 3<sup>rd</sup> postnatal day, 26(26%) women's pulse checked on 1<sup>st</sup> postnatal day, 17(17%) woman's pulse checked on 7<sup>th</sup> postnatal day and 2(2%) woman's pulse checked on 6<sup>th</sup> postnatal week. Maximum number of women's 71(71%) temperature has not checked at all, 18(18%) women's temperature checked on 1<sup>st</sup> postnatal day, 7(7%) women's temperature checked on 3<sup>rd</sup> postnatal day and 4(4%) women's temperature checked on 7<sup>th</sup> postnatal day.

Table 9 Frequency and percentage distribution of women according to their utilization of PNC services  
 n=100

Variables	fr.	%
Advice on family planning		
Yes	81	81
No	19	19
Breast examination		
Yes	36	36
No	64	64
Home service		
Yes	10	10
No	90	90
Newborn care at birth		
Yes	90	90

No	10	10
Advice on technique of breast feeding		
Yes		
No	93	93
	7	7

Data presented in table 9 reveal that maximum number of women 81(81%) has received advice on family planning and 19(19%) of women has not received advice on family planning , maximum number of women’s 64(64%) breast examination has not done during postnatal period and 36(36%) women’s breast examination has done during postnatal period . Maximum number of women 90(90%) has not received home service during postnatal period and 10(10%) women has received home service during postnatal period.

Data also revealed that maximum number of women 90(90%) has received newborn care at birth and 10(10%) women has not received newborn care at birth. Maximum number of women 93(93%) has received advice on breast feeding and 7(7%) women has not received advice on breast feeding.

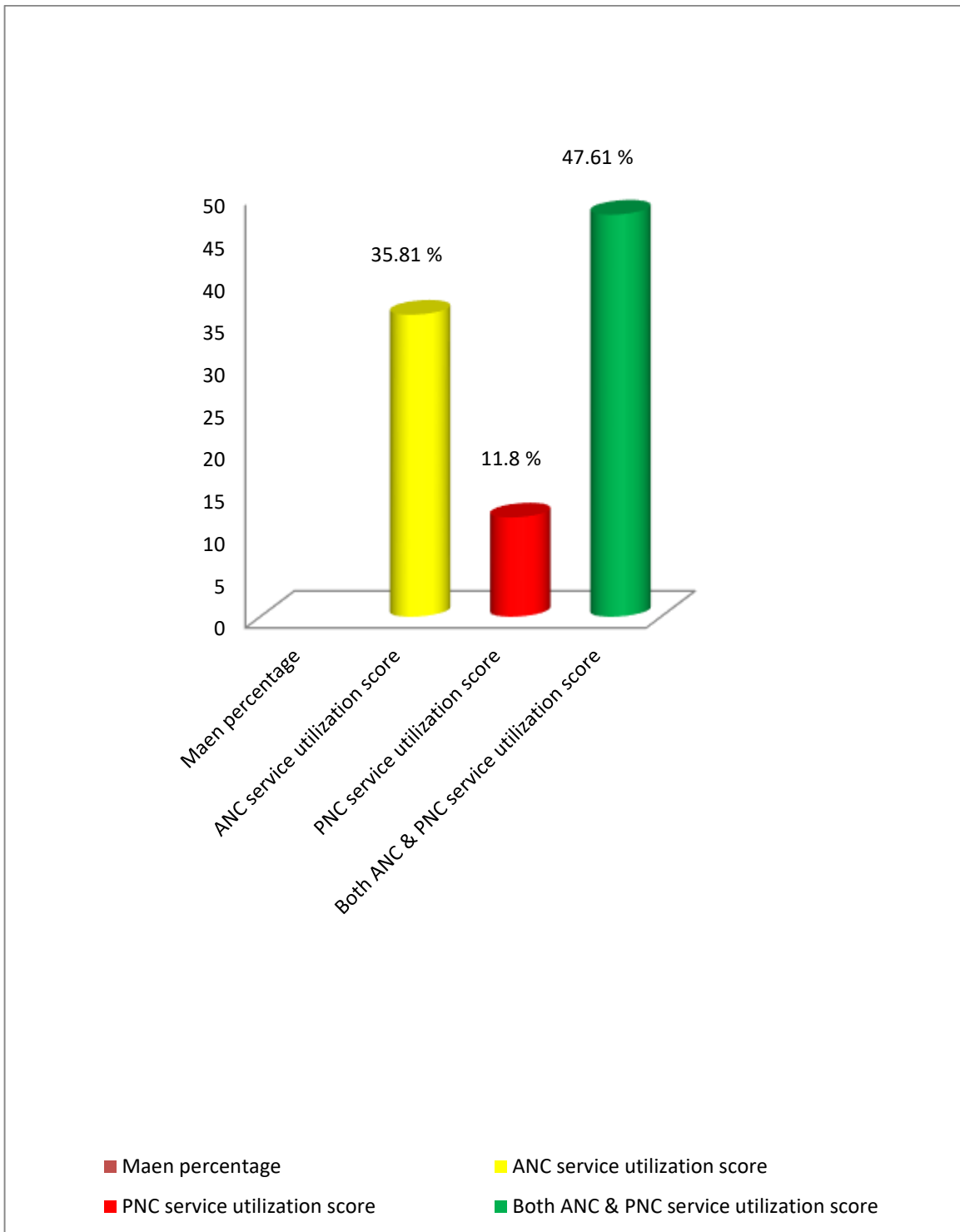
Table 10 Mean, mean percentage , median, standard deviation of ANC service, PNC service and both ANC and PNC service utilization score of women

