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Nourishment and Health: An Engine for Rural Development Study on Chhota Jagulia Gram Panchayat of North 24 Parganas District, West Bengal, India

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ABSTRACT

Maternal health and nutrition are essential components for rural development; especially in developing areas. The purpose of this report is to focus on the Chhota Jagulia Gram Panchayat located in the North 24 Parganas District of West Bengal in order to evaluate the relationship existing between nutrition, access to healthcare, and socioeconomic status of women living in this area. The methodology included the use of primary data collected through household surveys and secondary data obtained from census and government sources. The results show that women have become more aware of antenatal care as well as institutional delivery and diagnostic services. However, there are still several significant challenges that remain, such as early marriage, low income, inadequate practices related to postnatal care, few women employed, and lack of access to government welfare programs. Other nutritional issues that impact a women's maternal health status include being underweight and suffering from anaemia. The research concludes by stating that enhancing maternal health through the development of health care infrastructure, increasing awareness, and providing women with access to educational and economic opportunities will help generate sustainable rural development.

Keywords: Maternal Health; Rural Development; Nutrition; Antenatal Care; Women Empowerment

INTRODUCTION

Health and nourishment are fundamental pillars for the sustainable development of any society, especially in rural areas where access to quality healthcare and balanced nutrition often remains limited. In many developing regions, rural populations face challenges such as malnutrition, lack of clean water, poor sanitation, and inadequate healthcare facilities. These issues not only affect individual well-being but also hinder community progress by reducing productivity, increasing disease burden, and perpetuating cycles of poverty.

All living creation has emerged from mother. So, it is very necessary to take care of pregnant women. Without the improvement of maternal health, a healthy society as well as nation can't be form. For increasing the level of maternal health service, the govt. of India as well as different type of state govt has launched many schemes & programs. Such as child survival & safe motherhood program family planning by Ministry of Health & child welfare in 1992-93. Both the previous program the child Survival & safe Motherhood turned into Reproductive & child Health care program (RCH) in 1996.Janani Suraksha Yojona (JSY)introduced in the month of April 2005 where cash has provided to pregnant woman as allowance for check their needs. Indira Gandhi Matritva SahajogYojona (IGMSY) was launched in the year 2010 to provide cash to the pregnant women. Janani Shishu Suraksha Karyakram was launched in the month of June 2010.This Yojona provide

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free delivery to the women. The main aim of this Yojona is to increase the institutional delivery. In our country many people live in village. Around 70% of the India's total population are belongs rural community. Medical facility is not as very good as compare to the urban area. Maternal health is a major part of family welfare program in developing India specifically in rural sector so medical facility should be very good there. If a pregnant woman can get adequate amount of care, it will reduce the infant mortality. The large no. of pregnant women has not taken ante-natal care for economical & spatial factors in rural area. Good physical & mental health of a mother is a good indicator of a progressive society. The rate of maternal mortality is that thing which shows the society's heed towards the mother. The rate of maternal mortality reflects crucial aspects of a society. As the health status of India gradually gets better than good but it is far from the level of specifically in rural sector.

Conceptual Background

Maternal health is the health of women during the time of pregnancy, child birth& the postpartum phases. While motherhood is a positive & fulfilling experience, for too many women it is associated with suffering, ill-health & even death. The United Nations Population Fund (UNFPA) estimated that 289,000 women died of pregnancy or childbirth related causes in the year 2013.The global maternal mortality ratio has fallen from 380 maternal deaths per 100000 live births in 1990 to 210 deals per 100000 live births in the year of 2013 but still high rates of maternal mortality exist in Africa & Southern Asia.

Four elements are needed to prevent maternal death. First of all, pre-natal care secondly skill birth attendance is needed, thirdly emergency obstetric care to address the major cause of maternal mortality exist in Africa & Southern Asia. During the time of pregnancy, the BMI of a woman should be within 18.5-24.9. Obesity can create difficulties in the time of delivery. India's maternal mortality rate reduced from 212 deaths per 100000 live births in 2007 to 167 deaths in 2013.The advance is largely due to key government interventions such as the Janani Shishu Surasha Karyakaram (JSSK) scheme which encompasses free maternity service for women & child, a nationwide scale up of emergency referral system & maternal & improvement in the governance & management of health service at all levels. However, adolescent & illiterate mother & those living in hard-to-reach areas still have a much greater chance of dying in childbirth. Adolescent girl outside cities is especially vulnerable as teenage marriage & pregnancies are very high in rural & remote areas.

LITERATURE REVIEW

A study of literature review places an important role any research work. Here the topic has been discussed through the review of past literature.it is mainly found from journals, reports etc.

There is a new technique of sample survey called sisterhood method. Here, every female respondent gives the information of their sisters who were not alive, died during pregnancy or died after 6 weeks of delivery. So, from this technique the delivery care as well as maternal mortality rate can be understood. (Graham et al.1989)

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In the present context the rate of maternal mortality is quite high. The main cause of mortality is the complication during pregnancy.it is also related with malnutrition, poverty, illiteracy, unhygienic living condition. It is majorly related to ineffective public health service. (Pandey et al.2003)

When safe delivery service is available women are interested to take this facility. In the case of rural area large no. of poor & uneducated people are unable to take the health care service. (Houweling et al.2007)

If pregnant women can access the quality amount of care from maternal health centre so that it will reduce the risk factors during delivery & beneficial for the infant. (Rosenth et al.2009)

The maternal health of West Bengal is poor in different districts due to the cultural & communal aspects. Accessibility, availability, controls the level of utilization of maternal health care. Educated& economically wealthy women have the better quality of standard of living; they get married after 25 normally & take the ante-natal care. (Das. S.2009)

Maternal health can be easily developed as the condition of the poor will be developed. It will reduce the maternal mortality ratio (MMR). (Paul et al.2015)

Critical type of health problems or complications can be form within one to two months just after safe delivery. As the delivery was safe so they are less interested to take the adequate amount of post-natal check-up after delivery. So, it creates a massive problem as the time goes on. (Ghosh.P.2017)

Maternal mortality is the matter which shows the health service quality given by the community. Maternal mortality is discussed in the maternal health which is the study of the past things. The rate of maternal mortality is high in India. So, action should be taken from the grass root level. The rate of maternal mortality is high between the age group of 20-24 & for multifarious women. The major cause of death is Haemorrhage &Eclampsia. The maternal health should be improved by ameliorate the rural health centre, up-to-data the referral centre & transport system should be developed (Bhadra et al.2017).

The gynaecological society of India demand ‘’Auxitocine”for reduce maternal death due to excessive blood loss after delivery. But central govt. Banned this for misuse. It is only available in the pharmacy of Karnataka. But it is very little comparing its demand. It is only available in few major hospitals. (Ananda bazar Patrika,2018) To change the behaviour of community towards the institution delivery Janani Suraksha Yojana (JSY) was established under the project of National Rural Health Mission 2005.It is the modified scheme of National

Objectives

[1] To examine the health care facilities for pregnant women in the study area.

[2] To identify the economical & educational status of the women as it is directly or indirectly related to the maternal health.

METHODOLOGY

Planning theory and practice currently use different methodologies, but most of them are partial, verbal and informal, restricted to the local ambient and non-automated. Proposed new methodology follow basic principles of incremental and interactive approach, collaborative and co-operative approach, role-based access. Every phase contains several work flows. Barrackpore Sub-division has a strong industrial background and a huge population pressure. As a result, there has been an increasing demand for the water resources of both surface and underground and have different types of sanitation facilities.

The present work is based on sufficient data, information and maps which have been either collected from different authorities’ or generated by the researcher from different sources and surveys.

