A STUDY TO EVALUATE KNOWLEDGE, ATTITUDE AND PRACTICE OF ACCREDITED SOCIAL HEALTH ACTIVISTS (ASHAs) IN VIJAYAPUR DISTRICT.

By

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Date: **Dr. ROHITH M**

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LIST OF ABBREVIATIONS USED

ADMO	: Additional District Medical Officer
ANC	: Antenatal care
ANM	: Auxiliary nurse midwife
APL	: Above poverty line
ASHA	: Accredited social health activist
AWC	: Anganwadi centre
AWW	: Anganwadi worker
BPL	: Below poverty line
CDMO	: Chief District Medical Officer
CHC	: Community health centre
DOTS	: Directly observed treatment short course
EAG	: Empowered Action Group
FGD	: Focus group discussion
ICDS	: Integrated Child Development Scheme
IFA	: Iron and folic acid tablet
JSY	: Janani Surakhya Yojana
LBW	: Low Birth Weight
MO	: Medical Officer
MoHFW	: Ministry of Health and Family Welfare
NIHFW	: National Institute of Health and Family Welfare
NRHM	: National Rural Health Mission
OBC	: Other Backward Caste
ORS	: Oral rehydration therapy
PHC	: Primary health centre

PNC	: Postnatal care
PRI	: Panchayati Raj Institutions
RTI	: Reproductive tract infection
STI	: Sexually transmitted infection
TT	: Tetanus Toxoid
VHSC	: Village Health and Sanitation Committee
108	: Government Ambulance

ABSTRACT

Introduction:

The Government of India launched National Rural Health Mission (NRHM) on 12th April 2005 to address the health needs of rural population, especially the vulnerable section of the society. One of the key components of the National Rural Health Mission is to provide every village in the country with a trained female community health activist or Accredited Social Health Activist (ASHA) selected from the same village. In general each ASHA will cover a population of 1000. However, this norm is relaxed in the hilly and tribal areas depending on the local situations. ASHA will be the first port of call for any health related demands of deprived sections of the population, especially women and children, who find it difficult to access health services.

She will create awareness on health and its social determinants and mobilize the community towards local health planning and increased utilization and accountability of the existing health services. Her responsibility is prevention of diseases and promotion of good health. However she will also provide a minimum package of curative care which are appropriate and feasible for that level and make timely referrals.

The Ministry of Health & Family Welfare (MOHFW) has developed a 23-day basic training schedule to provide the necessary knowledge & skills to women identified as ASHAs and there is also regular re-orientation trainings organized at the district levels.

ASHA are given performance based compensation/remuneration. She can earn good amount of money by taking responsibility of patients by promoting institutional deliveries (allowance under Janani Suraksha Yojana), VHSC, nutritional and national

programs. There is a provision for non monetary compensation in the form of recognition, awards given at state level meetings of ASHA.

The study aims to investigate the factors contributing to Knowledge, Attitude and Practice of ASHAs regarding their training, selection, job responsibilities and their incentives. There are no published studies available on KAP of ASHAs especially those who are working in Northern Karnataka. In this background the present study will be conducted in Vijayapur District of Karnataka.

Objective:

1. To describe the socio-demographic profile of ASHAs working in Vijayapur District
2. To evaluate the Knowledge, Attitude and Practice of ASHAs towards their roles and responsibilities.

Methodology:

A cross sectional study was carried out in Vijayapur district. All the ASHAs working in Vijayapur taluk, Basavana Bagewadi taluk and Muddebihal taluk under 39 PHCs were selected for the study. The purpose of the study was explained to District Health Officer and after obtaining permission, the study was conducted. ASHA workers were contacted in their respective PHCs on a pre-fixed date. After explaining the purpose of the study and obtaining oral consent, data was be collected in a pre-designed, semi-structured proforma by interview technique.

Results:

Maximum numbers of ASHAs belonged to the age group of 30-39 (52.4%). About 86.1% of ASHAs underwent 23 days of training with 5.2% of ASHAs opining that it was over crowded. In our study ASHAs had good knowledge about ANC care, with 69% of the ASHAs told they know the correct procedure of registering a

pregnant woman. Also, nearly 70% of the ASHAs could give proper details about the minimum number and details of ANC visits required by a pregnant woman. 88% of ASHAs gave positive response saying that they accompany pregnant woman and stay until the delivery is over. About 94% of ASHAs had proper knowledge about Exclusive breast feeding and weaning and only 23.4% of ASHAs had proper knowledge of duration of EBF and weaning. Nearly half (48.6%) of the ASHAs revealed that they are catering to population of more than the stipulated norm of 1,000. Nearly 86.7% of ASHAs told that they were well aware of immunisation dates in their concerned PHCs and assist ANMs on immunisation days. 97% of ASHAs revealed that they encourage mothers to start breast feeding within 30 minutes of delivery and educate mothers on exclusive breast feeding. Only 16.3% of ASHAs revealed that they work as DOTS agent. About 83.3% of ASHAs reported that were not happy and content with their incentives and demanded fixed salary on a monthly basis.

Conclusion:

ASHAs form the backbone of the community and are meant to be selected by and be accountable to the village. There is a need for comprehensive monitoring into the performance of ASHAs in terms of her responsibilities and work. In spite of the performance based incentives and other benefits there is also an opinion that the ASHAs need some sort of job security. Special effort is needed to focus on the induction training quality and the regular orientation trainings to enhance her knowledge and practical skills regarding her job responsibilities.

Key words: ASHA, Maternal Care, Child Health, Drug Kit

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INTRODUCTION

Despite significant improvements made in the past few decades, the public health challenges are not only huge but also growing and shifting at an unprecedented rate in India. Studies done on primary health care set-up of India showed that the health care delivery system is acting as a weak link between the government services and beneficiaries. Sub-centre is the most peripheral level of contact with the community under the public health infrastructure, which ideally caters to a population norm of 5000, but has been effectively serving much larger population, especially in EAG States.

With only about 50 per cent of Male Multi-purpose Health Workers (MPW-M) being available in these States, ANM's have been heavily overworked, which has adversely impacted outreach services in rural areas. Also under the Integrated Child Development Scheme (ICDS) the Anganawadi Workers (AWWs) engaged primarily in organising supplementary nutrition programmes, preschool education and other supportive activities was left with little or no time to take up the responsibility of a health behaviour change agent in a village[1, 2].

Thus in order to address the health needs of rural population, especially the vulnerable sections of society, the Government of India launched the National Rural Health Mission (NRHM) in 2005, under which many innovations were introduced in the states to deliver healthcare services in an effective manner, that seeks to provide effective health care to the rural population, especially the disadvantaged groups, by improving access, enabling community ownership and demand for services and strengthening public health systems for efficient service delivery. One of the key components of NRHM was to create a band of female health volunteers, appropriately named "Accredited Social Health Activist" (ASHA) in each village within the

identified States to act as a bridge between the rural people and health services outlets[2].

ASHAs act as health activists in the community who will create awareness on health and its determinants, counsel mothers on key healthy behaviours and mobilise the community towards local health planning and increased utilisation and accountability of the existing health services[3].

Previous studies on ASHA workers in India have shown that majority of ASHAs (73-78%) were either middle or high school passed, which shows selection is in adherence with selection criteria of ASHAs. Several ASHAs (69-72%) were unable to specify all their job responsibilities. Many ASHA's (81-93%) claimed that they work approximately 25 hours a week. It was found that huge percentages of ASHAs (91- 95.5%) were serving for the population which was more than 1000 in number. Also majority of the ASHAs (74.65%) received only 12 days of training against the recommended 23 days of training[4].

In other studies nearly 70% of ASHAs lack the essential knowledge to perform their jobs to the best of their ability. Not many ASHAs (69- 71%) received refresher trainings. Studies showed that majority of ASHAs (85.5- 93%) were dissatisfied by their incentives. Many ASHAs (63- 69%) in most states were not actually receiving these minimum amounts in practice.

Results from different studies have shown that activities such as sanitation improvement and new born/child health are often not compensated for. These are received as least importance by ASHAs, whereas, they spend most of their time on and receive most of their incentives from activities related to ANC and delivery. Several ASHAs (57-71%) also reported spending out of their own pockets for travel and related items, especially in rural areas[4].

Studies done in Karnataka state showed that majority of ASHAs (83-92%) were residents of the community they served in , as a result of which they formed a very effective link between the delivery of health services and the community. Most of them had good knowledge about ANC, PNC and Infant care (89.5-93%) but lacked proper knowledge on family planning methods and immunization. Nearly 21 % of ASHA's also believed that evil spirits have an effect on a child's health. The most motivating factor for the ASHA (77-84%) is the financial incentives what they get from government and hope of getting absorbed into government jobs in future[4].

