Evaluation of Home Based Neonatal Care in Gadchiroli, Maharashtra

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Abstract

Background: The Ankur project was started in 2001 and implemented in 30 villages of Korchi tehsil of Gadchiroli district of Maharashtra in partnership with SEARCH. According to a study conducted by SEARCH in 1999, before the start of the project, 95% of the deliveries were Home deliveries with high neonatal and maternal mortality. The main aim of the project was to reduce the infant and neonatal mortality. HOME BASED NEONATAL CARE Programme was extensively carried out in the selected villages by Amhi Amchya Arogyasathi NGO. 12 neonatal care attendants (AROGYASAKHI) female health workers were appointed and trained both for diagnosis and treatment for these villages which worked on infant and maternal health. ***Objective:*** To conduct comparative analysis of the gathered data on infant and maternal health in 16 villages of Korchi which were not included in ANKUR project vs 30 villages included under ANKUR during the year 2016-17 & 2017-18& to explore the causes of infant and maternal mortality in 16 villages of Korchi. ***Methodology:*** This study was carried out in 16 Villages in Korchi block, Gadchiroli.
Result: There is considerable reduction in both and neonatal, infant mortality and still births between the years 2000-01and 2016-2017 in 30 ANKUR selected villages. There is considerable increase in the number of institutional deliveries in these 30 villages where Ankur project was implemented. Training of VHWs and TBAs has successfully resulted in increased awareness, health education and change in treatment seeking behavior among the population regarding the infant and maternal health for pregnancy and diseases. The organization is still providing its healthcare services in these villages through Home Based Neo-natal Care model in these villages and has recently started its activities in 16 other villages of Korchi.
Conclusion: The model is successful in reducing the cases of child mortality & improving institutional deliveries.

Key Words: Infant mortality, Neonatal care, Still birth, Neo-natal mortality, Institutional delivery

INTRODUCTION: -

The Ankur project was started in 2001 and implemented in 30 villages of Korchi tehsil of Gadchiroli district of Maharashtra in partnership with SEARCH. According to a study conducted by SEARCH in 1999 before the start of the project, 95% of the deliveries were Home deliveries and IMR- 90, NMR-70 &SBR-30
The main aim of the project was to reduce the infant and neonatal mortality. HOME BASED NEONATAL CARE Programme was extensively carried out in the selected villages. 12 neonatal care attendants (AROGYASAKHI) female health workers were appointed and trained both for diagnosis and treatment for these villages which worked on infant and maternal health. The various activities carried out as a part of this program were- Community consent and community involvement, Recruitment, training and field work of AROGYASAKHI, Orientation and training of NCS (Neo-natal Care Supervisor) and VSS (Vital Statistics Supervisor), Preparation of list of pregnant women, TBA (Trained Birth Attendant) training and involvement, Supervision of all health workers, Relationship building with both the government and private healthcare facilities &Bi-annual surveys.
Rationale: Amhi Amchya Arogyasathi has worked on project Ankur in partnership with SEARCH in Korchi tehsil of Gadchiroli district. The situation in the area regarding infant and maternal mortality is severe as it is a tribal dominant area, mainly covered by deep forests and there are very few healthcare facilities. comparison of Home based Newborn care & Project Ankur has never been done so to fill the gap and examine the success of the Ankur programme the study was conducted.

Objective: This study aims to evaluate the effect on various mortality indicators post implementation of Project Ankur in 16 villages by AAA & compare the same with the other 30 villages where the project was not implemented.