- **Secondary Data Collection:** The pre-field study indicates about the collection of secondary data. Two data are collected for this study, Primary and Secondary data. The Secondary data are collected at first from the district Census Hand book and Primary Census Abstract of 1991-2011. Data are also collected from Journals, Articles and the details on various schemes were collected from government websites for

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data analysis and literature review. Few data are collected from the Gram Panchayat Office and the BDO Office.

- **Primary Data Collection:** For the collection of Primary data, a schedule survey was conducted for the four selected villages. 25 households were chosen from each of four villages, which is a total of 100 samples. The data for the study were collected by personally visiting and interviewing all the respondents on the structured schedule. Information gathered by further observations and verified by cross questioning. All possible care was taken regarding appropriate, reliable and valid information being noted down in the schedule. Personal observations were recorded, additional and specific information noted down.

- **Mapping And Tabulation:** For the Post-Field Study, Master tables were prepared from the data collected in the schedule from the respondents. Percentages were collected from different charts (Like- Bar, Pie, Line graph, Histogram) was created from the data. The base maps for the consecutive study area were collected from the Panchayat Office which was further digitized using GIS Software (Such as- Q-GIS, ARC Map). Land use and Land Cover map were also created by the software. Photographs of the study area were all collected personally by respondent. Basic concept of safe Motherhood has determined by Indian Policy 1997.

The structure of the Safe Motherhood is:

- **Selection of the Study Area:** Selection of the study area is very much important for any research. Here I select four villages of Chhota Jagulia Gram panchayat for research. Though the study area is rural but still it is not far from the main city that is Barasat. So, the accessibility of the area for regularly survey can be easier for a new comer researcher. As the study area is bounded by many local & govt hospital so the main objective to understand the maternal health is can be easily driven.

Location

Chhota Jagulia is a gram panchayat in Barasat I CD Block in Barasatsadar subdivision of North 24 parganas district in the state of West Bengal, India. It is around 10 km from Barasat. The geographical co-ordinate of this area is 22.747219°N to 88.535436°E.

Here four villages were taken for the study among the twelve villages of Chhota Jagulia gram panchayat. So, it is necessary to talk about the individual location of each village which is studied for maternal health study.

The Tentulia village is situated in Chhota Jagulia gram panchayat in North 24 Parganas district in the state of West Bengal, India. It is situated 1.5 km away from sub-district headquarter Chhota Jagulia& 7.5 km away from sub-district headquarter ChhotaJagulia& 5.3 km away from district headquarter Barasat.

The Malikapur village is situated in Chhota Jagulia Gram Panchayat in North 24 Parganas District in the state of West Bengal, India. It is situated 13.2 Km away from sub-district headquarter Chhota Jagulia& 7.5 km away from district Headquarter Barasat. The Bazitpur village is situated in Chhota Jagulia gram panchayat in North 24 parganas district in the state of West Bengal, India. It is situated 4.2 km away from sub-district headquarter Chhota Jagulia & 4.3 km away from district headquarter Barasat. Chhota Jagulia is village & also the gram panchayat. So, the location of this village is same as the Chhota Jagulia gram panchayat.

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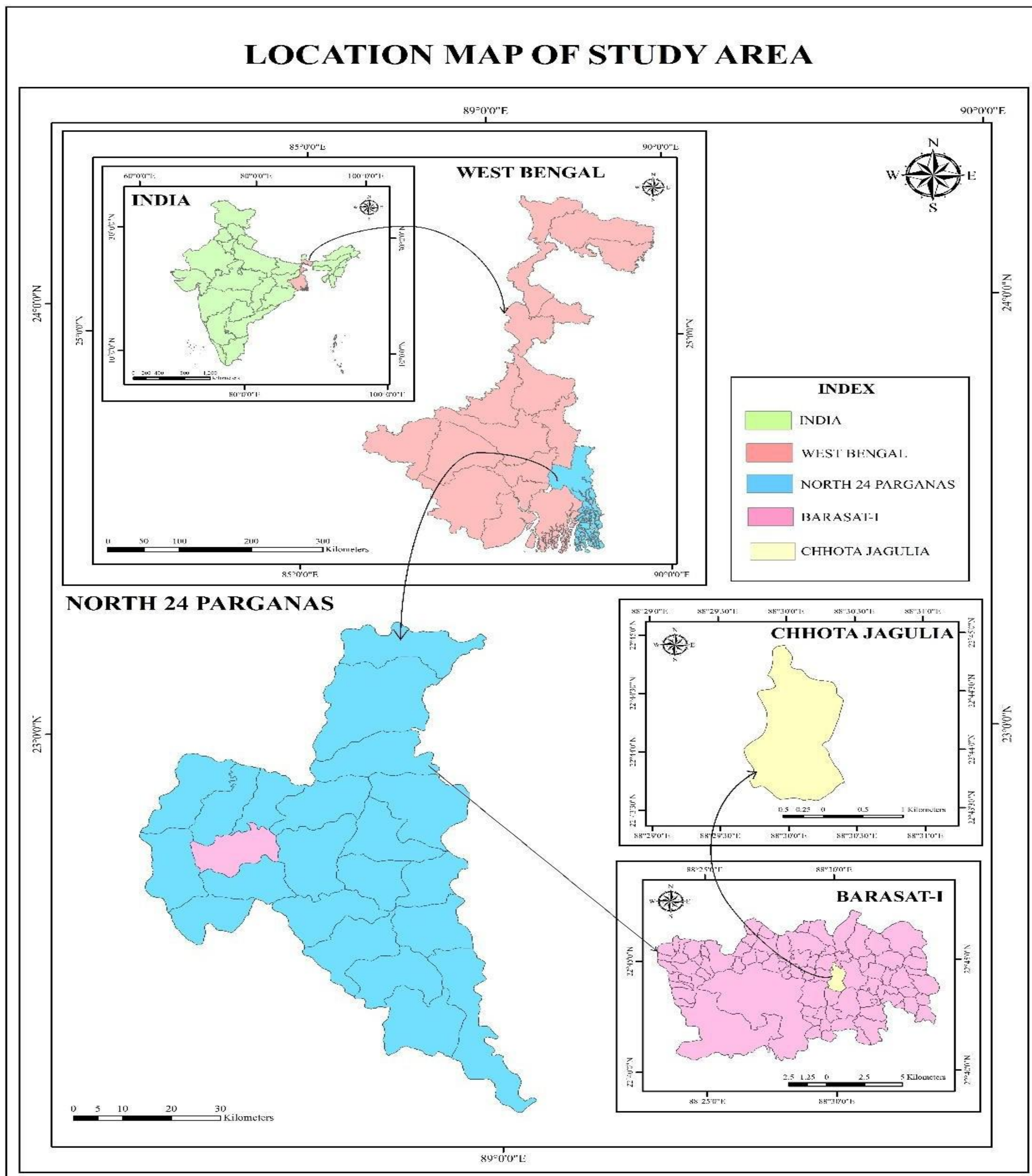

Fig:1-Location Map Source: Secondary Data, GIS, QGIS

DISCUSSION

Socio-Economical Characteristics:

Total Population: The total population of Chhota Jagulia village is 4043 among them 2087 (51.62%) are male & 1956 (48.37%) are female. In Tentulia village the total population is 1823 among them 946 (51.89%) are male & 877 (48.10%) are female. In Malikapur village the total population is 1372 among them 719 (52.40%) are male & 653 (47.59%) are female. In Bazitpur village the total population is 944 among them 490 (51.90%) are male & 454 (48.09%) are female.

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Geographical Area: The total geographical area of Chhota Jagulia village is 2Km², Tentulia is 1545/km².

Population Density: Population density of Chhota Jagulia village is 2020 persons/km², in Tentulia is 1545/km².

Caste Wise Population: The general, SC, ST population of ChhotaJagulia village is 78%, 22% & 0% in Tentulia all population belongs to general caste. In Bazitpur all population belongs to general caste.

