"UTILISATION OF HEALTH SCHEMES BY THE REGISTERED PREGNANT WOMEN IN THE RURAL FIELD PRACTICE AREA OF HANDIGANUR IN BELAGAVI: A COMMUNITY BASED CROSS SECTIONAL STUDY"

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LIST OF ABBREVIATIONS

ANC	Ante-natal care
ANM	Auxiliary Nurse Midwife
APL	Above Poverty Line
AROM	Artificial Rupture of Membrane
ASHA	Accredited Social Health Activist
AWW	Anganwadi Workers
BCG	Bacillius Calmette Gurine
BPL	Below Poverty Line
CCT	Conditional Cash Transfer
CF	Correction Factor
CHC	Community Health Centre
CNA	Community Need Assessment
CSSM	Child Survival and Safe Motherhood
DGS	Demand Generation Scheme
DLHS	District Level Household Survey
EDD	Expected Date of Delivery
EmOC	Emergency Obstetrics Care
FHW	Female Health Worker
Govt.	Government
GoI	Government of India
Gm.	Gram
Hb.	Haemoglobin
HbsAg	Hepatitis-B Antigen

HIV	Human Immunodeficiency Virus
HRP	High Risk Pregnancy
Hrs.	Hours
IFA	Iron and Folic Acid
IMR	Infant Mortality Rate
IUD	Intra-Uterine Device
JSY	Janani Suraksha Yojana
LBW	Low Birth Weight
LMP	Last Menstrual Period
LSCS	Lower Segment Caesarean Section
MCH	Maternal and Child Health
MDG	Millennium Development Goal
MMR	Maternal Mortality Rate
MO	Medical Officer
MoH&FW	Ministry of Health and Family Welfare
MTP	Medical Termination of Pregnancy
NAS	National Ambulance Service
NBW	Normal Birth Weight
NFHS	National Family Health Survey
NHP	National Health Policy
NHSRC	National Health System Resource Centre
NPP	National Population Policy
NRHM	National Rural Health Mission
OBC	Other Backward Castes
OPV	Oral Polio Vaccine

PA	Prasuthi Araiki
PG	Post-Graduate
PHC	Primary Health Centre
PNC	Post-natal Care
PPH	Post-Partum Hemorrhage
PUC	Pre-University College
RCH	Reproductive and Child Health
SBA	Skilled Birth Attendant
SD	Standard Deviation
SES	Socio-Economic Status
SN	Staff Nurse
SC	Sub-Centre
SC	Scheduled Castes
ST	Scheduled Tribes
STD	Sexually Transmitted Diseases
Std	Standard
SRS	Sample Registration System
TT	Tetanus Toxoid
TBP	Thaiyi Bhagya Plus
UPT	Urine Pregnancy Test
USG	Ultra-Sonography
VLBW	Very Low Birth Weight
WHO	World Health Organisation
$\chi 2$	Chi – square test

ABSTRACT

Background: Mothers and children approximately form 71.14% of the total population in any developing country. In India women of child bearing age (15-45 years) constitute about 32.2% of the total population. The risk is associated with pregnancy, childbirth and post natal period. Promoting women's health improves not only individual health, but also the health of the family, community and the nation. Hence women acquire a special place in the community. A number of programs have been launched by the Government of India for the welfare of the women belonging to reproductive age group, but still significant reduction in maternal mortality and morbidity has not been achieved yet.

Objectives: To study the utilization of Maternal Health services after launching/implementing of Demand Generation Schemes by Government of Karnataka, viz Janani Suraksha Yojana (JSY), Prasuthi Araike Programme (PA), Madilu-kit Programme and Thaiyi Bhagya Plus programme (TBP).

Methodology: A community based cross sectional study was done among 540 pregnant mothers who delivered from 1st January 2015 to 31st December 2015in the rural field practice area of P. H. C. Handiganur, administered by the Department of Community Medicine, K.L.E. University's Jawaharlal Nehru Medical College, Belagavi. Information regarding socio-demographic profile, utilisation of Maternal and Child Health Services, assessment of Demand Generation Schemes (DGS) was collected after obtaining written informed consent. The participants were interviewed using pre-designed and pre-tested questionnaire.

Results: In the present study, the mean age of study participants was 24.1 + 2.8 years ranging from 20-35 years. About 92.4% wereof 18 years and above at the time of

marriage.80.7% were Hindus, 50.2% belonged to general category, 88.9% mothers were literates, 54.1% were home-makers,58.5% belonged to SES class V, 56.9% belonged to below poverty line. About 42% of women after knowing their pregnancy, first contacted ASHA worker. About 96.1% of pregnancies were registered and also first antenatal check-up was done within 12 weeks of gestation. About 42.2% women had moderate anemia, 31.1% of the study participants had mild anemia. 100% pregnant women had received free supply of IFA tablets out ofwhich 53.3% consumed 75%-100% tablets of iron and folic acid. About 83.3% mothers delivered in governmentfacilities. 46.1% pregnant women were accompanied by ASHA workers to hospital for delivery.100% new borns received OPV_0 and BCG dose, whereas only 45.6% received Hepatitis B_0.84.6% participants came for two PNC visits. 61.7% women were the beneficiaries who utilized the demand generation schemes services. Among beneficiaries, 82% there was delay in receiving incentives and only 18% beneficiaries got incentives on time.The main reason for delay (63.7%) was due to insufficient budget released at that time from the government.

Conclusion: Factors influencing maternal health services like younger age of the woman, higher education of the woman, age at married and higher socio-economic status were associated with better utilization of maternal health services. ASHA workers, Anganwadi workers and ANM workers are the important link between the health care services and at the gross root level in community. Even after receiving free iron and folic acid tablets, it was observed that the compliance of the pregnant mothers was less. Knowledge about immediate starting of breast feeding after delivery was medium. Most of the woman availed two post-natal check-ups services. The awareness about Demand Generation Schemes was very high, which has successfully promoted women’s preference to institutional deliveries, but the

knowledge about the benefits covered under Demand generation Schemes (DGS) was low. Benefits covered under the various schemes were received by all beneficiaries but there was overall delay in receiving cash incentives. However, insufficient budget was the main reason for delay in majority of women. Incentive money received in schemes by the beneficiaries was mainly spent for various house-hold expenditure. Overall satisfaction level among the women regarding maternal health services and the Demand Generation Scheme was high.

Key words: Utilization; Maternal health services; JSY; Prasuthi Araike; Madilu-kit; Thaiyi Bhagya.

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INTRODUCTION

The term "maternal and child health" (MCH) refers to the promotive, preventive, curative and rehabilitative health care offered to mothers and children. It includes the sub-areas of maternal health, child health, family planning, school health, handicapped children, adolescence and health aspects of care of children in special settings such as day care.[1]

Mothers and children approximately form 71.14% of the total population in any developing country. In India women of child bearing age (15-45 years) constitute about 32.2% of the total population. By virtue of their numbers, mothers form major consumers of the health care services. They not only form a large group, but they comprise the vulnerable or special risk groups. The risk is associated with pregnancy, childbirth and post natal period. Promoting women's health improves not only individual health, but also the health of the family, community and the nation. Hence women acquire a special place in the community.[1]

Most maternal deaths are preventable, but progress in this area is falling short Globally, the maternal mortality ratio (MMR) declined by 47 per cent over the last two decades, from 400 maternal deaths per 100,000 live births to 210 between 1990 and 2010. Meeting the Millennium Development Goal (MDG) target of reducing the ratio by three quarters will require accelerated interventions and stronger political backing for women and children.[2]

Globally, the maternal mortality ratio declined by 47 per cent over the past two decades, from 400 maternal deaths per 100,000 live births in 1990 to 210 in 2010. All regions have made progress, with the highest reductions in Eastern Asia (69 per cent), Northern Africa (66 per cent) and Southern Asia (64 per cent). Meeting the

MDG target of reducing the ratio by three quarters will require accelerated interventions, including improved access to emergency obstetric care, assistance from skilled health personnel at delivery and the provision of antiretroviral therapy to all pregnant women who need it.[2]

Good quality care during pregnancy is fundamental to the health, well-being and survival of mothers and their babies. In developing regions, coverage of antenatalcare (at least one visit with a doctor, nurse or midwife during pregnancy) increased from 63 per cent to 81 per cent from 1990 to 2011. Southern Asia, Northern Africa and Western Asia made the most progress over the past decade, while regions such as the Caribbean, Eastern Asia, Latin America and South-Eastern Asia have already achieved coverage rates of 90 per cent or more.[2]

The World Health Organization (WHO) has recommended a minimum of four antenatal care visits to ensure the well-being of mothers and new-borns. These visits should include tetanus toxoid vaccination, screening and treatment for infections, and the identification of warning signs during pregnancy. Pregnant women are also tested for HIV; if positive, they receive help and guidance in living with the virus and avoiding transmission to their babies. In countries where malaria is endemic, pregnant women should also receive intermittent treatment to prevent the disease, thereby averting adverse outcomes for mother and baby if infected during pregancy.[2]

Antenatal care can save lives. Yet in developing regions overall, only half of all pregnant women receive the minimum recommended number of antenatal visits (ANC) (four). Regions such as Northern Africa and South- Eastern Asia showed substantial progress during the past two decades in improving coverage of antenatal care, while Southern Asia and sub-Saharan Africa lagged behind. In 2011, only 36 per

cent of pregnant women in Southern Asia and 49 per cent in sub-Saharan Africa received at least four antenatal care visits during their latest pregnancy. Care can vary in terms of quality, a dimension that is hard to measureand is not reflected in the data. Monitoring is required to ensure high-quality antenatal care that actually contributes to improved pregnancy outcomes.[2]

A number of programs have been launched by the Government of India for the welfare of the women belonging to reproductive age group, but still significant reduction in maternal mortality and morbidity has not been achieved yet. The highest maternal mortality ratios can be witnessed in India. India accounts for approximately 20% of all the maternal deaths globally.[3]

As a commitment by the Government of India to Millennium Development Goals (MDG), it was required to reduce the Maternal Mortality Rate (MMR) to 109 per 100,000 live births by 2015 from an estimated MMR level of 437 per 100,000 live births in 1990-91. At the historical pace of decrease, India tends to reach MMR of 139 per 100,000 live births by 2015, falling short by 20 points. However, the bright line in the trend is the sharper decline in maternal mortality i.e., 17% during 2006-09 and 16% during 2003-06 compared to 8 % decline during 2001-2003. But the worrisome aspect is that majority of the maternal deaths occurring in India are preventable, stressing the importance of focusing on the access to maternal health care.[3]

Majority of maternal deaths can be prevented through appropriate maternal health services during antenatal, natal and post natal period. The quality of care and accessibility to full ANC (it includes minimum three ante-natal check-ups, at least one tetanus injection and issue of 100 or more iron and folic acid tablets) is more important. According to National Health Systems Resource Centre (NHSRC) report

of 2011, the percentage of ANC registration in first trimester in India is 58% and in Karnataka it is 69%. Percentage of three ANC check-ups against ANC registration in India is 75%, where in Karnataka it rises to 109%. Immunization with two doses of tetanus toxoid (TT) in India is 81% and in Karnataka 98 %.[4, 5]

Though the percentage of hospital deliveries is increasing gradually, it is not only the hospital delivery, the duration of stay in hospital after delivery is also equally important. The importance of this is to detect and treat the immediate post natal complications. Percentage of stay in hospital for less than 48 hours in institutional deliveries in India is 52% and in Karnataka 23%. Women receiving post-natal care (PNC) in 48 hours – 14 days of delivery in Karnataka is 82%. Around 13% of new-borns in India are of low birth weight (LBW) i.e., less than 2.5kg, the incidence in Karnataka decreases which is 11%, but it's still a considerable value in the present era. [4, 5]

In developing countries like India, the utilization of basic health services has remained poor even though there is increase in public and private expenditure on the provision of advanced health care. Despite substantial public investments in health infrastructure, the supply of such services continues to be inadequate and of poor quality. In addition, several inefficiencies such as over emphasis on secondary and tertiary hospital care, skewed distribution of health services favouring urban areas and gender discrimination in access to health care are all pervasive. There has also been an excessive reliance on physicians rather than paramedics in the health care delivery mechanisms. These weaknesses of the health care system have also affected the utilization of reproductive health care.[6]

The available literature suggests that, the reasons for non-utilization of maternal health services could be due to various social, cultural and economic factors. Women's education, child birth order and standard of living index also influences in choosing the health care facility. Early marriages, social pressure to bear children early, malnutrition, ignorance, illiteracy, customs, lack of awareness, lack of health services, hostile behaviour of health staff, unavailability of transport facilities etc are the other contributing factors.

Various efforts have been proposed to quantify these barriers in utilizing the maternal health services. Penchansky and Thomas in February 1981 formed a framework on how these barriers are perceived by women in utilizing the maternal health services. The framework consisted of five dimensions that women usually come across. The dimensions are Availability, Accessibility, Affordability, Adequacy and Acceptability.[7]

However, as the utilization of maternal health care ultimately comes down to the community level in which women live, it is of key importance to pay attention to the perspective of the women themselves. Hence, understanding of these factors at the community level is required. If these factors are correctly identified, then the program efforts can be concentrated to increase the acceptance/utilization rates.

Therefore, keeping this in view, this study was conducted to assess the determinants of utilization in the rural area for utilization of maternal health services.

OBJECTIVES

To study the utilization of Maternal Health services after launching/ implementation of Demand Generation Schemes by Government of Karnataka,

- Janani Suraksha Yojana,
- Prasuthi Araike Programme,
- Madilu-kit Programme,
- Thaiyi Bhagya Plus programme.

REVIEW OF LITERATURE

EVOLUTION OF MATERNAL HEALTH SERVICES

Care of mothers and children has been in existence from the beginning of the civilization. The first reference to safe motherhood can be noted in Ayurveda, ancient Indian Medical Science. Ayurveda describes the general management of pregnancy under 'GarbhiniVyakaran' which is concerned about diet, activities, behavior and mental activity. Even 3000, years ago, Ayurveda had stressed the importance of safe motherhood. Its aim was to achieve excellence in formation of the fetus, its development without anomalies, a comfortable full term delivery and maintenance of the health of the mother.[8]

Ancient Indian physicians, Charaka and Sushrutha have advocated sound principles and have described about the care of the mother and child. The midwifery work was in the hands of trained women, who imparted advice on hygiene, diet and general care.

About the same time the Greek physicians promoted welfare of mothers and children. Trained midwives attended on mothers during childbirth in Persia, Egypt, Greece and Palestine. The services for the mother and children received a real scientific approach in 17th century from the days of William Harvey (1578-1657) who is known as 'father of midwifery'.[9]

It was in the late 19th century, first effort was made to improve MCH services in India through establishment of training for Dais in Amritsar in 1880. Later in 1902, first midwifery act was enacted to promote safe delivery[10]in 1931, the entire work of MCH was coordinated by establishing a maternal and child welfare bureau under the

Indian Red Cross Society. The government of Madras was the first state government to setup a special section of maternal welfare in 1931. In 1946, Bhore committee in its recommendation gave high priority to MCH services and for developing them as anIntegral part of general health service.[11]

After the independence, India became the first country in the world to formulate a demographic goal and to launch a government sponsored family planning programme during the first five year plan (1951-56). During the second five year plan (1956-61) the service approach was introduced and in the third five year plan (1961-66) the approach was changed to extensive education. In the subsequent five year plans Intrauterine Devices (IUD's) were included in the programme and more emphasis was placed on MCH, by renaming the Family Planning programme as 'Family Welfare programme' in 1977. The components of Family Welfare programme were MCH services, Family Planning services, Immunization services, Nutrition and Health education.[12]

In the 7th five year plan, various national programmes like Universal Immunization Programme, Oral Rehydration Therapy programme and many others werealso started. The objectives of all these programmes were convergent and aimed atimproving the health of the mothers and the young children and to provide the facilitiesfor prevention and treatment of major diseases. As the various programmes werevertically run, this resulted in various administrative problems and also adversely affectedthe outcome. Therefore, during 8thfive year plan, these programmes were integratedunder Child Survival and Safe Motherhood (CSSM) programme which was implemented fromApril 1992. During the 9thfive year plan, the programme was renamed with additional inputs as Reproductive and Child Health Programme. The

RCH Programme incorporatesthe components covered under the Child Survival and Safe Motherhood Programme and includes an additional component relating to reproductive tract infections and sexuallytransmitted infections.[13]

Initially, the RCH programme was designed as a five year project and should haveended by March 2002. But it was later extended up to March 2005 that is up to the launchof RCH- II.[11] Second phase of RCH program commenced from April, 2005 along withNRHM for five year period up to 2010 (later extended to 2012). The main objectives ofthe program were to bring about a change in three critical health indicators i.e. reducing total fertility rate, infant mortality rate and maternal mortality rate with a view to realizethe outcomes envisioned in the National Population Policy (NPP) 2000, National Health Policy (NHP) 2002, Millennium Development Goals (MDG's), the Tenth Plan Documentand India Vision 2020. The salient features of RCH - II programme are: Sector-wideapproach to reach beyond RCH to the entire family welfare sector; building Stateownership by involving all the States, decentralization through development of districtand State level need based plans, flexible programming to allow States to develop needbased work plans with freedom to decide upon program inputs and, capacity building atdistrict, state and the central level to ensure improved program implementation.[14]

National Rural Health Mission (NRHM) a mission mode initiative was started with a framework to implement (NHP), 2002. It was launched to improve the availability and access to quality health care, particularly to vulnerable rural population. NRHM seeks to provide universal access, equitable, affordable and quality healthcare, reductionof maternal and child mortality as well as population

stabilization with gender anddemographic balance during its implementation period 2005-12.[14]

To achieve these goals, NRHM will facilitate improved access and utilization ofquality health services by all; forge partnership between central, state and local Governments; provide platform for involving panchayat raj institutions (PRI) in the management of primary health care; provide flexibility to the States and community to promote local initiatives and develop framework to promote inter-sectoral convergence.[14]It was through this program a cadre of Health worker called ASHA was created at thevillage level. ASHA plays a major role in building the community's awareness of theirhealthcare entitlements, in providing health education, in facilitating the community'saccess to essential health services, and in delivering preventive, promotive and firstcontact curative care. ASHA is trained in skills to provide a limited package of firstcontact care for mothers and newborns, in addition to preventive and promotive services.This actually enables a better realization of the continuum of care.[15]

The key features of the mission are to make the public delivery system accountable to community, human resource management, community involvement,decentralization, monitoring and evaluation, convergence of health programs and flexiblefinancing to improve the health indicators.[14]

Maternal Health

The term "maternal and child health" refers to the promotive, preventive, curativeand rehabilitative health care of mothers and children. It includes the sub-areas of maternalhealth, child health, family planning, school health, handicapped children, adolescence and health aspects of the care of children.[1]

The specific objectives of MCH are (a) reduction of maternal, perinatal,infant and childhood mortality and morbidity: (b) promotion of reproductive health andpromotion of the physical and psychological development of child and adolescent within the family. The ultimate Objective of MCH services is life-long health.[1]

Components of maternal health services[16]

a) Pre-conceptional care

b) Antenatal care

c) Intra-natal care

d) Postnatal care

a) Pre-conceptional care

Pre-conception care promotes the use of folic acid in planned pregnancies duringthe peri-conception phase (three months before and three months after conception) for theprevention of neural tube defects and other congenital anomalies. ASHAs also receiveincentives for delaying the birth of the first child and for spacing in between the births.[17]

High school or college girl students are told about the anatomy and physiology ofreproductive system and Family Welfare. It also includes theknowledge and pathology about Sexually Transmitted Diseases (STD's) including Human Immunodeficiency Virus (HIV). Informal component includes the benefits of medical supervision of pregnancy and the facilities available for the same.They are also informed about Medical Termination of Pregnancy (MTP) act. Genetic counseling is given to the individual orcouple about prevention of genetic diseases etc. [16]

Antenatal care (ANC)

Antenatal care, also known as pre-natal care, is the care of the mother and foetus during the period of pregnancy with the aim of reducing health risks of mother and child. Many women's in the developing countries have nutritional deficiencies, especially anemia, which indicates high risk for mothers and child.Antenatal care is important so as to assess the risk and early detection and treatment of the condition. The WHO recommends a minimum of four ante-natalvisits for pregnant women in order to receive a tetanus toxoid vaccination, 100 IFA tablets as prophylaxis for nutritional anemia, screening and treatment for infections and foridentification of warning signs during the pregnancy.[18] Studies have shown thatadditional visits do not improve the maternal or perinatal outcome.[19]

Intra-natal Care (INC)

Childbirth is a normal physiological process, but complications such assepticemia may arise from unskilled and septic manipulations. Situations can arise whenhome delivery may be risky and potentially life-threatening. The lack of access to skilledroutine and emergency care plays a big role in the amount of women that die during or after their pregnancy. The need for effective intra-natal care is therefore indispensable, even if the delivery is going to be a normal one. Hence, every pregnant woman should beadvised and encouraged to go in for an institutional delivery. Skilled birth attendance atevery birth should be ensured.[19]

A Skilled Birth Attendant (SBA) is a professionally qualified individual who canhandle normal pregnancies and deliveries, identify obstetric and neonatal emergencies,manage complications as per their defined competencies, and undertake

timely referral toa higher center where comprehensive obstetric care can be provided.[15]

Postnatal Care (PNC)

Conventionally, the first 42 days (six weeks) after delivery are considered the post-partum period. PNC can play a role in educating women and their families indetecting danger signs and care seeking behaviour. Research has shown that more than50% of maternal deaths take place during the postpartum period. The first 48 hours of thepost-partum period, followed by the first one week, are the most crucial period for thehealth and survival of both of the mother and her newborn. Most of the fatal and near-fatalmaternal and neonatal complications occur during this period. Hence, a woman who hasjust delivered needs to be closely monitored during the first 48 hours. Of all thecomponents of maternal and child health care delivery, postnatal care (PNC) and earlynewborn care are the most neglected components.[19]

Only one in six women receive care during the postpartum period in India. The National Family Health Survey (NFHS - III) 2005-06 data indicate that only 17% of the womendelivering at home were followed by a check-up within two months of delivery. Of those who delivered at home, only 2% received postpartum care within two days of deliveryand a meager 5% within the first 7 days. Even out of this minor fraction of women, mostof them were not provided the entire range of information and services that should havebeen provided to a woman during a postpartum visit.[19]

CURRENT STATUS OF UTILIZATION OF MATERNALHEALTH SERVICES

GLOBAL CONTEXT:

Annually about 3,58,000 women die in pregnancy and labour from preventablecauses due to the lack of access to services.[2] The majority of these deaths occur in thefirst 24 hours after delivery.[20] In addition to maternal mortality it is estimated that yearly9.5 million women suffer from pregnancy related illnesses such as injuries and infectionsand disabilities. 1.4 Million Women suffer from the consequences of the life threateningcomplications.[21]In the years 2005-2010, through-out the world, only 53% of pregnant women utilized minimum four ante-natal check-ups. In 2005-2010, number of women receiving four or more than four ante-natal care were only 36%. In developing countries, the utilization of at least one antenatal checkup increased from 64% in 1990 to 81% in 2009.