Operational Definitions

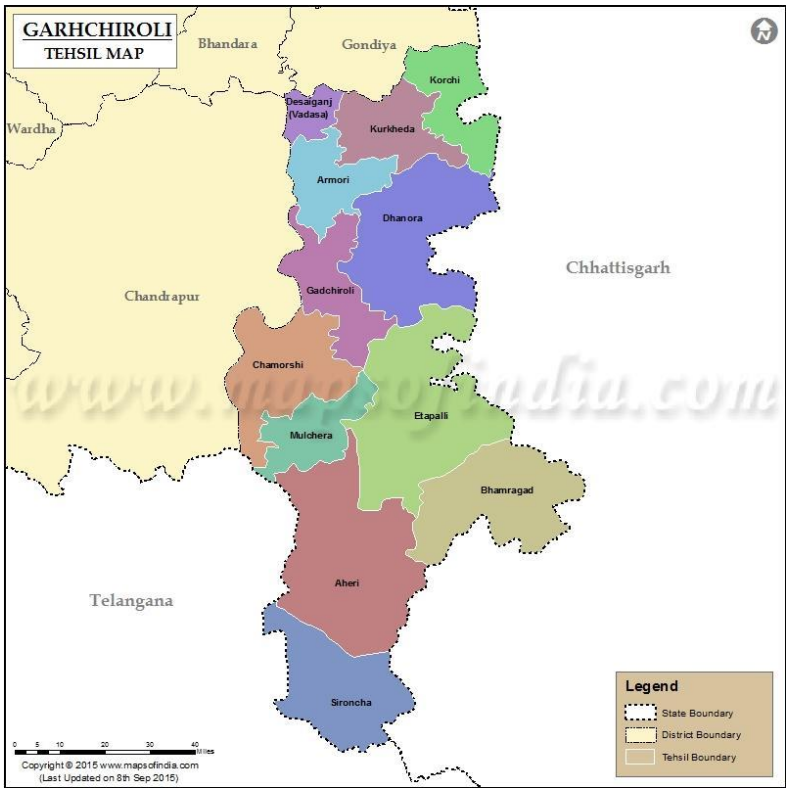
Arogyasakhis: Female village residents who were given training on maternal and child health under the supervision of the NGO.

Secondary data: Secondary data is a type of quantitative data. When the data is already collected by somebody for a purpose other than the researcher's present project and has previously undergone the numerical analysis is called as Secondary Data.

MATERIALS & METHODS

Geography: Kurkheda is a Block positioned in Gadchiroli district in Maharashtra. Placed in the urban part of Maharashtra, it is one among the 12 blocks of Gadchiroli district. According to the administration register, the block number of Kurkheda is 105. The block has 128 villages and there is a total of 20136 families in this Block. As per Census 2011, Kurkheda' s population is 86073. Out of this, 43582 are males whereas the females count 42491 here. This block has 9511 kids in the age group of 0-6 years. Among them 4858 are boys and 4653 are girls.

Figure 1: Geographical location of Gadchiroli



Study area – 16 Villages in Korchi Tehsil, Gadchiroli.

A study was conducted in 16 Villages in KorchiTehsil, Gadchiroli district. Secondary data is obtained from sub-centers from 2016-2018.

Data collection Instrument: Data was collected through the semi-structured questionnaire for study. It has a list of health indicators such as Infant deaths, maternal deaths etc.

Review of tools: Tools are reviewed by a group of experts in term of comprehensiveness, completeness, and sequencing. Based on the expert review tools was revised and finalized.

Data Cleaning: after the data is collected it is cleaned and MS excel used for further analysis.