n=100

M.C.H. service utilization score	Maximum possible ranges of scores	Mean	Mean %	Median	Sd
ANC service utilization score	0-38	35.81	35.81	35	2.6
PNC service utilization score	0-15	11.8	11.8	9	3.6
ANC and PNC service utilization score	0-53	47.61	47.61	47	4.24

Data presented in table 10 reveal that the ANC service utilization mean score of women is 35.81, with median 35 and standard deviation 2.6 ; the PNC service utilization mean score of women is 11.8 , with median 9 and standard deviation 3.6 and both the ANC and PNC service utilization mean score is 47.61, with median 47 and standard deviation 4.24.

Mean percentage of ANC, PNC and both ANC and PNC service utilization score is 35.61, 11.8 and 47.61 respectively.



**Fig 4: Mean percentage of ANC, PNC and both ANC & PNC service utilization score**

**Section IV: To find out the association between utilization of maternal health care services and selective demographic variables**

Table 11 Chi square test of association and it's significance existing between utilization of ANC services score and educational status of women.

Education	Utilization of ANC services			$\chi^2$ value	Significance at 0.05 level
	<median (35)	$\geq$ median (35)	Total		
Upto secondary	20	26	46	0.007	Not significant
Above secondary	23	31	54		

$$\chi^2_{df(1)} 3.84, p > 0.05$$

Data presented in table 11 indicates that out of 46 subjects with secondary level of education 20 score below median and 26 score at and above median of their total utilization of ANC service score, out of 54 subjects of above secondary level of education 23 score below median and 31 score at and above median of their total utilization of ANC service score of women.

Chi square is computed between total utilization of ANC services score of women and their educational status which is found to be statistically not significant .So it can be concluded that total utilization of ANC services score of women is not associated with the educational qualification of the subjects

Table 12 Chi square test of association and it's significance existing between utilization of PNC services score and educational status of women.

n=100					
Education	Utilization of P.N.C. services			$\chi^2$ value	Significance at 0.05 level
	<median (9)	$\geq$ median (9)	Total		
Upto secondary	11	35	46	3.9687	Significant
Above secondary	5	49	54		

$$\chi^2_{df(1)} 3.84, p < 0.05$$

Data presented in table 12 indicates that out of 46 subjects with secondary level of education 11 score below median and 35 score at and above median of their total utilization of PNC services score, out of 54 subjects of above secondary level of education 5 score below median and 49 score at and above median of their total utilization of PNC services score of women.

Chi square is computed between total utilization of PNC services score of women and their educational status which is found to be statistically not significant .So it can be concluded that total utilization of PNC services score of women is not associated with the educational qualification of the subjects.

Table 13 Chi square test of association and it’s significance existing between utilization of ANC services score and parity of women.

Parity	Utilization of ANC services			$\chi^2$ value	Significance
	<median (35)	$\geq$ median (35)	Total		
Primipara	24	40	64	2.1941	Not significant
Multipara	19	17	36		

$\chi^2$  df(1)3.84,p>0.05

Data presented in table 13 indicates that out of 64 subjects with primipara 24 score below median and 40 score at and above median of their total utilization of ANC services score, out of 36 subjects with multipara 19 score below median and 17 score at and above median of their total utilization of ANC services score of women.

Chi square is computed between total utilization of ANC services score of women and their educational status which is found to be statistically not significant .So it can be concluded that total utilization of ANC services score of women is not associated with the parity of the subjects.

Table 14 Chi-square test of association and it's significance existing between utilization of PNC services score and parity of women.