NATIONAL CONTEXT

India has very high maternal mortality ratio in comparison to other countries as approximately 20% of all maternal deaths in the world take place in India.[23] Within thecountry a wide range of maternal mortality rates can be seen, with especially poor andmarginalized women suffering from rates far higher than the national average. In the last30 years a positive trend can be recognized as India's maternal mortality ratio substantially declined from 677 maternal deaths for every 100,000 live births in 1980 to 254 in 2008.[25] Over the MDG period, there was decline in the MMR by 4%.[25]

The utilization of maternal health care varies amongst the Indian population. Differences exist between states, regions within these states and households. The

stateswith the highest development rates, urban areas and households with higher socioeconomic statuses, are those with the highest utilization rates. When taking theincome level of households into account it can be seen that households with a low incomein general seek less treatment. In general these households treat less than half of theillnesses that they suffer, subsequently spending a low percentage of their householdincome on health.[26]

The utilization of Antenatal care (4+ visits) in India is 51%. Presence of a Skilled Birth Attendant (SBA) reduces the risk of a woman dyingduring or after childbirth substantially. In the year 2010 approximately 53% of births inIndia were assisted by SBA. Postnatal care being the most neglected part is utilized onlyby 37% of the women.[4, 5]

REGIONAL CONTEXT

It is unusual to state that a state like Karnataka, which is much ahead of itssouthern counterparts in terms of development, is way behind when it comes to takingcare of the women giving birth. Assistance from health providers is of the best quality in states like Kerala and Tamil Nadu, close to 100%; but in Karnataka, it is only 85%.[27]It islargely due to the lack of quality healthcare in the rural and semi-urban set-ups that hascontributed to high maternal mortality in the state. Maternal Mortality Rate (MMR) hasseen a dip in Karnataka by 35 points between 2008 and 2011. The number of maternaldeaths for every one lakh live births stood at 213 in 2008 and that it had gone down to178 in 2011.[28]Despite these promising numbers early registration is 62.3%, therecommended minimum of 3 ANC visits is 92%, institutional deliveries only 57%, 49.6%of the women delivered in institution stay less than 48 hours in the institution and the postnatal check-up is 82%.[4, 5]

Low uptake of ante-natal health care services and delivery services characterize the poor maternal health in Karnataka. When comparing these numbers Karnataka has thelowest ANC utilization visits, institutional deliveries and post natal checkups among allstates in the south region of India.[29]

Systematic review was conducted in April 2013 in eight countries to know the impact of Conditional Cash Transfer (CCT) that report maternal and newborn health outcomes. Results showed maternal mortality decreased by 10% in Oportunidadesprogramme and large decline in Perinatal and Neonatal deaths in India. In Mexico and Uruguay, low birth weight was markedly decline by 4.6% and 1.5% respectively. ANC services showed that the average number of beneficiaries that received at least five antenatal visits was significantly increased among beneficiaries compared to non-beneficiaries of CCT programme, ranging 8% point difference in Mexico to 19% point increase in Honduras. Largest CCT programme in the world was India's Janani Suraksha Yojana (JSY) which showed significant increase in institutional delivery rate. There was positive and significant outcomes on birth attended by skilled personnel from a low of 4% point difference between beneficiaries and non-beneficiaries in Guatemala to a high 37% point difference in India, compared to Indonesia 45%. Regarding births in health facilities showed significant and positive effect in Nepal and there was 4% point difference between beneficiaries and non-beneficiaries. Mother receiving tetanus toxoid vaccination showed, average is between 37% increase in Mexico and 4% increase in Honduras with average of 8% increase. Impact of CCT program on post-partum visit revealed negative but insignificant results, with overall effect size of 6% decline in post-partum visits.Conclusion of this study was increase in the utilization of MNH services,

especially skilled attendant at delivery and ante-natal care monitoring in middle-income countries with high income inequality.[30]

A Cohort study was conducted in Dera Ghazi Khan City, South Punjab, Pakistan in Household interviews were conducted with randomly selected women who delivered in 2008 (the year prior to the voucher intervention), and with randomly selected women who delivered in 2009. This study assed the impact of Maternal Health Voucher Scheme, which included package of services available to the study participants like, three ANC visits, delivery services, referral services for caesarian section, ultrasonography, blood count and other services were made available for the period of 12 months which were rendered by Primary Health Care providers to the clients who had vouchers booklets. Results showed that the number of mothers utilized this services in 2008 was only 61% which significantly increased to 83%. Similarly institutional delivery rate increased from 61% in 2008 to 80% in 2009 after intervention of voucher scheme, PNC service utilization increased from 30% in 2008 to 61% in 2009. This study concluded that there was large improvement in ANC, Intra-natal and PNC service utilization after introduction of voucher scheme.[31]

A review of the literature was conducted on demand-side financing scheme for maternalhealth in South Asia which included 38 published journal articles in the review, to know the impact of maternal mortality. In, South Asia, five major demand-side schemes were implemented with variants of cash transfer schemes (India, Nepal) and voucher or voucher like schemes (India, Pakistan, Bangladesh). This study revealed, there was decline in home deliveries by 4.9% in one year, and negligible impact on facility deliveries by 2.6% and deliveries by skilled attendance by 2.3%. Similarly in 2005, India implemented 'Janani Suraksha Yojna' which is a safe

motherhood scheme. In the span of three years, this study showed improvement of ANC services by 10%, increased institutional deliveries by 43% and decreased Neonatal death rate by 2.4 per 1000 live births.[32]

A study conducted by Brauw A, Peterman A. "Can Conditional Cash Transfer (CCT) Improve Maternal Health and Birth Outcomes" in 2011. (Evidences from state of El Salvador`s Comunidadedes Solidarias Ruraies -CSR), revealed CCTs are quickly becoming a main stay of social protection and Govt. welfare programs. Capacitacionaciones are an integral part of service delivery of CSR and are offered on a monthly basis at a meeting point, beneficiaries attended Capacitacionaciones was 74.8% during initiation phase, and at the end of the year it was 97.5%, over all, the mothers seeking ANC services increased markedly.[33]

Also another study conducted by S Sharma. "Maternal, Perinatal and Neonatal Mortality in South- East Asia Region" revealed to achieve MDG 5 targets, countries must prioritize programme and financial packages that provide a continuum of care for maternal, newborn and child health. Proven simple, cost-efficient and feasible solution to save the lives of mother and new born simultaneously.[34]

A study "India's Janani Suraksha Yojana, a conditional cash transfer programme to increase births in health facilities: an impact evaluation" conducted by using data from the nationwide district-level household surveys (DLHS) done in 2002–04 and 2007–09 to assess receipt of financial assistance from JSY as a function of socioeconomic and demographic characteristics revealed JSY had a significant effect on increasing antenatal care and in-facility births.[35]

A study conducted by Bhatt R, Mavalankar DV. "Maternal Health Financing: Gujarat's Chiranjeevi scheme and its beneficiaries" revealed,the Chiranjeevi scheme

has provided financial protection against the cost of delivery and Emergency Obstetrics Care (EmOC) to a marginalized section of the population. Chiranjeevi scheme has saved up to Rs. 3,273 (about US $82) in deliveries compared to those who did not avail of the benefits of the scheme. By buying the services in bulk from private health care providers, the Govt. is getting delivery services at a much lower price than the market rates being paid by non-beneficiaries (Rs. 4,000 or US $ 100). The Govt. health employees such as ANM/FHW`s have been found to be effective in building awareness and guiding clients to use private services elaborately.[36]

Globally, the total number of maternal deaths decreased from 5, 43,000 in 1990 to 2, 87,000 in 2010, Likewise, global MMR declined from 400 maternal deaths per lakh live births in 1990 to 210 in 2010. The latter represents an average annual decline of 3.1%. Maternal Mortality of India is 200/lakh live births, and MMR of Karnataka is 178/lakh live births in 2009 [Sample Registration System (SRS-2010)].[37]

United Nations Millennium Development Goal 5: 5.A: improve maternal health Target. 5. B: Reduce by three quarters, between 1990 and 2015, the maternal mortality ratio Target. Achieve, by 2015, universal access to reproductive health. Despite a significant reduction in the number of maternal deaths – from an estimated 523 000 in 1990 to 289 000 in 2013 – the rate of decline is less than half of what is needed to achieve the MDG target of a three quarters reduction in the mortality ratio between 1990 and 2015. To reduce the number of maternal deaths, women need access to good-quality reproductive health care and effective interventions. In 2012, 64% of women aged 15–49 years who were married or in a consensual union were using some form of contraception, while 12% wanted to stop or postpone childbearing but were not using contraception. The proportion of women receiving antenatal care

at least once during pregnancy was about 83% for the period 2007–2014, but for the recommended minimum of 4 or more visits the corresponding figure drops to around 64%. The proportion of births attended by skilled personnel – crucial for reducing perinatal, neonatal and maternal deaths – is above 90% in 3 WHO regions. However, increased coverage is needed in certain regions, such as the WHO African Region where the figure was still only 51%.[38]

Maternal Health is important to families, communities and the entire nation due to its profound effects on the health of women, immediate survival of newborn and long term wellbeing of children especially girl child and families. Maternal morbidity and maternal mortality have cost implications for family and community, because of both direct and indirect costs and the adverse impact on productivity. Maternal mortality and morbidity reflects quality of Health care delivery, degree of equity in Public Health Service Delivery and Utilization of services.[39]

In an effort to improve the coverage of Health Service and to narrow the differences between different income groups, Policy makers (Govt.) are becoming increasingly bold in their reforms. One promising strategy is to provide financial incentives to individuals who exhibit certain behaviors that improve Health status. This is a key factor of various programmes that have become popular in recent years, where incentives takes the form of conditional cash transfer, voucher scheme, cash payment and gifts. The central idea of providing monetary rewards is to improve access to Health Care delivery.[40]

To achieve Millennium Development Goals (MDG 5) Govt. of India launched National Rural Health Mission in April-2005, a multi-dimensional programme, with its Goals to reduce infant mortality rate (IMR),maternal mortality rate (MMR),total

fertility rate (TFR)& stabilize Communicable & Non-communicable diseases in the community. It seeks to provide equitable & affordable quality health care services to rural population.[41]

Karnataka state is one of the pioneering state in providing Comprehensive Public Health Service delivery to the community. With NRHM, Govt. of Karnataka has implemented various Demand Generation Schemes (Janani Suraksha Yojana which is National scheme whereas Prasuthi Araike, Thaiyi Bhagya Plus and Madilu kit are Karnataka state schemes) to improve Maternal Health & Child Health (to reduce IMR andMMR). As one of the goals of NRHM is to reduce MMR, its strategies is to promote ANC services, promote institutional deliveries, 48hrs hospital stay during labour, early diagnosis and prompt referral of high risk pregnancies to Referral Centre's, PNC care along with Child care and Immunization, Govt. of Karnataka implemented the following Demand Generation Schemes.[41]

1. Janani Suraksha Yojana (JSY).
2. Prasuthi Araiki programme (PA).
3. Madilu kit programme.
4. Thaiyi Bhagya Plus programme.

A. JANANI SURAKSHA YOJANA (JSY)

Janani Suraksha Yojana (JSY) is a safe motherhood intervention under the National Rural Health Mission (NRHM) being implemented with the objective of reducing maternal and neo-natal mortality by promoting institutional delivery among the poor pregnant women. This programme was launched on 12th April 2005. It provides a cash incentive to women who give birth in public health facility, accredited private health provider. JSY also provides a smaller sum as support for those poor

women who opt for home delivery for reasons ranging from lack of access, confidence in institutional delivery services or their own culture. Beneficiaries are those women who belong to below poverty line (BPL), scheduled castes (SC)&scheduled tribes (ST) group, restricted to first and second delivery. [39]

Cash incentive:-

<table>
<tr><th>Place of Delivery</th><th>Cash Incentive</th><th>Remarks</th></tr>
<tr><td>Home Delivery</td><td>Rs 500/-</td><td rowspan="5">Incentives are paid in the form of bearer cheque soon after delivery.</td></tr>
<tr><td colspan="2">Institutional Delivery</td></tr>
<tr><td>Rural Women</td><td>Rs 700/-</td></tr>
<tr><td>Urban Women</td><td>Rs 600/-</td></tr>
<tr><td>Caesarian section</td><td>Rs1,500/-</td></tr>
</table>

B. PRASUTHI ARAIKE(P.A.)

Prasuthi Araike is a cash incentive scheme for pregnant women, to encourage rest, nutritious food, and medical care during pregnancy and after delivery, to pregnant women belonging to scheduled castes (SC), scheduled tribes(ST) and below poverty line (BPL) families. This incentive scheme is restricted to first and second delivery.[41]

Installment	Cash Incentive	Remarks
First installment (In second trimester/5 or 6thmonth)	Rs.1,000/-	Incentives are paid in the form of bearer cheque
Second installment (After Deliveryin Government Institution)	Rs. 300 for Rural Women Rs. 400 for Urban Women	

C. MADILU KIT PROGRAMME

To reduce IMR, MMR and to improve institutional delivery Govt. of Karnataka launched 'Madilu kit' programme in October-2007. The aim of this programme is to provide Post-Natal kit to the mothers who deliver in Government institution. Beneficiaries are those mothers who belong to SC, ST and BPL families and it is restricted to first and second live births.[41]

Contents of Madilu kit:

1-Two Bed sheet, 2-One Jamkhana, 3- One towel, 4- One set of sweater, socks, cap to the baby, 5- One Jabala for newborn, 6- One rubber sheet, 7-One Abdominal belt for mothers, 8-Set of sanitary pads for mother, 9- Bed sheet for baby, 10- One Flannel bed sheet, 11-Cotten diapers for baby, 12-Soap, Detergent and baby powder and One Plastic bag.[41]

D. THAIYI BHAGYA PLUS YOJANE.

Thaiyi Bhagya plus yojana, launched in 2009 is a cash incentive scheme to those women who belong to SC, ST, BPL families and restricted to first and second live births. The aim of this scheme is to reduce financial burden who opted private institution for delivery services. A cash incentive of Rs. 1,000/- is being given after delivery to the mother.[41]

In a programme evaluation of Janani Suraksha Yojana, conducted by National Health System Resource Centre (NHSRC), Ministry of Health and Family Welfare (MoH&FW), Govt. of India, revealed that JSY has clearly increased the number of institutional deliveries, and this increase, documented in other population based surveys is validated by their study findings that over 50% of women who had a previous home delivery had opted for an institutional delivery. The study also demonstrates equity in access of women to institutional deliveries, given that the representation of SC/ST and BPL in the sample was higher than the population representation. However in Jharkhand and Chhattisgarh, the percentage of ST among institutional deliveries is lower than in the population.[42]

Another study in Karnataka, showed that the evidence obtained from Raichur for the Thaiyi Bhagya scheme demonstrates a classic case of 'supplier hold-up', while that from Bagalkot shows that private hospitals had found the scheme to be a source of funds. The indicators of possible fraud and misuse of the scheme require further analysis.[59]

METHODOLOGY

This Community based Cross sectional study was taken up in the Primary Health Center (PHC) area of Handiganur, which is the rural field practice areas of Department of Community Medicine, Jawaharlal Nehru Medical College, Belagavi. The PHC has four sub centers with fifteen villages having a total population of 27,000. It is situated about 20 km. from the college towards North-West side.

SOURCE: Registered pregnant women, delivered during the period from 1st January 2015 to 31st December 2015 in the rural field practice area of Handiganur. Recall bias was minimised by checking registers of JSY, Prasuthi Araiki and Madilu kits available at PHC and were cross referred with the data collected. Similarly, Thaiyi Card (Mather card) which was available with respondents was checked to confirm the service utilisation and investigation carried out.

STUDY DESIGN: A community based cross sectional study.

STUDY PERIOD: The study was conducted between 1stJanuary 2015 to 31st December 2015 (12 months).

SAMPLE SIZE

- Mid-year population of Handiganur Primary health Centre (PHC) area in 2014 was 27,000 according to previous year Community Need Assessment (CNA) survey.
- Considering 2% population to be pregnant and half of them always available at the given time,
- Crude birth rate of Handiganur: 19/1000 MYP

- Expected Pregnancy = Birth rate **x** Total population / 1000

  =19 x 27,000/1000

- Estimated pregnant women (sample size): 513 (10% attrition).
- Corrected sample size: 540

SAMPLING TECHNIQUE: All the women who delivered during the period from 1st Jan.2015 to 31st Dec.-2015 were included in the study.

INSTRUMENTS USED FOR DATA COLLECTION

QUESTIONNAIRE: Predesigned and structured questionnaire was constructed using review of various articles, NFHS and DLHS reports. The questioners were divided into five sections namely socio-demographic characteristics of the participants, utilisation ante-natal care services, intra-natal services, postnatal care services and utilisation of demand generation schemes. A pilot study was done in one PHC and one sub-centre to pre-test and validate the questionnaire. The investigator personally visited the households of the study subjects and questionnaire was administered. Written informed consent was obtained from all the study participants.

METHOD OF DATA COLLECTION

PRIMARY DATA

Data was collected regarding demography, ANC services like ANC registration, three ANC check-ups, physical examination during ANC, basic investigation, tetanus toxoid (TT) immunization, IFA Tablet consumed, identification of high risk pregnancy (HRP), health education, Intra-natal services like promotion of institutional delivery, safe delivery, mode of transportation, Institutional Delivery, outcome of delivery & PNC services ,child care, referral services, and utilization of

demand generation schemes like JSY, Prasuthi Araike, Madilu kit and Thaiyi Bhagya Plus programme.

SECONDARY DATA

Data on utilization of the maternal health care services and utilization of Demand Generation Schemes, like JSY register, Prasuthi Araike register and Madilu kit register, were collected from the records available at the Primary Health Centre and ANM Sub-centre of PHC Handiganur for cross-reference. The register was cross verified for confirmation of eligible beneficiaries and the utilisation of the benefits of these schemes. Information was also obtained from Mother and Child protection card (Thaiyi Card), which were available with respondents at the time of investigation.

INCLUSION CRITERIA

Registered pregnant women, delivered during the period from 1st January 2015 to 31st December 2015 in the rural field practice area of Handiganur, Belagavi district.

EXCLUSION CRITERIA

1. In case of maternal death/neonatal death.
2. Married women who have come to mother's place in study area from other areas only for delivery.

STATISTICAL ANALYSIS PLAN

The data collected in questionnaire was coded and entered in Microsoft Excel sheet. Tables and charts were prepared. Rates, Ratios and percentages were calculated. Statistical analysis was done using chi square test.

ETHICAL CLEARANCE

The study was approved from the Institutional Ethics Committee for Human Subject's Research, of the institution. Ref: MDC/DOME/179. Dated: 14-11-2014 (see Annexure-I)

THE PROFORMA INCLUDED THE FOLLOWING

MATERNAL AGE: Age of the mother in years as completed on her last birthday.

EDUCATION: Every study subject and her husband were asked about the Education status. It was classified as:

1. **ILLITERATE:** A person who cannot read and write any language.
2. **PRIMARY SCHOOL:** A person who has studied from first to fifth standard.
3. **HIGHER PRIMARY:** A person who had studied sixth to tenth standard.
4. **P. U. C/ DIPLOMA:** The person who has studied up to Pre-University College second year (PUC) or diploma course.
5. **GRADUATE:** The person who has completed Graduation or more.

OCCUPATION: Every study subject and their husband her asked about the occupation. It was classified as:

1. **GOVERNMENT JOB:** Working in Central or State Government for salary.
2. **PRIVATE JOB:** Works in private party/ agency/firm etc for salary.
3. **SELF EMPLOYED:** doctors, engineers, college lecturers etc.
4. **SKILLED WORKERS:** skilled based jobs, such as technicians, mechanic, electricians etc.

5. **UNSKILLED WORKERS/ MANUAL WORKERS:** In this group the occupations which involve physical exertion like masonry, farming, coolie, drivers, conductors, office attenders, security personnel, etc.
6. **UNEMPLOYED/EXPIRED:**
7. **HOME MAKER:** women not engaged in any kind of economical productive work.

SOCIO-ECONOMIC STATUS (SES) CLASS

Information regarding per capita income (in Rupees / month) was collected and socio-economic status was classified using Modified B. G. Prasad's classification for the study period (2015).[43]

Socio-Economic Class	Prasad's classification 1961 (per capita income in Rupees/month)	Modified Prasad's classification 2015 (per capita income in Rupees/month)[43]
I	100 and above	5965 and above
II	50-99	2983-5964
III	30-49	1789-2982
IV	15-29	895-1788
V	<15	Below 895

$$\text{Monthly Per Capita Income in Rs.} = \frac{\text{Total monthly income of family}}{\text{Total members of family}}$$

Modification was done with the aid of Correction factor (CF), which was obtained as below:

As our study period was from 1st January to 31st December 2015, the mean All India Consumer Price Index (AICPI) for the period was considered.

Average Consumer Price Index for year 2015 was 1210.[44]

$$CF = \frac{\text{Value of consumer price index average for the study period (2015)}}{100} \times 4.93$$

$$= \frac{1210 \times 4.93}{100} = 59.65$$

Modified B. G. Prasad's =Per capita family monthly income of 1961 (B.G. Prasad)xCF

TYPE OF FAMILY

a. **NUCLEAR FAMILY:** The family consisting of married couple along with their dependent children.
b. **JOINT FAMILY:** It consists of number of married couples and their children who live in the same household.
c. **EXTENDED FAMILY:** A family which extends beyond the nuclear family which includes relatives who live in the one household and share kitchen in common.

GESTATIONAL PERIOD AT THE TIME OF ANC REGISTRATION: Duration of pregnancy in weeks when they first contact the health care staff.