The preliminary finding of the National ASHA Mentoring Group (NAMG) has revealed that there has been confusion in many States among the ASHAs on their own role and also among the AWWs and ANMs on the role of ASHA. In order to orient the ASHAs on their job profile and responsibility, there is a need to assess the knowledge and skills of Accredited Social Health Activists (ASHA) on issues relating to maternal and child health and nutrition, and also perception of their role with respect to ICDS related activities, for bringing about corrective actions.

The implementation of ASHA programme was started in 2005 in Karnataka state and it was implemented in 2008 in Vijayapur District[3].

Out of 1410 ASHA posts sanctioned for Vijayapur district, 1394 have been filled. All of the appointees have undergone training. During our study period, 1093 ASHA's were working. This study was done over a period of 12 months to assess Knowledge, Attitude, and Practice of ASHAs in delivering the health care services and to know problems faced by them in carrying out their roles and responsibilities.

AIMS AND OBJECTIVES

1) To describe the socio-demographic profile of ASHAs working in Vijayapur District.
2) To evaluate the knowledge, attitude, practice of ASHAs towards their roles and responsibilities.

REVIEW OF LITERATURE

The Government of India's flagship National Rural Health Mission (NRHM) aims to provide accessible, affordable and effective primary health care, especially to poor and vulnerable sections of the population and to address the deficit in rural health care. NRHM has created a cadre of trained female community health activists called Accredited Social Health Activists (ASHAs) to mobilise the community toward increased utilisation of existing health services[3].

ASHAs play an important role in the rollout of government health programmes such as the Janani Suraksha Yojana (JSY), a conditional cash transfer scheme to incentivise women to give birth in a health facility. The ASHAs work closely with other frontline workers like Auxiliary Nurse Midwives (ANMs) and Anganawadi Workers (AWWs) to conduct community-level activities[2].

Criteria for Selection of ASHAs[1, 3]

Generally one ASHA is selected for population of 1000 with relaxation in the hilly and tribal areas depending on the local situations.

The criteria for selection of ASHA as specified in the ASHA guidelines are as follows:

- ASHA must be primarily a woman resident of the village - 'Married/Widow/Divorced' and preferably in the age group of 25 to 45 yrs.
- She should be a literate woman with formal education up to 8th class. This may be relaxed only if no suitable person with this qualification is available
- She should have effective communication skills, leadership qualities and be able to reach out to the community.
- Adequate representation from disadvantaged population groups should be ensured to serve such groups better.

Roles and Responsibilities of ASHA[1, 5]

The roles and responsibilities of ASHA are as follows:

- ASHA will be the first port of call for any health related demands
- ASHA will take steps to create awareness and provide information to the community on social determinants of health.
- ASHA will mobilise the community and facilitate them in accessing health and health related services available at the village/sub-centre/primary health centres.
- She will work with the "Village Health, Sanitation and Nutrition Committee" (VHSNC) of the *Gram Panchayat* to develop a comprehensive village health plan.
- ASHA will provide primary medical care for minor ailments such as diarrhoea, fever, and first aid for minor injuries.
- ASHAs would reinforce community action for institutional delivery, universal immunization, newborn care, prevention of communicable diseases
- She will also help the villagers in adopting promotive and preventive health by educating them on nutrition, drinking water, sanitation and utilization of health services
- She will promote construction of household toilets under Total Sanitation Campaign among villagers.

ASHA is expected to fulfil her role through 5 major activities in the community: [1, 4]

i. **Home Visits**: For up to 2 hrs every day, for at least four or five days a week, ASHA should visit the families living in her allotted area, with first priority being accorded to marginalized families. Home visits are intended for health promotion and preventive care. They are important not only for the services that ASHA provides for reproductive, maternal, newborn and child health interventions, but also for non-communicable diseases, disability, mental health and also schemes and programmes relating to them. The ASHA should prioritize homes where there is a pregnant woman, newborn, child below two years of age, or a malnourished child. Home visits to these households should take place at least once in a month. Where there is a new born in the house, a series of six visits or more becomes essential.

ii. **Attending Village Health and Nutrition Day (VHND)**: The ASHA should promote attendance at the monthly Village Health and Nutrition Day by those who need Anganawadi or Auxiliary Nurse Midwife (ANM) services and help with counselling, health education and access to services.

iii. **Visits to the health facility**: This usually involves accompanying a pregnant woman, sick child, or some member of the community needing facility based care. ASHA is expected to attend the monthly review meeting held at the PHC.

iv. **Holding village level meeting**: As a member or member secretary of the Village Health, Sanitation and Nutrition Committee (VHSNC), ASHA is expected to help convene the monthly meeting of the VHSNC and provide

leadership and guidance to its functioning with the help of elected member of Gram Panchayat, who leads the committee.

v. **Maintain records:** Maintaining records which help her in organizing her work and help her to plan better for the health of the people.

The above first three activities relate to facilitation or provision of healthcare, the fourth aimed is mobilization and fifth is supportive of other roles.

Role and Integration with Aanganwadi[1, 2]

Aanganwadi Worker (AWW) should guide ASHA in performing following activities:

- Organizing Health Day once/twice a month. On health day, the women, adolescent girls and children from the village will be mobilized for orientation on health related issues such as importance of nutritious food, personal hygiene, care during pregnancy, importance of antenatal check up and institutional delivery, home remedies for minor ailment and importance of immunization etc. AWWs will inform ANM to participate & guide organizing the Health Days at *Anganawadi* Centre (AWC).
- IEC activity through display of posters, folk dances etc. on these days are undertaken to sensitize the beneficiaries on health related issues.
- AWWs will be depot holder for drug kits and will be issuing it to ASHA. The replacement of the consumed drugs can also be done through AWW.
- AWW will update the list of eligible couples and also the children less than one year of age in the village with the help of ASHA.
- ASHA will support the AWW in mobilizing pregnant and lactating women and infants for nutrition supplement. She would also take initiative for bringing the beneficiaries from the village on specific days of immunization, health checkups/health days etc. to Anganawadi centres.

Role and Integration with ANM[1, 3]

Auxiliary Nurse Midwife (ANM) will guide ASHA in performing following activities:

- She will hold weekly / fortnightly meeting with ASHA and discuss the activities undertaken during the week / fortnight. She will guide her in case ASHA had encountered any problem during the performance of her activity.
- ANMs will inform ASHA regarding date and time of the outreach session and will also guide her for bringing the beneficiary to the outreach session, especially during immunisation days or celebration of national health days.
- She will take help of ASHA in updating eligible couple register of the village concerned.
- ASHAs will be utilised by ANMs in motivating the pregnant women for coming to sub centre for initial checkups. She will also help ANMs in bringing married couples to sub centres for adopting family planning.
- ASHA will be guided by ANMs in motivating pregnant women for taking full course of IFA Tablets and TT Injections etc
- ASHAs will be oriented by ANMs on the dose schedule and side effects of oral pills.
- ASHAs will be educated by ANMs on danger signs of pregnancy and labour so that she can timely identify and help beneficiary in getting further treatment.
- ASHAs will be informed by ANMs about the date, time and place for initial and periodic training schedule. She will also ensure that during the training ASHA gets the compensation for performance and also TA/DA for attending the training.

Training of ASHAs[1, 3, 5]

The Ministry of Health & Family Welfare (MOHFW), Government of India has developed a 23-day basic training schedule to provide the necessary knowledge & skills to ASHAs. Periodic re-training is to be held for about two days, once in every alternate month at district level for all ASHAs. During this training, interactive sessions are held to help refresh and upgrade their knowledge and skills, trouble shoot problems they are facing, monitor their work and also for keeping up motivation and interest.

Working Arrangements of ASHA: [1, 3, 4]

ASHA will have her work organized in following manner. She will have a flexible work schedule and her work load would be limited by putting in only about two-three hours per day, on about four days per week, except during some mobilization events and training programmes.

A. **At the AWC:** She will be attending the AWC on the day when Immunization/ANC sessions are being organized. At least once or twice a week, she would organize health days for health IEC, basic health check-up and advice including medicine and contraceptive dispensation.

B. **At the Home:** She will be available even at her house so as to work as depot holder for distribution of supplies (i.e. drugs for common illness, contraceptives like condoms etc) to needy people or for any assistance required in terms of accompanying a woman to delivery care centre/FRU or RCH camp.

C. **In the Community:** she will organize/attend meetings of village women/health committees and other group meetings and attend Panchayat health committees. She will counsel and provide services to the families as per her defined role and responsibility[1, 3, 4].

Removal of ASHA[1, 5]

Following is criteria for declaring any ASHA as an Inactive/Dormant ASHA, Drop Out, if:

- She has submitted a letter of resignation to the VHSNC/VLC and her facilitator (ANM)
- She has not attended the three consecutive Village National Health Days; without giving any information/ reason for the same
- She has not attended the three consecutive Monthly Meetings at PHC; without giving any information/reason for the same
- If she has not been active in most of the RMNCH+A activities like mobilization of pregnant women/mother/newborn for routine immunization services, home visits for Home based post natal care and population stabilization services etc. in her Area.
- When DAC, BAC, AF have visited the village of ASHA and ascertained through discussions with all VHSNC/VLC members that she is indeed not active[1, 5].