Parity	Utilization of PNC services			$\chi^2$ value	Significance
	<median (9)	$\geq$ median (9)	Total		
Primipara	7	57	64	0.1736	Not significant
Multipara	3	33	36		

$\chi^2$  df(1)3.84,p>0.05

Data presented in table 14 indicates that out of 64 subjects with primipara 7 score below median and 57 score at and above median of their total utilization of PNC services score , out of 36 subjects with multipara 3score below median and 33 score at and above median of their total utilization of PNC services score of women .

Chi square is computed between total utilization of PNC services score of women and their parity which is found to be statistically not significant .So it can be concluded that total utilization of PNC services score of women is not associated with the parity of the subjects.

Table 15 Chi square test of association and it's significance existing between utilization of ANC services score and type of the family.

Type of family	Utilization of ANC services			$\chi^2$ value	Significance
	<median (35)	$\geq$ median (35)	Total		
Nuclear family	15	18	33	0.404	Not significant
Joint family	26	41	67		

$\chi^2$  df(1)3.84,p>0.0

Data presented in table 15 indicates that out of 33 subjects with their type of family 15 score below median and 18 score at and above median of their total utilization of ANC services score, out of 67 subjects with their type of family 26 score below median and 41 score at and above median of their total utilization of ANC services score of women.

Chi square is computed between total utilization of ANC services score of women and their distance from the health care facility which is found to be statistically not significant .So it can be concluded that total utilization of ANC services score of women is not associated with the type of family of the subjects.

Table 16 Chi square test of association and it’s significance existing between utilization of PNC services score and type of the family

Type of family	Utilization of PNC service			$\chi^2$ value	significance
	<median (35)	$\geq$ median (35)	Total		
Nuclear family	1	32	33	2.6584	Not significant
Joint family	9	58	67		

$\chi^2$  df(1)3.84,p>0.05

Data presented in table 16 indicates that out of 33 subjects with their type of family 1 score below median and 32 score at and above median of their total utilization of PNC services score, out of 67 subjects with their type of family 9 score below median and 58 score at and above median of their total utilization of PNC services score of women .

**Section V: To identify the relationship between utilization of maternal health care services and selected demographic variables.**

Table 17 Correlation between utilization of ANC services received by women with their age, number of child and monthly income of the family

Variables	r value	t value	Significance
Age	-0.0344	0.34074	Not significant
Number of child	-0.23794	2.42513	Significant
Monthly income	-0.10154	1.01041	Not significant

t(98)= 1.98,p>0.05

Data presented in table 17 shows that there is strongly negative relationship between ANC services received by women and their age which is found to be statistically not significant.

Data also shows that there is positive relationship between ANC services received by women and their number of child which is found to be statistically significant.

Data also shows that there is strongly negative relationship between ANC services received by women and their monthly income of the family which was found to be statistically not significant.

Table 18 Correlation between utilization of PNC services received by women with their age, number of child and monthly income of the family

n=100				
Variables		r value	t value	Significance
Age		0.02312	0.228937	Not significant
Number of child		0.32148	3.360898	Significant
Monthly income		0.06600	0.654794	Not significant

t(98)= 1.98, p>0.05

Data presented in table 18 shows that there is weakly positive relationship between utilization of PNC services and age of the women which is found to be statistically not significant.

Data also shows that there is weakly positive relationship between utilization of PNC services received by women and their number of child which is found to be statistically significant.

Data also shows that there is weakly positive relationship between utilization of PNC services received by women and their monthly family income which is found to be statistically not significant.

### Summary:

This section deals with the analysis and interpretation of research findings. Chi-square is computed to find out the association utilization of maternal health care services with selected demographic variables.

### CHAPTER –V

### Major findings, Discussion in relation to other findings, Conclusion, Implications, Limitations and Recommendations:

This chapter deals with the major findings of the study, discussion in relation to other studies, conclusion and implication in relation to the nursing education, nursing administration and nursing research. The limitations of the study had been stated here. The investigator makes recommendations for future research related to present study.

### Major findings of the study:

As per the study objectives:

#### Finding related to socio demographic characteristics of the subjects

- A large of women (43%) belonged to the age group of 19-23 years.
- Majority (64%) of the women were primipara.
- Majority (43%) of women had primary school level of education.
- Majority (39%) of husband had primary school level of education.
- Majority (100%) of women were unemployed.
- Majority (59%) of husband were skilled workers.
- Majority (94%) of women belonged to monthly family income Rs. 3,908-11,707.
- Majority (67%) of women were belonged to joint family.
- Majority (62%) of women had one child.
- Majority (87%) of women had  $\geq$  1km distance from health care facility.