PREGNANCYORDER: total number of times the mother has conceived, including the present pregnancy.

NUMBER OF LIVING CHILDREN: Total number of living children including the present one.

ANC REGISTRATION (THAIYI CARD): When woman has missed her periods, concerned ANM would confirm pregnancy by urine pregnancy test and register the new ANC and issue child protection card (Thaiyi Card) to the pregnant women.

LMP (LAST MENSTRUAL PERIOD): First day of the last menstrual period as told by the woman was taken as LMP.

ANTENATAL CARE (ANC): Antenatal care is the systemic supervision of women during pregnancy to monitor the progress of fetal growth and to ascertain the well-being of the mother and the foetus.

ANC VISITS: Schedule for antenatal visits (minimum four visits)

1st visit: -Within 12 weeks or soon as pregnancy is suspected.

2nd visit: Between 14 and 26 weeks (or accordingly)

3rd visit: Between 28 and 34 weeks (or accordingly)

4th visit: Between 36 weeks and term (or accordingly).

FULL ANC: It includes minimum three antenatal check-ups, at least one tetanus injection and issue of 100 or more Iron and folic acid tablets (IFA).[1]

TETANUS TOXOID: The first dose of TT is administered as soon as possible, preferably when the women registers for ANC. The second dose is to be given one month after the first, preferably one month before the EDD. Only one booster dose is given to the mother who have conceived within three years of previous delivery.

DELAYED LABOUR: A pregnancy has extended beyond two weeks of expected date of delivery (≥ 42 weeks or ≥ 294 days counting from the first day of LMP).

MODE OF DELIVERY

NORMAL DELIVERY: delivery is called normal if it fulfills the following criteria:

1. Spontaneous onset and at terms

2.With vertex presentation

3. With-out undue prolongation

4. Natural termination without any aid

5. Without having any complication affecting the health of mother and child.

ASSISTED DELIVERY: If the delivery is assisted either with Induction of labour, assistance or intervention was considered during second or third stage of labour to deliver the child e.g. artificial rupture of membrane (AROM), stripping the membranes, episiotomy, forceps delivery and manual extraction of placenta etc.

CAESARIAN SECTION: Where the fetus after 28 weeks is delivered through the uterus by an abdominal incision under anesthesia.

SICK NEW BORN: Is the one which requires additional support to sustain and which needs specialist services for treatment. Can be grouped under Birth weight < 1,800 gm., gestation period < 34 wks., large baby, central cyanosis, shock, coma, convulsion or encephalopathy, bleeding or any major malformation, perinatal asphyxia, apnea or gasping, respiratory distress (rates > 60 or grunt/ retractions), refusal to feed, severe jaundice (Appears < 24 hrs./stains palms & soles Lasts > 2 weeks).

POST NATAL CARE (PNC): It is the care of the mother and the child after delivery with proper advice to the mother.

BIRTH PREPAREDNESS: It is the planning and preparing for delivery. Activities carried out were information and motivation for next subsequent visits and also encouraging for institutional deliveries.

DURATION OF PREGNANCY

PRE TERM: Labour which starts before the 37^{th} completed week (< 259 days) of gestation.

FULL TERM: Labour which starts from 37th completed weeks (≥ 260 days) doesn't exceed42 weeks of gestation (≤ 293 days), counting from the first day of LMP.

POST-TERM: Labour which starts after 42 completed weeks of period of gestation.

5. RESULTS

The present study was undertaken in the rural field practice area of PHC Handiganur, administered by the Department of Community Medicine, KLE University's Jawaharlal Nehru Medical College, Belagavi. The data obtained was tabulated and analyzed under the following headings:

1. Socio-Demographic Profile of study participants

2. Utilization of Maternal and Child Health Services

3. Assessment of Demand Generation Schemes

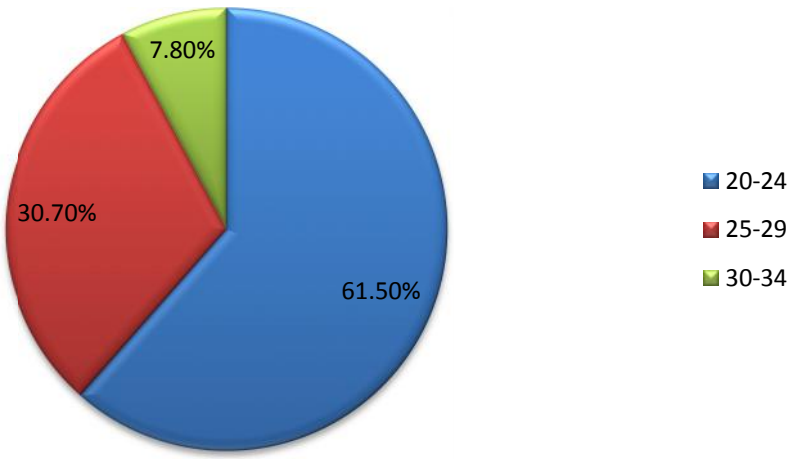
I SOCIO-DEMOGRAPHIC PROFILE OF STUDY PARTICIPANTS

Table 1: Distribution of study participants according to Age

Age (years)	Total No. of Pregnant Mothers N (%)	
	No.	**%**
15-19	0	0
20-24	332	61.5%
25-29	166	30.7%
30-34	42	7.8%
35-39	0	0
40-44	0	0
Total	**540**	**100%**

In the present study, most 332 (61.5%) of the pregnant women were in the age group of 20-24 years. 166 (30.7%) were in the age group of 25-29 years and only 42 (7.8%) were in the age group of 30-34 years. There were no participants either below the age of 19 years or above the age of 35 years.

Graph 1: Distribution of study participants according to Age



In the present study, the age group of study participants ranged from 20-35 years and the mean age of study participants was 24.1± 2.8 years.The age at marriage of the women in the present study ranged from 15-24 years and the Mean± SD age was 19.1 ± 2.1 years.

Table 2: Distribution of the study participants according to the woman's age at marriage

Age	Participants	Percentage
<18 years	41	7.6
≥ 18 years	499	92.4
Total	**540**	**100**

Out of 540 study participants, majority of them 499 (92.4%) were 18 years and above at the age of marriage and only 41 (7.6%) were less than 18 years.

Graph 2: Distribution of study participants according to age at marriage

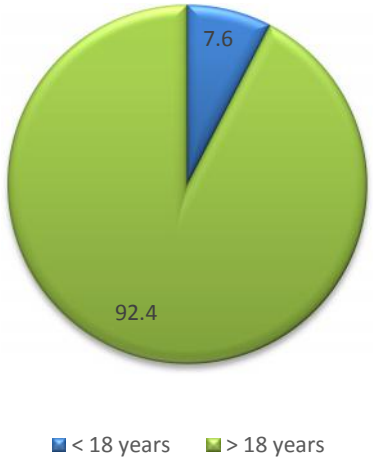


Table 3: Distribution of study participants according to religion

Religion	Participants	Percentage
Hindu	436	80.7
Muslim	82	15.2
Christian	22	4.1
Total	**540**	**100**

A major number of participants, 436 (80.7%) were Hindus followed by 82 (15.2%) were Muslims and only 22 (4.1%) were Christians.

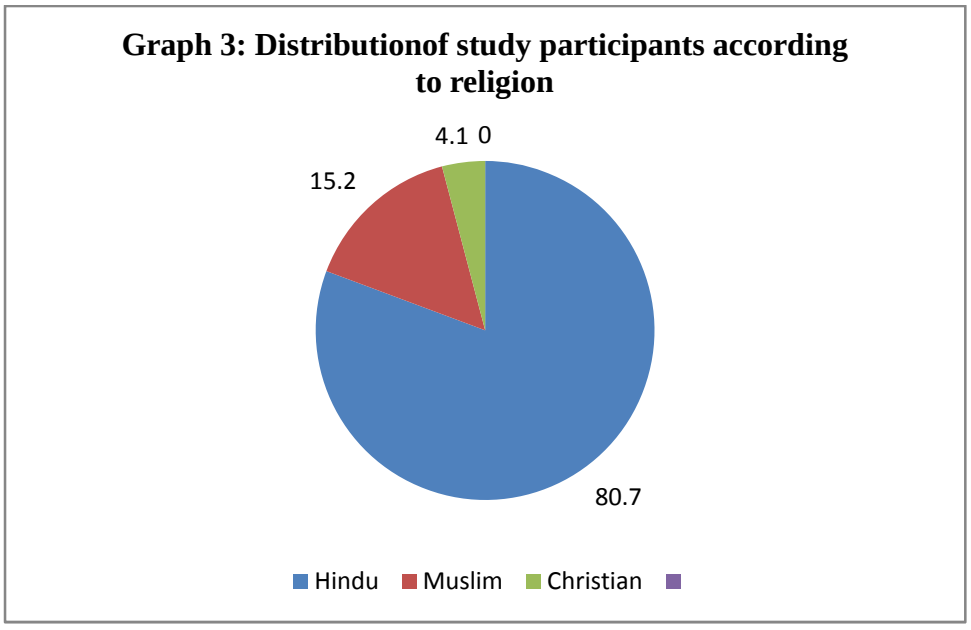


Table 4: Distribution of study participants according to their category

Category	Participants	Percentage
Scheduled Castes	58	10.7
Scheduled Tribes	60	11.1
Other Backward castes	151	28
General	271	50.2
Total	**540**	**100**

Out of 540 study participants, almost 271 (50.2%) belonged to general category, 151 (28%) belonged to other backward castes, 60 (11.1%) belonged to scheduled tribes and 58 (10.7%) belonged to scheduled castes.

Graph 4: Distribution of study participants according to category

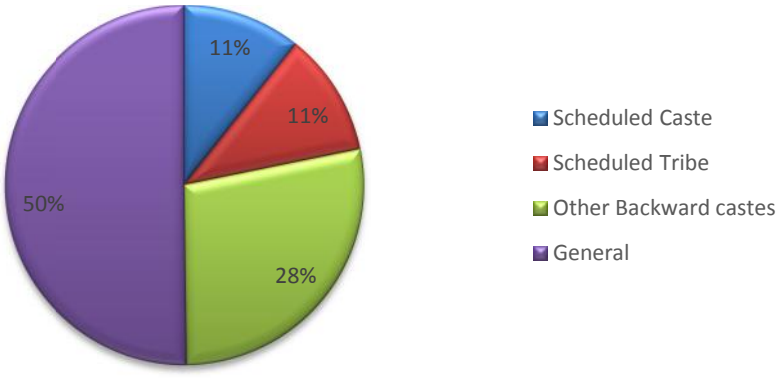


Table 5: Distribution of study participants according to their literacy status

Literacy status	Participants	Percentage
Illiterate	60	11.1
1st - 5th standard	21	3.9
6th - 10th standard	376	69.6
Pre-University College/ Diploma	62	11.5
Graduate/ Post-Graduate	21	3.9
Total	**540**	**100**

In the present study out of 540 study participants, 480 (88.9%) of them were literates. Among them, most 376 (69.9%) of the participants had studied up to 6th - 10th standard, followed by 62 (11.5%) up to Pre-University College/ Diploma. About 21 (3.9%) participants studied up to 1st - 5th standard and 21 (3.9%) were Graduate/ Post-Graduates. Around 60 (11.1%) participants were illiterate.

Graph 5: Distribution of study participants according to their literacy status

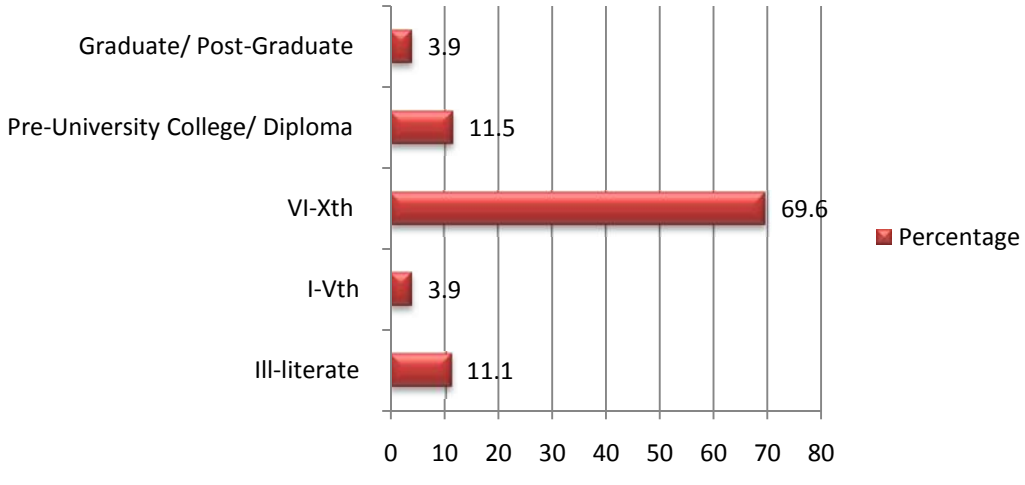


Table 6: Distribution of study participants according to their occupation

Occupation of Participant	Participants	Percentage (%)
Government service	41	7.6
Private service	0	0
Self employed	42	7.8
Skilled worker	0	0
Unskilled worker	165	30.5
Unemployed	0	0
Home maker	292	54.1
Total	**540**	**100**

In the present study,out of 540study participants, 292 (54.1%) were home-makers, 165 (30.5%) were unskilled workers, 42 (7.8%) were self-employed, and 41 (7.6%) were in government service.None of the participants were in private service, or doing skilled work, or unemployed.

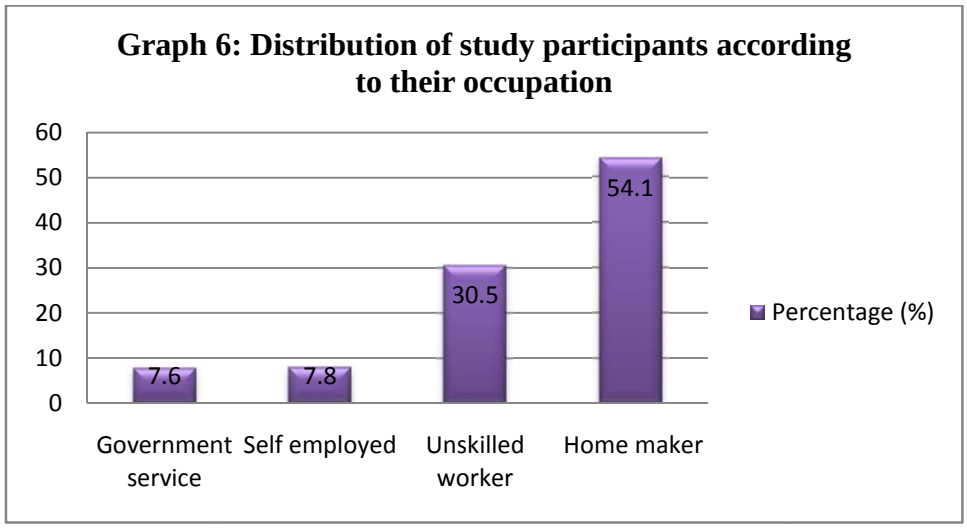


Table 7:Distribution of study participants according to type of family

Type of family	Participants	Percentage
Nuclear	252	46.7
Joint	288	53.3
Total	**540**	**100**

Out of 540 study participants, 288 (53.3%) study participants belonged to joint family and 252 (46.7%) belonged to nuclear family.

Graph 7: Distribution of study participants according to type of family

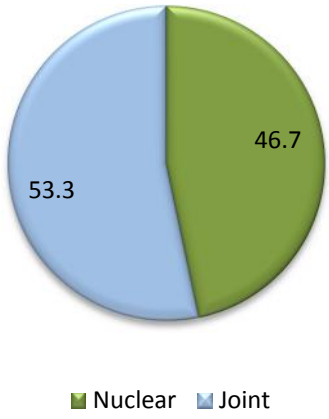


Table 8:Distribution of study participants according to Socio-economic status

Socio-economic class	Participants	Percentage
I	0	0
II	54	10
III	89	16.5
IV	81	15.0
V	316	58.5
Total	**540**	**100**

Out of 540 study participants, 316 (58.5%) belonged to SES class V, 89 (16.5%) belonged to SES class III, 81 (15%) belonged to SES class IV and 54 (10%) belonged to SES class II socio-economic status as per the modified B. G. Prasad's classification.

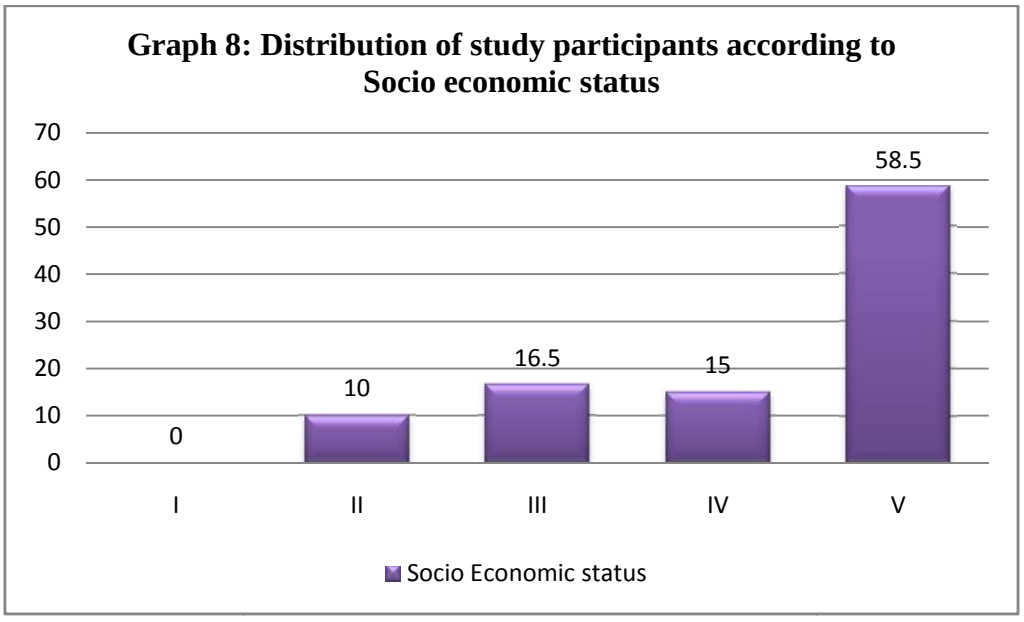


Table 9:Distribution of study participants according to family status

Type of family	Participants	Percentage
APL	233	43.1
BPL	307	56.9
Total	**540**	**100**

Out of 540 study participants, 307 (56.9%) belonged to below poverty line family and 233 (43.1%) belonged to above poverty line family.

Graph 9: Distribution of study participants according to family status

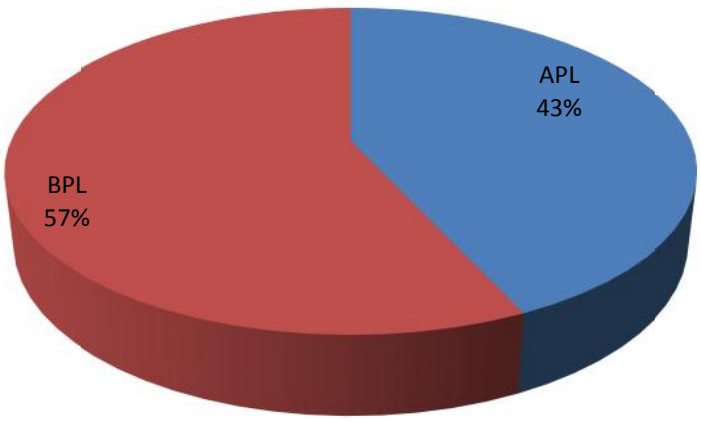


Table 10: **Distribution of study participants according to their Husbands' literacy status**

Husbands' literacy status	Participants	Percentage
Illiterate	61	11.3
$1^{st} – 5^{th}$	21	3.9
$6^{th} – 10^{th}$	312	57.8
Pre-University College/ Diploma	104	19.3
Graduate/ Post-Graduate	42	7.8
Total	**540**	**100**

Out of 540 study participants, 312 (57.8%) participant's husbands had studied till tenth standard, 104 (19.3%) had studied till pre-university college/ diploma, 61 (11.3%) participant husbands were illiterate, 42 (7.8%) had completed graduation or post-graduation and 21 (3.9%) had studied till fifth standard.

Table 11: Distribution of study participants according to their husband's occupational status

Occupation of Participant's husband	Participants	Percentage (%)
Self employed	42	7.8
Skilled worker	42	7.8
Unskilled	456	84.4
Total	**540**	**100**

Out of husbands of 540study participants, majority 456 (84.4%) of participant husbands were unskilled workers, 42 (7.8%) were self-employed and 42 (7.8%) were skilled workers.

II UTILISATION OF MATERNAL AND CHILD HEALTH SERVICES

Table 12: Distribution of study participants according to first knowing of their pregnancy status

Duration (months)	Participants	Percentage (%)
2nd	374	69.2
3rd	145	26.9
4th	21	3.9
Total	**540**	**100**

Out of 540 study participants, 374 (69.2%) of them had got to know about their pregnancy in second month, 145 (26.9%) in third month and 21 (3.9%) in fourth month.

Table 13: Distribution of study participants according to first contact person after knowing of their pregnancy

First contacted	Participants	Percentage (%)
ASHA	227	42
AWW	61	11.3
ANM	63	11.7
Staff nurse	0	0
Doctor /Medical officer	189	35
Total	**540**	**100**

Out of 540 study participants, 227 (42%) of women after knowing their pregnancy, first contacted ASHA worker, 189 (35%) contacted doctor, 63 (11.7%) contacted ANM, 61 (11.3%) contacted anganwadi worker, while no any participant contacted staff nurse.