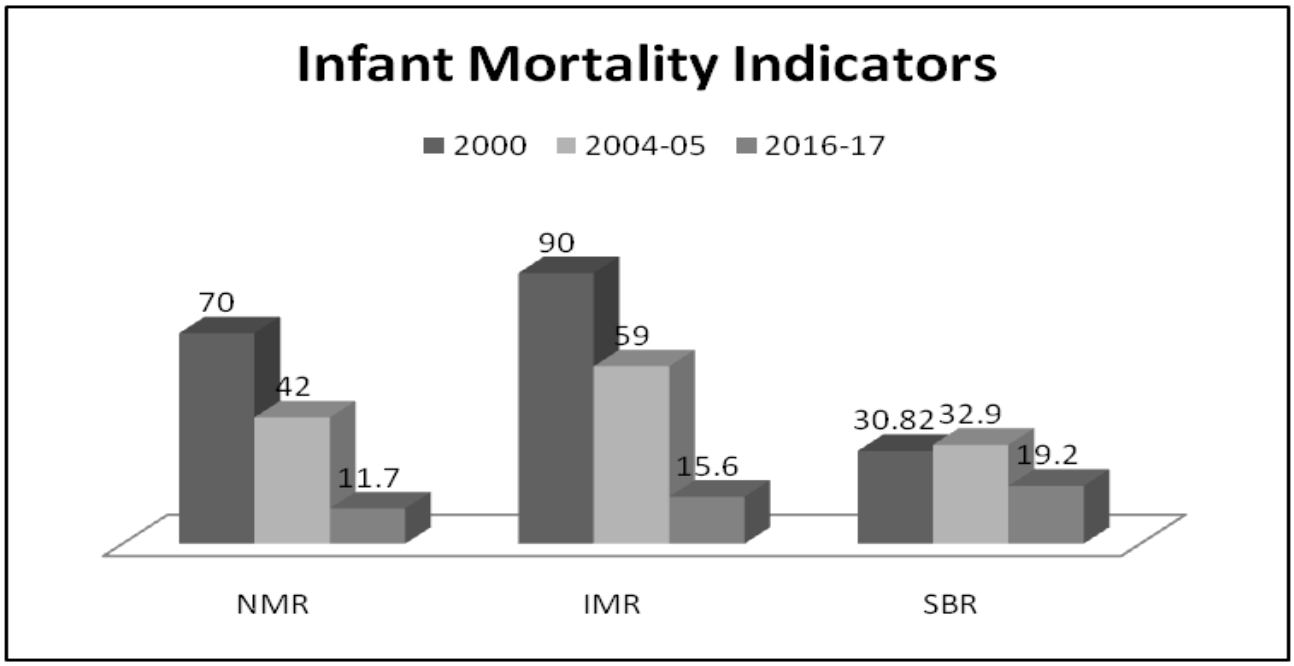
Ethical consideration: prior permission was obtained from the project director-Dr. Satish Gogulwar (Amhi Amchya Arogyasathi).

RESULTS

Data Analysis for the Key Indicators under Ankur Project

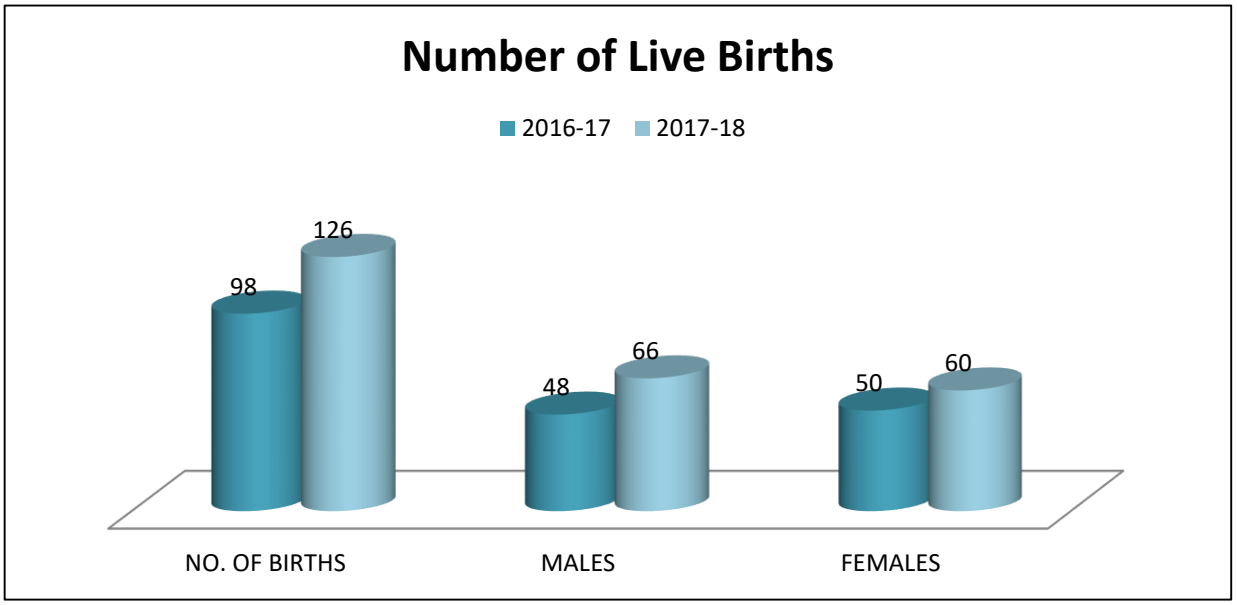
The data was collected for 16 villages where the project was implemented, data was collected from their respective sub-centers with respect to various key indicators from 2016 to 2018 and data was analyzed using MS-Excel.

