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Assessment of Doorstep Health Service Utilization among Farm House Residents and Service Provider Engagement in Rural Areas of North Karnataka: A Cross-Sectional Study

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ABSTRACT

Background: Access to quality healthcare remains a significant challenge in rural India, particularly among farm house residents residing in remote areas. To address these gaps, the Government of India has implemented various community-based strategies such as Accredited Social Health Activists (ASHAs) and doorstep service delivery models to improve healthcare access and equity (Ministry of Health and Family Welfare. However, the effectiveness of these services largely depends on the availability and active engagement of frontline health workers like ASHAs, Auxiliary Nurse Midwives (ANMs), and Primary Health Centre (PHC) staff. This study was conducted to bridge this knowledge gap by evaluating the pattern of doorstep health service utilization and the engagement of health service providers among rural farm household residents in North Karnataka.
Objective: To determine the extent of Utilization of various doorstep health services among the rural farm household residents and the engagement of health service providers.
Materials & Methods: A cross-sectional study was conducted among residents of farm households in Vijayapura district, Geographically, Vijayapura district was divided into five talukas. The study targeted residents in agricultural households, with farming being the predominant occupation, A multistage sampling method was used. All characteristics were summarized in a descriptive way. The data was analysed with SPSS v.23.0 software for frequency distribution and presented in figures.
Results: The study included both male and female participants, with the majority of males belonging to the 41–50 years age group (21.4%), while most female participants were from the 11–20 years age group (21.7%) The predominant type of health facility available near the farm households was government-run (93.8%), with only 6.2% reporting access to private facilities. Among the various health services received at the doorstep, immunization services were the most frequently reported (79.8%) & in most cases, ASHA workers were identified as the primary service providers delivering doorstep healthcare services.
Conclusion: This study highlights substantial utilization of doorstep health services among rural farm households in North Karnataka. ASHA workers were the most active and recognized service providers. The results emphasize the necessity of strengthening the role of Community Health workers, investing in training, and supporting infrastructure to ensure continued service outreach and effectiveness in rural areas.

Keywords: Farm House, ANM, ASHA, Doorstep Health Service

INTRODUCTION

Access to quality healthcare remains a significant challenge in rural India, particularly among farm house residents residing in remote areas. Attainment of universal access to equitable, affordable, and quality health care services that are accountable and responsive to people's needs, with effective inter-sectoral convergent action to address the wider social determinants of health. To address these gaps, the Government of India has implemented various community-based strategies such as Accredited Social Health Activists (ASHAs) and doorstep service delivery models to improve healthcare access and equity (Ministry of Health and Family Welfare. Doorstep health services, such as immunization, antenatal and postnatal care, and basic disease surveillance are crucial in promoting primary healthcare in underserved populations. However, the effectiveness of these services largely depends on the availability and active engagement of frontline health workers like ASHAs, Auxiliary Nurse Midwives (ANMs), and Primary Health Centre (PHC) staff. [(1)] The inception of the ASHA program was from similar indigenous and globally accepted health programmes (primarily in poor-resource settings), which included Community Health Workers (CHW) for leveraging the healthcare services to the unreached population. [(2)] ANM will carry out all the activities related to various programs in an integrated manner when visiting the village/households. [(3)] "Farm house" means a house attached to a farm and constructed in a portion of an agricultural land, used for the residence of the agriculturist or used for the purpose of keeping agricultural equipment's and tethering cattle. The farmer shall use the home for his own use and not make it available to any person or agency for commercial purposes. [(4)]

Despite the increasing emphasis on community outreach, there is limited empirical evidence assessing the utilization patterns and the involvement of service providers in rural Karnataka, especially among farm-dwelling households. This study was conducted to bridge this knowledge gap by evaluating the pattern of doorstep health service utilization and the engagement of health service providers among rural farm household residents in North Karnataka.

Objective: To determine the extent of Utilization of various doorstep health services among the rural farm household residents and the engagement of health service providers.