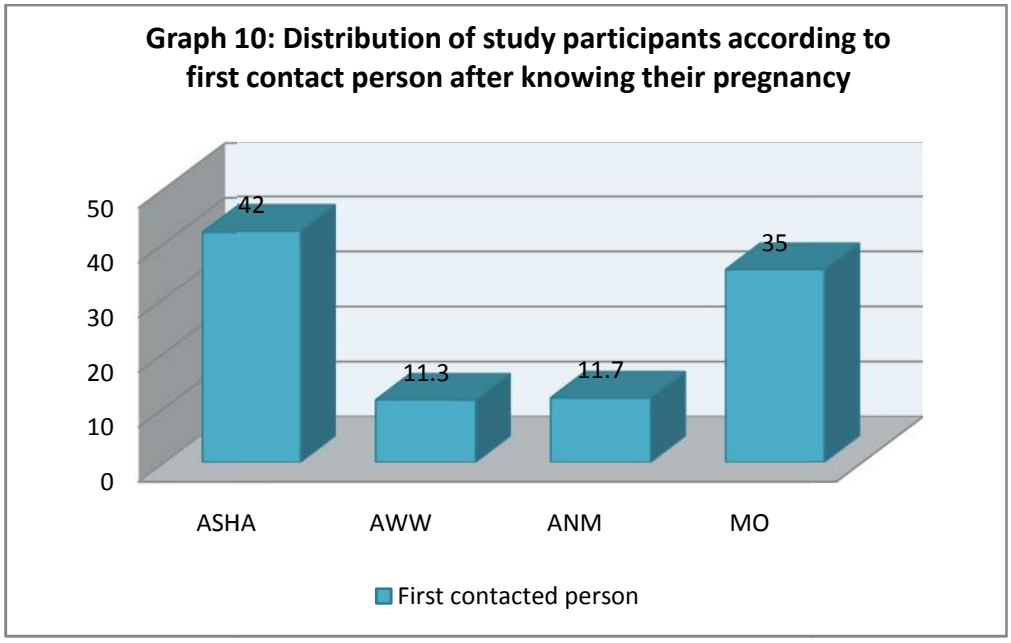


Table 14: Distribution of study participants according to their pregnancy order

Pregnancy Order	Participants	Percentage (%)
1st	221	40.9
2nd	309	57.3
3rd	05	0.9
4th	05	0.9
Total	**540**	**100**

Out of 540 study participants, it was observed that 309 (57.3%) were of second order of pregnancy, 221 (40.9%) were of first order of pregnancy, 5 (0.9%) were of third order and 5 (0.9%) were of fourth order of pregnancy.

Table 15: Distribution of study participants according to their number of living children

Total number of living children	Participants	Percentage (%)
1	223	41.3
2	312	57.8
3	4	0.7
4	1	0.2
Total	**540**	**100**

Out 540 study participants, 312 (57.8%) mothers had two living children, 223 (41.3%) had one living child, 4 (0.7%) mothers had three living children and only 1 (0.2%) mother had four living children.

Table 16: Distribution of study participants according to their number of previous abortions

Number of previous abortions	Participants	Percentage (%)
Nil	533	98.7
1	4	0.7
2	2	0.4
3	1	0.2
Total	**540**	**100**

Out of 540 study participants, majority 533 (98.7%) of the women did not had history of previous abortions, while 4 (0.7%) women had single abortion, 2 (0.4%) women had two abortion and only one (0.2%) women had three abortion.

Table 17: Distribution of study participants knowing their last menstrual period

Knows LMP	Participants	Percentage (%)
Yes	354	65.6
No	186	34.4
Total	**540**	**100**

Out 540 study participants, 354 (65.6%) remembered and mentioned correctly about their last menstrual period, while 186 (34.4%) didn't remember about their last menstrual period.

Table 18: Distribution of study participants according to the gestational period at first registration with first ANC check-up

Gestational period	Participants	Percentage (%)
< 12 weeks	519	96.1
> 12 weeks to < 20 weeks	21	3.9
Total	**540**	**100**

Out 540 study participants, 519 (96.1%) of pregnancies were registered and also first antenatal check-up was done within 12 weeks of gestation, while 21 (3.9%) were registered at 12-20 weeks of gestation.

Table 19: Distribution of study participants according to the number of ANC check-ups by ANM, M.O and private doctor

Number of ANC check-up's	ANM		M. O		Private Doctor	
	Participants	Percentage	Participants	percentage	Participants (n=313)	Percentage
1	63	11.7	189	35	104	33.2
2	146	27	167	30.9	126	40.3
3	228	42.2	121	22.4	41	13.1
≥4	103	19.1	63	11.7	42	13.4
Total	**540**	**100**	**540**	**100**	**313**	**100**

Out of 540 study participant, all the (100%) participants had their at-least one ANC check-up either with ANM,/ Medical officer, while, 313 (58%) of the participants had their ANC check-up by private doctor also.

Among the 540 (100%) participants, who has undergone ANC check-up by ANM, most 228 (42.2%) had three ANC check-ups, followed by 146 (27%) had two ANC check-up, 103 (19.1%) had four or more ANC check-ups and 63 (11.7%) had only one ANC check-ups.

Among the 540 (100%) participants, who has undergone ANC check-up by Medical Officer, most 189 (35%) had one ANC check-ups, followed by 167 (30.9%) had two ANC check-up, 121 (22.4%) had three ANC check-ups and 63 (11.7%) had four or more ANC check-ups.

Among the 313 (100%) participants, who has undergone ANC check-up by private doctor, 126 (40.3%) participants had two ANC check-ups, 104 (33.2%) had one ANC check-up, 42 (13.4%) had four or more ANC check-ups, 41 (13.1%) had three ANC check-ups.

Table 20: Distribution of study participants according to the doses of tetanus Toxoid received

Tetanus Toxoid		**Participants**	**Percentage (%)**
Ist dose	Taken	540	76.7
Total		**540**	**100**
Booster dose	Not taken	02	0.4
	Taken	538	99.6
Total		**540**	**100**

Out 540 study participants, all 540 (100%) mothers received first dose of tetanus toxoid, whereas 538 (99.6%) received the booster dose of tetanus toxoid and only 2 (0.4%) did not receive the booster dose during last pregnancy.

Table 21: Distribution of study participants according to their Hemoglobin level

Hemoglobin (gm. %)	Participants	Percentage (%)
Normal (≥ 11)	144	26.7
10-10.9	168	31.1
7-9.9	228	42.2
<7	0	0
Total	**540**	**100**

In present study of 540 participants, about 228 (42.2%) had moderate (Hb: 7-9.9 gm. %) anemia, 168 (31.1%) of the study participants had mild (Hb: 10-10.9 gm. %) anemia, 144 (26.7%) were in normal (Hb: ≥ 11 gm. %) range. None had severe anemia (Hb: <7 gm. %).

Table 22: Distribution of studyparticipants according to their urine routine examination

Urine routine		**Participants n=540**	**Percentage (%)**
Done		519	96.1
Not done		21	3.9
Total		**540**	**100**
Urine abnormality		**Participants n=519**	**Percentage (%)**
Abnormalities	No abnormalities	252	48.6
	Sugar positive	63	12.1
	Albumin positive	204	39.3
Total		**519**	**100**

Out of 540 study participants, urine analysis was done in 519 (96.1%) mothers, while for 21 (3.9%) of them urine analyses were not done. Out of 519 urine tested participants, 252 (48.6%) mother's urine was normal, 204 (39.3%) mothers had positive for urine albumin and 63 (12.1%) mothers had positive for urine sugar.

Table 23: Variables of study participants regarding ANC and PNC check-ups (n=540)

Variables	Number	Percentage (%)
ANC Registration	**540**	**100**
UPT done	**540**	**100**
Measurement of weight	**540**	**100**
Blood Pressure	**540**	**100**
Per abdomen examination	**540**	**100**
Rapid test for HIV and HBs Ag,	**540**	**100**
Blood grouping	**540**	**100**
Advice on rest and diet	**540**	**100**
Planning for delivery explained	**540**	**100**
After delivery counseling for breast feeding, hospital stay, family planning advice and immunization.	**540**	**100**

In present study of 540 participants, all the participants urine pregnancy test was done and registered, measurement of weight and blood pressure was recorded and per abdomen was done in all the participants. Rapid test for HIV and HBs-Ag and blood grouping was done in all participants. Planning for delivery was explained for all participants. Advice was given to all about nutritional diet and rest. Counseling about breast feeding, hospital stay, family planning advice and immunization was also given to all mothers after delivery.

Table 24: Distribution of study participants according to ultra-sonography investigation

Ultra-sonography		**Participants**	**Percentage (%)**
Done		540	100
Abnormalities	No	498	92.2
	Yes	42	7.8
Total		**540**	**100**

In the present study of 540 participants, ultra-sonography was done in all the study participants. 498 (92.2%) showed normal findings, whereas 42 (7.8%) showed some abnormalities.

Table 25: Distribution of study participants according to Iron and folic acid tablets received and consumed

Iron and Folic acid (IFA) Tablets		Participants	Percentage (%)
Received Free supply	0	0	0
	1-30	62	11.6
	30-60	76	14
	60-90	79	14.6
	90-100	220	40.7
	101-150	41	7.6
	151-200	62	11.5
Total		**540**	**100**
Consumed	<25%	21	3.9
	25% to 50%	108	20
	50% to 75%	123	22.8
	75% to 100%	288	53.3
Total		**540**	**100**

Out of 540 study participants, all pregnant women had received free supply of IFA tablets, while 220 (40.7%) participants received 90-100 tablets of IFA tablets, 79 (14.6%) had received 60-90 tablets of IFA tablets, 76 (14%) had received 30-60 tablets of IFA tablets, 62 (11.6%) had received 1-30 tablets of IFA tablets, 62 (11.5%) had received 151-200 tablets of IFA tablets and 41 (7.6%) had received 101-150 tablets of IFA tablets.

Participants after receiving free IFA tablets, 288 (53.3%) consumed 75%-100% tablets of iron and folic acid tablets, 123 (22.8%) consumed 50%-75%, 108 (20%) participants consumed 25%-50% and 21 (3.9%) consumed less than 25% tablets of iron and folic acid during their complete pregnancy.

Table 26: Distribution of study participants according to health education given to them

Health Educator	Participants	Percentage (%)
ASHA	228	42.2
AWW	21	3.9
ANM	63	11.7
Doctor	21	3.9
Multiple sources	207	28.3
Total	**540**	**100**

Out of 540 participants, 228 (42.2%) participants received health education from ASHA workers, 207(28.3%) received health education from multiple sources, 63 (11.7%) from ANM, 21 (3.9%) from anganwadi workers and 21 (3.9) from medical officer/ doctor.

Table 27: Distribution of study participants according to place of delivery

Place of delivery	Number	Percentage (%)
Government Hospital	450	83.3
Private Hospital	90	16.7
Total	**540**	**100**

Out of 540 participants, majority 450 (83.3%) of the pregnant women delivered in government hospitals either at sub-centre/ primary health centre/ first referral unit/ district hospital, whereas 90 (16.7%) women delivered in private hospital and none of the study participants delivered at home.

Table 28: Distribution of study participants according to person accompanying to hospital for delivery

Person accompanied Hospital by	Participants	Percentage (%)
ASHA	249	46.1
ANM	21	3.9
AWW	103	19.1
Others	167	30.9
Total	**540**	**100**

In the present study, about 249 (46.1%) pregnant women were accompanied by ASHA workers, 167 (30.9%) were accompanied by other people (family members/ relatives), 103 (19.1%) by Anganwadi workers and 21 (3.9%) by ANM's respectively.

Table 29: Distribution of study participants according to mode of transport to hospital

Mode of Transport	Participants	Percentage (%)
108 vehicle (National Ambulance Service)	270	50
Ambulance	62	11.5
Private vehicle	208	38.5
Total	**540**	**100**

In the present study of 540 participants, 270 (50%) pregnant women reached place of delivery by 108 vehicle (National Ambulance Service), 208 (38.5%) by their own private mode of transport and about 62 (11.5%) by other ambulance respectively.

Table 30: Distribution of study participants according to duration of Pregnancy

Duration of Pregnancy	Participants	Percentage (%)
Pre-term (<37 weeks)	63	11.7
Full term (38-42 weeks)	477	88.3
Post term (≥ 42 weeks)	0	0
Total	**540**	**100**

Out of 540 study participants, 477 (88.3%) delivered at term (38-42 weeks), while other 63 (11.7%) mothers delivered within 37 completed weeks of pregnancy (pre-term). None of them delivered after 42 weeks (post-term) of gestation.

Table 31: Distribution of study participants according to mode of delivery

Mode of Delivery	Participants	Percentage (%)
Normal	456	84.4
Assisted	21	3.9
LSCS	63	11.7
Total	**540**	**100**

Out of 540 study participants, majority 456 (84.4%) of them underwent normal delivery, 63 (11.7%) underwent lower segment caesarian section and 21 (3.9%) had assisted delivery.

Table 32: Distribution of study participants according to sex of new born

Outcome *	Participants	Percentage (%)
Males	249	46.1
Females	291	53.9
Total	**540**	**100**

(* Multiple pregnancies were excluded)

Out of 540 study participants, 291 (53.9%) delivered female child, while 249 (46.1%) participants delivered male child.

Table 33: Distribution of study participants according to birth weight of new born

Birth Weight (kg)	Participants	Percentage (%)
VLBW (<1.8 kg)	21	3.9
LBW (1.8 – 2.5 kg)	63	11.7
NBW (>2.5 kg)	456	84.4
Total	**540**	**100**

Out of 540 study participants, 456 (84.4%) participants delivered a child of birth weight greater than 2.5 kg, 63 (11.7%) participants delivered a child of low birth weight (1.8-2.5 kg) and 21 (3.9%) participants delivered a child of very low birth weight (less than 1.8 kg).

Table 34: Distribution of study participants according to condition of new born after delivery

Condition of the newborn	Participants	Percentage (%)
Normal	519	96.1
Sick	21	3.9
Total	**540**	**100**

Among all the new borns of 540 study participants, 519 (96.1%) new borns were normal whereas 21 (3.9%) were sick new born and all the sick neonates were referred to higher centre immediately according to need.

Table 35: Distribution of study participants according to condition of mother after delivery

Condition of the mother	Participants	Percentage (%)
Normal	519	96.1
Danger signs noted	21	3.9
Total	**540**	**100**

Among 540 study participants, 519 (96.1%) were normal after delivery, but 21 (3.9%) had some of the danger signs like fever, post-partum hemorrhage etc.

Table 36: Distribution of study participants according to vaccination of new born at birth

Vaccination at birth	Participants	Percentage (%)
OPV_0	540	100
BCG	540	100
Hepatitis B_0	246	45.6
Total	**540**	**100**

Among the new borns of 540 study participants, all 540 (100%) new borns received OPV_0 and BCG dose, whereas only 246 (45.6%) received Hepatitis B_0.

Table 37: Distribution of study participants according to time of initiation of breast feeding to the new born who were delivered normally (n=477)

Time after delivery		**Participants (n=477)**	**Percentage (%)**
Normal Delivery	<1 hour	205	43.0
	1-2 hours	84	17.6
	2-3 hours	188	39.4
Total		**477**	**100**

Among the new borns of 540 study participants, 477 (88.3%) mothers had normal delivery, out of which 205 (43%) participants initiated breast feeding to the new born within one hour, 188 (39.4%) after 2-3 hours and 84 (17.6%) initiated within 1-2 hours.

Table 38: Distribution of study participants according to time of initiation of breast feeding to the new born who were delivered by LSCS (n=63).

Time after delivery			**Number**	**Percentage (%)**
LSCS	Within 4 hours	Yes	42	66.7
		No	21	33.3
Total			**63**	**100**

Among the new borns of 540 study participants, 63 (11.7%) of the mothers had delivered by LSCS, out of which 42 (66.7%) participants initiated breast feeding to the new born within 4 hours whereas 21 (33.3%) did not initiate breast feeding within 4 hours.

Table 39: Distribution of study participants according to number of post-natal visits (within 42 days)

No. of PNC visits	Number	Percentage (%)
1	21	3.9
2	457	84.6
3	41	7.6
≥4	21	3.9
Total	**540**	**100**

Among 540 study participants, 457 (84.6%) participants had two PNC visits, 41 (7.6%) participants had three PNC visits, 21 (3.9%) women had one PNC visit after discharge from delivery and only 21 (3.9%) participants four or more PNC visits.

Table 40: Association between age groups of study participants and type of hospital for delivery

Age Group(in years)	Govt. Hospital (%)	Private Hospital (%)	Total
15-19	0	0	0
20-24	276 (83.1%)	56 (16.9)	332
25-29	137 (82.5%)	29 (17.5%)	166
30-34	37 (88.1%)	5 (11.9%)	42
35-40	0	0	0
Total	**450**	**90**	**540**
χ^2 =0.777 df=2 p=0.680			

In present study, 276 (83.1%) of 20-24 years age group participants delivered in government hospital and 56 (16.9%) in private hospital, 137 (82.5%) of 25-29 years age group participants delivered in government hospital and 29 (17.5%) in private hospital. 37 (88.1%) of 30-34 years age group participants delivered in government hospital and 5 (11.9%) in private hospital respectively. There was no significant association between age group of study participants and type of hospital for delivery.

Table 41: Association between religion of study participants and type of hospital for delivery

Religion	Govt. Hospital (%)	Private Hospital (%)	Total
Hindu	368 (84.4%)	68 (15.6%)	436
Muslim	69 (84.1%)	13 (15.6%)	82
Christian	13 (59.1%)	9 (40.9%)	22
Total	**450**	**90**	**540**
χ^2 =9.708 df=2 p=0.008			

Out of 540 study participants, 368 (84.4%) of Hindu's, 69 (84.1%) of Muslims and 13 (59.1%) of Christians preferred government hospital for their delivery, while 68 (15.6%) of Hindu's, 13 (15.6%) of Muslims and 9 (40.9%) of Christians preferred private hospital for delivery which showed statistically significant difference (p<0.001).

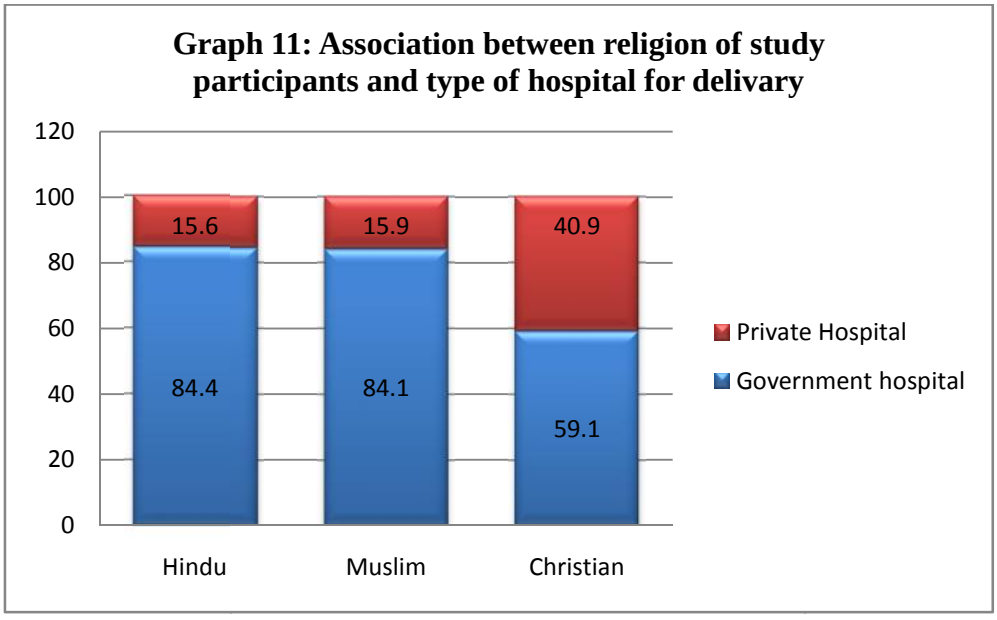


Table 42: Association between categories of study participants and type of hospital for delivery

Category	Govt. Hospital (%)	Private Hospital (%)	Total
SC	58 (100%)	0(0%)	58
ST	60 (100%)	0(0%)	60
OBC	97 (64.2%)	54 (35.8%)	151
General	235 (86.7%)	36 (13.3%)	271
Total	**450**	**90**	**540**
χ^2 =65.474 df=3 p=0.001			

In the present study, all 58 of scheduled castes and 60 of scheduled tribes' participants preferred 100% deliveries in the government hospital. While 97 (64.2%) of other backward castes women preferred government hospital and 54 (35.8%) in private hospital, 235 (86.7%) of general category women preferred government hospital and 36 (13.3%) in private hospital, which showed statistically significant (p<0.001).

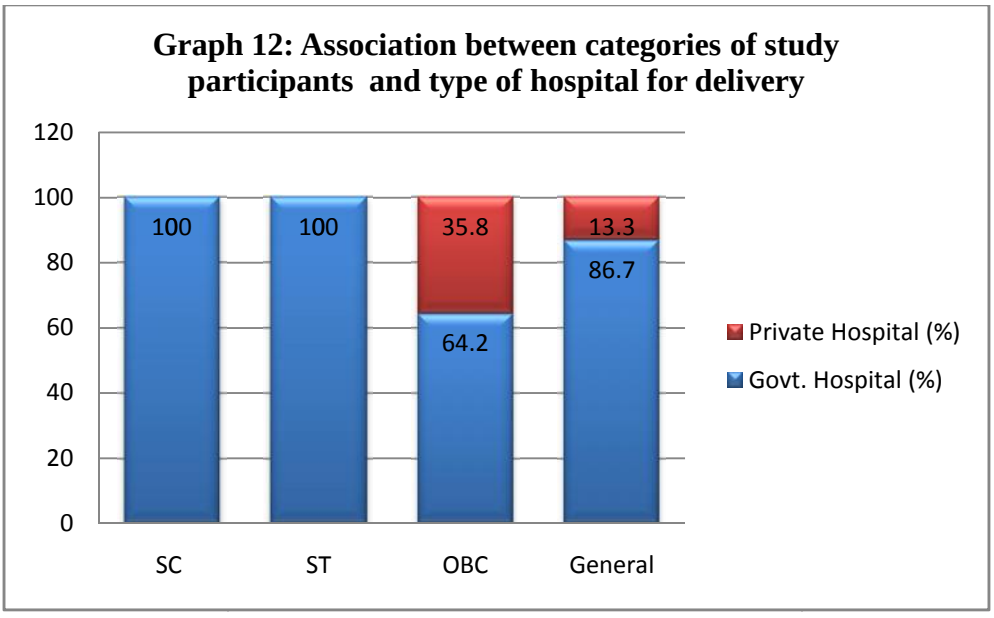


Table 43: Association of education status of study participants and type of hospital for delivery

Literacy status	Govt. Hospital (%)	Private Hospital (%)	Total
Illiterate	53 (88.3%)	7 (11.7%)	60
1^{st} -5^{th} standard	17 (81%)	4 (19%)	21
6^{th} -10^{th} standard	313 (83.2)	63 (16.8)	376
Pre-University College/ Diploma	49 (79%)	13 (21%)	62
Graduation or Post-Graduation	18 (85.7)	3 (14.3%)	21
Total	**450**	**90**	**540**
χ^2 =2.079 df=4 p=0.721			

In the present study, 53 (88.3%) of illiterate participants preferred government hospital for delivery, while only 7 (11.7%) women delivered in private hospital. 17 (81%) of the study participants who had studied 1^{st}-5^{th} standard were opted government hospital for delivery, while only 4 (19%) women delivered in private hospital. 313 (83.2%) of the study participants who studied 6^{th}-10^{th} standard opted government hospital for delivery, while 63 (16.8%) women delivered in private hospital. 49 (79%) of participants who studied Pre-University College/ Diploma opted government hospital for delivery while 13 (21%) women in private hospital. 18 (85.7%) of the study participants who Graduate/ Post-Graduate opted government hospital for delivery, while only 3 (14.9%) women delivered in private hospital. There was no significant association between education status of study participants and type of hospital for delivery.