Performance Based Incentives to ASHAs[1, 3, 5]

ASHA has been instituted as an honorary volunteer and do not receive any salary or honorarium. Her work is so tailored that it does not interfere with her normal livelihood. However, ASHAs are compensated –

- For the duration of her training both in terms of Travel Allowance and Daily Allowance.
- For participating in the monthly/bi- monthly training.
- Wherever compensation has been provided for under different national programmes for undertaking specific health or other social sector programmes with measurable outputs, such tasks should be assigned to ASHAs on priority (i.e. before it is offered to other village volunteers) wherever they are in position.
- Other than the above specific programmes, a number of key health related activities and service outcomes are aimed within a village for example, if she registers pregnant woman, accompanies pregnant woman during delivery to reach institutions, getting the children immunized etc.

There also provision for non monetary compensation in form of recognition, in the local area and awards given at state level meetings for best ASHA worker.

Studies regarding socio-demographic profile of ASHAs.

1. A cross sectional study conducted by **Prof. Deoki Nandan et al.,**[6] in eastern Uttar Pradesh revealed that all ASHAs were women. About two-thirds of ASHAs were in the 24 to 35 year age group. 35% of ASHAs came from general category (which contains possibility of higher caste more than any) while 40% of them were BC, 25% from SC (23%), and ST (2%). Only 53.3% of the ASHAs had schooling up to Middle School, 31.7% High school education and 5% intermediate, and 10% were graduates. About 91.7% ASHAs were found to be married.
2. A study by **Dr T.Bir et al.,**[7] conducted in Udaipur found that most of the ASHAs in the urban block were in the age group of 26-30 (40%), followed by the age group of 31-35(28%). In rural (40%) and tribal (41%) block most of them belonged to age group of 21-25. When distributed according to caste 41% of ASHAs in urban block belonged to OBC followed by general category (31%). In rural block, 43% belonged to general category followed by OBC (36%), ST (11%) and SC (6%) while in tribal block majority (63%) belonged to ST followed by SC (21%). Among the ASHAs belonging to urban block 40% had studied up to secondary, followed by 36% ASHAs who had completed middle level (8th std). 48% of ASHAs in the rural block had completed middle level and 38 per cent had completed secondary. In the tribal block almost 50 percent studied up to middle level. Around 6 per cent of the ASHAs in all three blocks were graduates. Most of the ASHAs in all the three blocks were married 90 per cent in urban, 93 per cent in rural and 95 per cent in tribal blocks.

3. **Saji Saraswathy**[8] in their study conducted in Andhra Pradesh showed that, the majority of ASHAs were below poverty line (71%), married (70.47%) and belonged to scheduled tribes (36%). Most of them had 8 years of formal education (85.75%), experience of 2–5 years as CHW (82.9%). The majority had undergone a minimum five trainings (73.06%), earned US $22.24–33.33/month as a CHW (83.16%). Further, most of them did not have any other personal sources of earning (91.97%).
4. A cross sectional conducted in eastern Uttar Pradesh by **Santosh Kumar et al.,**[9] revealed that one third of ASHA workers had schooling up to class eight, 36.6% high school and 22.2% intermediate and 10.4% were graduates. A statistically significant association was observed between educational level and practices undertaken by ASHA in the community. Findings also indicate that ASHA workers educated up to class eight faced difficulty in filling village health index register provided to them.
5. A study conducted in rural Lucknow by **Manish K Singh et al.,** [10] shows that educated Recently Delivered Women (RDW) those belonging to higher socio-economic class, Hindu women who were young, with low parity were more to utilize ASHA services for early registrations, adequate ANC and post natal check up. On the other hand, contrary to previous studies, women from lower castes were more in number to avail antenatal and postnatal care. The reason for discordance is better approach of ASHA and ability to connect and convince the women belonging to lower caste.
6. A study conducted on evaluation of **Merly et al.,**[11] showed that most of the ASHAs were in the age group 35 to 39 years age- group (31%), followed by 30 to 34 years age group (23%). The distribution of ASHAs who had passed

primary school, middle school, high school, intermediate and graduation, was 3%, 28 %, 46%, 20% and 3%, respectively. About 37 %of ASHAs reported a monthly income less than Rs. 2000; 36 %of ASHAs reported drawing a monthly income between Rs. 2001 to 5000, followed by 22 % drawing monthly income of Rs-5001 to 10,000. The study further revealed that only 66 %of ASHAs had undergone the requisite training of 23 days or more

7. **Saprii L et al.,** [12] in his research paper on ASHA workers, highlights the issue of empowerment of women through ASHA scheme and their space in workplace and household. This study indicates that after joining as ASHAs their purchasing power in household increased, which in-terms increase the decision making power in the family. The ability to leave the home alone increased the confidence of ASHAs. The status of importance and support was given by the family to each ASHA

Studies on knowledge, attitude and practice of ASHAs

1. A cross sectional study conducted by **P K Garg et al.,**[13] in rural Harayana, observed that the most important motivational factor for the ASHA workers were the financial gain. Majority (57.14%) of the ASHAs had received the drug kit, immediately after their training. ASHAs knowledge about immunization was not satisfactory specifically regarding tetanus immunization. Most of the ASHAs preferred helping in delivery and immunization as these activities were associated with high financial incentives when compared to other jobs like promotion of awareness on hygiene and sanitation, counselling on family planning, in birth and death registration.
2. A Cross-sectional Descriptive study conducted by **Mishra A**[14], in Orissa revealed that, majority of them were not aware about their role in changing the behaviour about infant feeding, family planning, child marriage, girl education, hand washing and sanitation. They were also not very much aware about their role in birth and death registration. In spite of the crucial importance of education and counselling for hygiene and sanitation, exclusive breast -feeding, complimentary feeding, family planning, ORS use, preventing early marriage and gender discrimination etc were not found in the agenda of ASHAs. So its importance must be emphasized during the training and other meetings. The synthesis of the views of the health functionaries like CMOs, MOs and ANMs unanimously reflected further need of training of the ASHAs. They emphasized upon time-to-time refresher training in the areas like mother and child health, anaemia and malaria.

3. A study conducted by **Ravindra H Dholakia et al.,** [15] in Bihar, revealed that several ASHAs were unable to specify all their job responsibilities. It was suggested that a clearly defined list of responsibilities, one that is short and memorisable, would be beneficial for the ASHA so that she is completely aware of what is within and what is not within her role in the community. ASHAs were currently claiming to work approximately 25 hours a week; this provides potential to increase her responsibilities, and would therefore increase her incentives as well. Other findings suggest that many ASHAs were dissatisfied by their incentives. Qualitative findings also suggested that ASHAs were interested in acquiring more health-related skills. The maximum average number of training days that ASHAs received in study sample was only 12 days. Study also revealed that well over half of the ASHAs in study sample scored below 80% in their knowledge assessment. Therefore, it is evident that ASHAs lack the essential knowledge to perform their jobs to the best of their ability. Several ASHAs also reported spending out of their own pockets for travel and related items, especially in rural areas.
4. A cross-sectional, descriptive study by **Hema Bhatt**[16], in Bageshwar and Nainital districts of Uttarakhand, revealed that ASHAs were very keen in registration of pregnant women, ANC/ PNC, immunization, but areas like motivating the people for construction of toilets, participation in VHSC and development of comprehensive village health plan, family planning, and adolescent education were neglected. The entire compensation received by ASHAs per month was very low. Majority of the ASHAs were not getting incentives in time. Another problem encountered by ASHA's was, loosing of incentive if she missed the opportunity to accompany the mother to health

facility due to some problems, even though if she has provided all the approved services of ANC and immunization. It was also reported by few of the ASHA's that the medicine kit that they received were incomplete. More than a quarter of ASHAs were unable to conduct meeting in the community because they were unable to motivate the target group.

5. A cross-sectional survey conducted by **Farah N Fathima et al.,** [17] in Karnataka showed that at least 60% (689/1,141) of women who had reported an institutional delivery attributed it to being a result of the motivation by the ASHA in their community. There was variability in the type of postnatal care services offered by the ASHA: some activities, such as advice on breastfeeding (83.6%) and home-visits to see the puerperal mother (72.4%), were reasonably high while, on the other hand, service provision on others, such as advice on danger sign management (14.9%), contraceptive-use (21.2%), and maternal nutrition (58.4%), remained low. Counselling by ASHAs on early initiation of breastfeeding (83.5%) and immunization at birth (84.2%) was reported to be high by the mothers. It was, however, low in other areas, such as exclusive breastfeeding (64.7%), thermoregulation of newborns, including no early bathing (42.4%), keeping baby warm (68.7%), and social determinants of health, such as birth registration (55.8%)
6. A cross-sectional, descriptive study by **Dr Saraswati Swain**[18] in Cuttuck district, observed that the most important activities enumerated by ASHAs were accompanying the pregnant women to the hospital (92.5%) counselling them on AWC, PNC and safe delivery (84%), distribution of IFA and oral pills (87.5%), registration of pregnant mother (68.8%), mobilizing the mothers for their children's immunization, and helping the ANMs on the immunization

day (80%). The activities like informing AWWs/ANMs on birth and death, motivating community to construct household toilets, motivating the couple for family planning were assumed least priority among the ASHAs. ASHAs were found to have lack of knowledge on proper dose schedule of AYUSH medicines that were in the kit.