Child Population: Child aged under 6 years in Chhota Jagulia village is 9% among them 45% are boys & 49% are girls in Malikapur it is 9.99% among them 49% are boys & 51% are girls, in Bazitpur it is 12% among them 54% are boys & 46% are girls.

Growth Rate: The decadal positive growth rate of Chhota Jagulia village is 15.1% in Tentulia it is negatively grown as -12.8%. In Bazitpur village positive growth of population has seen that is 20.6%.

Sex Ratio: The sex ratio of Chhota Jagulia village is 937.1000, in Tentulia it is 927:1000.

Literacy: The literacy rate of Chhota Jagulia is 88% where 90% of male & 85% of female, in Tentulia it is 70% where 68% are male & 72% are female, in Malikapur it is 72% where 75% are male & 68% are female, in Bazitpur it is 73% where 77% are male & 70% are female.

Workers Profile: In Chhota Jagulia village 36% (1449) populations are demarcated as the main workers and 59% male & 11% female population are working the population in this village. In Tentulia village 27% (489) populations are demarcated as the main workers and 47% male & 5% female population are working the population in this village. In Bajitpur village 38% (361) populations are demarcated as the main workers and 58% male & 17% female population are working the population in this village.

Chronological Maternal Health Programmes:

1950-First time India had a family planning and maternal health strategy.

1950-During the mid-1970's immunization received high priority and the expanded program on immunization (EPI) for children aged less than 5 years was initiated.

1980-India had a family planning and maternal and child health program.

1992-Launching of the survival and safe mother-hood program supported by (UNICEF).

1994-The government started the process of re-orienting the family planning and MCH program into a new one the RCH which added further interventions to those CSSM, including treatment of reproductive tract infections, sexually transmitted disease (STD), and establishment of blood storage units, referral transport and access to safe abortion of mothers.

2005-With the assistance of world bank and other donors the RCH2 program was started which took initiatives to increase public maternal health spreading, has provided substantial addition at funding and given high priority to revamping rural health system. It intends to bring all health and family welfare program less than one umbrella to improve child and maternal health care of rural people.

2006- The **"Janani suraksha Yojna"** (women's protection scheme) implemented in 2006 under the NRHM promotes institutional deliveries by upgrading the National Maternity Benefit Scheme.

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Socio Economic Structure of the Study Area

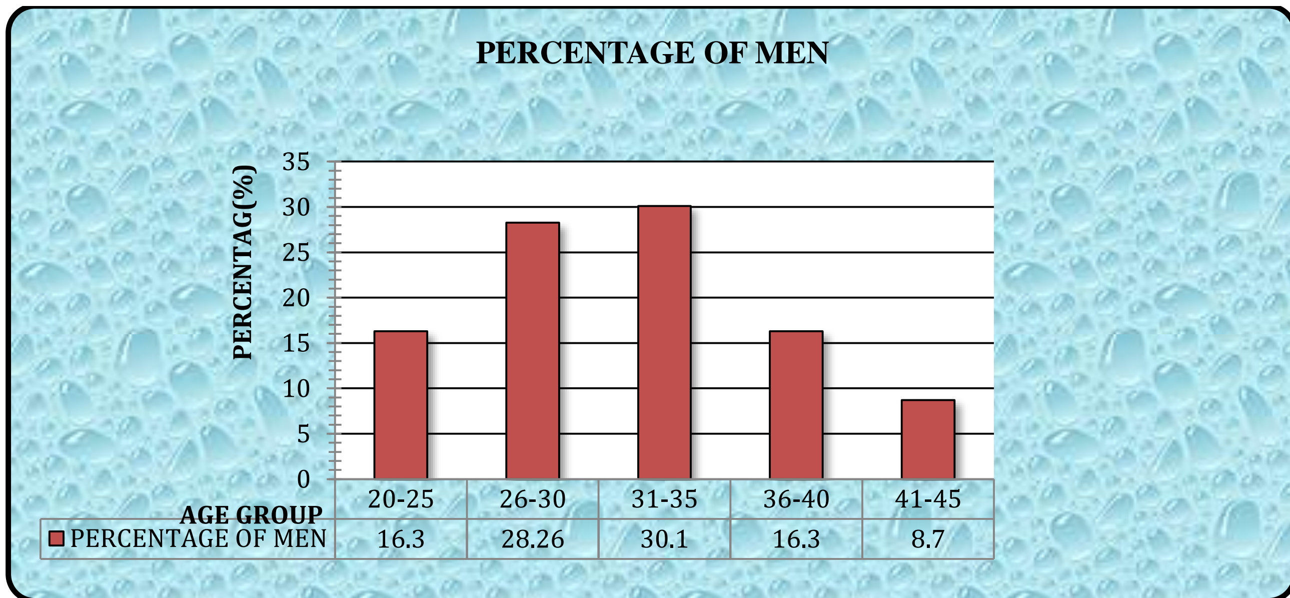

Fig:2-Percentage of Men, Source: Primary data

From this diagram we can understand that the men are belonging to the age group from 20-45 years are able to be a father. Maximum percentage of father lies within the age group between 31-35 years which is near about 30% & the next are from 26-30 years which is near about 28.26 %. This is very positive thing that people are having parenthood on the right time. That is very good for the child bringing & also for social structure. Maximum percentage of mother lies within the age group between 23-27 years which is near about 28.26%. This is very positive thing that people are having parenthood on the That is very good for the child bringing & also for social structure

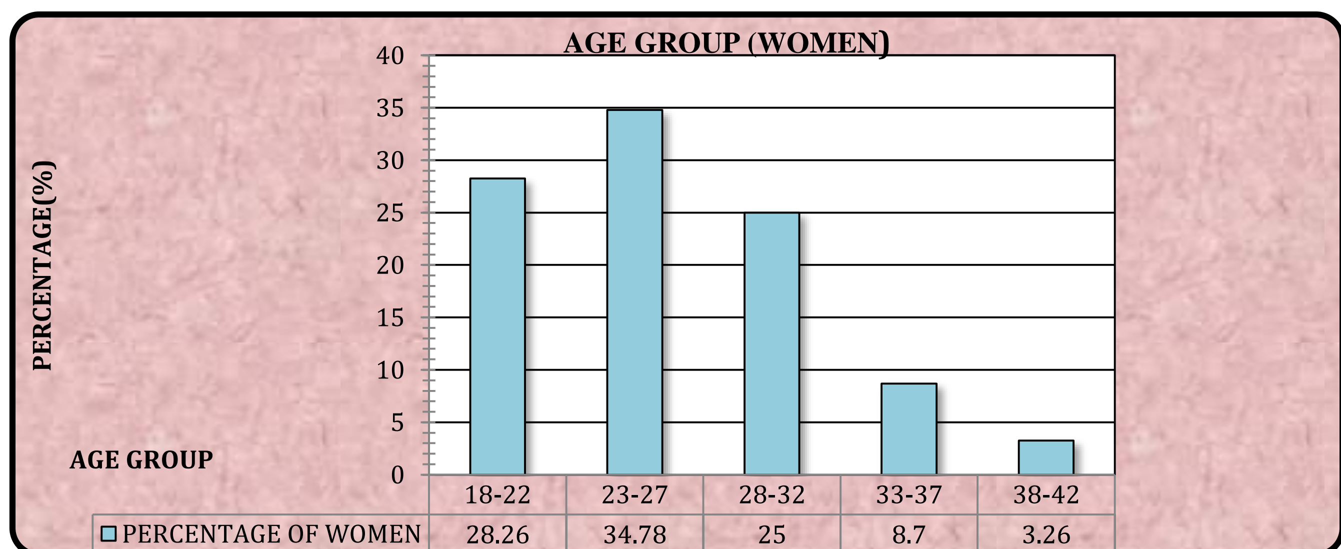

Fig:3-Age Group (Women), Source: Primary data

In Chhota Jagulia gram panchayat among 12 villages 4 villages were surveyed. The names of the villages are Bazitpur, Tentulia,Chhota Jagulia & Malikapur. From this analysis we can understand that the women are