TREND ANALYSIS OF 30 ANKUR VILLAGES



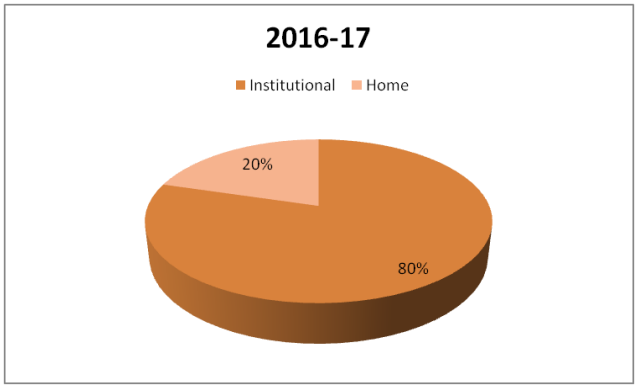
The graph clearly shows that after the implementation of the Ankur project in 30 villages of Korchi tehsil of Gadchiroli district, Maharashtra in 2001, the situation has tremendously improved in context to infant mortality. In the year 2000 Neo-natal mortality rate was 70, infant mortality rate was 90 and still birth rate was 30 but it reduced to 42, 59 and 33 for the year 2004-05 and it further reduced to 11.7, 15.6 and 19.2 for the year 2016-1

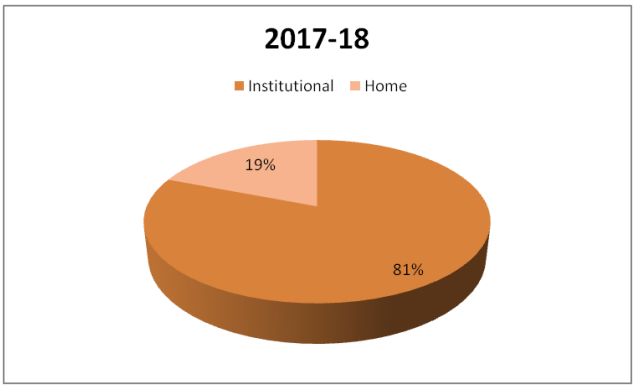
DATA ANALYSIS OF 16 Non- ANKUR Villages:-



Number of births in 16 villages of Korchi which were not part of Ankur project for the years 2016-17 and 2017-18 are 98 and 126 respectively. For the year 2016-17, out of 98 live births, 50 were females and 48 were males. For the year 2017-18, out of 126 live births, 66 were males and 60 were females. Numbers of live births have increased from the year 2016-17 to 2017-18.