7. A community based cross sectional study done by **Shilpa Karir et al.,**[19] in district of Ranchi, showed that, the age structure of ASHAs were in young age group as more than 70% of Sahiyyas are below 35 years of age and none above 45 years. In the study 65.4% Sahiyyas belonged to SES class IV (Upper lower class) and 34.6% belonged to socio-economic status class V (lower). Monetary problems could be one of the reasons which have curtailed them to move forward. Sahiyyas in the field practice area were aware about helping beneficiaries in registration of pregnancy and mobilization during antenatal checkups as one of their job responsibilities. It also revealed that only 23.2% and 19.9% beneficiaries responded that they had received advices on nutrition and adequate rest during pregnancy from Sahiyya during their home visits. Counselling regarding nutrition, rest and other health related issues were drawing lesser attention by Sahiyyas and were not done passionately by her, the reason being they are not incentivized.

8. A study done by **Dr Vandhana Kanth et al.,** [20] in East Champaran district, stated that only 22 % of ASHA's in the District had some understanding of their role as given under the NRHM ASHA guidelines. The remaining 78% ASHA had little to no knowledge about their roles. Most of them did not perceive the care of the newborn (< 18 %) or the promotion of family planning services (< 13%) to be part of their role. More importantly they did not feel

that they were a community health educator, or that their work involved addressing other social determinants of health like food security, water or sanitation.

9. A cross sectional study carried out by **Mahyavanshi K.D et al.,**[21] in Surendranagar district , found that 90% of the ASHAs were having a qualification between 8th and 12th class and in this study it was around 70% which is sufficient enough for their proper learning and performance. Almost 86.2% of ASHA workers had improper knowledge regarding newborn care and 90% ASHA workers did not know as what advice to give to mother for prevention of hypothermia and how to give kangaroo mother care. 86% were doing improper practice as they had poor knowledge regarding immediate referral condition. Around 70% had poor knowledge about breast feeding and complimentary feeding. As nearly 97% knew about prelacteal feed not to be given but 71% had poor knowledge regarding intervals of breast feeding in a day. Nearly 63% knew which the vaccine preventable diseases are, but 70% ASHA workers had poor knowledge regarding schedule of immunization as they had less knowledge as to when to take child for vaccination and for which vaccine. As compared to other diseases, their knowledge and practices were found to be better for diarrhoea. About 75% of ASHAs knew when to give ORS and advice for immediate referral. Around 68.46% and 91.54% had lack of knowledge and improper practicing for measles & pneumonia respectively. For malaria, their practice was good as 85% knew the causes and symptoms of malaria. Nearly 64% of them were knowing how and when to take blood smear. In this study major motivating factor for ASHAs was either money or absorption in government job. About one third of ASHAs were earning more

than Rs 800 per month where as another one third were earning less than Rs 400 per month.

10. A cross sectional study by **Dr Neera Jain et al.,**[22] in Lucknow , found that majority (73.33%) of the ASHAs have pointed out that most preferred activities for them were taking children to ANM for immunization followed by helping in delivery (56.66%) and family planning (53.33%).In query to their job perception, majority of the ASHAs enumerated immunization (73.33%), medicine distribution (25%) and nutritional education (21.66%) as their most done activities .Most of the ASHAs (96.66%) felt that villagers were happy with them. There was more demand of medicines as enumerated by many ASHAs. Most of the ASHAs expected more incentives, better means of transportation for patients, for the improvement of their function.

11. **Saxena V et al.,** [23] in their study conducted in Rajasthan, stated that, ASHAs were working only for 26 to 28 hours per week, which is at best 70% of the standard full-time employment. Thus, ASHAs do not have full time work. They used to visit on average 3 to 4 households per day in a village. Working hours of ASHAs were almost invariant whether they handle one village or two, or whether they handle 450 people or 1500 people. Also there were 3% to 12% pregnant women who were not visited by ASHA for ANC: and 5% to 15% pregnant women who were visited only once for ANC. ASHAs were not accompanying all women for the required number of TT shots. Moreover, in spite of ASHAs, deliveries taking place at home were to found at around 30%, though about two thirds of such home deliveries were attended by ASHAs

12. **National Health Systems Resource Centre (NHSRC, 2011)**[24] conducted an evaluation of ASHA programme in eight states, namely, Andhra Pradesh,

Assam, Bihar, Jharkhand, Kerala, Odisha, Rajasthan and West Bengal on 100 ASHAs, 600 beneficiaries, 100 AWWs, 100 PRI members and 25 ANMs and found that in all the states, all ASHAs were women and most were married. About two-thirds of ASHAs were in the 24 to 35 year age group, except in Kerala where only one-third belonged to this age group. In Rajasthan and Jharkhand the remaining were mainly in the 20 to 24 age group, whereas in Kerala, Assam, Odisha, Bihar and West Bengal the majority of the remaining were above 36 years of age .

13. A cross sectional study conducted by **Gosavi et al.,**[25] in Wardha District revealed that Most of the ASHAs (83%) were aware about their responsibility regarding ANC, immunization, tuberculosis, leprosy, malaria, high risk pregnancy but none of the ASHA were having specific information on schedule of immunization, how to detect TB & leprosy cases. Almost all the ASHAs were aware that they would be getting performance based incentive but none of them were aware about how much incentives they will exactly get while doing that particular work. Challenges faced by most of the ASHA were lack of support from PHC staff, the lack of good training, unclear reimbursement policy & poor clarity in how to collaborate work with the ANM and Anganwadi worker.

14. **Mohaptra A** and **Mohapatra S.C**[26] conducted a cross-sectional study on ASHAs in Harahua, Varanasi. Their study found that, ASHAs had obtained significantly lower scores for ‘self-initiative’ as compared to other attributes that had been clubbed into ‘work aptitude group’. At least half of ASHAs were fairly ‘dependable’ (50.2%) and appreciated their work style. Almost every fourth ASHA were ranked as ‘poor’ when it came to knowledge. Around 55%

ASHAs were found to have either average or even inferior scores for their 'productivity'. 'Punctuality' and regular 'attendance' at work had fetched the ASHAs significantly higher scores. In the 'community involvement' competency, it was found ASHAs faired exceptionally well when it came to 'community relationship'.

15. A descriptive, cross sectional study conducted by **Ram Milan Prasot et al.,**[27] in rural Gorakhpur stated that, in MCH care, nearly half (42.5%) of ASHAs were assessed into poor category of performance for motivating and helping to pregnant women for early registration whereas for escorting institutional delivery, two third (66%) of ASHAs were assessed into good category of performance while for providing postnatal care, more than half (55%) of ASHAs were graded into average category of performance. Majority of ASHAs (60.8%) were assessed into very good category of performance for full primary immunization to children but in family planning services, more than half (50.5%) and three fourth (77.5%) of ASHAs were assessed into poor category of performance for motivating to eligible couples to adopt Tubectomy and IUDs, respectively. Regarding the feedback on the performance of ASHAs given by MO, ANM and beneficiaries, majority of ASHAs were assessed into average (81.2%), good (62.5%) and very good (53.2%) category of performance, respectively

16. A study conducted **Ghan Shyam Karol et al.,** [28] in Rajasthan revealed that knowledge score of ASHAs in Family Planning and HIV/AIDS was 64.16 percent, which is lower than all other aspects of MCH care such as maternal health care, child health care, and health education and sanitation. The overall knowledge gap was 16.77 percent, but the knowledge gap in family planning

and HIV/AIDS was 35.84 almost double. This clearly reveals that they must be given frequent training and guidance from the other grassroots level health functionaries, particularly ANMs on various critical aspects of family planning and HIV/AIDS. However, ASHAs have scored 99.33 % in health education and sanitation. Regarding motivational skills of ASHAs showed that, only 30.49 % cases were motivated for family planning, whereas out of the total children who have undergone various immunizations, 80.78 % have been motivated by the ASHA workers. As compared to immunization, ASHAs motivational skill in family planning is low. They have also shown comparatively lower skill in escorting pregnant women to the health care institutions for institutional delivery.