### Findings related to utilization of ANC ( Antenatal Care) services

- Maximum number of women (64%) had done their registration within 12 weeks of pregnancy.
- Maximum number of women (100%) had done their blood for Hb% test , urine for sugar and albumin test and had taken both doses of injection T.D. less than 4 times.
- Maximum number of women (66%) had received weight check up less than 4 times.
- Maximum number of women (78%) had received fundal height check up less than 4 times.
- Maximum number of women (75%) had received fetal heart rate check up less than 4 times.
- Maximum number of women (71%) had received pulse rate check up less than 4 times.
- Maximum number of women (60%) had done U.S.G. more than 4 times.
- Maximum number of women (100%) had done their H.I.V. screening, syphilis test and thyroid test during antenatal period.

#### **Findings related to utilization of PNC ( Postnatal Care) services**

- Maximum number of women's (61%) weight had not checked during postnatal period.
- Maximum number of women's (59%) pallor and B.P. had checked on 1<sup>st</sup> and 3<sup>rd</sup> postnatal day.
- Maximum number of women's (58%) height of uterus had checked on 1<sup>st</sup> postnatal day.
- Maximum number of women's (50%) pulse had checked on 3<sup>rd</sup> postnatal day.
- Maximum number of women (81%) had received advice on family planning.
- Maximum number of women's (64%) breast examination done during postnatal period.
- Maximum number of women (90%) had not received home service during postnatal period.
- Maximum number of women (90%) had received newborn care at birth.
- Maximum number of women (93%) had received advice on breast feeding.

#### **Findings related to association between utilization of maternal health care services and selected demographic variables**

- There was significant association between total utilization of PNC services and educational status of the women.
- There was no significant association between total utilization of ANC services and educational status of the women.
- There was no significant association between total utilization of ANC services and parity of the women.
- There was no significant association between total utilization of PNC services and parity of the women.
- There was no significant association between total utilization of ANC services and type of family.
- There was no significant association between total utilization of PNC services and type of family.

#### **Findings related to identify the relationship between utilization of maternal health care services and selected demographic variables**

- The result showed that there was positive relationship between ANC services received by the women and their number of child which was found to be statistically significant ( $t(98)=1.98, p<0.05$ )
- The result showed that there was positive relationship between PNC services received by the women and their number of child which was found to be statistically significant. ( $t(98)=1.98, p<0.05$ )
- There was negative relationship between ANC services received by the women and their age which is found to be statistically not significant ( $t(98)=1.98, p>0.05$ )
- The result showed that there was negative relationship between A.N.C. services received by the women and their monthly income of the family which was found to be statistically not significant ( $t(98)=1.98, p>0.05$ )
- The result showed that there was negative relationship between P.N.C. services received by the women and their age which is found to be statistically not significant ( $t(98)=1.98, p>0.05$ )

- The result showed that there was negative relationship between P.N.C. services received by the women and their monthly income of the family which was found to be statistically not significant ( $t(98)=1.98, p>0.05$ )

### **Discussion in relation to other studies**

In this present discussion, the major findings of the study have been discussed with the reference to the results obtained by other researchers.

#### **Findings related to utilization of ANC (Antenatal Care) services:**

Findings of this present study showed that 100% women were immunized with injection T.D. (vaccine for tetanus and diphtheria) and 64% women had registered themselves within 12 weeks of pregnancy. These findings were supported by the study conducted by the Power P. Sunita, Pardeshi S. Geeta et.al. where 95% women were immunized with injection T.T. , and 53% had registered themselves in first trimester of pregnancy.<sup>11</sup> These findings were not supported by the study conducted by Sharma Nidhi , Kumar Kiran et. al. which revealed that majority (64.4%) women had their first antenatal visit in 2nd trimester .<sup>21</sup>

These findings were also not supported by the study conducted by Kardalkar Shruti and Sherkhane S Mayur where majority of women 84.74% had registered their pregnancy in first trimester. Two doses of TT injection were taken by 75.26% women.<sup>26</sup>

#### **Findings related to utilization of PNC ( Postnatal Care) services:**

Findings of this study showed that 81% women had received advice on family planning, 64% women's breast examination done during postnatal period and 93% women received advice on breast feeding. These finding were supported by the study conducted by Pandey Dhruvendra, Meshram Priyanka et. al. which revealed that advice for exclusive breast feeding given in 91.11% mother.<sup>24</sup> These findings were supported by the study conducted by Kardalkar Shruti and Sherkhane S Mayur where 87.15% women provide exclusive breast feeding to their child. Not supported 64.80 % of women were advised about breast feeding practices and family planning services respectively.<sup>26</sup>