MATERIALS & METHODS

After obtaining approval from the Institutional Ethics Committee, a cross-sectional study was conducted among residents of farm households in Vijayapura district, Karnataka, over one year (June 2017 – May 2018).

Study Area and Population

Geographically, Vijayapura district was divided into five talukas. The study targeted residents in agricultural households, with farming being the predominant occupation.

Sampling Technique

A multistage sampling method was used. Villages served as the primary sampling units (PSUs). [(5)] Villages with fewer than five households were excluded. The sample size was proportionally distributed across agricultural households in all five talukas.

- Stage 1: Villages (PSUs) were selected using Probability Proportional to Size (PPS) sampling technique.
- Stage 2: A list of households residing on farms was obtained from the respective Government Primary Health Centers (PHCs) within each selected village. Five households were randomly selected using chits with the head of the family's name.

Four participants were randomly chosen and interviewed within each selected household using a pre-structured questionnaire. Households with fewer than four eligible participants were excluded and replaced by another randomly selected household.

Inclusion and Exclusion Criteria

- **Inclusion**: Residents of farm households living for more than six months.
- **Exclusion**: Households with fewer than four participants, residents staying on the farm for less than six months.

The study purpose was explained in detail before conducting interviews. Written informed consent was obtained from all participants & anonymity was maintained.

Statistical Analysis

The sample size was determined using the formula. n= z2pq/d2. Due to a lack of information on morbidity among farm residents in the study area, the calculation was based on the assumption of a prevalence of 50%. Assuming a 95% confidence level and 5% accuracy, the overall sample size was 384 farm residents. A sample of 384 (400) was sampled in this study, but the sample size was 450. All characteristics were summarized in a descriptive way. The data was analysed with SPSS v.23.0 software for frequency distribution and presented in figures.

RESULT

Majority of male participants in age group of 41-50 years (21.4%) followed by 21-30 years (17.9%). Majority of Female participants in age group of 11-20 (21.7%) years followed by 31-40 years (20.8%).