17. **CORT**[29], in their study found that 33% of ASHAs had not been provided the drug kit, but few drugs were provided on an adhoc basis. However, most of the ASHA/ Sahiyas got the medicine kit consisting of chloroquine for fever, paracetamol for fever & pain, iron tablets for pregnant women, ORS for baby suffering from diarrhoea, Mala N & condoms and thermometer for measuring fever (but no one knew how to measure fever) and cotton & bandage but there was no clarity on medicine for diarrhoea and a medicine named 'Mandoor'.

18. A study conducted by **KCDS**[30], on rapid appraisal of functioning of Village Health and Sanitation Committee (VHSCs) in Odisha found that the awareness about the objectives of the VHSCs was highest among the ASHAs, the ANMs, SHG members and the least among the PRI members. VHSC have been formed and was referred to as Gaon Kalyan Samiti. The study found that majority of CDMOs/MOs, ANMs and ASHAs knew about the formation process, while only one out of the few PRI members knew about the process

of formation of VHSC and none of the panchayat officials had any knowledge about its formation. With respect to involvement in VHSC formation, it was highest among the ASHAs, the ANMs and SHG members followed by CDMOs and PRI members. It was also found that there was little systematic training of the VHSC members. The issues relating to cleanliness and sanitation (50%), awareness about health programmes (30%), village survey (25%), immunisation (10%), change of convener from ASHA to AWW (10%), use of sub-centre untied fund (5%) and undertaking IEC activities/wall painting (5%) were discussed during the meetings.

19. A cross sectional study done by **Reetu Sharma et al.,**[31] showed that the ASHAs' performance was adversely impacted by their limited orientation on their own and their co-workers' role; poor training on counselling and health promotion skills; and an over-emphasis on their 'incentive-based' rather than 'activist' role. The strategy of training of ASHAs after they are selected for the post rather than mandating a basic training course as a prerequisite for applying for the post was limiting their motivation to learn. All these issues, it was suggested, led to unaccountability, incompetency and, hence, the poor performance of ASHAs

20. A study done by **Smitha Kochukuttan**[32] in Kerala showed that knowledge of ASHAs regarding key danger signs during pregnancy was poor. Only 2(1%), 10(4.8%), and 15(7.2%) ASHAs were aware of key danger signs of labour and child birth, postpartum period and pregnancy period, respectively. Majority (>80%) of ASHAs knew that post-partum haemorrhage is a life threatening danger sign. ASHAs' key activity related to birth preparedness was supporting institutional deliveries (99%), which included helping with cash assistance

(98%) and identifying a functional health centre before delivery. However, only 1% of ASHAs identified an institution for referral and less than 1% had identified a blood donor.

21. A study done by **Bhargavi C N et al.,** [33] in Delhi, found that ANMs and AWWs, village leaders and other community stakeholders had a limited understanding regarding the roles of the ASHA. Most of them perceived them as additional line workers under the Maternal and Child Health Programme and that their roles were mainly to register pregnant women, mobilise the community to utilise the immunisation services and to provide support to mothers during the time of delivery. Most of them did not feel that they were a community health educator, or that their work involved addressing other social determinants of health like food security water and sanitation. The role of the ASHA as a social health activist was not understood by any of AWWs, ANM, and PRI members.

22. **The Vistaar Project**[34] was conducted during 2012 on the topic 'Performance-Based Payment System for ASHAs in India' by **Wang et al.,.,** the study indicates that while the ASHA PBP scheme plays a critical role in improving health indicators in the target states, the system has certain weaknesses that could have a negative impact on the effectiveness and sustainability of the ASHA model. These include: delays in payment, lack of clarity on the payment process, lack of data on how incentives affect outcomes, neglect of services that are not covered by the PBP scheme, lack of transparency and adequate governance, competition with other providers, and lack of congruity between compensation and expectations

23. A study conducted by **Dr. Shobha Malini et al.,**[35] in Behrampur, found that postnatal care by ASHAs was quite low (28.3%). The ASHAs facilitated three PNCs in less than one-fifth of the user-women and private practitioners conducted PNCs in 37.5 % non-users.

24. A cross sectional study done **SR Shrivastava et al.,**[36] in Palghar taluk found that all of the ASHAs belonged to the local community and acted as effective link people in the delivery of health services and in providing health awareness. It was found that approximately 50% of the ASHA workers were below the age of 25 years, contrary to the fact that as per guidelines, ASHAs should be in the 25-45 years age group. Also, 67 (45.9%) of the ASHAs were educated below a secondary school level despite the requirement that ASHAs be educated to at least an 8th class standard. 100% correct knowledge was observed regarding giving advice to pregnant women and their families about promoting institutional deliveries and accompanying pregnant women at the time of delivery. 93.8% of ASHA workers advised parents of malnourished children to take them daily to the Anganwadi Centre. All the ASHAs had correct knowledge was observed regarding counselling the exclusive breastfeeding of newborns.

25. A cross-sectional study conducted by **Sushama S Thakare et al.,**[37] on effectiveness of the training course of ASHA on feeding practices at a rural teaching hospital: at the Rural Health Training Centre, Saoner, District Nagpur, India. 94 ASHAs & 5 supervisors were the sample of the study. A predesigned, pretested and structured schedule was used for the data collection. Effectiveness of training programme was done by post test assessment by using same questionnaire. Study reveals that the mean pre test

score was 15.11± 1.89, which had risen significantly (p=0.001) post test to a mean of17.30± 1.59. Study concluded that ASHA worker and their supervisors gained the knowledge and skills on breast feeding and complimentary feeding after the training.

26. **P Stalin et al.,** [38] conducted a study on ASHA's involvement in newborn care at Primary Health Centres (PHC) of Haryana. All the 33 ASHA of Primary Health Centre were trained in providing newborn care by community physicians at Civil Hospital. This was followed by two refresher training at three months interval and supportive supervision. The study result showed that the knowledge did not increase immediately after training. This could be attributed to the induction trainings under routine program and working experience for more than 2 years. In addition, this could be due to shorter duration of training. Three months after training, there was significant increase in the knowledge of ASHAs. This could be attributed to learning by doing and indicates the need for practical training for ASHAs

27. A cross sectional study by **Bhagwan Waskel et al.,**[39] conducted at Sanchi and Obedullah of Bhopal District, showed that majority (67.69%) of the ASHA workers were in the age group of 20-29 years. Thus majority of the ASHAs may be considered young and this may be strength for programme as they are energetic and may deliver better service with proper motivation and capacity building. As far as ASHAs knowledge about immunization was concerned, their overall response was poor immunization. Most of the ASHAs preferred helping in delivery and immunization. These activities are also associated with financial incentives. But many other jobs like counseling on family planning, referred for MTP, give TB drug etc. were drawing lesser attention probably

due to lack of incentives.The study revealed that only 62.14% of the ASHAs received kits, immediately after training. Availability of drug kit helps ASHAs in not only attending some primary medical care needs, but also builds confidence of community in ASHAs as someone available in " hour of need.

28. A descriptive cross-sectional study conducted by **Charu kohli et al.,** [40] in north eastern district of Delhi revealed that, mean age of ASHAs was 31.84 ± 7.2 years. Most of the ASHAs workers were aware of their role in provision of maternal health services. Most of the ASHAs workers were aware of their work of bringing mothers for antenatal check-up (94.5%), counseling for family planning (96.4%), and accompanying them for hospital for delivery (89.1%). 87% of ASHAs knew that iron tablets have to be taken for minimum 100 days during pregnancy. 51 (92.7%) ASHAs reported that they used to maintain antenatal register. Some problems reported by ASHAs while working in community were shortage of staff at health center (16.4%), no transportation facility available (14.5%), no money for emergency, and opposition from local dais (12.7% each).

29. A study by **Shree Roy et al.,** [41] in selected area of Jagatsingpur district revealed that almost 50% ASHA's were covering population ranging from 1000-1500. All the ASHAs had good coordination with local community and they were participating in community meetings regularly. All the ASHAs received incentives for the cases of sterilization. 55.5 % urban, 85.7 % rural and 82.7% tribal ASHAs received it on the same day when sterilization was done. Half of the urban, 35% of the rural and 56.7% of tribal ASHAs got incentive less than Rs. 250 in last 6 months (less than 50/- per month).

Common cause identified for dissatisfaction was less incentives compared to their work, especially for the ASHA working in tribal areas.

30. **D. K. Shrivatsa et al.,** [42] in their study showed that most important motivational factor for the ASHAs is the financial gain and hope of being absorbed in government job. Monetary gain in majority of cases was very little and to receive even this money extra effort was needed some time. There was a general demand from all stakeholders for a regular monthly payment of Rs.1000/-to each ASHA besides the job related incentives. In general, monitoring and supervision of the ASHAs by MO through ANM and AWW was satisfactory. However in many areas ASHAs were not functioning properly and even their relation with ANM and AWW were not satisfactory. Village health and sanitation committee had not been established in many villages and even where it had been established regular meetings were not being held. All the ASHAs were accepted very well in the community and were acting as a link between community and health providers. The faith and confidence of community on ASHAs were reflected by the demand of additional jobs like help in getting widow pension and ration card etc.