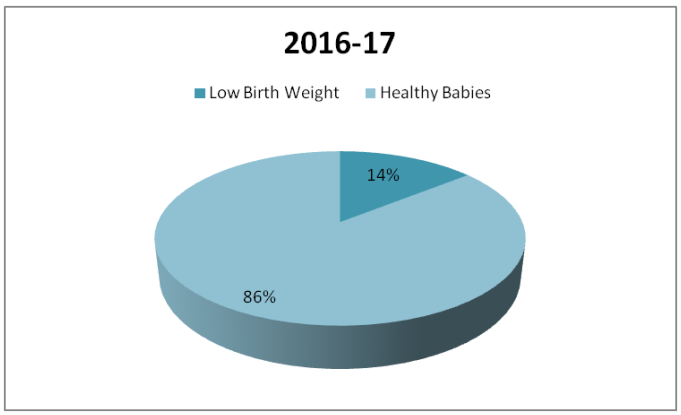
PLACE OF DELIVERY

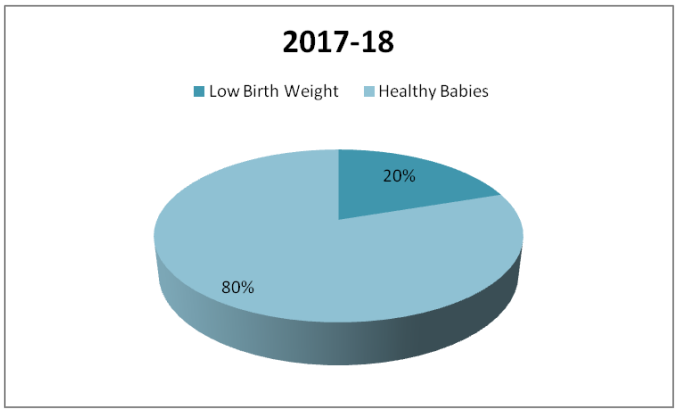




For the year 2016-17 in 16 villages of Korchi, out of 98 deliveries, 78 were institutional deliveries and 20 were home deliveries which shows that 79.60% of the deliveries were institutional and 20.40% were home based. For the year 2017-18, out of 126 live births, 110 were institutional deliveries and 26 were home deliveries which shows that 81% of the deliveries were institutional and 19% were home based.