Table 44: Association between family status of study participants and the type of hospital for delivery

Possession of (Ration card)	Govt. Hospital (%)	Private Hospital (%)	Total
APL	157 (67.4%)	76 (32.6%)	233
BPL	293 (95.4%)	14 (4.6%)	307
Total	**450**	**90**	**540**
χ^2 =75.083 df=1 p=0.001			

Out of 540 study participants, 157 (67.4%) of above poverty line (APL) families and 293 (95.4%) of below poverty line (BPL) families preferred government hospital for their delivery, while only 76 (32.6%) of APL and 14 (4.6%) of BPL families preferred private hospital for delivery and the association was statistically significant (p<0.001).

Graph 13: Association between family status of study participants and type of hospital for delivery

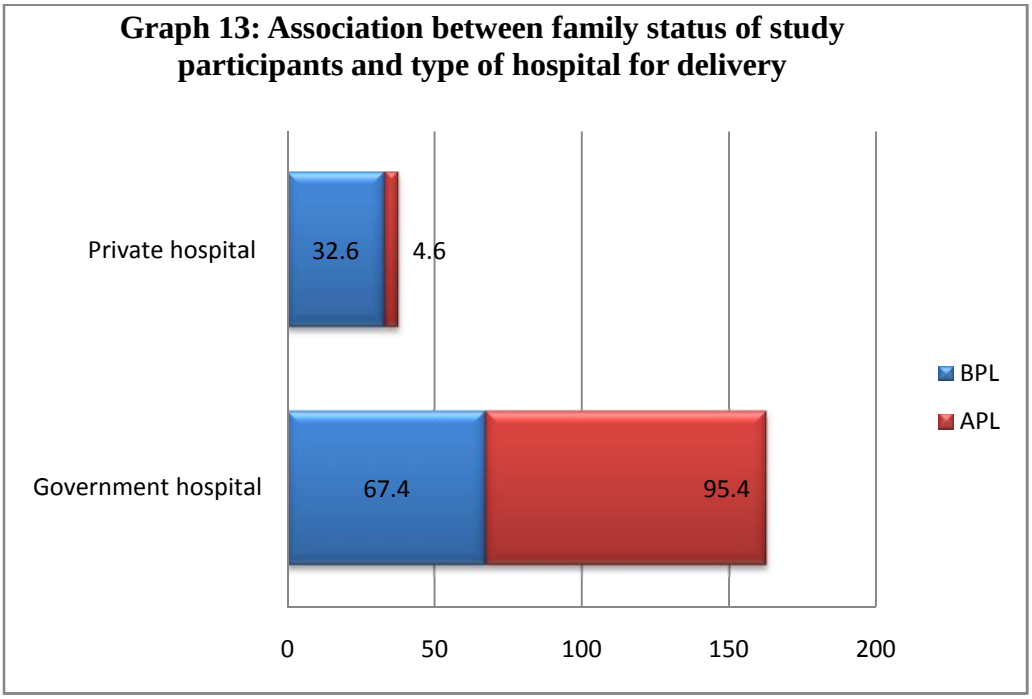


Table 45: Association between iron and folic acid tablets consumption by study participants and prevalence of anemia

Iron and Folic acid tablets consumed	Anemia (Hb in gm. %)			Total (n=540)
	Moderate (Hb. 7-9.9 gm. %)	Mild (Hb. 10-10.9 gm. %)	Normal (Hb. >11 gm. %)	
<25%	0 (0%)	21 (100%)	0 (0%)	21
25% to 50%	45 (41.7%)	63 (58.3%)	0 (%)	108
50%-75%	60 (48.8%)	21 (17.1%)	42 (34.1%)	123
75% to 100%	123 (42.7%)	63 (21.9%)	102 (35.4%)	288
Total	**228**	**168**	**144**	**540**
χ^2 =128.83 df=6 p= < 0.001				

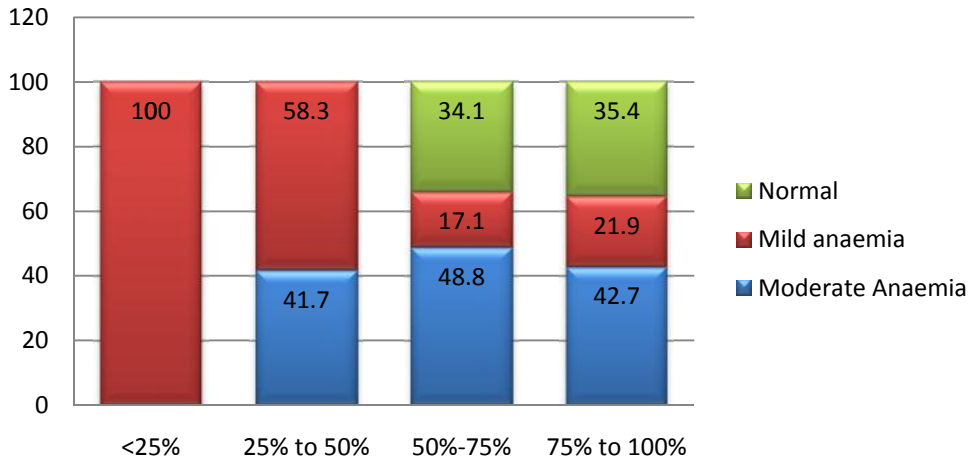
Out of 540 study participants, 21 (3.8%) participants who consumed less than 25% of folic acid tablets, they all (100%) had mild (Hb. 10-10.9 gm. %) anemia.

108 (20%) participants who consumed 25% to 50% of the iron and folic acid tablets, 45 (41.7%) of them had moderate anemia and 63 (58.3%) had mild (Hb. 10-10.9 gm. %) anemia.

While the 123 (23.5%) participants who consumed 50% to 75% of the iron and folic acid tablets, 60 (48.8%) had moderate anemia, 21 (17.1%) had mild anemia (Hb. 10-10.9 gm. %) and 42 (34.1%) were normal (Hb. >11 gm. %).

While the 288 (53.3%) participants who consumed 75% to 100% of the iron and folic acid tablets, 123 (42.7%) had moderate anemia, 63 (21.9%) had mild anemia and 102 (35.4%) were normal (Hb. >11 gm. %) anemia respectively, which showed statistically significant (p<0.001)

Graph 14: Association between iron and folic acid tablets consumption by study participants and prevalence of anemia



III DEMAND GENERATION SCHEMES

Table 46: Distribution of study participants according to beneficiaries and non-beneficiaries for Demand Generation Schemes

Hospital for delivery	Category	No. of Deliveries	Cards	Total Beneficiaries	Percentage
Government Hospital	SC	58	APL	21	3.9
			BPL	37	6.9
	ST	60	APL	19	3.5
			BPL	41	7.6
	OBC	97	BPL	67	12.4
	General	235	BPL	148	27.4
Total				**333**	**61.7**
Delivery	**Category**	**Deliveries**	**Cards**	**Non Beneficiaries**	**Percentage**
Government Hospital	OBC	97	APL	30	5.5
	General	235	APL	87	16.1
Private Hospital	OBC	54	APL	46	8.5
			BPL	08	1.5
	General	36	APL	30	5.6
			BPL	06	1.1
Total				**207**	**38.3**

Note: All Schedule Castes/Scheduled Tribes category having either APL or BPL family ration card were eligible, while only Other Backward Castes/general category having BPL family type delivered in government hospital were eligible as beneficiaries as per the JSY guidelines.

Out of 540 study participants, 450 of them delivered in government hospital among these 333 (61.7%) were the beneficiaries who utilized the Demand Generation Schemes services. 207 (38.3%) were the non-beneficiaries.

In the present study, beneficiaries who belonged to Scheduled castes were 58 in which 21 (3.9%) were APL and 37 (6.9%) were BPL. Scheduled tribes were 60 in which 19 (3.5%) were APL and 41 (7.6%) were BPL, other backward castes were 97 in which 67 (12.4%) were BPL and general caste were 235 in which 148 (27.4%) were BPL.

Participants who delivered in government hospital with other backward castes 97 (17.9%) belonging to APL 30 (5.5%) and general category 235 (43.1%) belonging APL 87 (16.1%) were non-beneficiaries. Also, participants who delivered in private hospital with other backward castes 54 (10%) category having 46 (8.5%) APL and 8 (1.5%) BPL family types were non-beneficiaries.

Also, participants who delivered in private hospital with general 54 (10%) category having 30 (5.6%) APL and 6 (1.1%) BPL family types were non-beneficiaries.

Table 47: Distribution of study participants according to awareness about Demand Generation Schemes

Knowledge about Demand Generation Schemes	Prasuthi Araike		Janani Suraksha Yojana		Madilu-kit		Thaiyi Bhagya Plus	
Knows	Yes	No	Yes	No	Yes	No	Yes	No
Total	373	167	206	334	396	144	104	436
Percentage	**69.1**	**30.9**	**38.1**	**61.9**	**73.3**	**26.7**	**19.3**	**80.7**

Out of 540 study participants, irrespective of eligible criteria, 373 (69.1%) participants knew about Prasuthi Araike, 206 (38.1%) participants knew about Janani Suraksha Yojna, 396 (73.3%) knew about Madilu kit and only 104 (19.3%) knew about Thaiyi Bhagya Plus respectively, whereas 167 (30.9%) did not know about Prasuthi Araike, 334 (61.9%) did not know Janani Suraksha Yojna, 144 (26.7%) did not know Madilu kit and about 436 (80.7%) did not know Thaiyi Bhagya Plus respectively.

Graph 15: Distribution of study participants according to awareness about Demand Generation Schemes

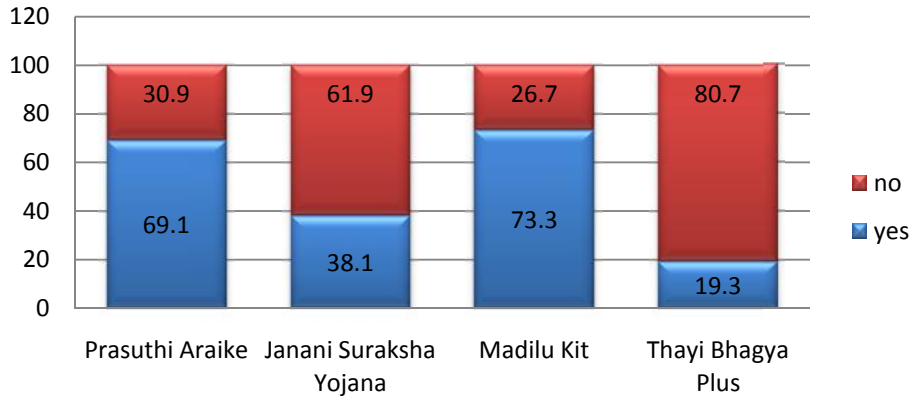


Table 48: Distribution of study participants according to knowledge about Demand Generation Schemes given by the health care worker

Knowledge of Demand Generation Schemes given by	Participants	Percentage (%)
ASHA	207	38.3
ANM	63	11.7
AWW	126	23.3
Doctors	41	7.6
Multiple sources	103	19.1
Total	**540**	**100**

Out of 540 study participants, the knowledge about Demand Generation Schemes was given by ASHA to 207 (38.3%) participants, by AWW to 126 (23.3%) participants, by multiple sources to 106 (19.1%) participants, by ANM to 63 (11.7%) participants and by doctors to 41 (7.6%) participants respectively.

Table 49: Distribution of study participants according to their motivation

DGS motivated them for hospital delivery	Participants	Percentage (%)
Yes (Govt. hospital)	443	82
Not Applicable (private hospital)	97	18
Total	**540**	**100**

Out of 540 study participants, all 443 (82%) participants who delivered in government hospital were motivated by one or the other Demand Generation Schemes, while 97 (18%) delivered in private hospitals and were not eligible for any of the Demand Generation Schemes benefits.

Table 50: Distribution of studyparticipants according to time of Prasuthi Araikeincentives received

Prasuthi Araike	Duration		Participants	Percentage
First instalment	< 7 days of delivery		101	30.3
	> 7 days and < 15 days of delivery		74	22.2
	> 15 days but < 1 month		158	47.5
Total			**333**	**100**
Second instalment	(< 7 days after delivery)	Received on time	96	28.9
	> 7 days and < 15 days after delivery	Received late	237	71.1
	> 15 days but < 1 month			
Total			**333**	**100**

Among 333 beneficiaries who received incentives of Prasuthi Araike, 158 (47.5%) got in period of 15 days to one month, 101 (30.3%) beneficiaries received first installment within 7 days after registration in third trimester and 74 (22.2%) after 7 days, but within 15 days respectively. About majority 237 (71.1%) beneficiaries received late i.e. after 7 days, but within one month after delivery while only 96 (28.9%) beneficiaries received second installment within time i.e. within 7 days after delivery.

Table 51: Distribution of studyparticipants according to time of Janani Suraksha Yojana incentives received (n=333)

Demand Generation Scheme	Duration	Participants	Percentage
Janani Suraksha Yojana	< 7 days of delivery	101	30.3
	> 7 days and < 15 days of delivery	74	22.2
	> 15 days but < 1 month	158	47.5
Total		**333**	**100**

Among 333 beneficiaries who received incentives of Janani Suraksha Yojana, 158 (47.5%) received incentives after 15 days to one month of delivery, 101 (30.3%) beneficiaries received incentive within 7 days after delivery and about 74 (22.2%) received incentive after 7days but within 15 days.

Table 52: Distribution of studyparticipants according to time of Madilu-kit received (n=333).

Demand Generation Scheme	Duration	Participants	Percentage
Madilu-kit	< 7 days of delivery	265	79.5
	> 7 days and < 15 days of delivery	68	20.5
Total		**333**	**100**

Among 333 beneficiaries who received Madilu Kit, 265 (79.5%) beneficiaries received within 7 days of delivery, whereas 68 (20.5%) received late i.e. after 7 days, but within one month after delivery.

Table 53: Distribution of studyparticipants according to time of Thaiyi Bhagya Plus incentives received (n=333)

Demand Generation Scheme	Duration	Participants	Percentage
Thaiyi Bhagya Plus	< 7 days of delivery	49	14.7
	>7 days and < 15 days of delivery	157	47.2
	> 15 days but < 1 month	127	38.1
Total		**333**	**100**

Among 333 beneficiaries of Thaiyi Bhagya Plus Scheme, 157 (47.2%) received incentive after 7 days but within 15 days, 127 (38.1%) received after 15 days to one month respectively and only 49 (14.7%) beneficiaries received incentives within 7 days after delivery.

Table 54: Distribution of studyparticipants according to delay in receiving incentives (n=333)

Delay	Participants	Percentage
Yes	273	82
No	60	18
Total	**333**	**100**

Out of 333 beneficiaries, Majority 273 (82%) of the beneficiaries had delay in receiving incentives and 60 (18%) beneficiaries received incentives on time.

Graph 16: Distribution of study participants according to delay in receiving incentives

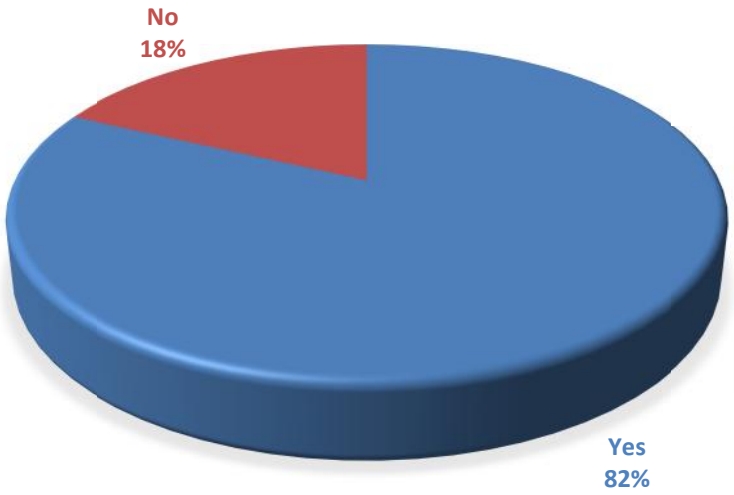


Table 55: Distribution of studyparticipants according to reasons for delay in receiving incentives (n=273)

Reasons for Delay	Participants	Percentage
Lack of documents	72	26.4
Administrative problem	27	9.9
Insufficient budget	174	63.7
Total	**273**	**100**

Out of 273 beneficiaries who had delay in receiving incentives, in which most 174 (63.7%) probable reason for delay was due to insufficient budget released from the government, 72 (26.4%) due to lack of documents with the beneficiaries and 27 (9.9%) due to administrative problems.

Graph 17: Distribution of study participants according to reasons for delay in receiving incentives

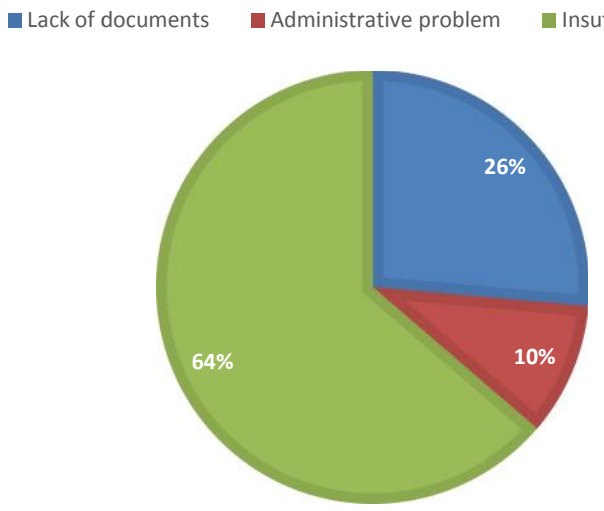


Table 56: Distribution of studyparticipants according to withdrawal of cash from their bank account (n=333)

Took cash from bank	participants	Percentage
<7 days	268	80.5
> 7 days < 1 month	51	15.3
>1 month	14	4.2
Total	**333**	**100**

Out of 333 beneficiaries, majority of the beneficiaries 268 (80.5%) had withdrawn cash from bank within 7 days after discharge from hospital. 51 (15.3%) participants after 7 days but within one month, whereas 14 (4.2%) beneficiaries had withdrawn cash after one month of discharge from hospital.

Table 57: Distribution of studyparticipants according to satisfaction from Maternal and Child Health services/Demand Generation Schemes (n=333)

Satisfied with the facility/schemes	Participants	Percentage
Yes	291	87.4
No	42	16.6
Total	**333**	**100**

Out of 333 beneficiaries, 291 (87.4%) beneficiaries were satisfied with the schemes provided by the government, whereas 42 (16.6%) were not happy/satisfied with the schemes.

Graph 18:Distribution of study participants according to satisfaction from maternal and child health services/Demand Generation Schemes

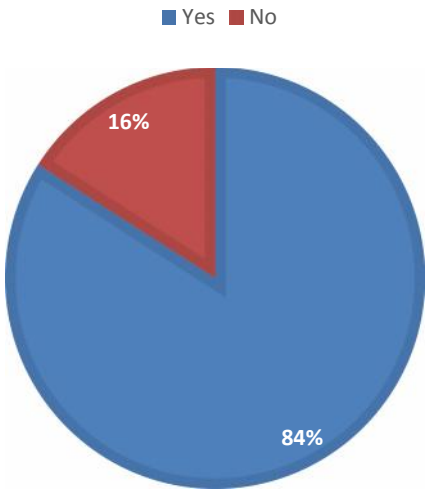
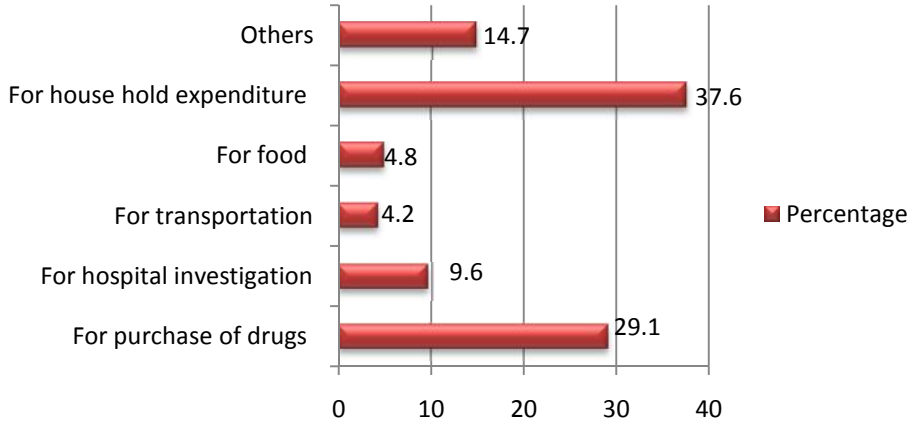


Table 58: Distribution of studyparticipants according to use of cash incentives (n=333)

Use of cash incentives	Participants	Percentage
For purchase of drugs	97	29.1
For hospital investigation	32	9.6
For transportation	14	4.2
For food	16	4.8
For house hold expenditure	125	37.6
Others	49	14.7
Total	**333**	**100**

Out of 333 beneficiaries, almost 125 (37.6%) beneficiaries used the cash incentives of various schemes in house hold expenditure, while 97 (29.1%) used the cash for purchase of drugs, 49 (14.7%) used the cash for other purposes, 32 (9.6%) used the money for various hospital investigations, 16 (4.8%) used the money on food and only 14 (4.2%) used the money for transportation.