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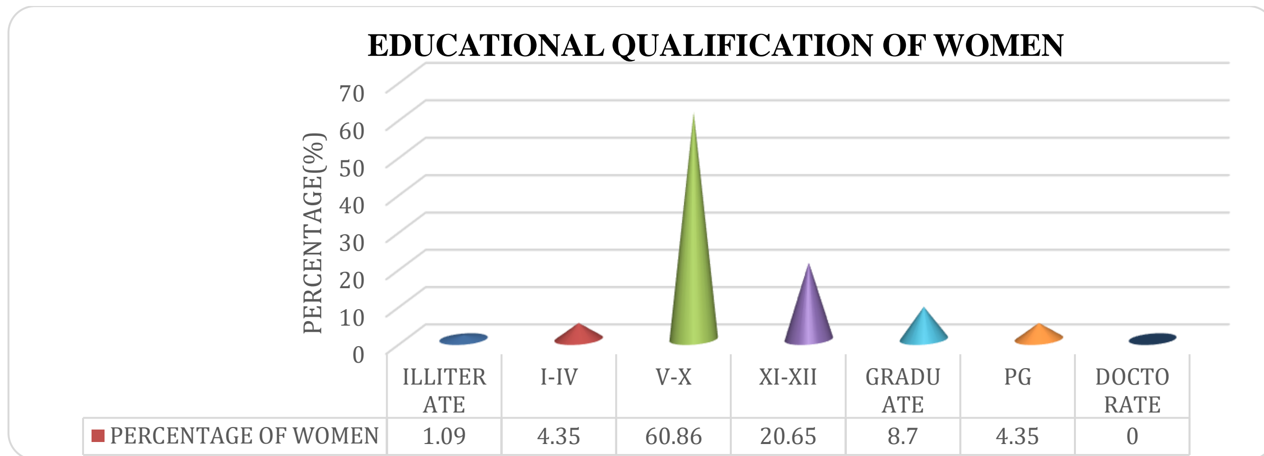
belonging to the age group of 18 to 42 years, are able to birth the baby. It belongs to the right timing of motherhood



	ILLITERATE	I-IV	V-X	XI-XII	GRADUATE	PG	DOCTORATE
PERCENTAGE OF WOMEN	1.09	4.35	60.86	20.65	8.7	4.35	0

Fig. 4: Educational Qualification of Women, Source: Primary Data

From this diagram we can understand that maximum men are moderately educated. Most of the men's educational qualification is lying from V-X. 55.44% of men are in the academic group of v-x. But there is no one in the villages those are studied PG or Doctorate. Still, we can conclude that the academic condition of the village people is moderately good. From this analysis it can easily understand that female education is greater than the male education. This is a very positive matter which can help the mother to give their child a better bringing as they are educated. The educational condition of this gram panchayat of Chhota Jagulia is good to take care of the child. Most of the men's educational qualification is lying from V-X. 55.44% of men are in the academic group of v-x. But there is no one in the villages those are studied PG or Doctorate. Still, we can conclude that the academic condition of the village people is moderately good

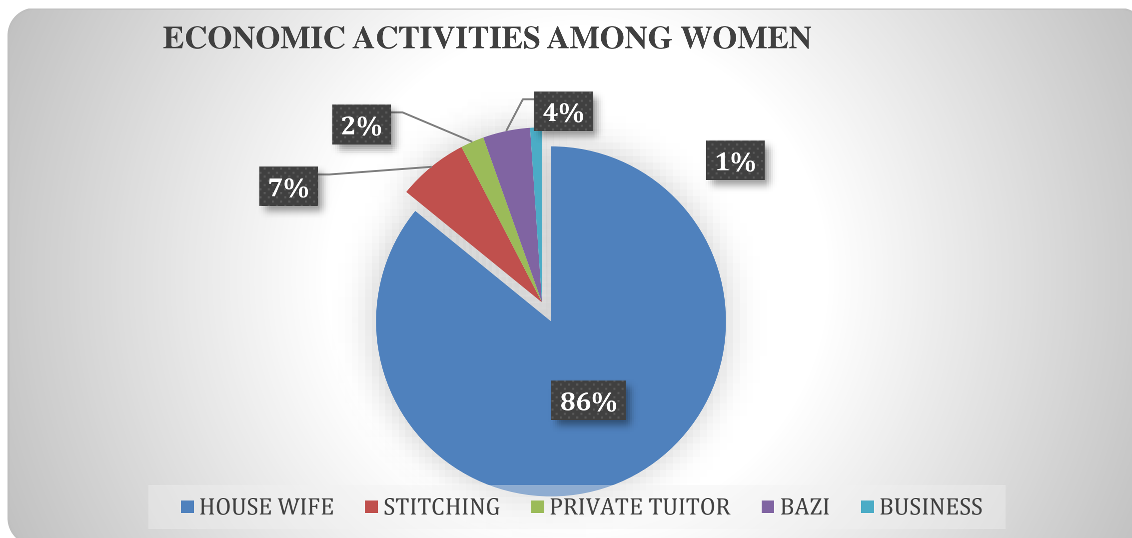


Fig. 5: Economic Activities Among Woman, Source: Primary Data

The pie chart displays the percentage distribution of different roles that women are engaged in, based on primary data. A vast majority of women are housewife, indicating limited participation in income-generating or professional activities. The remaining women are involved in small scale or informal work such as stitching and private tutoring. Participation in business or more formal sector is very minimal. it is clearly understood that a small percentage work in the primary sector such as agriculture, fishing. There is a noticeable change

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in their activity that only 16.3% people are engaging with the primary activity like agriculture, fishing etc, which are showing the adverse reflection of the economic activity of the village scenario. 51.1% people are engaged in tertiary activity like retail, transport, education and healthcare which is quietly impressive regarding to the regular economic conception of village. So, it shows a strong economic base of the people but also hamper the village culture. It shows the lack of awareness to the women from societal view. The economic development of the village women has not worked successfully.

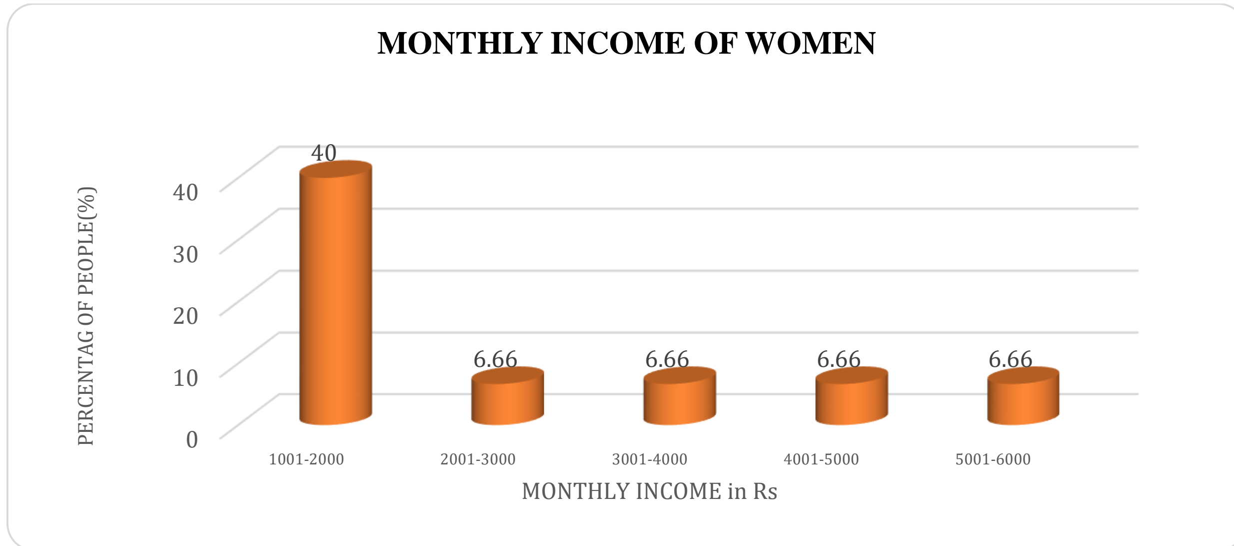

Fig. 6: Monthly Income of Women, Source: Primary Data

The economic condition of men in this village is very poor. So, it will obviously affect to their wife at the time of pregnancy as their economic condition is very poor. If any women can face severe pregnancy complication so, it will be very problematic for them to get better treatment. A significant majority of earning women fall in the low-income brackets with 40% earning only Rs 1000 to Rs 2000 per month. Only 5% earn above Rs 6000. This income distribution aligns with earlier data showing that 85.87% of women are housewife and only a small fraction engaged in paid work. From this analysis we can easily understand that the economic empowerment among the women is very less. It will obviously effect on their pregnancy period & after wards.