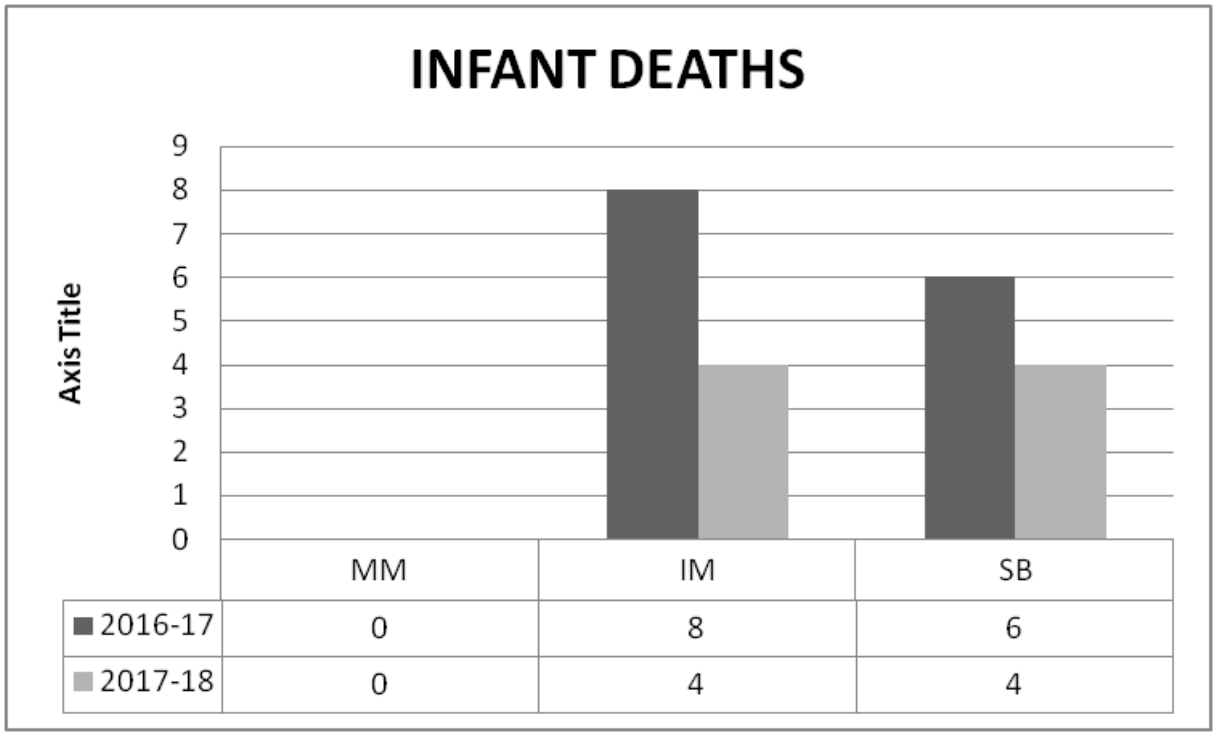
BIRTH WEIGHTS OF CHILDREN BORN





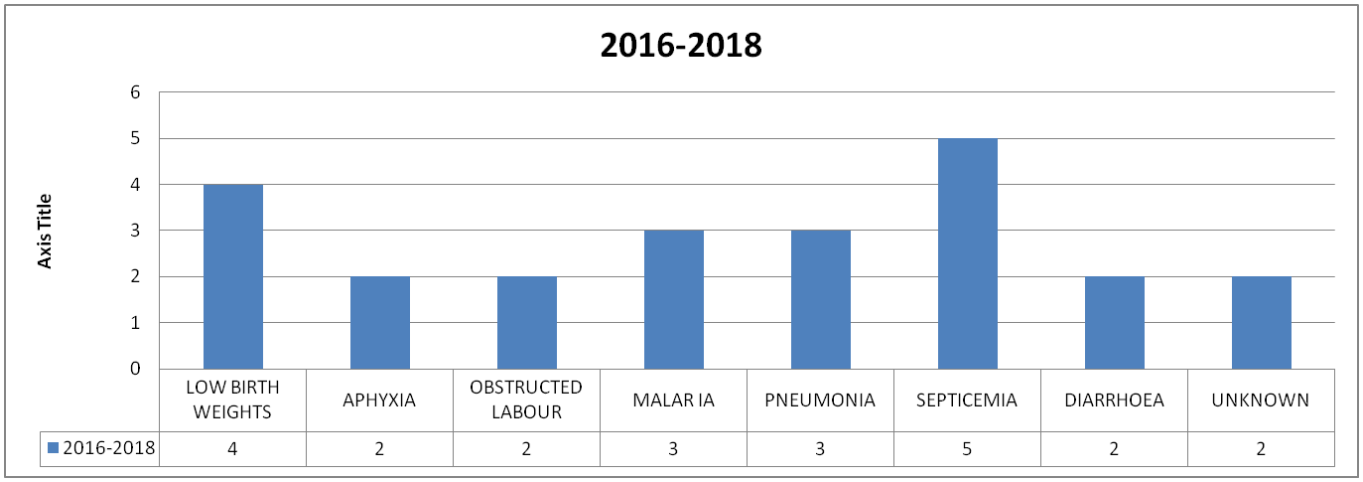
Both the numbers in 16 villages of Korchi for low birth weight babies and healthy babies have increased from the year 2016-17 when compared to 2017-18. Low birth babies and healthy babies for the year 2016-17 were 14 and 84 respectively out of 98 live births for that year. The numbers increased as low birth babies and healthy babies were 25 and 101 respectively out of 126 live births. The fact here is that number of live births have increased from the year 2016-17 to 2017-18.