Graph 19 (Table 60): Distribution of study participants according to use of cash incentives



DISCUSSION

This Community based Cross sectional study was conducted in the Primary Health Center (PHC) area of Handiganur, which is the field practice areas of Department of Community Medicine, K. L. E. University's, Jawaharlal Nehru Medical College, Belagavi on 540 study participants during the period of 1st January 2015 to 31st December 2015.

I SOCIO-DEMOGRAPHIC PROFILE

Table 1: Distribution of study participants according to Age

In present study, most 61.5% of the pregnant women were in the age group of 20-24 years. 30.7% were in the age group of 25-29 years and only 7.8% were in the age group of 30-34 years. There were no participants either below the age of 19 years or above the age of 35 years.

A study done in Ambala district, Haryana[51] in 2015 with 200 study participants, showed, most 63.5% of the mothers were in the age group of 20–25 years followed by 25–30 years were 24%, less than 20 years were 5.5% and 30–35 years were 4.5% which was almost similar to the present study. Another study done in Aligarh, Uttar Pradesh[50] in 2016 among 300 pregnant women, showed that 45% of the women belonged to the age group of 18-24 years which was quite low compared to the present study.Another study in Rohtak, Haryana[48] in 2012 among 148 women, majority 77% of the women were in the age group of 20-24 years which was high when compared to present study.

In the present study, the age group of study participants ranged from 20-35 years and the mean age of study participants was 24.1± 2.8 years. In a similar study conducted in Uttar Pradesh[45] in 2010 covering 4754 households spread over 12 districts, showed mean age of women was 25.3 ± 4.3 years. Another study done at Jam Nagar, Gujarat[49] in 2013 with 400 study participants the mean age was 23.43 years which was almost similar to present study.

The age at marriage of the women in the present study ranged from 15-24 years and the Mean± SD age was 19.1 ± 2.1 years. A study done in Jam Nagar, Gujarat[49] in 2013 with sample size of 400, showed mean age at marriage was 19.8 years which was almost similar to this study. This shows that most of the people in the study were aware about the legal age of marriage.

Table 2: Distribution of the study participants according to the age at marriage

Present study showed, majority 92.4% of study participants were 18 years and above at the age of marriage and only 7.6% were less than 18 years. Studyconducted in Jam Nagar, Gujarat[49] in 2013 among 400 participants, showed 18% beneficiaries were under the age of 18 years and 82% were above the age of 18 years.

Table 3: Distribution of study participants according to religion

In present study, majority 80.7% of participants were Hindus followed by 15.2% were Muslims and 4.1% were Christians. A study done in Jam Nagar, Gujarat[49] in 2013 with 400 participants, showed 97% women's were Hindu's and Muslim's were only 3% and study done in Uttar Pradesh[45] in 2010 covering 4754 households spread over 12 districts, showed Hindu's were accounting for 91% which was in par to present study. In contrast, another study done in Aligarh, Uttar Pradesh[50] in 2016 with 300, showed 67% were Muslim's and 33% were Hindus.

Table 4: **Distribution of study participants according to their category**

In the present study of 540 participants, almost 50.2% belonged to general category, 28% belonged to other backward castes, 11.1% belonged to scheduled tribe and 10.7% belonged to scheduled caste. Similar study done in Jam Nagar, Gujarat[49] in 2013, with sample size of 400 participants, which showed 38.5% were SC and remaining 61.5% were from other castes. Another study done in Aligarh, Uttar Pradesh[50] in 2016 with sample size of 300, showed 40% population belonged to OBC, 32.8% were general category and 27.2% belonged to SC/ST.

Table 5:Distribution of study participants according to their literacy status

In the present study out of 540 study participants, 88.9% of them were literates. Among them, most 69.9% of the participants had studied up to 6^{th} - 10^{th} standard, followed by 11.5% up to Pre-University College/ Diploma, 3.9% participants studied up to 1^{st} - 5^{th} and 3.9% were Graduate/Post-Graduates. Around 11.1% participants were illiterate. Similar study done in Aligarh, Uttar Pradesh[50] in 2016 among 300 study participants, more than 50% of women were illiterates or had no formal education while 22% of women had education up till middle school and 14% females had attended high school. While 11% had received higher education, i.e., attended college or above which was contrast to present study. Another study done in Ambala district, Haryana[51] in 2015 with 200 participants, showed 26% of them were illiterate and 74% were literate, among the literates, 47.5% were educated either up to primary school, high school and senior secondary school. A study conducted in Jam Nagar, Gujarat[49] in 2013, with 400 participants, 43% beneficiary were illiterate, 50% beneficiary had primary education and only 6% were found to have secondary education and above. Similar study done in Rohtak, Haryana[48] in

2012 among 148 women, showed overall 52% had completed minimum nine years of schooling.

Table 6: Distribution of study participants according to their occupation

In the present study,out of 540study participants, 292 (54.1%) were home-makers, 165 (30.5%) were unskilled workers, 42 (7.8%) were self-employed, and 41 (7.6%) were in government service.A study done in Ambala district, Haryana[51] in 2015 among 200 hospital delivered women, showed 66% of the women's were house wives and only 34% were working. Another study conducted in Aligarh, Uttar Pradesh[50] in 2016 with 300 participants, majority 97.7% of the women were house wives.Similar study conducted in Rohtak, Haryana[48] in 2012 with 148 participants, showed 93% women were home makers which is similar to present study.

Table 7:Distribution of study participants according to type of family

Out of 540 study participants, 53.3% study participants belonged to joint family and 46.7% belonged to nuclear family. Similar results were seen in another study done in Ambala district, Haryana[51] in 2015 among 200 hospital delivered women. Another study conducted in Aligarh, Uttar Pradesh[50] in 2016 with 300 participants, majority 76.7% of women belonged to joint family and 23.3% women belonged to nuclear family. Another study conducted in Jam Nagar, Gujarat[49] in 2013, with 400 participants, 44.75% belonged to nuclear family, 30.75% belonged to joint family and 24.5% belonged to three generation family.

Table 8:Distribution of study participants according to Socio-economic status

In the present study, out of 540 study participants, 58.5% belonged to SES class V, 16.5% belonged to SES class III, 15% belonged to SES class IV and 10% belonged to SES class II socio-economic status as per the modified B. G. Prasad's

classification. Another study showed 16.7% in upper and upper middle class which was conducted in Jabalpur, Madhya Pradesh[56] in 2011.

Table 9:Distribution of study participants according to family status

In the present study, out of 540 study participants, 56.9% belonged to below poverty line and 43.1% belonged to above poverty line family. Similar study conducted in Jam Nagar, Gujarat[49] in 2013, showed that out of 400 beneficiaries, 95% had BPL ration cards which is on higher side compared to present study.

Table 10: **Distribution of study participants according to their Husband's literacy status**

In the present study, out of 540 study participants, 57.8% participant husband's studied till tenth standard, 19.3% had studied till pre-university college/ diploma, 11.3% participant husbands were illiterate, 7.8% had completed graduation or post-graduation and 3.9% had studied till fifth standard. A study conducted in Haryana[58] in 2013 with 1386 beneficiaries, showed two-third of participant husbands studied up to high school and 9.5% were illiterate. A significant association was also observed between the husband's education level and woman's place of delivery in a study conducted in Meghalaya[57] in 2012 with sample size of 340 participants.

Table 11: Distribution of study participants according to their husband's occupational status

Out of 540 study participants, the present study showed, majority 456 (84.4%) of participant husbands were unskilled workers, 42 (7.8%) were self-employed and 42 (7.8%) were skilled workers.

II UTILISATION OF MATERNAL AND CHILD HEALTH SERVICES

Tables 12 and 13: Distribution of study participants according to first knowing about their pregnancy status and whom did they contact first

In the present study, 69.2% of them had got to know about their pregnancy in second month, 26.9% in third month and 3.9% in fourth month. About 42% of women after knowing their pregnancy, first contacted ASHA worker, 35% contacted doctor, 11.7% contacted ANM, 11.3%s contacted anganwadi worker, while no any participant contacted staff nurse. Similar findings were seen in the study conducted in Uttar Pradesh[45] in 2010 covering 4754 households spread over 12 districts, showed 40% women's contacted ASHA first. Hence it is noted that ASHA`s are the important link to provide health services at the grass root level. Hence, early registration of pregnancy can lead to proper check-up with expected proper outcome of pregnancy (high risk) and helps in timely management and early referral series for complicated cases.

Table 14: Distribution of study participants according to pregnancy order

In the present study, out of 540 study participants, it was observed that, 57.3% were of second order of pregnancy, 40.9% were of first order of pregnancy, 0.9% were of third order and 0.9% were of fourth order of pregnancy. These results were almost similar to DLHS-3 reports[54], which showed 35% were 1st order, 35. 2% 2nd order, 31.6% were in the order of 3rd and above.

Table 15: Distribution of study participants according to their number of living children

Out 540 study participants in the present study, 57.8% mothers had two living children, 41.3% had one living child, 0.7% mothers had three living children and only

0.2% mother had four living children. Similar study conducted in Rohtak, Haryana[48] in 2012 among 148 participants, 45.9% of mothers had one living child, 41.8% mothers had two children and 12.1% mothers had three children.

Table 16: Distribution of study participants according to their number of previous abortions

The present study with 540 participants showed, majority 98.7% of the women did not had history of previous abortions, while 0.7% women had single abortion, 0.4% women had two abortion and only 0.2% women had three abortion.

Table 17: Distribution of study participants knowing their last menstrual period

In the present study with 540 participants, 65.6% remembered and mentioned correctly about their last menstrual period, while 34.4% didn't remember about their last menstrual period.

Table 18: Distribution of study participants according to the gestational period at first registration with firstANC check-up

In the present study with 540 study participants, revealed that 96.1% of pregnancies were registered and also first antenatal check-up was done within 12 weeks of gestation, while 3.9% were registered at 12-20 weeks of gestation.

NFHS-3 (2005-06)[52] showed 70.9% women had ANC check-up in first trimester, which are similar to our study while NFHS-4 (2014-15)[54] showed reduced ANC check-up (66%) in first trimester. Similar study done in Ambala district, Haryana[51] in 2015 with 200 hospital deliveries, majority 73.5% of the mothers were registered after 12 weeks of pregnancy and only 26.5% were registered before 12 weeks of pregnancy.Another study conducted in Rohtak, Haryana[48] in 2012 with 148

participants, showed 20.2% mothers were registered after first trimester. Comparing with the above studies, present study showed higher rate of ANC registration in first trimester.

Table 19: Distribution of study participants according to the number of ANC check-up's by ANM, Medical officer and private doctor

Out of 540 study participant, all the participants had their at-least one ANC check-up either with ANM/ Medical officer, while, 58% of the participants had their ANC check-up by private doctor also. Among the participants, who has undergone ANC check-up by ANM, most 42.2% had three ANC check-ups, followed by 27% had two ANC check-up, 19.1% had four or more ANC check-ups and 11.7% had only one ANC check-ups. Among the participants, who has undergone ANC check-up by Medical Officer, most 35% had one ANC check-ups, followed by 30.9% had two ANC check-up, 22.4% had three ANC check-ups and 11.7% had four or more ANC check-ups. Among the 313 participants, who has undergone ANC check-up by private doctor, 40.3% participants had two ANC check-ups, 33.2% had one ANC check-up, 13.4% had four or more ANC check-ups, 13.1% had three ANC check-ups.

Another study conducted in Uttar Pradesh[45] in 2010 covering 4754 households spread over 12 districts, revealed that about two-third of the ANC check-ups were done by M. O/private doctor, while 17% by ASHA worker/ Anganwadi worker. Another study at done in Ambala district, Haryana[51] in 2015 with 200 hospital deliveries, majority 86% of mothers had three or more ANC visits, and only 14% had less than three ANC visits. Similar study conducted in Rohtak, Haryana[48] in 2012 with 148 participants, showed 74.3% mothers had ANC check-up by ASHA worker

and while remaining 25.7% by anganwadi worker. Only 43.2% mothers had done all four ANC check-ups.

NFHS-3 (2005-06)[52] showed 68% mothers who had at least four antenatal care visits, while NFHS-4 (2014-15)[53] showed 70.3% women had four ANC check-ups, but present study showed 38.5% women had all four ANC check-up done.

So this study shows many of the mothers can be referred to the doctors by ANM, ASHA and others in case of high risk pregnancy or for the safe continuation of pregnancy.

Table 20: Distribution of study participants according to the doses of tetanus Toxoid received

In present study, all mothers received first dose of tetanus toxoid, whereas 99.6% received the booster dose of tetanus toxoid and only 0.4% did not receive the booster dose during last pregnancy. Another study done in Ambala district, Haryana[51] in 2015 with 200 hospital deliveries, showed that almost all mothers (95.5%) received TT Booster dose and only 4.5% of mothers received only one dose of TT. NFHS-3 (2005-06)[52] showed 78.6% mothers whose last birth was protected against neonatal tetanus, while NFHS-4 (2014-15)[53] showed 88.3% mothers were protected. But present study showed higher results compared to other above studies.

Tables 21 and 22: Distribution of study participants according to their hemoglobin level and urine routine examination

In the present study of 540 participants, 42.2% had moderate anemia, 31.1% of the study participants had mild anemia and 26.7% were in normal range. None had severe anemia. Urine analysis was done in 96.1% mothers, while for 3.9% of them urine analyses were not done. Out of 519 urine tested participants, 48.6% urine

analysis was normal, 39.3% had positive for urine albumin and 12.1% had positive for urine sugar.

A study conducted in Uttar Pradesh[45] in 2010 covering 4754 households spread over 12 districts, revealed 39%of the pregnant women blood test was done and in 53% urine was examined which was low compared to our study.

Tables 23 and 24: Variables of study participants regarding ANC and PNC checkups and ultra-sonography investigation

In present study with 540 participants, in all the participants urine pregnancy test was done and registered, measurement of weight and blood pressure was recorded and per abdomen was done in all the participants. Rapid test for HIV and HBs-Ag and blood grouping and typing was done in all participants. Ultra-sonography was done in all the study participants, 92.2% showed normal findings, whereas 7.8% showed some abnormalities. Planning for delivery was explained for all participants. Advice was given to all about nutritional diet and rest. Counseling about breast feeding, hospital stay, family planning advice and immunization was also given to all mothers after delivery.

Another study conducted in Uttar Pradesh[45] in 2010 covering 4,754 households spread over 12 districts, showed that only 44% pregnancy cases blood pressure was measured and in 63% of cases weight was recorded. Abdominal examination was done in majority (74%) of the cases. Another study conducted in Rohtak, Haryana[48] in 2012 with sample size of 148, showed weight and blood pressure was monitored for 34.4% of mothers only and 68% women received PNC counselling.

Table 25: Distribution of study participants according to iron and folic acid tablets received and consumed

In the present study, out of 540 study participants, all pregnant women had received free supply of IFA tablets, while 40.7% participants received 90-100 tablets of IFA tablets, 14.6% had received 60-90 tablets of IFA tablets, 14% had received 30-60 tablets of IFA tablets, 11.6% had received 1-30 tablets of IFA tablets, 11.5% had received 151-200 tablets of IFA tablets and 7.6% had received 101-150 tablets of IFA tablets. Participants after receiving free IFA tablets, 53.3% consumed 75%-100% tablets of iron and folic acid tablets, 22.8% consumed 50%-75%, 20% participants consumed 25%-50% and 3.9% consumed less than 25% tablets of iron and folic acid during their complete pregnancy.

Another study done in Ambala district, Haryana[51] in 2015 with 200 hospital deliveries, three-fourth of mothers received 100 IFA tablets, 18% received less than 100 IFA tablets and 6% received more than 100 IFA tablets.

Similar study conducted in Rohtak, Haryana[48] in 2012 with 148 participants, 14.1% had not consumed IFA tablets at all, whereas 56% had consumed >75% of IFA tablets.NFHS-3 (2005-06)[52] done in 2005-06, showed 28.2% pregnant women consumed 100 tablets of IFA during pregnancy, while NFHS-4 (2014-15)[53] showed 45.3% of pregnant women consumed 100 tablets of IFA in India. But in the present study the results were on higher side compared to the above studies.

Table 26: Distribution of study participants according to health education given to them

In present study, 42.2% participants received health education from ASHA workers, 28.3% received health education from multiple sources, 11.7% from ANM,

3.9% from anganwadi workers, 3.9 from medical officer/ doctor respectively. DLHS-3 (2007-08) [54] data provides information that only 54-76% pregnant women received health education about self-care in pregnancy.

Table 27: Distribution of study participants according to place of delivery

In the present study with 540 participants, majority 83.3% of the pregnant women delivered in government hospitals either at sub-centre/ primary health centre/ first referral unit/ district hospital, whereas 16.7% delivered in private hospital and none of the study participants delivered at home. Another study conducted in Aligarh, Uttar Pradesh[50] in 2016 with 300 participants, showed 55.6% of rural population delivered in government hospital, 19.6% in private hospital and 24.8% opted for home delivery. Another study conducted in different parts of the country covering 9405 house-holds in 471 villages, showed that 48% deliveries took place in government hospital, 9.5% in private hospital and 42.5% at home.[47]

Study conducted in Ambala district, Haryana[51] in 2015 with 200 hospital deliveries, showed that 59.5% mothers delivered in the government hospitals and 29% in private hospitals and 11.5% delivered at home.

Table 28: Distribution of study participants according to person accompanying to hospital for delivery

In present study, out of 540, about 46.1% pregnant women were accompanied by ASHA workers, 30.9% were accompanied by other people (family members/relatives), 19.1% by Anganwadi workers and 3.9% by ANM's respectively.

The study conducted in Ambala district, Haryana[51] in 2015 with 200 hospital deliveries, showed that 60.5% of the mothers were escorted by ASHA. This may be

because people in the study area thought that family members accompanying the pregnant women to hospital for delivery reduces the anxiety and give assurance to the pregnant mother.

Table 29: Distribution of study participants according to mode of transport to hospital

In the present study of 540 participants, 50% pregnant women reached place of delivery by 108 vehicle (National Ambulance Service), 38.5% by their own private mode of transport and about 11.5% by other ambulance respectively.

Another study done in Ambala district, Haryana[51] in 2015 with 200 women, showed that 58.5% of the women rented the vehicle (private) on their own, while 41.5% were paid by the ASHA.

Table 30: Distribution of study participants according to duration of pregnancy

In the present study, out of 540 study participants, 477 (88.3%) delivered at term (38-42 weeks), while other 63 (11.7%) mothers delivered within 37 completed weeks of pregnancy (pre-term). None of them delivered after 42 weeks (post-term) of gestation. NFHS-3 (2005-06) [52] data showed 41.6% pregnant women had premature labour.

Table 31: Distribution of study participants according to mode of delivery

In the present study, of 540 participants, majority 84.4% of them underwent normal delivery, 11.7% underwent lower segment caesarian section and 3.9% had assisted delivery. A study conducted in Rohtak, Haryana[48] in 2012 among 148 pregnant women, showed 100% normal vaginal deliveries.

Tables 32 and 33: Distribution of study participants according to sex and birth weight of new born

In present study, of 540 participants, 53.9% delivered female child, while 46.1% participants delivered male child. About 84.4% participants delivered a child of birth weight greater than 2.5 kg, 11.7% participants delivered a child of low birth weight and 3.9% participants delivered a child of very low birth weight. Similar findings were reported in a study conducted in Rohtak, Haryana[48] in 2012 among 148 women, showed 72.35% new-borns were normal weight and 18.8% were low birth weight which is comparable to the present study.

Tables 34 and 35: Distribution of study participants according to condition of mother and new born after delivery

In the present study, among 540 study participants, 96.1% were normal after delivery, but 3.9% had some of the danger signs like fever, post-partum hemorrhage etc.Among all the newborn's, 96.1% new born were normal whereas 3.9% were sick new born and all the sick neonates were referred to higher centre immediately according to need. The DLHS-3 (2007-08) [54] data shows, 43.7% women experienced some sought of complication during delivery.

Table 36: Distribution of study participants according to new born vaccination of new born at birth

Among the new born of 540 study participants, all new born received OPV_0 and BCG dose, whereas only 45.6% received Hepatitis B_0. Not all hospitals give Hepatitis-B immunization at birth, so this can be the reason for decreased immunization. NFHS-3 (2005-06)[52] data shows 26.4% of new-borns received OPV

vaccine, DLHS-3 (2007-08)[53] data shows 11.5% new-borns received OPV vaccination immediate after delivery.

Tables 37 and 38: Distribution of study participants according to initiation of breast feeding to the new born who were normally delivered and LSCS

In the present study, out of 540 participants, 88.3% mothers had normal delivery, out of which 43% participants initiated breast feeding to the new born within one hour, 39.4% after 2-3 hours and 17.6% initiated within 1-2 hours. Whereas 11.7% of the mothers had delivered by LSCS, out of which 66.7% participants initiated breast feeding to the new born within 4 hours whereas 33.3% did not initiate breast feeding within 4 hours. NFHS-3 data (2005-06)[52] showed 36% of new born were breastfed within one hour of delivery, DLHS-3 data (2007-08)[54] showed 87% new-born received colostrum, and 46.9% received breast milk within one hour. It was also highlighted that only 73.4% new-born received breastfeeding within one day.

Table 39: Distribution of study participants according to number of post-natal visits (within 42 days)

Among 540 study participants in present study, 84.6% participants had two PNC visits, 7.6% participants had three PNC visits, 3.9% women had one PNC visit after discharge from delivery and only 3.9% participants four or more PNC visits. Another study conducted in Ambala district, Haryana[51] in 2015 with 200 participants, showed overall 70.5% mothers got PNC either through ASHA/Multipurpose Health Worker-Female, followed by 22.5% by nurse/doctor and 5.5% by trained dais. 54.5% mothers got more than three PNC check-ups and 44% got three PNC check-ups.

Table 40: Association between age groups of study participants and type of hospital for delivery

In the present study with 540 participants, 83.1% of 20-24 years age group participants delivered in government hospital and 16.9% in private hospital, 82.5% of 25-29 years age group participants delivered in government hospital and 17.5% in private hospital. 88.1% of 30-34 years age group participants delivered in government hospital and 11.9% in private hospital respectively. There was no significant association between age group of study participants and type of hospital for delivery. Another study conducted in Aligarh, Uttar Pradesh[50] in 2016 with 300 participants, showed that younger females < 25 years had both 51% government and 45.6% private deliveries, while >30 years mothers favored home delivery.