31. A study conducted by **Population Research Centre**[43], Kozhikode district revealed that 29% of the cases were registered by Anganawadi worked and the role of ASHA in this regard was only 7.6%. Among the registered beneficiaries, 55.8% received JSY card. In regard about the role of ASHA during pregnancy of the beneficiaries, only 16.5% of the beneficiaries reported that ASHA worker provided any specific help to the beneficiary during the last pregnancy. The study concluded that ASHA volunteers can initiate the JSY

along with ANM and Anganawadi worker at the community level which will lead to safe delivery and child survival.

32. A descriptive study conducted on knowledge attitude and practice of ASHAs regarding tuberculosis and DOTS in Pune revealed by **S M Sagare et al.,** [44] showed that all ASHAs (43) were well versed with recent guidelines of RNTCP and diagnosis of pulmonary TB suspects. Two third of ASHAs (67.44%) knew that the tuberculosis diagnosis and DOTS is totally free of cost. 90.6% of ASHAs felt compassion and desire to help tuberculosis patients.

33. A cross sectional study was conducted on assessment of the functioning of ASHAs under **NRHM in Uttar Pradesh**[45]. Different stakeholders, comprising of four nodal officers, 12 block nodal officers, 20 facilitators, 43 ANMs, 60 ASHAs, 43 AWWs and 360 beneficiaries were included in the study. The study revealed that all the stakeholders i.e. the DNOs and facilitators were aware of the steps of recruiting the ASHAs, 16% of the ANMs did not support recurrent training to the ASHAs because it affects their routine work and it felt it was unnecessary. The involvement of the community, panchayat raj institutions, NGOs and AWW etc was limited and poor. ASHAs support in ANC services and immunization was significantly high in comparison to other services. The role of ASHAs in institutional deliveries was appreciable. More than 3/4th beneficiaries were found satisfied with ASHAs. Majority of ASHAs had incomplete knowledge about the compensation provisions made available under the scheme.

34. In a cross sectional study conducted **Dr Smitha P.K**[46], amongst 225 ASHA workers at Koppal showed that, the response rate was 207 (92%). The knowledge regarding the key danger signs in all the three stages were extremely poor, i.e. pregnancy (7.2%), labour and child health (1%), and post partum period (4.8%). Knowledge of key danger signs was associated with repeated, recent and practical training ($p< 0.05$). A majority (71%) scored 4-7 of the maximum score out of 8 for knowledge regarding birth preparedness.

35. A descriptive study by **Mony et al.,** [47] in Karnataka explores the diversity within the ASHA programmes in different districts and overall within Karnataka. The major findings of this study were that the ASHA workers perform tasks mostly as link workers and community health workers and to only a small extent as social activists. Within the domain of their link worker role, through their home visits to the households of community members they have contributed to improvements in the basic antenatal care and also in increasing the number of institutional deliveries and immunisation. It was also found that there is inadequate coverage of marginalized households within villages and hamlets in rural and periurban Karnataka.

36. A cross sectional study conducted on ASHAs working in Saurashtra region of Gujarat by **Maheshkumar Choudary et al.,**[48] showed that majority of ASHA (92.26%) correctly knew about minimum antenatal visit required for pregnant women and time for 1st TT injection (77%) but only two third of ASHA (65.98%) knew about correct dose & duration of iron folic acid tablets. Almost $3/4^{th}$ of ASHAs (74.74%) either did not know or gave incorrect answer for the method of removal of breeding places of mosquitoes. Majority of ASHA workers (90.72%) knew about correct use of Paracetamol as first aid in minor

ailments. 75 – 80 % of ASHAs knew regarding the correct usage of ORS powder and primary treatment of snake bite or scorpion bite. 3/4th of (72.68%) ASHA knew that they were the member of VHSC and same number of ASHA (72.16%) knew that meeting were held at the interval of 3 months.

MATERIALS AND METHODS

The current study was carried out in Karnataka state, India. A field survey of ASHAs was undertaken to collect data relating to ASHA‘s perception about quality of training, knowledge about their roles and responsibility, details about their income, time disposal, quality of supervision, interaction with the Panchayat and health personnel in the region, etc.

Study design- Cross sectional study

Study area- Vijayapur District

Total study period- March 2005 to March 2016

Study subjects- All the ASHAs of 3 taluk’s (Vijayapur, Basavana Bagewadi and Muddebihal) of Vijayapur district.

Inclusion Criteria

1) All the ASHAs working for more than 6 months
2) ASHAs who have undergone training

Exclusion Criteria

1) Newly recruited ASHA’s (< 6 months)
2) ASHA’s who do not give their consent.

Discontinuation and withdrawal criteria- If the participant became too distressed during the interview due to any reason or wanted to leave the study midway due to any reason, they could withdraw from the study at any time.

Sample size:

Sample method – Simple Random Sampling

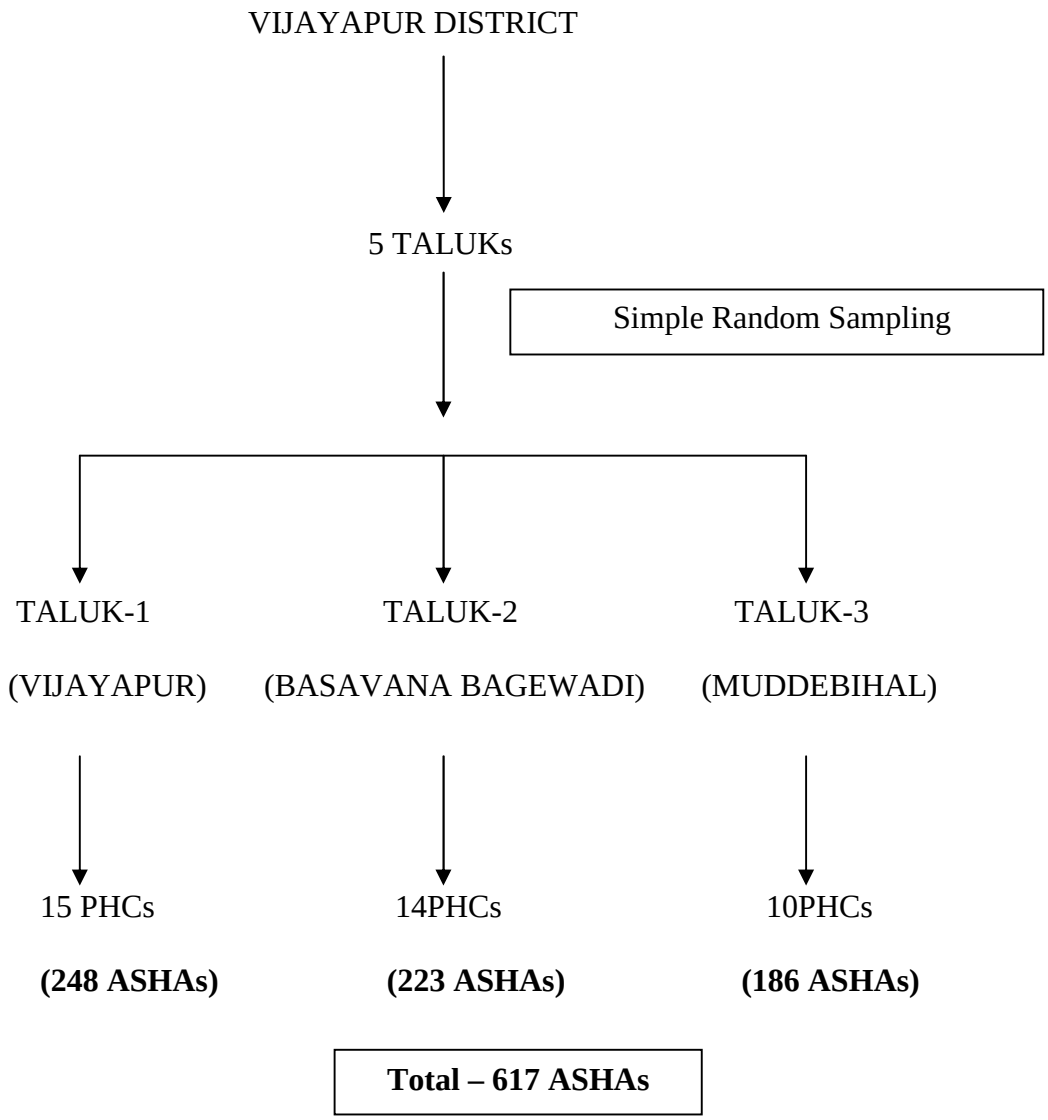
Stage 1- Viijayapur District has 5 taluks**.** Three taluks out of five namely Vijayapur, Basavana Bagewadi and Muddebihal taluks were selected by using Simple Random Sampling for the study.