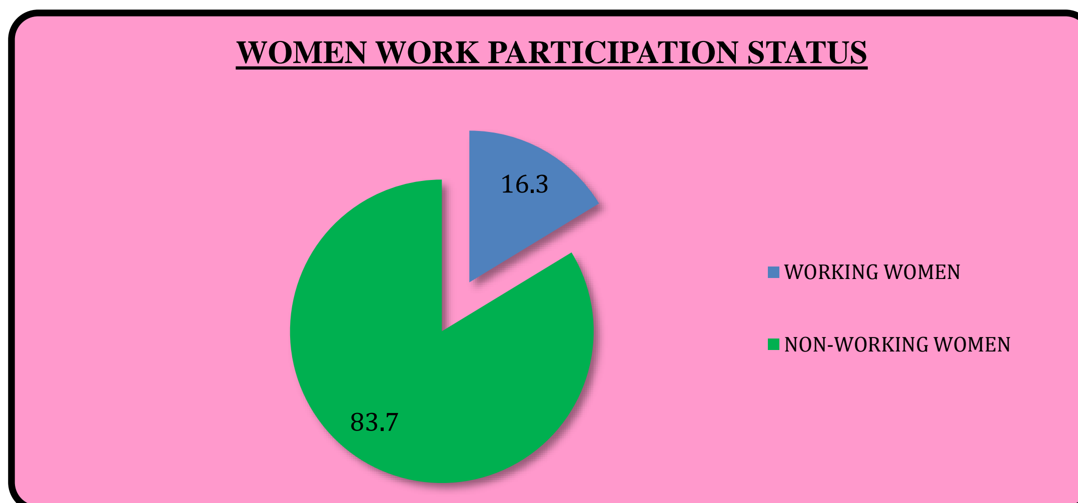

Fig. 7: Women Work Participation Status, Source: Primary Data

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The pie chart provides a visual representation of the employment status of women based on primary survey. A very low portion of women, only 16.3% are engaged in any form of employment. A majority of women are not participating in the workforce which aligns with prior figures showing that 85.87% of women are housewives. This reflects a significant gender gap in labour participation and suggests limited economic in dependence for women in surveyed area. If women are not economically independent so that they could not fulfil their needs in the time of maternity. The villages consist with well toilet condition. Every house has its own personal toilet. About 93.39% houses have their own toilet. There is 7.61% of houses have not their own toilet as their economic condition is very poor. The well toilet facility indicates the good sanitation system which is very necessary for the maternal health.

Drinking Water Source

The villagers prefer to drink water from tap & from hand pump which is present in every house. 40.95% people to drink water from tap water & from hand pump which common in every house. 59.05% people drink water from hand pumps. People do not prefer to drink water from well or pond. It is understood that the tap water is not completely safe to drink.76.74% of tap water are safe to drink while 23.26% of tap water are still untreated which are caused of the health problem of the pregnant women. From the survey it also came into the front that many women prefer package drinking water for their new born baby. So, it is clearly understood that people are not fully rely on the source of the drinking water so panchayat should examine every source of drinking water for better health condition.

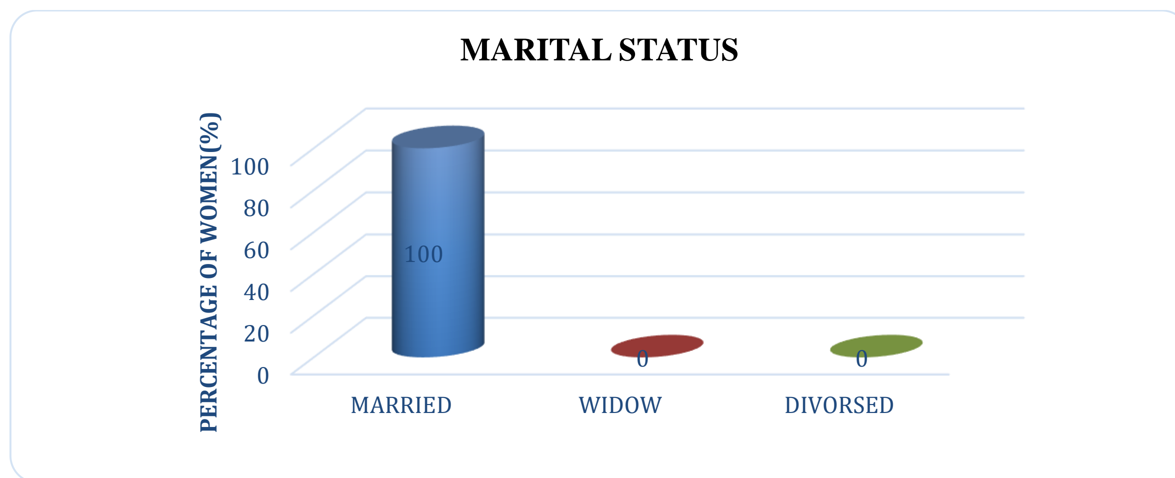

Fig. 8: Marital Status, Source: Primary Data

Marital Status and Women marriage age

From the primary survey analysis, it is found that all the women are married. No one is found in this survey are widow or divorced. It is a very positive sign for the maternal health of the women basically for the mental health. During the time of pregnancy all they can get a mental & emotional support from their husband. In these villages the marriage age of the girl primarily is shocking. As we see in this diagram that maximum marriage are belongs to the age group of 16 to 21(65.22%). The minimum age of woman marriage is 18 years mentioned by the Indian Govt. but here we can see that 7.61% women married between their ages of 10-15. It is more vulnerable to the women during their time of delivery. This indicates a high risk of maternal mortality during the time of pregnancy or in the time of delivery. The women should marry in the age group of 22 to 27 which is just 25% that 1/4th of the total sample population. Early age of marriage is not indicating only the health risk of the woman but also the view of the society towards the women and the socio-economic condition of each woman.