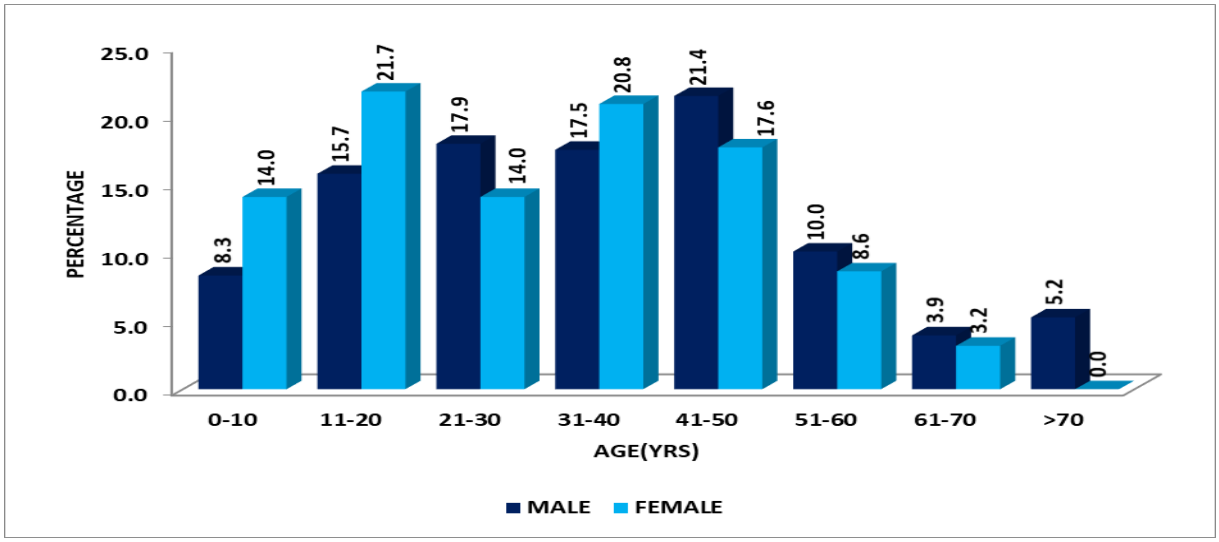


Figure: 1 Distributions of Participants According to Age and Sex

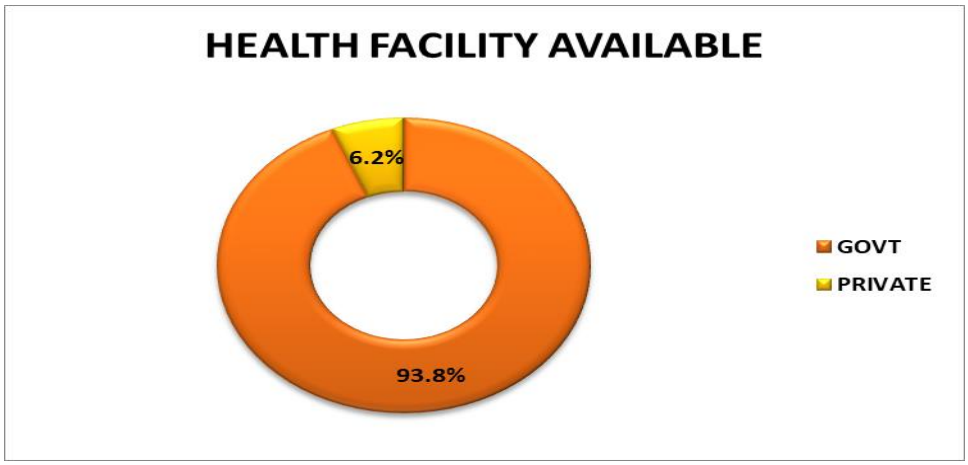
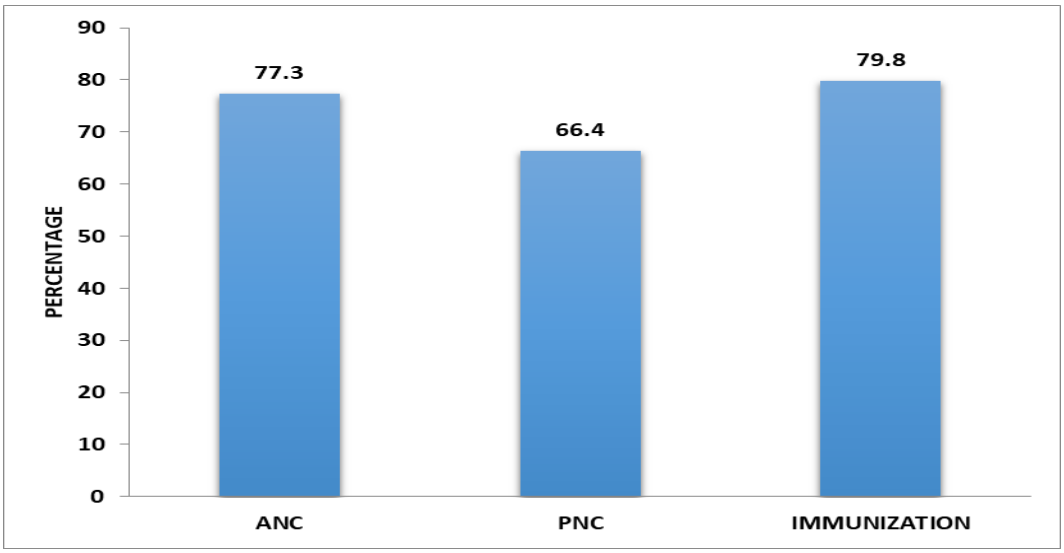


Figure 2: Distributions of Participants According to Health Facility Available.