Stage 2- Official permission was obtained from District Heath Officer, Vijayapur .

Stage 3- Details of ASHA's working in the above three taluks were obtained from District Health Office, Vijayapur. Along with that, information of ASHA facilitator and the details of all the Medical Officers and their PHC's of the study area were obtained.

248 ASHA's are working under 15 PHC's in Vijayapur taluk, 223 ASHA's are working under 14 PHC's in Basavana Bagewadi taluk and 186 ASHAs are working under 10PHCs in Muddebihal taluk. So a total of 617 ASHA's were included in the study.

Amongst all the 617 ASHA's, those who have been working for more than 6 months were included in the study.


VIJAYAPUR DISTRICT
5 TALUKs
Simple Random Sampling
TALUK-1
(VIJAYAPUR)
TALUK-2
(BASAVANA BAGEWADI)
TALUK-3
(MUDDEBIHAL)
15 PHCs
(248 ASHAs)
14PHCs
(223 ASHAs)
10PHCs
(186 ASHAs)
Total – 617 ASHAs

Data Collection:

Step 1- Ethical considerations

Permission to conduct the study and ethical clearance was obtained from the institutional ethics committee. Participants were fully informed about the purpose, procedures, benefits and risks of the participation in the study. Participation in this study was voluntary. Participants were informed that all the records pertaining to the study would be confidential and that numbers instead of names would be used to identify participants and data will be used for academic purpose only.

Step 2- Designing of Questionnaire

A pre-designed, semi- structured questionnaire was prepared in accordance with the study objectives. The questionnaire was prepared in English and the interview was conducted in Kannada language by explaining them questions one by one.

Step 3- Piloting of the questionnaire

The pre-designed, semi- structured questionnaire was tested with the help of Pilot Study on fifty ASHA's to test the feasibility of the study. The data collected was analysed and changes were made in the questionnaire accordingly.

Step 4- Identification of the study subjects and rapport building

List of ASHAs working under respective PHCs were obtained. A pre-set date was designated with the prior permission of the Medical Officer. After obtaining his permission, ASHA facilitator was informed to mobilise the ASHAs from nearby 4-5 surrounding PHCs to a PHC which was decided as the centre for data collection. A preliminary self-introduction to every subject, orientation about the study, purpose of the study and manner in which it will be carried out was explained to them.

Step 5- Data collection by interview technique

It included a questionnaire based oral interview. The interview was conducted by the investigator after taking oral consent of the study subjects at the PHC. Face to face interviews was carried out in Kannada, explaining them each question in detail and making sure they understand every bit of it. Once, all the ASHAs finished the question, and then the next question was taken up in the interview.

The questionnaire for the study consists of the following components

Part 1- consists of socio- demo graphic status of ASHAs along with details of, family and occupational history based on standard format.

Part 2- was a questionnaire for the assessment of training details.

Part 3- consisted questions about attitude about ANC/PNC care, child health, personal hygiene, family planning and communicable diseases.

Part 4- questionnaire regarding drug kit and usage

Part 5- consisted questionnaire regarding practice of ASHAs

Part 6- it consisted questionnaire regarding their payments and incentives.

Initially, general data (socio-demographic, economic) were asked. When they were comfortable and started interacting freely and rapport was established, the remaining questions, which were about the knowledge and practice, were asked.

Analysis plan

Step 1- All responses were tabulated by the investigator using Microsoft Excel 2007 software. Graphical representations were made wherever necessary.

Step 2- Data was analysed by using SPSS software version 17.0

Statistical used are-

- Mean
- Proportions and percentages
- Chi- square test

RESULTS

Table 1- Socio-demographic profile of ASHA

		Frequency	Percent
Age profile of ASHAs Mean age- 30.67 S.D:±4.65	**20-29**	**290**	**47.0 %**
	30-39	**323**	**52.4%**
	40-49	**4**	**0.6%**
Marital status of ASHAs	**Married**	**423**	**68.6%**
	Widowed	**76**	**12.3%**
	Separated	**118**	**19.1%**
Educational status	**High school**	**534**	**86.5%**
	College	**83**	**13.5%**
Religion	**Hindu**	**591**	**95.8%**
	Muslim	**18**	**2.9%**
	Others	**8**	**1.3%**
Monthly income	**<5000**	**459**	**74.4%**
	≈5000.00	**107**	**17.3%**
	>5000	**51**	**8.3%**
Husbands occupation	**Farmer**	**308**	**72.8%**
	Daily wage worker	**73**	**17.2%**
	Unemployed	**42**	**10%**
Family type	**Nuclear**	**482**	**78.1%**
	Joint	**135**	**21.9%**
Does the ASHA work for same village	**Yes**	**494**	**80.1%**
	No	**123**	**19.9%**
Duration of service	**<5 years**	**257**	**41.6%**
	> 5 years	**360**	**58.4%**

Above table represents socio-demographic profile of ASHAs who were studied. Out of 617 study subjects, maximum number of them were from the age group 30-39 (52.4%), followed by the age group 20-29 (47%). The mean age of the study subjects in the given study was 30.67±4.65. Majority of ASHAs were married (68.6%) and nearly 32% were either separated or widowed. About 86.5% of ASHAs were High School Educated. 95.8% ASHAs were Hindus, with monthly income less than 5000 (74.4%). Most of the ASHAs (78.1%) revealed that they come from nuclear family and work for the same village in which they were residing (80.1%). Just about 42% of the study subjects were working as ASHAs for less than 5 years and 58% for more than 5 years.

Table 2 - Selection of ASHAs in the study population

		Frequency	Percent
Were there any focused group discussion held?	**Yes**	**9**	**1.5%**
	No	**608**	**98.5%**
Was there a Gram Sabha meeting held during selection?	**Yes**	**78**	**12.6%**
	No	**539**	**87.4%**
Before joining as ASHA, did you work as community based worker?	**Yes**	**16**	**2.6%**
	No	**601**	**97.4%**

The above table represents details about selection of ASHAs. 98.5% of ASHAs told that there was no focused group discussion held in their village, before they were appointed as ASHAs. Majority of ASHAs (87.4%) revealed that there were no Grama Sabha meeting held during selection and only 2.6% of ASHAs worked as community based worker before joining as ASHA.

Fig 1- Selection of ASHAs

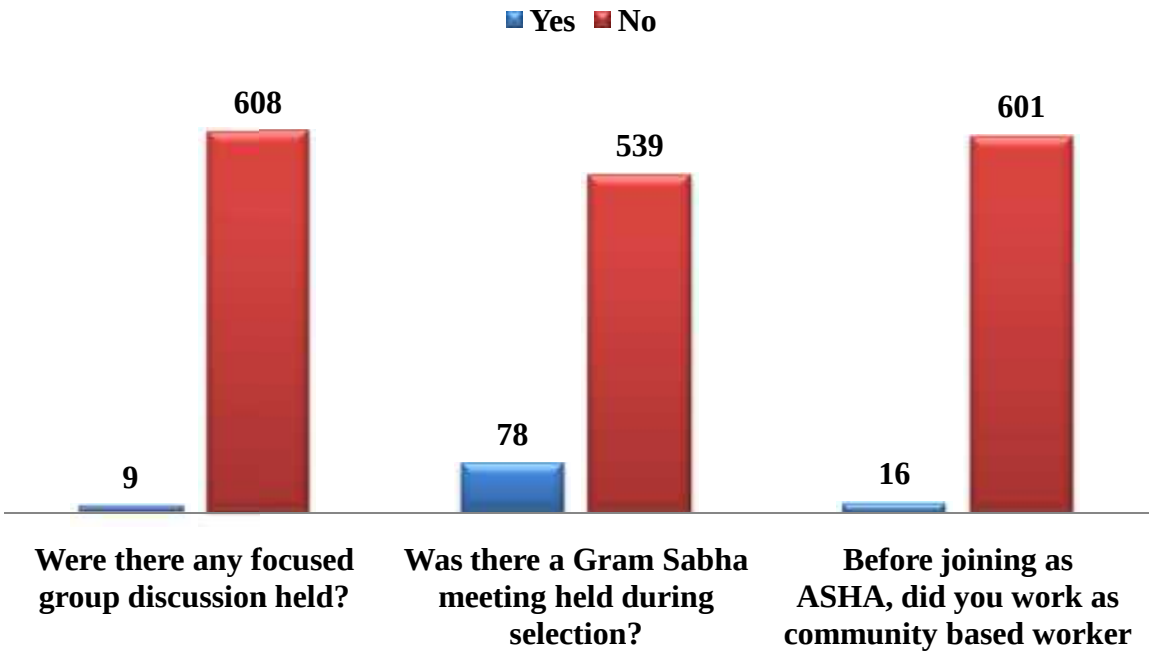


Table 3- Distribution according to people who had a major role in selection of ASHA

	Responses*	
	N	Percent
Entire village	196	31.8%
Village panchayat	492	79.7%
Men in the village	236	38.2%
Women in the village	614	99.5%

*multiple responses

When asked about major role in selection as ASHA, multiple responses showed that, women of the same village had a major role (99.5%), followed by village panchayat (79.7%), men of the village (38.2%) and entire village (31.8%).