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Table:1-BMI Status

NO. OF WOMAN	BMI RANGE	GROUP	PERCENTAGE OF WOMAN
14	<18.5	UNDERWIGHT	15.21
47	18.5-24.9	NORMAL (HEALTHY WEIGHT)	51.09
27	25.0-29.9	OVER WEIGHT	29.35
4	> 30.0	OBESITY	4.35
92	TOTAL		100

Source: Primary Data

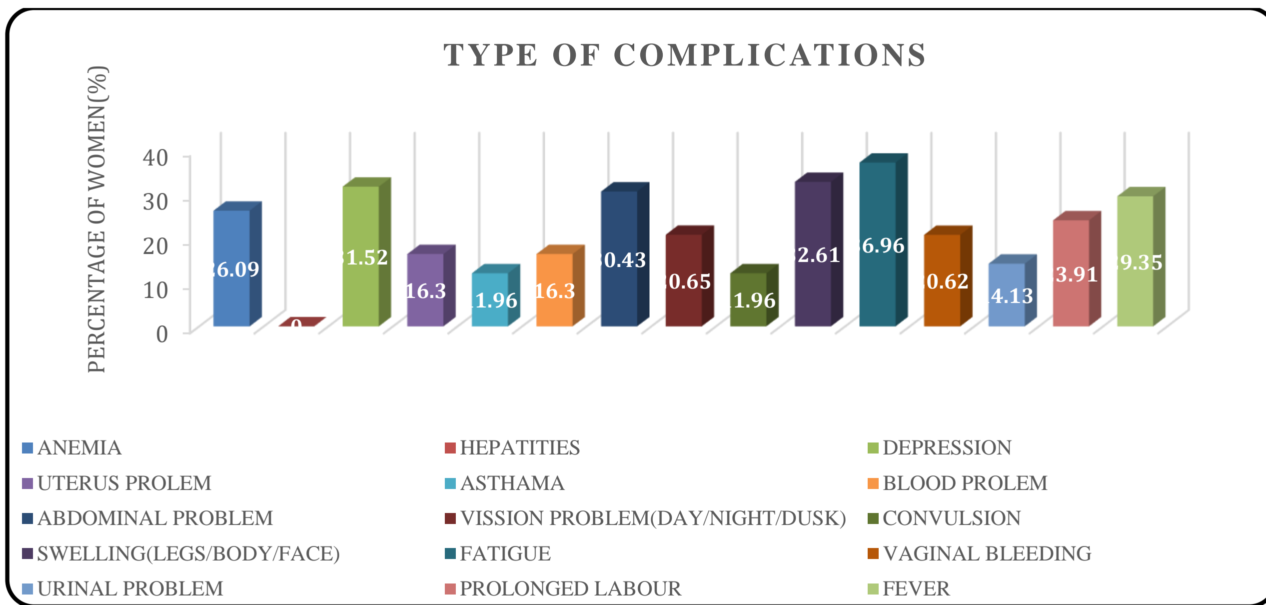

Fig. 9: Type of Complications, Source: Primary Data

The bar diagram shows the relation among age, height & weight which is better known as BMI (BODY MASS INDEX) From this analysis we can understand that 51.09% women are in the class of normal class which indicates the healthy body weight to them that is their weight is appropriate in relation with their age & height. This is very good sign for their pregnancy time & for their health. There is near about 15% of women who are underweight & near about 33% of women are facing the problem of obesity which is the main cause of their health problem during the time of pregnancy & delivery. All over the analysis it indicates that village people are now health conscious as to the urban area

During the time of pregnancy or after delivery women faces various kinds of problems. This health-related problem is some time very little but some time turn into severe problems. As we see in this diagram, the highest rate of health problem is fatigue which is not actually a disease but a combination of mental & physical weakness. 36.96% of women are suffering from fatigue during the pregnancy or post pregnancy. Abdominal problems, depression, swelling on hand, foot are very common for pregnant woman which are 30.43%,

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31.52% & 32.61% respectively. Sometimes woman face fever, anaemia or prolonged labour Uterus problem may cause the severe complication for the pregnant women which are here near about 16%. Very few numbers of women faces convulsion or urinal problem during pregnancy.

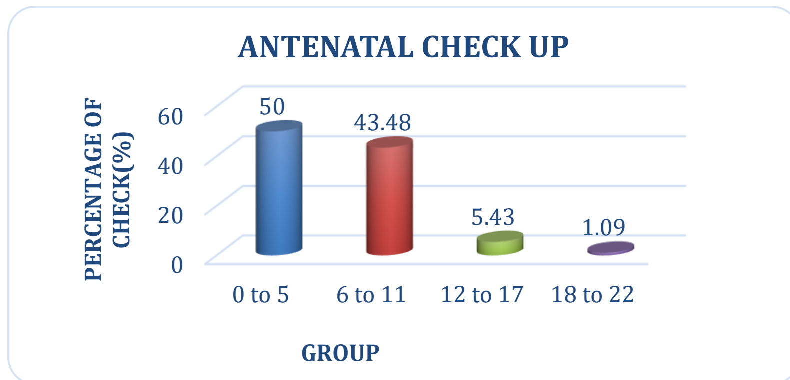

Fig. 10: Antenatal Check-up, Source: Primary Data

Antenatal Check Up and Ultra Sound Testing

Antenatal checkup is very much important to the mother. In our country in the period of pre delivery various kinds of problems emerges related to maternal health. So, it is very necessary to check up regularly before delivery. The bar chart presents data on the percentage of women who received antenatal care, categorized by weeks of pregnancy. Here 50% of women check just 0 to 5 times. There is a steep drop in checkups beyond the 11th week. While high pregnancy month goes on various kind of problem. So regularly checkup is mandatory for a healthy delivery. A large majority of women (80.43%) has access to ultrasound testing during pregnancy indicating good awareness or availability of this essential diagnostic tool. It is very good for their delivery phase but still there is 19.57% of women who are not tested ultra sound as their economic condition is poor than others. These may be turn into severe problem in the time of delivery. So ultra sound testing is very much important for the pregnant women.

Type of Violence

Violence among women is common in India. The rural part of the country is mostly affected by the violence both mental & physical. There is 31.5% of domestic violence is happen in India which is the highest among all kind of violence to women. 70.65% of women say that they do not face any kind of violence both of physical or mental. Which is very godson for their maternal health. But among the very little violence which is found by the survey that is 22.22% women say that they face violence, some in physically or some are mentally. The mental violence is 77.78%. Though the scenario of violence is not so much vulnerable regarding to the national average but still it is not satisfactory. As many women are feeling shy to talk about this matter So, understanding the original quantity of violence is very difficult.

Status of Addiction

Any kind of addiction during pregnancy is very harmful. Women of the Chhota Jgulia are mainly free from any kind of addiction but little quantity of addicted women 4.35% is mainly addicted with Guracu or Tobacco. It effects to their baby during the time of pregnancy. So, addiction should be eradicated from every place of the country.

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Status of Birth Attended

The bar chart presents data on whether women received care from a birth attendant during delivery. A very high percentage of women (92.39) received care from a birth attendant during child birth which is a positive indicator of maternal health support. 7.61 % who did not receive any such care still represent a vulnerable group and highlight the need for universal access to skilled birth attendant to reduce risks during delivery. The attention of birth attended to the pregnant woman is one of the major important things in pregnancy period. It not only helps the pregnant woman but also help to reduce pregnancy related complication & maternal mortality.

Preference to Hospital

The people of the villages prefer to check up in Govt. hospital. The hospitals are very close to their residents. The Chhota Jagulia hospital is the main place of maternity for both the villages of Chhota Jagulia & Tentulia. The main health centre for the village of Baitpur & Malikapur is the Barasat hospital which is situated the centre of the block.

These hospitals are very accessible for the people. It takes just 10-15 min to reach there. 54.35% of pregnant woman prefer to check up in govt. hospital. In Chhota Jagulia hospital there is free of cost for blood test & USG held in every Monday & Friday for the pregnant women from 2 PM to 4 PM. There is present PPIUCD for the women after delivery. Legal abortion is present within the 12 weeks of pregnancy. The pregnancy related other expanses like delivery both normal & scissor & the transportation cost has bear by the hospital.

Though the govt facility is present but still 46.65% of women prefer checkup during pregnancy in private hospital. According to them they have not get all the facility from the Govt. hospital which are above mentioned. In Chhota Jagulia Gram Panchayat maximum women prefer to scissor at the time of delivery. 56% of women's delivery has done by scissor while 44% woman has normal delivery. The types of delivery indicate the economic condition as well as their health condition during the time of delivery.