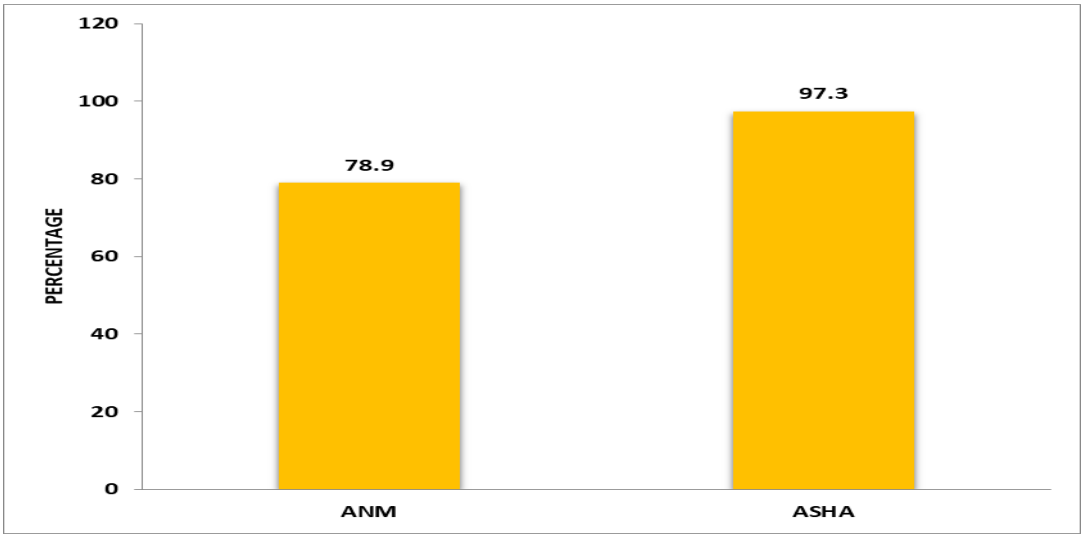
The predominant type of health facility available near the farm households was government-run (93.8%), with only 6.2% reporting access to private facilities.



***Multiple answers**

Figure 3: Pattern of health services received at door steps by the respondents

The above figure shows that the majority of respondents said they received immunization services (79.8%) at door step by the government health facilities followed by Antenatal Services (77.3%) and Postnatal services (66.4%).



***Multiple answers**

Figure 4: Health services provider at door steps

ASHA workers were identified as the primary service providers delivering doorstep healthcare services in the majority of cases.

DISCUSSION

In the present Study, most respondents for both present and past health illnesses took treatment from a government facility (21.8%), followed by a private practitioner (7.6%). The maximum no of study subjects said that ASHAs were more involved in providing health services (97.3%).

A study done by Chauhan RC *et al*., among 559 study participants, found that the majority (56.4%) visited public health care facilities for various illnesses. [6] Ager *et al*.

highlighted that the majority of agriculture workers received treatment from a governmental hospital (48%) and ANM (20%). [7]

Similar findings were observed in a study by Kulkerni R *et al.,* who found that out of 400 agricultural workers, government doctors were opted by 48.75%, 28% opted for a private doctor, 12.25% Anganwadi workers, and 10% auxiliary nurse midwives as the priority health care provider for their illnesses. [8]

Free availability of treatment may be the reason for utilizing a government health facility.

The study found that the most commonly utilized doorstep services were immunization, antenatal care, and postnatal care. These findings are consistent with national trends and highlight the effectiveness of community-level interventions in rural health delivery. NFHS-5 India data found that ASHA workers' doorstep service was the most frequently mentioned service provider, reaffirming their central role in the success of community-based healthcare in India. [9] Saprii L et al found that most ASHAs viewed themselves as the community's first port of call for service provision. [10] The NHSRC Report found that ASHAs are viewed as the key members of the primary healthcare team to support the delivery of the expanded services at the community level. [11

CONCLUSION

This Study highlights substantial utilization of doorstep health services among rural farm households in North Karnataka. ASHA workers were the most active and recognized service providers. The results emphasize the necessity of strengthening the role of community health workers, investing in training, and supporting infrastructure to ensure continued service outreach and effectiveness in rural areas.

Declaration by Authors

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Conflict of Interest: The authors declare no conflict of interest.

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