#### **Findings related to association between utilization of maternal health care services and selected demographic variables:**

The present study revealed significant association between education of women and utilization of postnatal care services which was supported by a study conducted by Pandey Dhruvendra, Meshram Priyanka et. al. (2019) showed that there was significant relationship between the education of mothers and utilization of postnatal care services.<sup>24</sup> In another study conducted by Kardalkar Shruti and Sherkhane S Mayur revealed that 97.56% literates had used the PNC services when compared to 2.44% of illiterates, which was statistically significant.<sup>26</sup> This indicates that education of the women played a major role in availing the PNC services effectively.

#### **Findings related to identify the relationship between utilization of maternal health care services and selected demographic variables:**

The present study revealed significant relationship between number of child of mother and utilization of antenatal care services and postnatal care services which was supported by a study conducted by Sahib Baru, Kaur Amanpreet , Gupta N.L. et.al. in rural area of district Sirmour, H.P., India showed that high number of antenatal visits found among those who had two or less than two children. Mothers who had more than two children consumed less IFA tablets. It was found in the study that mothers who had more than two children attend less postnatal visits.<sup>32</sup>

### **Conclusion:**

From the findings of the present study, the researcher had been observed that women of urban slum areas could not properly utilized the maternal health care services. In the present study only 64% women had done there registration within 12 weeks of pregnancy. It is found that there was significant association between education and PNC service utilization. There was also significant relationship between number of child and utilization of ANC and PNC services. But there is still lack in utilization of maternal health care services more than 4 times. So there is need of much more awareness among the women for proper utilization of maternal health care services as per Government of India guide line. It is very important to give main focus on services for the increasing awareness level of the mother. A sustained and focused IEC campaign to improve the awareness amongst community on MCH will help in improving community

participation leading to sustaining and improving the quality, accessibility, and utilization of maternal health care services in both rural and urban areas.

### **Nursing education:**

The present study may help in developing and improving skills of the students of different nursing curriculum of obstetrics and gynaecological nursing and community health nursing. The nursing institutions, like older health institutions are often used for in-service training also. Thus this study can be referred to the materials related to utilization of maternal health care services as per Govt. of India guideline.

In depth analysis, understanding and training about this study will also generate awareness amongst the students. Awareness will help in making competency and in turn competency will further lead to proficiency. This proficiency will ultimately bring confidence amongst the community health workers, trainees and students. This confidence, if properly taken care of by giving them scopes in the working environments in their respective future work places is sure to benefit the community in the broader perspective and in the long run.

### **Nursing practices:**

Nurses play a vital role in proper utilization of maternal health care services among women by developing interpersonal relationships, providing proper information and counselling as per government of India guidelines. They arrange mother meetings and door to door home visits for assessing the utilization of maternal health care services. This study findings also supported to strengthen the services provided to the postnatal women in community field i.e. proper information and care.

### **Nursing administration:**

The health administrator should be able to motivate the health personnel by organizing different types of health educational programmes in the community. The policies are prepared and formulated by nurse administrators according to the need of the women. The nurse administrator should arrange in-service educational programmes for nurses to develop their skills in providing care to the postnatal women. In community surveillance, a limited amount of health information is gathered directly from the community. The findings would be utilized as a reference for future research and prevent duplication of effort. The research design, findings and tool can be used as steps for further research.

### **Nursing Research:**

There is a wide scope and need to conduct extensive research in different settings to assess self-care practices and identify the need of utilization of maternal health care services. More research is needed to develop more skill standards for proper utilization of maternal health care services. Emphasis may be laid on publication of research findings in journals and books to disseminate the research used evidence for nursing practice.

### **Limitations:**

- The size of the sample was small so it hindered in the generalization of the study.
- The time period for this study was less so it also affected the generalization of the study.
- The present study was conducted in only one place of urban slum area so generalization of the study was not possible.
- In few parts of the tool the respondents had recalling problems and gave data.

### **Recommendations:**

- A similar study can be done in comparative design between rural and urban population with same research variables.
- A similar type of study can be carried out only in rural settings.
- A similar study can be replicated on a large sample for making broad generalization of the study.

### **Summary:**

This chapter deals with the major findings of the study, discussion in relation to the findings of the other studies, conclusion and implications in relation to Nursing Education, Nursing Service, Nursing

Administration and Nursing Research. In addition to this, the limitations of the study have been incorporated, followed by recommendations.

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( Investigator)

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