Yojona Facility During Pregnancy

In the developing countries the Yojona facility is very much important for the rural poor people. But the shocking picture has come into the force during primary survey. Not single woman gets any kind of Yojona, allowance from Govt. which is very misfortunate. Without Govt. help towards the pregnant woman in the village health progress of maternal issue can't be possible.

Attitude Towards Gender Role

Attitude towards gender role is not directly related to the maternal physical health but it is related to the mental health of a mother. In our country every day many abortions have held due to the preference of male child. In our survey we can see that the woman of the villages has no preference towards the gender role (52.17%) which is very significant in the present context.

But still 28.26% women prefer male child rather than female which can show their mentality towards gender role. There is also 19.57% of woman still want girl child which reflect their broad mentality. When 100% of women have no preference towards gender role then it will be great social health.

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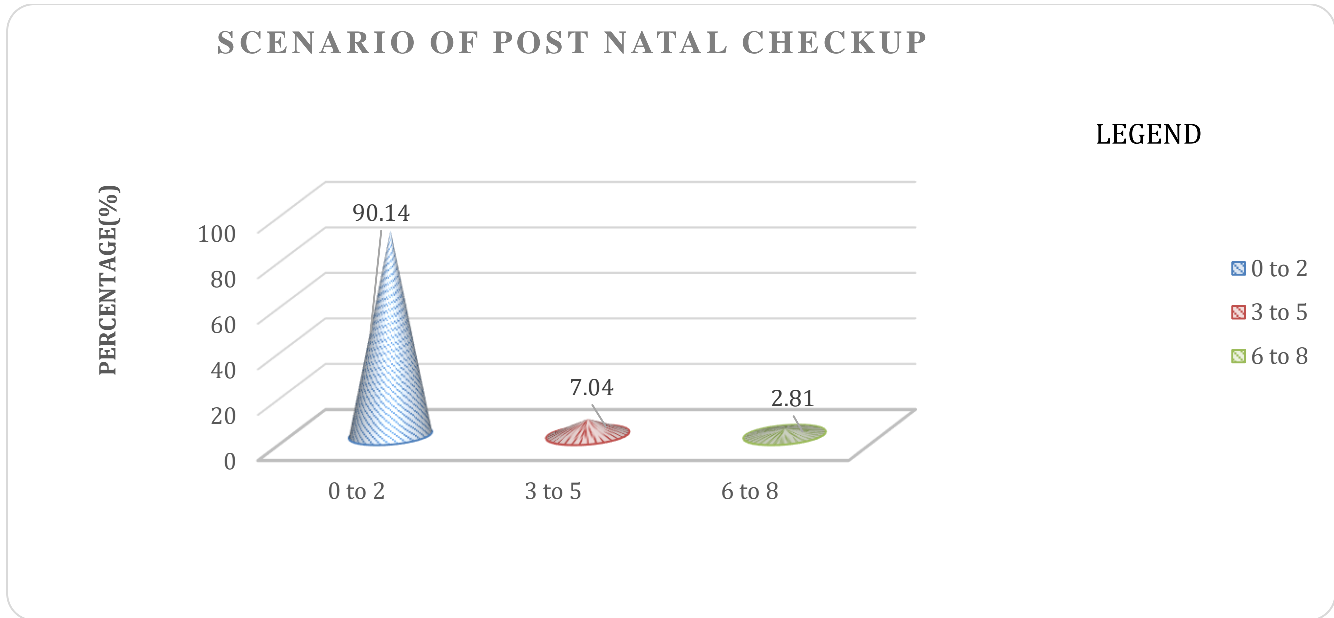

Fig. 11: Scenario Of Post Natal Checkup, Source: Primary Data

Post-natal checkup is very much important to the mother. After the delivery process has over the complication may arise to the mother. Here 90.14% of women take post-natal check up just 1 or 2 times. So, the awareness of the post-natal check is quite low than ante natal check-up. Only 2.82% of women take post-natal checkup over 6 times. So it is very necessary to check up regularly after delivery to check any kind of health.

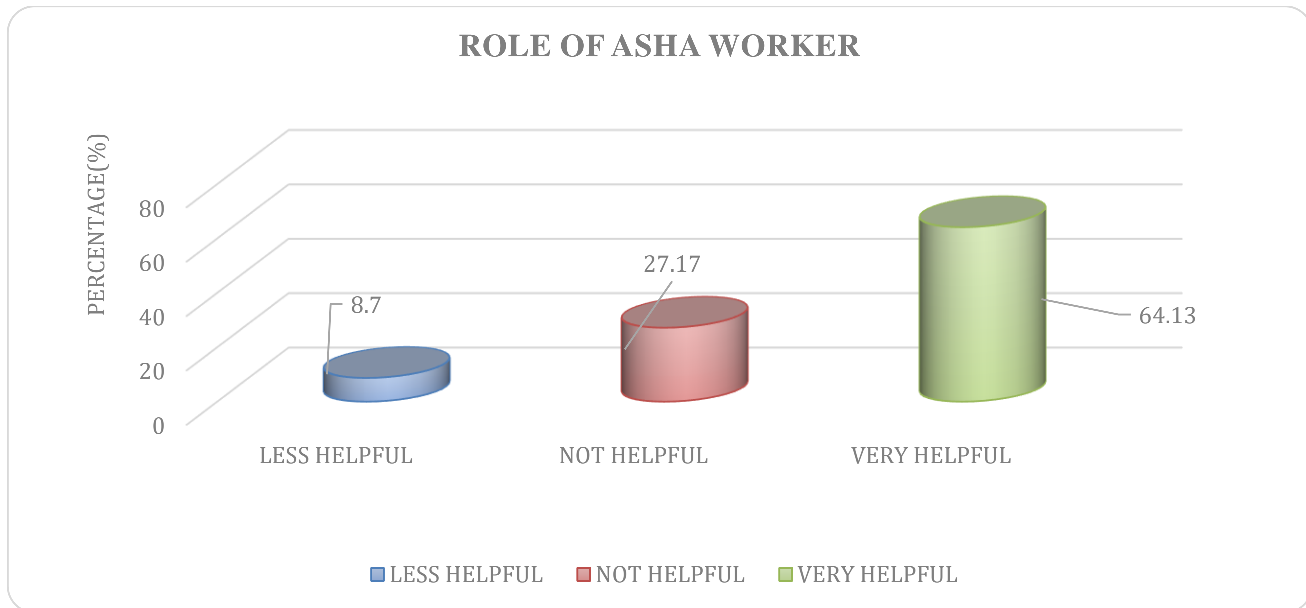

Fig. 12: Role of Asha Worker, Source: Primary Data

An Accredited Social Health Activities (ASHA) is a community health worker instituted by the Govt. of India's ministry of health & family welfare (MOHFW) as a part of National Rural Health Mission (NRHM). The mission began in 2005.So in rural areas the help of ASHA worker has strongly needed. As we see here that 64.13% of women say that the role of ASHA worker is very helpful. They take care to the pregnant woman & give them various health related suggestion. So, the active presence of the ASHA worker has seen in the villages of Chhota Jagulia.

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Hypothetical Analysis

R2 is a statistic that will give some information about the goodness of fit of a model. In regression, the R2 coefficient of determination is a statistical measure of how well the regression predictions approximate the real data points.

Values of R2 outside the range 0 to 1 can occur when the model fits the data worse than a horizontal hyper plane. This would occur when the wrong model was chosen, or nonsensical constraints were applied by mistake. The Relationship between Monthly Family Income and Anti Natal Check-up for growth, the r2 is very easy to understand the data model structure. They can arise when the predictions that are being compared to the corresponding outcomes have not been derived from a model-fitting procedure using those data.