INFANT AND MATERNAL MORTALITY

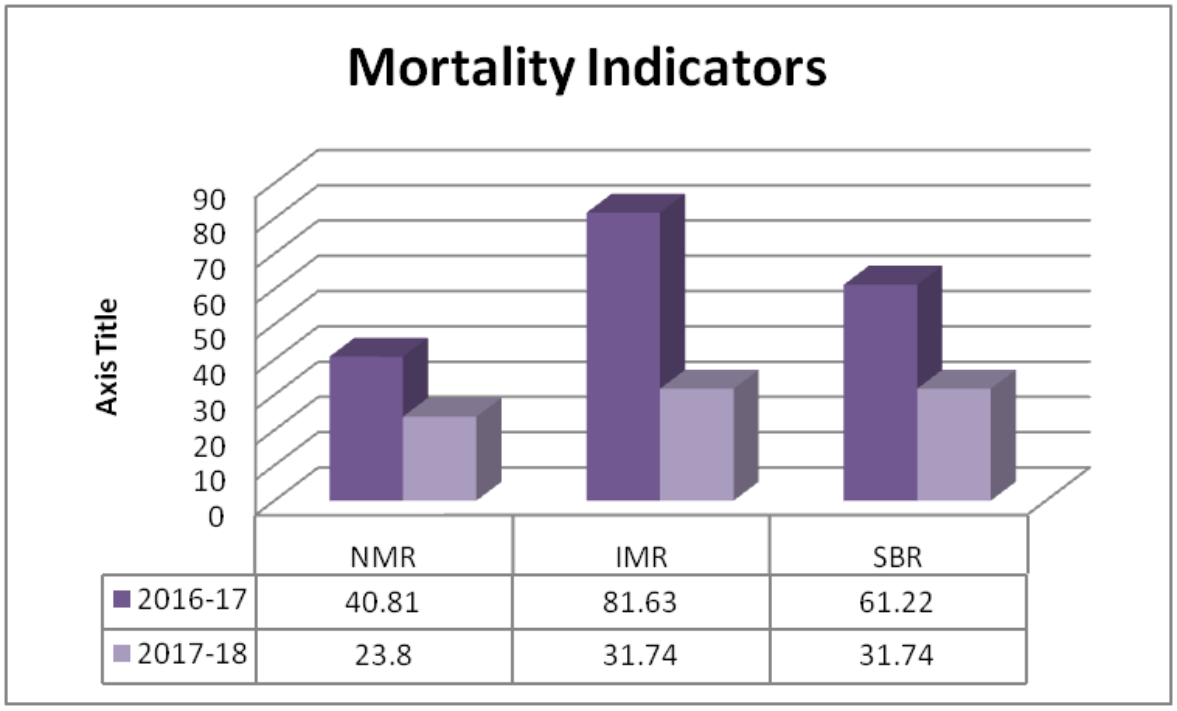


From the above graph, it is clear that there was no maternal mortality in 16 villages of Korchi for both the years 2016-17 and 2017-18. Infant mortalities for the year 2016-17 were 8 which reduced to 4 for the year 2017-18. In case of still births, there were 6 cases of still births for the year 2016-17 and it reduced to 4 for 2017-18.