Table 41: Association between religion of study participants and type of hospital for delivery

In the present study with 540 participants showed that, 84.4% of Hindu's, 84.1% of Muslims and 59.1% of Christians preferred government hospital for their delivery, while 15.6% of Hindu's, 15.6% of Muslims and 40.9% of Christians preferred private hospital for delivery which showed statistically significant difference ($p<0.001$). A study conducted in Aligarh, Uttar Pradesh[50] in 2016 with 300 participants which showed Hindu females had lower home deliveries 19% compared to Muslim females 81%.

Table 42: Association between categories of study participants and type of hospital for delivery

In the present study with 540 participants, all 58 of scheduled castes and 60 of scheduled tribes' participants preferred 100% deliveries in the government hospital.

While 64.2% of other backward castes women preferred government hospital and 35.8% in private hospital, 86.7% of general category women preferred government hospital and 13.3% in private hospital, which showed statistically significant ($p<0.001$). In contrast another study conducted in Aligarh, Uttar Pradesh[50] in 2016 with sample size of 300, showed that SC/ST women had highly negative association with delivery at government institutions.

Table 43: Association of education status of study participants and type of hospital for delivery

In the present study, 88.3% of illiterate participants preferred government hospital for delivery, while only 11.7% women delivered in private hospital. 81% of the study participants who had studied 1^{st}-5^{th} standard were opted government hospital for delivery, while only 19% women delivered in private hospital. 83.2% of the study participants who studied 6^{th}-10^{th} standard were opted government hospital for delivery, while 16.8% women delivered in private hospital. 79% of participants who studied Pre-University College/ Diploma were opted government hospital for delivery while 21% women in private hospital. 85.7% of the study participants who graduate/ Post-Graduate were opted government hospital for delivery, while only 14.9% women delivered in private hospital. There was no significant association between education status of study participants and type of hospital for delivery.

Another study conducted in Aligarh, Uttar Pradesh[50] in 2016 with 300 pregnant women, showed that the association between education and place of delivery was highly significant, females with primary and above education preferring institutional deliveries.

Table 44: Association between family status of study participants and the type of hospital for delivery

In the present study, out of 540 study participants, 67.4% of above poverty line (APL) families and 95.4% of below poverty line (BPL) families preferred government hospital for their delivery, while only 32.6% of APL and 4.6% of BPL families preferred private hospital for delivery and the association was statistically significant ($p<0.001$).

Another study conducted in different parts of the country[47] and a study in Aligarh, Uttar Pradesh[50] showed that most of the lower castes (SC/ST/BPL) women's were more likely to deliver at home and there was negative association with government hospital deliveries.

Table 45: Association between iron and folic acid tablets consumption by study participants and prevalence of anemia

The present study showed, 21 (3.8%) participants who consumed less than 25% of folic acid tablets, they all (100%) had mild (Hb. 10-10.9 gm. %) anemia. 108 (20%) participants who consumed 25% to 50% of the iron and folic acid tablets, 45 (41.7%) of them had moderate anemia and 63 (58.3%) had mild (Hb. 10-10.9 gm. %) anemia. While the 123 (23.5%) participants who consumed 50% to 75% of the iron and folic acid tablets, 60 (48.8%) had moderate anemia, 21 (17.1%) had mild anemia (Hb. 10-10.9 gm. %) and 42 (34.1%) were normal (Hb. >11 gm. %).

While the 288 (53.3%) participants who consumed 75% to 100% of the iron and folic acid tablets, 123 (42.7%) had moderate anemia, 63 (21.9%) had mild anemia and 102 (35.4%) were normal (Hb. >11 gm. %) anemia respectively, which showed statistically significant ($p<0.001$).

III DEMAND GENERATION SCHEMES

Tables 46 and 47: Table showing total number of beneficiaries and non-beneficiaries

In the present study, out of 540 study participants, 61.7% were the beneficiaries who utilized the demand generation schemes services and 38.3% were the non-beneficiaries. Similar study conducted in Aligarh, Uttar Pradesh[50] in 2016 with 300 study participants, showed 94.7% of the women's who got delivered in the government hospital were eligible for intended cash benefit which was high compared to present study. Another study done in Sholapur[46] showed that 32.7% women got the benefits of demand generation schemes while 67.2% missed the opportunity. A study done in Ambala district, Haryana[51] in 2015 with 200 hospital deliveries, showed that only 25.5% mothers received incentives of demand generation schemes who were eligible while majority 74.5% were non beneficiaries which was in contrast to present study. Another study conducted in Rohtak, Haryana[48] in 2012 with 148 study participants, showed that 100% beneficiaries belonged to SC/ST/OBC, in which only 38.8% had BPL cards.

Table 47: Distribution of study participants according to awareness about Demand Generation Schemes

In present study of 540 participants, irrespective of eligible criteria, 69.1% participants knew about Prasuthi Araike, 38.1% participants knew about Janani Suraksha Yojna, 73.3% knew about Madilu kit and only 19.3% knew about Thaiyi Bhagya Plus.

A study done in Aligarh, Uttar Pradesh[50] in 2016 with 300 participants, showed only 5.3% mothers were unaware of the cash benefit and or those told to

come after some time but could not return back. A study conducted in Uttar Pradesh[45] in 2010 covering 4754 households spread over 12 districts, showed that most of the women 88% were aware about the schemes and the incentives it offered for institutional deliveries. Similarly study conducted in Ambala district, Haryana[51] in 2015 with 200 participants, showed that, 71.5% mothers were aware of the cash benefits. Similar study conducted in Jam Nagar, Gujarat[49] in 2013, with 400 participants, showed 89.5% respondents were aware about the benefit schemes while 105% were unaware about schemes. Another similar conducted in Rohtak, Haryana[48] in 2012 with 148 study participants, showed 91.6% of the beneficiaries were aware of the schemes, while 22.3% of non-beneficiaries were aware of schemes.

Table 48: Distribution of study participants according to knowledge about Demand Generation Schemes given by the health care worker

In the present study of 540 study participants, the knowledge about Demand Generation Schemes was given by ASHA to 38.3% participants, by AWW to 23.3% participants, by multiple sources to 19.1% participants, by ANM to 11.7% participants and by doctors to 7.6% participants.

Another study conducted in Uttar Pradesh[45] in 2010 covering 4754 households spread over 12 districts, showed only 40% of women's were contacted by ASHA who gave knowledge about demand generation schemes.

Table 49: Distribution of study participants according to their motivation

In the present study, out of 540 study participants, all 82% participants who delivered in government hospital were motivated by one or the other Demand Generation Schemes, while 18% delivered in private hospitals and were not applicable for any of the Demand Generation Schemes benefits.

Similar study conducted in Jam Nagar, Gujarat[49] in 2013, with 400 participants, showed that supportive ASHA and child safety was 100% motivational factor for institutional deliveries and 47.4% mothers said money under the schemes was the factor of influence for institutional delivery.

Table 50: Distribution of study participants according to time of Prasuthi Araikeincentives received

In the present study, in Prasuthi Araike, out of 61.7% beneficiaries, 47.5% in period of 15 days to one month, 30.3% beneficiaries received first installment within 7 days after registration in third trimester and 22.2% after 7 days, but within 15 days respectively. About majority 71.1% beneficiaries received late i.e. after 7 days, but within one month after delivery while only 28.9% beneficiaries received second installment within time i.e. within 7 days after delivery.

A study conducted in Karnataka[55] in 2010-11, showed that majority 96.6% of the women did not get incentives of Prasuthi Araike on time.

Table 51: Distribution of study participants according to time of Janani Suraksha Yojana incentives received

In the present study, among 333 beneficiaries who received incentives of Janani Suraksha Yojana 47.5% received incentives after 15 days to one month of delivery, 30.3% beneficiaries received incentive within 7 days after delivery and about 22.2% received incentive after 7days but within 15 days. Similar study conducted in different parts of India[47] covering 9405 house-holds in 471 villages, showed that 60% of the beneficiaries received benefits within seven days of delivery, while 71% received benefits within or up to two weeks.

Another study conducted in Jam Nagar, Gujarat[49] in 2013 with 400 participants, showed that 77.2% beneficiaries received full incentives, while 22.7% did not receive full incentives as per the scheme. 77.3% of beneficiaries received amount after one week of delivery, 21.5% received after one month of delivery and 1.3% within one week of delivery.

Similar study conducted in Rohtak, Haryana[48] in 2012 with 148 participants, showed only 20.8% beneficiaries received incentives within one month of delivery. Another study conducted in Aligarh, Uttar Pradesh[50] in 2016 with 300 study participants, showed that only 18% got cash/cheque at time of discharge, while 48.2% received cash within two weeks of time. NFHS-3 (2005-06)[52] showed 56.6% mothers received financial assistance under Janani Suraksha Yojana (JSY) for births delivered in an institution while NFHS-4 (2014-15)[53] showed 65.6% mothers received financial assistance for the same purpose.

Table 52: Distribution of study participants according to time of Madilu-kit received

In the present study, among 333 beneficiaries who received Madilu Kit , 79.5% beneficiaries received within 7 days of delivery whereas 20.5% received late i.e. after 7 days, but within one month after delivery.

Table 53: Distribution of participants according to time of Thaiyi Bhagya Plus incentives received

Among 333 beneficiaries of Thaiyi Bhagya Plus Scheme, 157 (47.2%) received incentive after 7 days but within 15 days, 127 (38.1%) received after 15 days to one month respectively and only 49 (14.7%) beneficiaries received incentives within 7 days after delivery.

Another study in Karnataka[59], showed that the evidence obtained from Raichur for the Thaiyi Bhagya scheme demonstrates a classic case of 'supplier hold-up', while that from Bagalkot shows that private hospitals had found the scheme to be a source of funds.

Tables 54 and 55: Distribution of study participants according to delay in receiving incentives and reasons for delay

Out of 333 beneficiaries, Majority 82% of the beneficiaries had delay in receiving incentives and 18% beneficiaries received incentives on time. Out of 273 beneficiaries who had delay in receiving incentives, in which most 63.7% probable reason for delay was due to insufficient budget released from the government, 26.4% due to lack of documents with the beneficiaries and 9.9% due to administrative problems.

Similar study conducted in Solapur, Maharashtra[46] in 2011 covering 1.75 lakhs population over 60 slums, showed that common reasons for not receiving benefits were lack of information-39.1%, followed by difficulty in getting documents on tine-25.6%, not filled form by ANM on time-15.2%.

Table 56: Distribution of study participants according to withdrawal of cash from their bank account

Out of 333 beneficiaries, majority of the beneficiaries 80.5% withdrawn cash from bank within 7 days after discharge from hospital. 15.3% participants after 7 days but within one month, whereas 4.2% beneficiaries withdrawn cash after one month of discharge from hospital.

Tables 57 and 58: Distribution of study participants according to satisfaction from Maternal and Child Health services/Demand Generation Schemes and use of cash of incentives

Out of 333 beneficiaries, 87.4% beneficiaries were satisfied with the schemes provided by the government, whereas 16.6% were not happy/satisfied with the schemes. About 37.6% beneficiaries used the cash incentives of various schemes in house hold expenditure, while 29.1% used the cash for purchase of drugs, 14.7% used the cash for other purposes, 9.6% used the money for various hospital investigations, 4.8% used the money on food and 4.2% used the money for transportation.

Similar study conducted in Rohtak, Haryana in 2012 with 148 participants, showed 47.2% mothers spent cash of demand generation scheme incentives either on themselves or on child care while others used for general family purpose.[48]

CONCLUSION

1. Factors influencing maternal health services like younger age of the woman, high education of the woman, age at married and high socio-economic status were associated with utilization of maternal health services.
2. ASHA workers, Anganwadi workers and ANM workers are the important link between the health care services and at the gross root level in community.
3. Full ANC coverage was much better as compared to DLHS-3 of Belagavi district.
4. Even after receiving free iron and folic acid tablets, it was seen that the compliance of the pregnant mothers was less with the consumption.
5. There is still out of pocket expenditure on private transport of pregnant women for delivery to hospital.
6. Referral services to the higher centre in case of sick new-born was very high.
7. Knowledge about immediate starting of breast feeding after delivery was medium.
8. Most of the woman availed two PNC check-ups services.
9. The awareness about Demand Generation Schemes is very high, which has successfully promoted women's preference to institutional deliveries, but the knowledge about the benefits covered under DGS was low.
10. Benefits covered under the various schemes were received by all beneficiaries, there was overall delay in receiving cash incentives, and however, insufficient budget was reason for delay in majority of women. Incentive money received in schemes by the beneficiaries was mainly used for various house-hold expenditure.
11. Overall satisfaction level regarding maternal health services and the Demand Generation Scheme was high.

LIMITATIONS

The limitations of the study were:

1. No feedback was collected from the health workers about the utilisation of demand generation schemes.
2. Reasons for low compliance for IFA was not taken into consideration, further studies can take qualitative analysis for the same.

SUMMARY

The present study was a community based cross sectional study, undertaken in the rural field practice area of PHC Handiganur, administered by Department of Community Medicine, KLE university's, Jawaharlal Nehru Medical College, Belagavi, to study the utilization of Maternal Health services after launching of Demand Generation Schemes by Govt. of Karnataka, Janani Suraksha Yojana, Prasuthi Araike Programme, Madilu-kit Programme, Thaiyi Bhagya Plus programme. The duration of study was one year from 1st January 2015 to 31st December 2015. 540 married women who delivered during the period from 1st January 2015 to 31st December 2015 were included in the study. After obtaining written informed consent, the participants were interviewed using pre-designed and pre-tested questionnaire.

The key observations can be summarized as follows:

In the present study, majority of the pregnant women, 61.5% were in the age group of 20-24 years. 30.7% were in the age group of 25-29 years and only 7.8% were in the age group of 30-34 years. There were no participants either below the age of 19 years or above the age of 35 years. The mean age of study participants was 24.1$\pm$ 2.8 years ranging from 20-35 years and the mean age at marriage for the women in the present study was 19.1 $\pm$ 2.1 years ranging from 15-24 years. 7.6% were less than 18 years of age and majority of them 92.4% were equal or above 18 years of age.

In the present study, major number of participants, 80.7% were Hindus, followed by 15.2% were Muslims and 4.1% were Christians. Almost half of them 50.2% belonged to general category, other backward castes (OBC) were 28%, 11.1% belonged to scheduled tribe (ST) and 10.7% belonged to scheduled caste (SC). 88.9%

mothers were literates, majority 69.9% of them studied had up to 6^{th} - 10^{th} standard, followed by 11.5% up to Pre-University College/ Diploma, 3.9% participants studied up to 1^{st} - 5^{th} and Graduate/ Post-Graduate each. 11.1% participants were illiterate.

In the present study,54.1% were home-makers, 30.5% were unskilled workers, 7.8% were self-employed, and 7.6% were in government servicer.53.3% mothers belonged to joint family and 46.7% belonged to nuclear family. 58.5% belonged to SES class V, 16.5% belonged to SES class III, 15% belonged to SES class IV and 10% belonged to SES class II socio-economic status as per the modified B. G. Prasad's classification. About 56.9% belonged to below poverty line and 43.1% belonged to above poverty line family. 57.8% participant husbands studied till tenth standard, 19.3% had studied till pre-university college/ diploma, 11.3% participant husbands were illiterate, 7.8% had completed graduation or post-graduation and 3.9% had studied till fifth standard. Majority 84.4% of participant husbands were unskilled workers, 7.8% were self-employed and 7.8% were skilled workers.

In the present study, 69.2% of the women came to know about their pregnancy in second month, 26.9% in third month and 3.9% in fourth month. 42% of women after knowing their pregnancy, first contacted ASHA worker, 11.3% contacted Anganwadi worker, 11.7% contacted ANM, while 35% contacted doctor.

Also it was observed that, 57.3% were of second order of pregnancy, 40.9% were of first order of pregnancy, 0.9% were of third order and only 0.9% were of fourth order of pregnancy. 57.8% mothers had two living children, 41.3% were found to have one living child, 0.7% mothers had three living children and only 0.2% mother had four living children. Majority 98.7% of the women did not have any previous abortions. Among the study participants, 65.6% remembered and mentioned

correctly about their last menstrual period. 96.1% of pregnancies were registered and also first antenatal check-up was done within 12 weeks of gestation, while 3.9% were registered at 12-20 weeks of gestation.

In the present study, out of 540 study participant, all the (100%) participants had their at-least one ANC check-up either with ANM,/ Medical officer, while, 313 (58%) of the participants had their ANC check-up by private doctor also.

In the present study, 100% mothers received first dose of tetanus toxoid, whereas 99.6% received the booster dose of tetanus toxoid and only 0.4% did not receive the booster dose during last pregnancy.

In the present study, about 42.2% had moderate anemia, 31.1% of the study participants had mild anemia and 26.7% were in normal range. None had severe anemia.

Urine analysis was done in 96.1% mothers. Out of 519 urine tested participants, 48.6% mother's urine was normal, 39.3% mothers had positive for urine albumin and 12.1% mothers had positive for urine sugar.

In all the participants urine pregnancy test was done and were registered, measurement of weight and blood pressure was recorded and per abdomen was done in all the participants. Rapid test for HIV and HBs-Ag and blood grouping and typing was done in all participants. Advice was given to all about nutritional diet and rest. Counseling about breast feeding, hospital stay, family planning advice and immunization was also given to all mothers after delivery. Ultra-sonography was done in all the study participants. 92.2% showed normal findings, whereas 7.8% showed some or the other abnormalities.

In the present study, 100% pregnant women had received free supply of IFA tablets, in which 40.7% participants received 90-100 tablets of IFA tablets, 14.6% had received 60-90 tablets of IFA tablets, 14% had received 30-60 tablets of IFA tablets, 11.6% had received 1-30 tablets of IFA tablets, 11.5% had received 151-200 tablets of IFA tablets and 7.6% had received 101-150 tablets of IFA tablets.

Out of which, 53.3% consumed 75%-100% tablets of iron and folic acid, 22.8% consumed 50%-75% iron and folic acid tablets, 20% participants consumed 25%-50% iron and folic acid tablets, 3.9% consumed less than 25% tablets of iron and folic acid during their complete pregnancy respectively.

In the present study, 42.2% participants received health education from ASHA workers, 28.3% received health education from multiple sources, 11.7% from ANM, 3.9% from anganwadi workers, 3.9 from medical officer/ doctor respectively.

Most of the pregnant women about 83.3% delivered in government facilities either at sub-centre/ primary health centre/ first referral unit/ district hospital, whereas 16.7% delivered in private hospitals. About 46.1% pregnant women were accompanied by ASHA workers to hospital for delivery, 30.9% were accompanied by other people like women's family members, 19.1% by Anganwadi workers and 3.9% by ANM's respectively. 50% pregnant women reached place of delivery by 108 vehicle (National Ambulance Service), 38.5% by their own private mode of transport and about 11.5% by other ambulance.

88.3% delivered at term, while other 11.7% mothers delivered pre-term. 84.4% underwent normal delivery, 11.7% underwent lower segment caesarian section and 3.9% had assisted delivery. 53.9% delivered female child, while 46.1%

participants delivered male child respectively. Out of which, 84.4% participants delivered a child of birth weight greater than 2.5 kg, 11.7% participants delivered a child of low birth weight and 3.9% participants delivered a child of very low birth weight.

96.1% mothers were normal after delivery, but 3.9% were noted with some of the danger signs like fever, post-partum hemorrhage, etc.Among all the newborn's, 96.1% were normal, whereas 3.9% were sick new born and all of them were referred to higher centre's immediately according to need. 100% new born received OPV_0 and BCG dose, whereas only 45.6% received Hepatitis $B_{0.}$

In the present study, 88.3% mothers had normal delivered, out of which 43% participants started breast feeding to the new born within one hour, 39.4% started after 2-3 hours and 17.6% started within 1-2 hours respectively. Whereas 11.7% mothers had delivered by LSCS, out of which 66.7% participants started breast feeding to the new born within 4 hours whereas 33.3% did not start breast feeding within 4 hours.

About 84.6% participants came for two PNC visits, 7.6% participants came for three PNC visits, 3.9% women had come for only one PNC visit after discharge from delivery and only 3.9% participants came for four or more PNC visits.

In the present study, different religion, categories, Socio-economic status of study participants, showed statistically significant difference ($p<0.001$) with respect to hospital for delivery. Association of folic acid tablets consumed by study participants with respect to anemiashowed statistically significant ($p<0.001$).

SECTION III) DEMAND GENERATION SCHEMES

Out of 540 study participants, 61.7% were the beneficiaries who utilized the demand generation schemes services and 38.3% were the non-beneficiaries. 69.1% participants knew about Prasuthi Araiki, 38.1% participants knew about Janani Suraksha Yojna, 73.3% knew about Madilu kit and only 19.3% knew about Thaiyi Bhagya Plus respectively whereas 30.9% did not know about Prasuthi Araiki, 61.9% did not know Janani Suraksha Yojna, 26.7% did not know Madilu kit and about 80.7% did not know Thaiyi Bhagya Plus respectively.

The knowledge about Demand Generation Schemes was given by ASHA in 38.3% participants, by AWW in 23.3% participants, by multiple sources in 19.1% participants, by ANM in 11.7% participants and by doctors in 7.6% participants.

In the present study, in Prasuthi Araiki, out of 61.7% beneficiaries, 47.5% in period of 15 days to one month, 30.3% beneficiaries received first installment within 7 days after registration in third trimester and 22.2% after 7 days, but within 15 days respectively. About majority 71.1% beneficiaries received late i.e. after 7 days, but within one month after delivery while only 28.9% beneficiaries received second installment within time i.e. within 7 days after delivery.

In the present study, in Janani Suraksha Yojana, out of 61.7% beneficiaries, 47.5% received incentives after 15 days to one month of delivery, 30.3% beneficiaries received incentive within 7 days after delivery and about 22.2% received incentive after 7days but within 15 days.

In the present study, in Madilu kit, out of 61.7% beneficiaries, 79.5% beneficiaries received Madilu kit within 7 days of delivery whereas 20.5% received late i.e. after 7 days, but within one month after delivery.

In Thaiyi Bhagya Plus, out of 61.7% beneficiaries, 47.2% received incentive after 7 days but within 15 days, 38.1% received after 15 days to one month respectively and only 14.7% beneficiaries received incentives within 7 days after delivery.