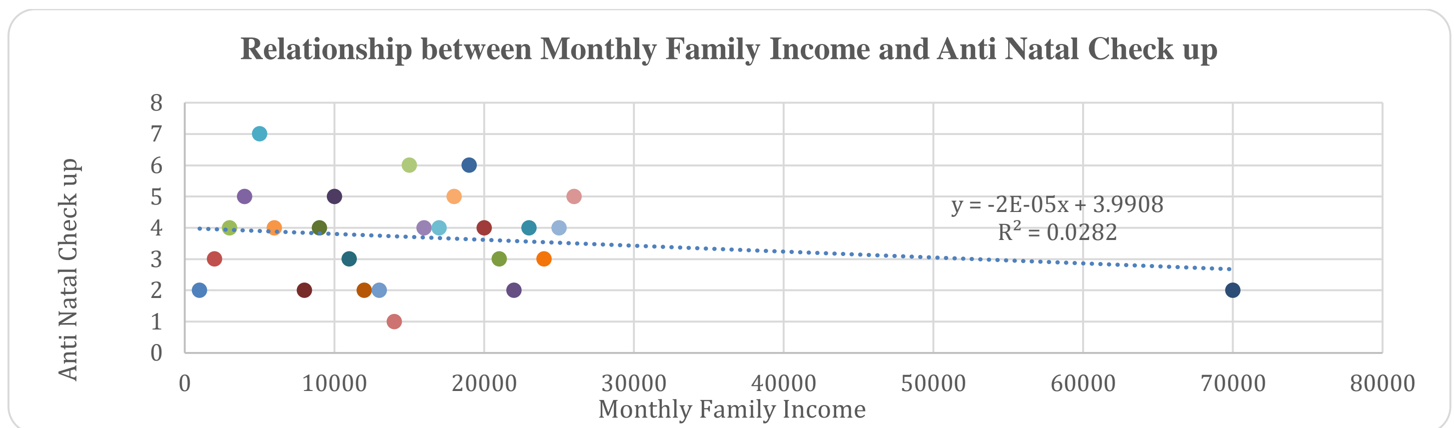

Fig. 13: Relationship between Monthly Family Income and Antenatal Check-up, Source: Primary Data

The higher the value is more attach to the dataset. The relation is too low define the low goodness-of-fit is expose less relation. Very low is unhealthy for the data. Low data is actually very low relationship between them. Here R2 value of 0.0282 suggests a very weak positive correlation between monthly income and the number of antenatal checkups.

RESULT

Here Medical facility is being try to be analyse with special reference to maternal health whose data provided by Census of India 2011. Here we can see that Maternal Child Welfare Centre (MCW) is not present in any village except the Chhota Jagulia which is also a Gram Panchayat. So, primary facility towards the women is absent here. There is also a shocking thing that there is not a single medical shop with in the village. During the time of pregnancy if a woman needs a special type of medicine so she or her family buy it from outside the village. But there is a great hope that the all 4 villages like- Malikapur, Bazitpur, Tentulia & Chhota Jgulia have the access of ASHA worker. The ASHA workers take care of the pregnant village women Provide then beneficial suggestion related to pregnancy.

Associate Problems:

Inadequate Antenatal Care (ANC)

Limited access to healthcare facilities and specialists.

Low awareness of the importance of regular check-ups.

Poor transportation and long distances to health centres deter women from seeking care.

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Malnutrition and Anaemia

Many pregnant women suffer from under nutrition, especially due to:

Poor dietary intake.

Traditional food taboos.

Increased risk of maternal mortality.

High Maternal Mortality Rate (MMR)

Due to delayed access to emergency obstetric care.

Lack of skilled birth attendants or institutional deliveries.

Complications like haemorrhage, eclampsia, and sepsis are not promptly managed.

Early Marriage and Teenage Pregnancy

Cultural norms support early marriage, leading to:

Physically underdeveloped mothers.

Higher risk of complications like obstructed labour, low birth weight babies, etc.

Poor Sanitation and Hygiene

Chhoto Jagulia village has lack clean toilets and safe water.

This increases the risk of urinary tract infections (UTIs) and waterborne diseases, which affect pregnancy

Psychological and Social Stress

Lack of emotional support and presence of domestic violence.

Anxiety and depression during pregnancy often go undiagnosed.

RECOMMENDATIONS

Strengthen Antenatal Care (ANC) Services

Increase the number of Primary Health Centres (PHCs) and ensure availability of qualified obstetricians.

Ensure minimum four ANC checkups as per WHO guidelines.

Use mobile health vans and telemedicine for remote villages.

Address Malnutrition and Anaemia

Distribute Iron and Folic Acid (IFA) tablets to all pregnant women through ASHA workers.

Promote locally available nutritious food through community awareness programs.

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Strengthen the Integrated Child Development Services (ICDS) for supplementary nutrition.

Improve Institutional Delivery Rates

Strengthen Janani Suraksha Yojana (JSY) incentives to encourage hospital deliveries.

Provide free transportation to health facilities through schemes like Janani Shishu Suraksha Karyakram (JSSK). Increase the number of Skilled Birth Attendants (SBAs) in rural health centres.

Prevent Early Marriage and Teenage Pregnancy

Enforce legal age of marriage through community surveillance and school education.

Promote adolescent health education and empowerment through Kishori Shakti Yojana and school programs. Engage local NGOs and community leaders to change social norms.

Improve Sanitation and Hygiene

Ensure access to safe drinking water and household toilets under schemes like Swachh Bharat Abhiyan. Promote hygiene practices through village health campaigns and self-help groups.

Address Mental Health and Social Support

Train ASHA and ANMs to identify symptoms of maternal depression/anxiety.

Form Mother Support Groups in villages for peer support.

Involve male partners and families in maternal care education.

Increase Awareness and Education

Organize regular community-based awareness drives using local languages and folk media.

Include maternal health education in adult literacy programs. Ensure access to health information via mobile apps or posters at Anganwadi centres.

FINDINGS

- Antenatal care is significantly higher in younger mothers, but drops sharply in older age brackets suggesting age influences access or uptake of maternal care services.
- A majority of women had access to diagnostic tools like ultrasound indicating good but not universal access to pregnancy monitoring.
- Gender neutrality is becoming more common but a notable preference for boys still exists indicating persistent cultural bias though not overwhelmingly.
- Family income has minimal effect on the number of antenatal checkups, suggesting that other factors may play a more important role than economic status.
- Here 90.14% of women take post-natal check up just 1 or 2 times. So, the awareness of the post-natal check is quite low than ante natal check-up. Only 2.82% of women take post-natal checkup over 6 times.

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- No single woman gets any kind of Yojona, allowance from Govt. which is very misfortunate. Without Govt. help towards the pregnant woman in the village health progress of maternal issue can't be possible.

- People are not fully relying on the source of the drinking water so panchayat should examine every source of drinking water for better health condition.

CONCLUSION

All the analysis of the maternal health is giving a well reflection of the present rural maternal health image. From all the analysis from top to bottom we can understand that maternal health in the rural area of Chhota Jagulia gram panchayat has developed very rapidly. BMI has indicated a very good awareness of women to maintain their body weight as it is very necessary to avoid pregnancy complication. In the time of survey from the perception study, we can understand that maximum women in the villages are very much concern about their pregnancy. Near about all the women take adequate amount of ante-natal check-up, take USG, still the concern to the post-natal check-up lesser than the anti-natal check-up but all over it is quite impressive regarding to the rural aspect. Though maximum women are literate but it is very necessary to encourage the women educational qualification also after marriage. It will be very beneficial for her & her future generation. Govt. Yojona has very much needed for the pregnant women & pregnancy health related campaigning from the govt. organization can make the awareness among the illiterate women also.

As we see in all over all India that maternal health is getting develop day by day. So, the good reflection of the nation has reflected these villages. But still there my problems are present. Many women don't know about the disposable delivery kit & also the usefulness of keep the new born every aspect which can help every woman during the time of pregnancy.

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