CAUSES OF INFANT MORTALITY

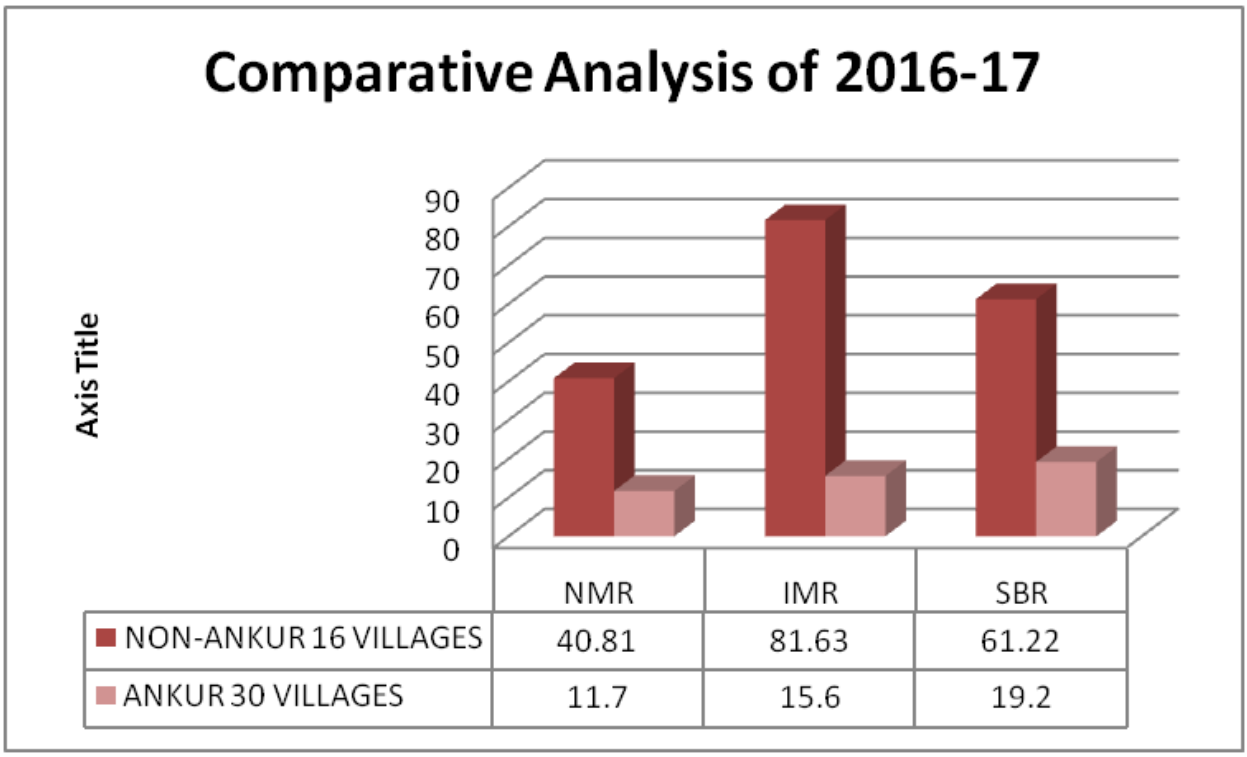


For both the years 2016-17 and 2017-18 combined in 16 villages of Korchi, Septicemia emerged as the biggest cause of child mortality as there 5 cases of it, low birth weight cases were 4, 3 cases each of malaria and pneumonia, 2 cases each of asphyxia, diarrhoea and deaths due to obstructed labor. There were 2 cases where the causes of deaths were not known. In total, there were 23 infant mortalities between the years 2016 to 2018.



In the 16 villages of Korchi, Neo-natal mortality rate reduced from 40.81 for the year 2016-17 to 23.8 for the year 2017-18. Infant mortality rate for the year 2016-17 was 81.63 which reduced to 31.74 for the year 2017-18. Still birth rate for the year 2016-17 was 61.22 which reduced to 31.74 for the year 2017-18.

Comparison of infant and neo natal mortality betweenNon- Ankur 16 villages of Korchi and 30 Ankurselected villages of Korchi for the year 2016-17



The above graph shows a comparative analysis of child mortality indicators between Non-Ankur selected 16 villages of Korchi tehsil and 30 Ankur selected villages of Korchi tehsil for the year 2016-17. It's very clear that the indicators (Neo-natal mortality rate, Infant mortality rate and still birth rate) in 30 villages of Korchi where Ankur project was implemented are better as compared to 16 villages of Korchi where Ankur project was not implemented. Neo-natal mortality rate, Infant mortality rate and Still birth rate of 16 Non-Ankur project selected villages of Korchi are 40.81, 81.63 and 61.22 respectively which are higher when compared with 30 Ankur selected villages as their Neo-natal mortality rate, Infant mortality rate and still birth rate are 11.7, 15.6 and 19.2 respectively.

DISCUSSION AND CONCLUSION

The aim of the study was to conduct comparative assessment of the gathered data on Infant Mortality, Neo-natal mortality, Maternal mortality as well as other indicators that are related to Home based Newborn care in Korchi tehsil, Gadchiroli. Study results show that Home based Newborn care is successful in reducing the mortality indicators as well as has improved the number of institutional deliveries in Korchi, Gadchiroli. It happened due to collaborative efforts by the Arogyasakhis, ASHA workers, AAA NGO team. A Home based

Newborn care study conducted by **Abhay T Bang et al**[1]on rural Gadchiroli from 1993-2003 block shows that HBNC has caused significant reduction in neonatal mortality, infant mortality, SBR along with other co-morbidities like sepsis, asphyxia, hypothermia and breathing problems[1].An article by **A. Tinker et al**[2]states that SNL(Saving Newborn Lives) initiative utilizing techniques such as promotion of KMC, Behavioral change and communication and community mobilization in collaboration with Bill & Melinda Gates foundation has been successful in reducing the mortality and morbidity indicators that are associated with Home Based Neo-natal Care (HBNC). The similar method of community based HBNC has been implemented at other areas as well: Projahnmo (2001-2006) project in Sylhet district, Bangladesh where post implementation the NMR came down by 34%, Shivgarh (2003-2006)resulting in bringing down NMR by 54% & Hala, Pakistan resulting in reduction of NMR by 28%[3, 4]

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