For 82% beneficiaries there was delay in receiving incentives and only 18% beneficiaries got incentives on time. Out of 82% beneficiaries who had delay in receiving incentives, in which maximum delay about 63.7% was due to insufficient budget released at the time from the government, 26.4% beneficiaries, lack of documents were reason for delay. Another 9.9% beneficiaries, administrative problem was the reason for delay.

About 87.4% beneficiaries were satisfied with the schemes provided by the government, whereas 16.6% were not happy/satisfied with the schemes.Out of 61.7% beneficiaries, maximum beneficiaries 37.6% used the cash incentives of various schemes in house hold expenditure, while 29.1% used the cash for purchase of drugs, 14.7% used the cash for other purposes, 9.6% used the money for various hospital investigations, 4.8% used the money on food and only 4.2% used the money for transportation.

RECOMMENDATIONS

Based on the findings of the present study, following recommendations are being suggested for better utilisation of maternal health services:

- The determinants of utilization influence the uptake of different maternal health care services differently. This means that policy makers should be careful in terms of structuring strategies to improve utilization.

At individual level:

- ASHA workers and Anganwadi workers during their time of home visit or ANC visits, can educate pregnant women to stimulate and enforce the beneficiaries to make available of necessary documents for various demand generation schemes and benefits covered under it.
- Flexibility in documents should be there, like caste certificates (SC/ST/OBC) documents are difficult to get in short period of time. This problem can be solved if the pregnant woman/attender are given the information at the ANC visit about the documents required for various Demand Generation Schemes.

At Primary Health Centre level:

- Health service providers like ANM, health educator along with doctor can be emphasized to provide knowledge about the demand generation schemes, either by group discussion or by pamphlets to the pregnant mothers or their attenders during their ANC visit.

- The payment of incentive at the time of discharge of mother after delivery should be strictly enforced and funds should be made available at time at health care facilities.

- Display of banners and advertisement boards in local language about various DGS and requirement of necessary documents can be displayed in PHC waiting room or in ultra-sonography room in approved private hospitals.

At ASHA worker/Anganwadi worker level:

- Attention should also be given to regular and sustained contact between health workers and antenatal mothers through home visits to develop mutual confidence. This can minimise the ignorance of mothers during her pregnancy.

- Importance of antenatal, intra-natal and postnatal care should be emphasized to mothers during antenatal check-ups, in immunization session, mother's group meetings in Anganwadi and during other opportunistic mother's meetings.

- Reorientation meeting of various DGS can be emphasized to ASHA workers/AW workers periodically so as to increase the utilisation of DGS.

❖ Approved JSY private hospitals should also be made mandatory to display the information of schemes (JSY) and taking the form of JSY at the time of delivery.

- Health workers should emphasize more on the importance of consumption of IFA during pregnancy.
- ASHA workers, ANM, Anganwadi workers should emphasise knowledge on cheque received beneficiaries to withdraw the money from bank within three months of date of issue.
- Health workers should educate pregnant women's about the need and importance of post-natal care either during ANC visits or during discharge from hospital after delivery.
- Health education to all mothers including the pregnant mothers regarding the importance of early initiation and exclusive breastfeeding. There should be repeated sensitization through ASHA workers.
- Government can make a policy to provide the funds of demand generation schemes in advance so that it can be used as per the need. When funds levels reaches to the limited level it can be deposited again.
- Programme inbuilt measures should be taken for qualitative evaluation and monitoring of the program.

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ANNEXURE IV

KEY TO MASTER CHART

"UTILISATION OF HEALTH SCHEMES BY THE REGISTERED PREGNANT WOMEN IN THE RURAL FIELD PRACTICE AREA OF HANDIGANUR IN BELAGAVI: A COMMUNITY BASED CROSS SECTIONAL STUDY"

A – Unique identification number:

B- Age in years: _____

C- Education of participant?

1-Illiterate

2- Primary

3-Higher primary

4- Secondary

5- PUC/Diploma

6- Graduate

D: Age at Marriage? _____

E: Occupation of Participant?

1- Govt. Service

2- Private Service

3- Self employed

4- Skilled worker

5- Unskilled worker

6- Unemployed

7- Homemaker

F. Educational status of Husband?

1- Illiterate

2- Primary

3- Higher primary

4- Secondary

5- PUC/Diploma

6- Graduate .

G: Occupation of husband?

1- Govt. Service

2- Private Service

3- Self employed

4- Skilled worker

5- Unskilled worker

6- Unemployed

H: Religion?

1- Hindu,

2- Muslim,

3- Christian,

4 - Others

I: Caste / Tribes?

1- SC 2- ST 3- OBC 4- General

J: Socio economic status?

1- Class I

2- Class II

3- Class III

4- Class IV

5- Class V

K: Ration Card holder?

1- APL

2- BPL

L: Family type?

1- Nuclear

2- Joint

3- Extended

M: Number of Family members?

N: When did she know about pregnancy?

1- 1st month

2- 2nd month

3- 3rd month

4- 4th month

O: First contacted after knowing about her pregnancy?

1- ASHA

2- AWW

3- ANM

4- Staff nurse

5- Doctor

P: Pregnancy order?

1- 1st order

2- 2nd order

3- 3rd order

4- 4th order/≥

Q: Total number of living children?

1- One

2- Two

3- Three

4- Four/≥

R: History of previous abortions?

1- One

2- Two

3- Three

4- Four/≥

S: Does the participant know her LMP?

1- Yes

2- No

T: When was first ANC check-up done?

1- <12 weeks

2- 12-20 weeks

3- >20 weeks

U: Number of ANC check-ups done by ANM?

1-One

2- Two

3- Three

4- Four or more

V: Number of ANC check-ups done by Medical Officer?

1-One

2- Two

3- Three

4- Four or more≥

W: Number of ANC check-ups done by Private doctor?

1-One

2- Two

3- Three

4- Four or more≥

X: First TT doses taken?

0- Not taken

1- 1st dose taken

Y: 2nd dose /booster dose TT taken?

0- Not taken

1- Taken

Z:Weight recorded?

1. Yes

2. No

AA: BP recorded?

1-Yes

2- No

AB: Per abdomen examination done?

1-Yes

2- No

AC: Diet and Rest advice given?

1-Yes

2- No

AD: Haemoglobin estimation done?

1-Yes

2- No

AE: What is the Hb%?

AF:Urine pregnancy test done?

1-Yes

2- No

AG: Rapid test for HIV done?

1-Yes

2- No

AH: Results of rapid test for HIV?

1-Yes

2- No

AI:Urine routine done?

1-Yes

2- No

AJ: Any abnormality in urine routine?

1- Normal

2- Sugar +

3- Albumin +

4-Bacteria +

AK: USG done?

1-Yes

2- No

AL: Any abnormality in USG?

1-Yes

2- No

AM: Number of free Iron and Folic acid tablets received?

1- 1-30

2- 30-60

3- 60-90

4- 90 -100

5- 100-150

6- 150- 200

AN: Percentage of Iron and folic consumed?

1 – 0-25%

2- 25-50%

3- 50-75%

4- 75-100%

AO:Health education was given to mother by?

1- ASHA

2- AWW

3- ANM

4- MO

5- Others

7- Multiple

AP: Planning for delivery explained?

1- Yes

2- No

AQ: Signs of anaemia explained?

1- Yes

2- No

AR: Which hospital for delivery?

1- Government hospital

2- Private hospital

AS: Who accompanied her for delivery?

1- ASHA

2- AWW

3- ANM

4- Others

AT: Mode of transport?

1- 108- NAS

2- Ambulance

3- Private Vehicle

AU: Duration of delivery?

1- Preterm

2-Full term

3- Delayed labour

4- Post term

AV: Mode of delivery?

1- Normal

2- Assisted delivery

3- Caesarean section

AW: Sex of the baby?

1- Male

2- Female

AX: Weight of new-born? _____ kg.

AY:Condition of mother after delivery?

1- Normal

2- Danger signs noted

3- Giddiness

4- Disorientation

5- PPH

6- Fever

7- Others

AZ: Condition of new-born?

1- Normal

2- Sick newborn

BA: If sick, New-born referred to higher centre?

0 – Not applicable

1- Yes

2- No

Immunisation at birth

BB: BCG?

1- Given

2- Not givens

BC: OPV_0?

1- Given

2- Not given

BD: Hep – B_0?

1- Given

2- Not given

BE: Time of initiation of Breast feeding in normal delivery?

1- Within 1 hour

2- Within 2 hour

3- Within 3 hour

BF: Time of initiation of Breast feeding in LSCS within 4 hours?

1- Yes

2- No

BG: Counselling for breast feeding?

1- Yes

2- No

BH: Counselling for 24 hours hospital stay?

1- Yes

2- No

BI: Counselling for Nutrition?

1- Yes

2- No

BJ: Counselling for family planning?

1- Yes

2- No

BK: Counselling for immunisation?

1- Yes

2- No

BL: Counselling for PNC check-ups ?

1- Yes

2- No

BM: Number of PNC check-ups?

1 – 1 visit

2- 2 visit

3- 3 visit

4- 4 visit

5- 5 visit or more

BN: Knowledge about DGS?

1- Yes

2- No

BO: Knowledge about Prasuthi Araike?

1- Yes

2- No

BP: Knowledge about JSY?

1- Yes

2- No

BQ: Knowledge about Madilu kit?

1- Yes

2- No

BR: Knowledge about Thaiyi Bhagya plus?

1- Yes

2- No

BS: Who gave information about DGS?

1- ASHA

2- AWW

3- ANM

4- Staff nurse

5- Doctor

6- Multiple

7- No information.

BT: Did this schemes motivated them?

1- Yes

2- No

3- Not Applicable

BU: Received incentives of Prasuthi Araike?

1- within 7 days

2- >7 days to <15 days

3- ≥15 days

4- Didn't receive

5- Not Applicable

BV: Received incentives of JSY?

1- within 7 days

2- >7 days to <15 days

3- ≥15 days

4- Didn't receive

5- Not Applicable

BW:Received incentives of Madilu-kit?

1- within 7 days

2- >7 days to <15 days

3- ≥15 days

4- Didn't receive

5- Not Applicable

BX: Received incentives of Thaiyi Bhagya Plus?

1- within 7 days

2- >7 days to <15 days

3- ≥15 days

4- Didn't receive

5- Not Applicable

BY: Second instalment of Prasuthi Araike was received?

1- Received on time

2- Received late

3- Not received

4- Not Applicable

BZ: Was there over all delay?

1- Yes

2- No

3- Not Applicable

CA: Reason for delay?

1- Document

2- Administrative Problem

3- Insufficient Budget released from Government

4- Others

5- No delay

6- Not Applicable

CB: Took incentive cash from bank?

1- <7 days

2- >7 days to one month

3- > one month

4- Didn't withdrawn money from bank

5- Not Applicable

CC: Satisfied with MCH/DGS?

1- Yes

2- No

3- Not Applicable

CD: Amount of incentives was utilized for?

1- Consultation to other doctors

2- For purchase of drugs

3- For various hospital investigations

4- On transportation.

5- On food

6- On house hold expenditure

7- Other purposes

8- Not Applicable

ANNEXURE I – ETHICAL CLEARANCE CERTIFICATE

K.L.E.UNIVERSITY'S
JAWAHARLAL NEHRU MEDICAL COLLEGE,
NEHRU NAGAR, BELAGAVI-590010 (KARNATAKA-INDIA)
(Accredited 'A' Grade by NAAC)

Website: http//www.jnmc.edu
E-Mail : dome@jnmc.edu

Phone: (+ 91-(0)831 Office : 2471350
Principal: 2471701
Fax No. +91 (0)831 – 2470759

Ref: MDC/DOME/ 179 **Date: 14/11/2014**

To,

PG student in Community Medicine,
J.N.Medical College,
BELAGAVI.

Sub: Institutional Ethical Clearance for the study.

With reference to the above, we wish to inform you that your proposed research project titled **"UTILISATION OF HEATH SCHEMES BY THE REGISTERED PREGNANT WOMEN IN THE RURAL FIELD PRACTICE AREA OF HANDIGANUR IN BELGAUM; A COMMUNITY BASED CROSS SECTIONAL STUDY",** is ethical and justifiable. The proposed research project has been cleared by the JNMC Institutional Ethics Committee on Human Subjects Research.

(Dr.Hema Dhumale)
Member Secretary
JNMC Institutional Ethics Committee
on Human Subjects Research,
J.N.Medical College, Belagavi.

(Dr.Ganga Pilli)
Chairman,
JNMC Institutional Ethics Committee
on Human Subjects Research,
J.N.Medical College, Belagavi.

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ANNEXURE II – CONSENT FORM

INFORMED CONSENT FORM (18 – 44years)

"UTILISATION OF HEALTH SCHEMES BY THE REGISTERED PREGNANT WOMEN IN THE RURAL FIELD PRACTICE AREA OF HANDIGANUR IN BELAGAVI: A COMMUNITY BASED CROSS SECTIONAL STUDY"

INVESTIGATOR: Dr. _____

GUIDE: Dr. _____

Objective:

1. To study the utilization of Maternal Health services after launching of Health Schemes by Govt. of Karnataka.

I**ntroduction:** You are invited to participate in this study which intends to obtain information on Maternal Health Services and Utilization of Demand Generation Scheme for Maternal Health like Janani Suraksha Yojana (J. S. Y), Prasuthi Araike (P.A), Madilu kit Programme and Thaiyi Bhagya Plus Yojana. Also to find, out of pocket expenditure during pregnancy. Participation in this study is completely voluntary.

Explanation of procedures: For this study, you will have to answer a few questions related to Maternal Health Services and utilization of Demand Generation Schemes. This interview schedule may take approximately 30-40 minutes. If you agree to participate, you will be continued asking questions; but the moment you wish to discontinue, the interview schedule will be closed.

Withdrawal: Your participation in this study is purely voluntary. You are free to decide whether or not to participate in the study. In case you decide not to participate in the study, you will be at no loss. If you decide to participate & later feel to withdraw; you are free to do so. Provision of Health Care Services to your family will not be altered in any way at PHC/ Sub-centre because of your decision.

Possible Benefits: The investigator does not promise that you will receive any direct benefit from this study. It will benefit for the whole community & help policy makers to design new programmes.

Possible Risks: There is no risk of any kind involved in this study. You are only going to be interviewed for the sake of collecting your views & information.

Privacy and Confidentiality: All the data collected will remain confidential & only aggregated data will be published. Your personal identity will not be revealed.

Financial Incentives: There will be no incentives awarded to you for participating in this study.

Costs of study: The cost of the study will be entirely borne by the investigator. There will be no additional cost for you to participate in this study.

Authorization to Publish Results: The results of the study will be used for publication/presentation. However the Participant's Identity will be kept confidential.

Questions:

You have the right to ask & have answered, to any questions or doubt about this study. If you have any queries regarding the study, you can contact Dr. _____, PG Student, Dept. of Community Medicine, KLE University's J. N. Medical College, Belagavi-590010, mobile no: _____ or Dr. _____., Professor, Dept. of Community Medicine, KLE University's J. N. Medical College Belagavi-590010, mobile no:_____.

If you have any questions about rights as a research participant, you can contact Dr. (Mrs.) _____. M. D, Chairperson, Institutional Ethics Committee on Human Subjects' Research, J. N. Medical College, Belagavi - 590010. Phone no: _____ or Dr. _____, Principal, KLE University's J. N. M. College, Belagavi-590010. Ph. no: _____.

Consent statement

"I volunteer & give consent to participate in this study. I have read (or have been read to me) the information sheet. Full opportunity was given to me to ask for clarification of doubts. I am fully satisfied with the answers to the questions/queries/doubts I wished to clarify. I hereby voluntarily agree to participate in this study. Furthermore, I recognize that I have the complete right to withdraw this consent at any point during the study. I understand that the information given by me will be confidential & will be used for research purpose only.

Further, I am aware that the results of this research will be presented/ published without disclosing any personal identification of the participants."

Name of Participant Signature or Left hand thumb impression

Name of Witness Signature of Witness _____

Name of Researcher Signature of Researcher _____

Date: _____

Place: _____

ANNEXURE III – PROFORMA

KLE University's

J. N. Medical College, Belagavi

Department of Community Medicine

RESEARCH QUESTIONNAIRE

"UTILISATION OF HEALTH SCHEMES BY THE REGISTERED PREGNANT WOMEN IN THE RURAL FIELD PRACTICE AREA OF HANDIGANUR IN BELAGAVI: A COMMUNITY BASED CROSS SECTIONAL STUDY"

INVESTIGATOR: Dr. _____

GUIDE: Dr. _____

Name of the Village:-_____ Date of Data collection_____

UIN:-

SECTION I) Socio-Demographic Profile of study subjects

1. Name of the Participant:

2. Age of the Participant:

3. Educational status of Participant:

a) Illiterate b) Primary c) Higher primary d) Secondary e) PUC f) Graduate

4. Age at Marriage:

5. Occupation of Participant;

6. Educational status of Husband:

a) Illiterate b) Primary c) Higher primary d) Secondary e) PUC f) Graduate

7. Occupation of husband: _____

8. Religion: Hindu/Muslim/Christian/Jain/Others

9. Category: SC, ST, OBC, General

10. Total Family Income/month: Rs. _____

11. Family belongs to APL/BPL group

12. Family structure? Nuclear/Joint/ Extended

13. Number of Family members _____

14. Date of ANC Registration _____

15. When did she know about pregnancy? $1^{st}/2^{nd}/3^{rd}/4^{th}$ month

16. Whom did she contact first? ASHA/ AWW/ ANM/ SN/ Doctor,

17. Order of present pregnancy? (1/2/3/4/5/6)

18. No of Living children (including the present pregnancy) a)Male_____ b)Female _____

SECTION II) Utilisation of Maternal and Child Health Services

1. Antenatal Registration (Thaiyi Card) done? Yes/No

2. Last Menstrual Period: _____

3. Number of living children: _____ Abortions: _____

4. Gestational period at I^{st} ANC check-up? a) <12 weeks b)>12 -20 weeks c) >21 weeks

5. Number of ANC check-ups done by ANM? a) 1 b) 2 c) 3 d) 4& above

6. No. of ANC check-ups conducted by Govt. Medical Officer? a) 1 b) 2 c) 3 d) 4& above

7. No. of ANC check-ups conducted by Private Doctor? a) 1 b) 2 c) 3 d) 4& above

8. No. of TT dose given?

a) TT 1: Yes/No b) TT2/Booster: Yes/No

9. Measurement of weight? Yes/No

10. Measurement of B.P? Yes/No

11. Per abdominal examination done? Yes/No

12. Advise on rest and diet given? Yes/No

13. Investigation:

a) Hb% done? Yes/No If yes value in gm %: _____

b) Rapid test for pregnancy? Yes/No If yes: Positive/ Negative

c) Rapid test for HIV done? Yes/No If yes: Positive/ Negative

d) Urine routine done? Yes/No If yes: Sugar/ Albumin/ Bacteria

e) USG done? Yes/No If yes: abnormal findings if any?

14. Number of IFA Tablets received? a) 1-30 b) 30-60 c) 60-90

d) 90-100 e) 100-150 f) 151-150

15. Number of IFA Tablets consumed? a) 0-25% b) 25-50% c) 50-75% d) 75-100%

16. Health education was given by? ASHA/AWW/ANM/SN/MO/Others

17. Planning for delivery was explained? Yes/No

18. Signs of anaemia explained? Yes/No

19. Facility selected for Delivery services?

a) Government Hospital b) Private hospital

20. Who accompanied her? ASHA/ANM/AWW/ others

21. Mode of transportation? a) 108-NAS b) Ambulance c) Private Vehicle

22. Duration of Pregnancy? Pre term / Full term / Post term

23. Mode of Delivery? Normal delivery/Assisted delivery/ Caesarean section

24. Sex of the baby: Male/ Female

25. Weight of the baby a) <1800 grams b) $\geq$1800 grams - 2500 grams c) >2500 grams

26. Condition of Mother? Normal / Danger sign noted /Giddiness/ Disorientation/ Post-Partum Haemorrhage / Fever/ Others

27. Condition of baby? Normal/ Sick new born

28. If sick new born, referral services to higher centre? Yes/No

29. Immunization at birth? BCG/ OPV0/ Hep-B0

30. Breast feeding was stated within? a) 30 minutes b) 60 minutes c) After 60 minutes

31. a) Counseling for Breast Feeding? Yes/No

b) 24 hrs. hospital stay? Yes/No

c) Nutrition? Yes/No

d) Family planning? Yes/No

e) Immunization? Yes/No

f) PNC check-up was done? Yes/No

32. Number of Post-natal care visits provided? a) 1 visit b) 2 visit c) 3 visit

d) 4 visit e) 5 and above visit

SECTION III) Assessment of Demand Generation Schemes

1. Knowledge about the DGS (package)? Yes/No

2. Knowledge about Prasuthi Araike? Yes/No

3. Knowledge about JSY? Yes/No

4. Knowledge about Madilu Kit Yojana? Yes/No

5. Knowledge about Thaiyi Bhagya plus? Yes/No

6. Who gave the information of DGS? ASHA/AWW/ANM/SN/MO/No information

7. Did these scheme motivated her to get Maternal Health services? Yes/No

8. When did she receive the incentives for Prasuthi Araike 1st Instalment (Cheque & Kits)?

Within 7 days/ 7-15 days/ More than 15 days/ Didn't receive/Not applicable

9. When did she receive the incentives for JSY?

Within 7 days/ 7-15 days/ More than 15 days/ Didn't receive/Not applicable.

10. When did she receive the incentives for Madilu Kit?

Within 7 days/ 7-15 days/ More than 15 days/ Didn't receive/Not applicable.

11. When did she receive the incentives for Thaiyi Bhagya Plus?

Within 7 days/ 7-15 days/ More than 15 days/ Didn't receive/Not applicable.

12. When did she receive the incentives for Prasuthi Araike 2nd instalment?

Received on time/Received late/Not received / Not applicable.

13. Was there any delay? Yes/No/Not applicable

14. What were reasons for delay?

a) Document b) Administrative problem c) Insufficient Budget

d) Others e) No delay f) Not applicable

15. When did she withdraw cash from bank? a) <7days b) >7days c) > 1month

d) Didn't withdrawn money from bank e) not applicable

16. Is the participant satisfied with incentive provided? Yes/No/Not applicable

17. Where did she utilize the amount?

Consultation/Drugs/Investigation/Transportation/ Food/House hold expenditure/ others specify / Not applicable