Fig 2- Major role in selection of ASHAs

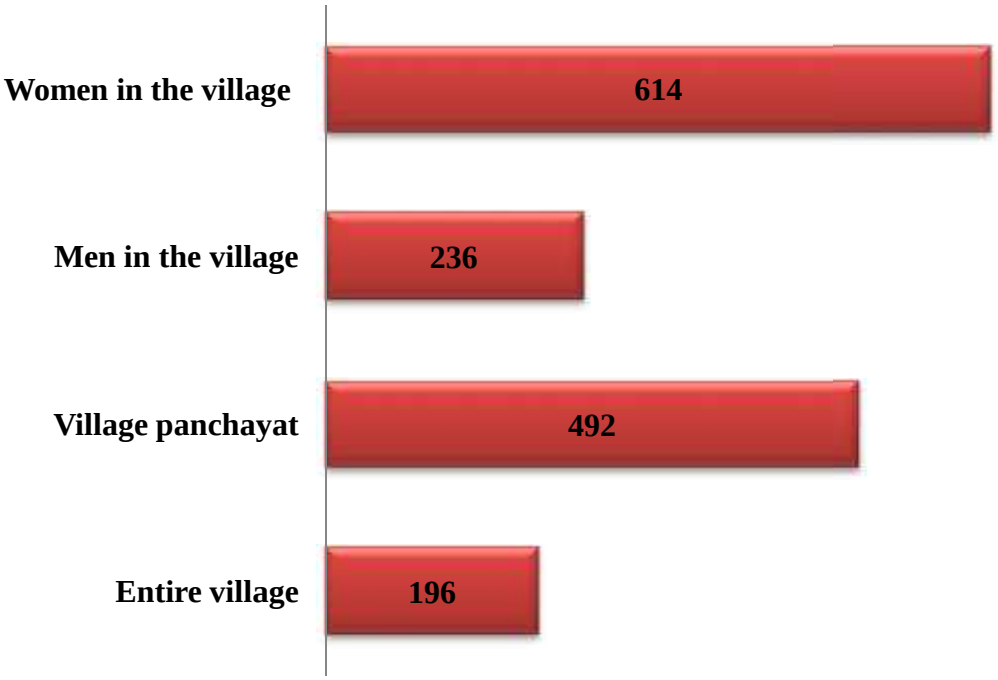


Table 4- Reasons for becoming an ASHA worker

	Responses*	
	N	Percent
Financial	**617**	**100.%**
To gain more confidence/ self respect	**75**	**12.2%**
Wanted to improve health status	**617**	**100%**
Peer pressure	**216**	**35%**

***Multiple Responses**

Details about major factor in ASHAs decision in becoming a community health worker showed that all the ASHAs (100%) said that the major factor was financial and wanted to improve health status of community. It was followed by peer pressure (35%) and to gain more confidence/ self respect (12.2%).

Figure 3- Major reasons to become an ASHA

Table 5 – Training duration and perception of quality of training

		Frequency	Percent
Days of training	**17**	**86**	**13.9%**
	23	**531**	**86.1%**
Do you think it was over crowded?	**Yes**	**32**	**5.2%**
	No	**585**	**94.8%**
Was the teacher able to explain clearly?	**Yes**	**522**	**84.6%**
	No	**95**	**15.4%**
Content of training	**Inadequate**	**46**	**7.5%**
	Appropriate	**449**	**72.8%**
	Excessive	**8**	**1.3%**
	Need refresher training	**114**	**18.5%**
Did you get adequate facilities for accommodation and food during training?	**Yes**	**488**	**79.1%**
	No	**129**	**20.9%**
Did you receive any compensation for attending the training?	**Yes**	**507**	**82.2%**
	No	**110**	**17.8%**

Details of the training session showed that majority (86.1%) of ASHAs had 23 days of training with (5.2%) of ASHAs opined that the training session was over crowded. About 84.6% of ASHAs said that the teacher was able to explain clearly; with 72.8% of ASHAs informed that content of training was appropriate and 18.5% of ASHAs replied that there was a need of refresher training. Majority of ASHAs (79.1%) told that they got adequate facilities for accommodation and food during training and 17.8% of ASHAs told that they did not receive any compensation for attending the training.

Fig 4- Days of training

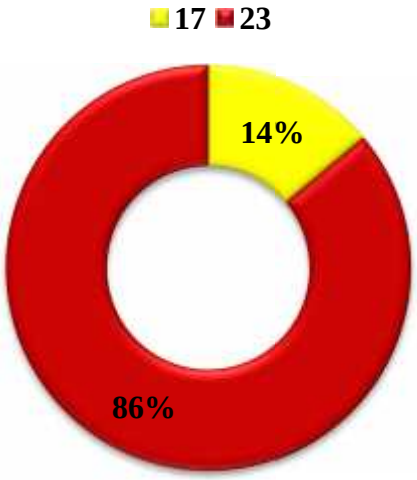


Fig 5- Content of training

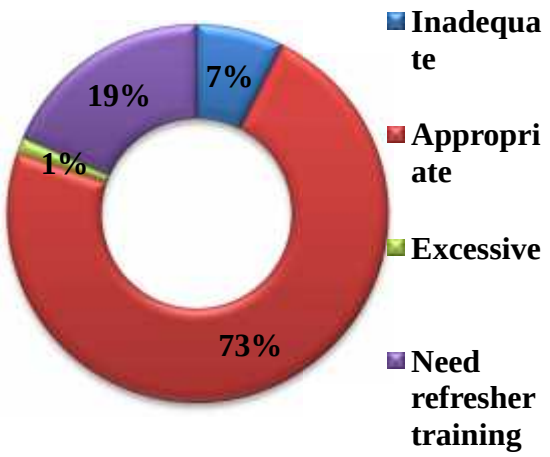


Fig 6- Perception of Training

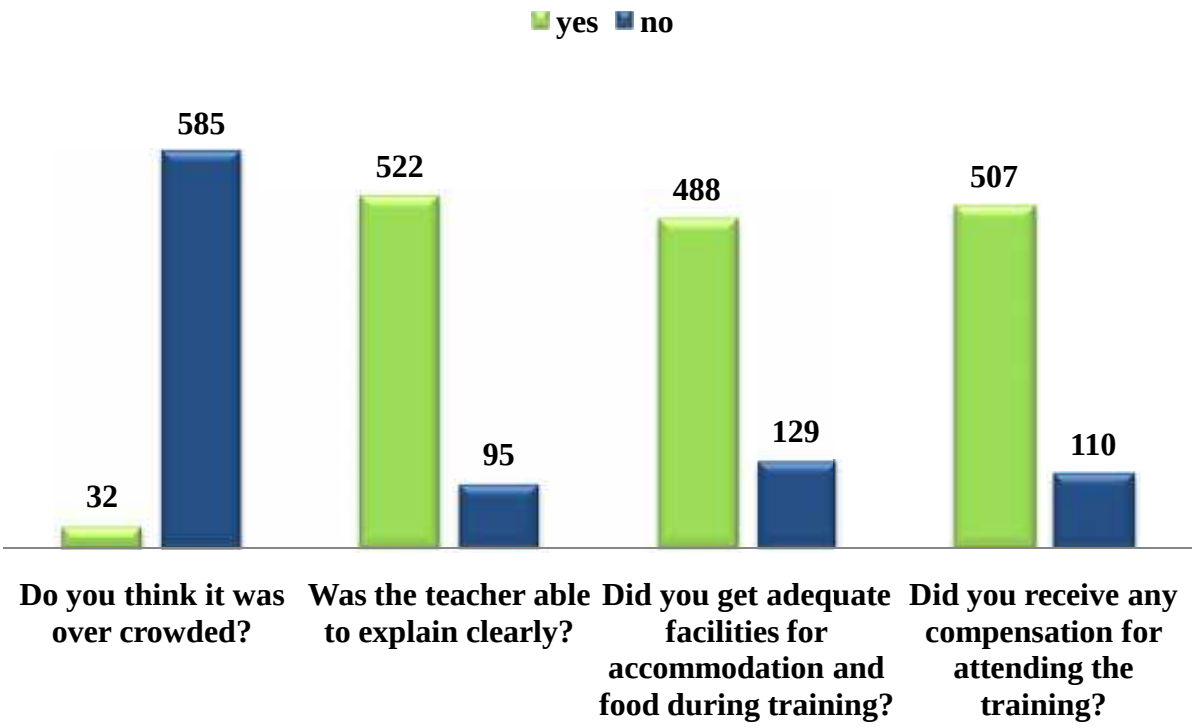
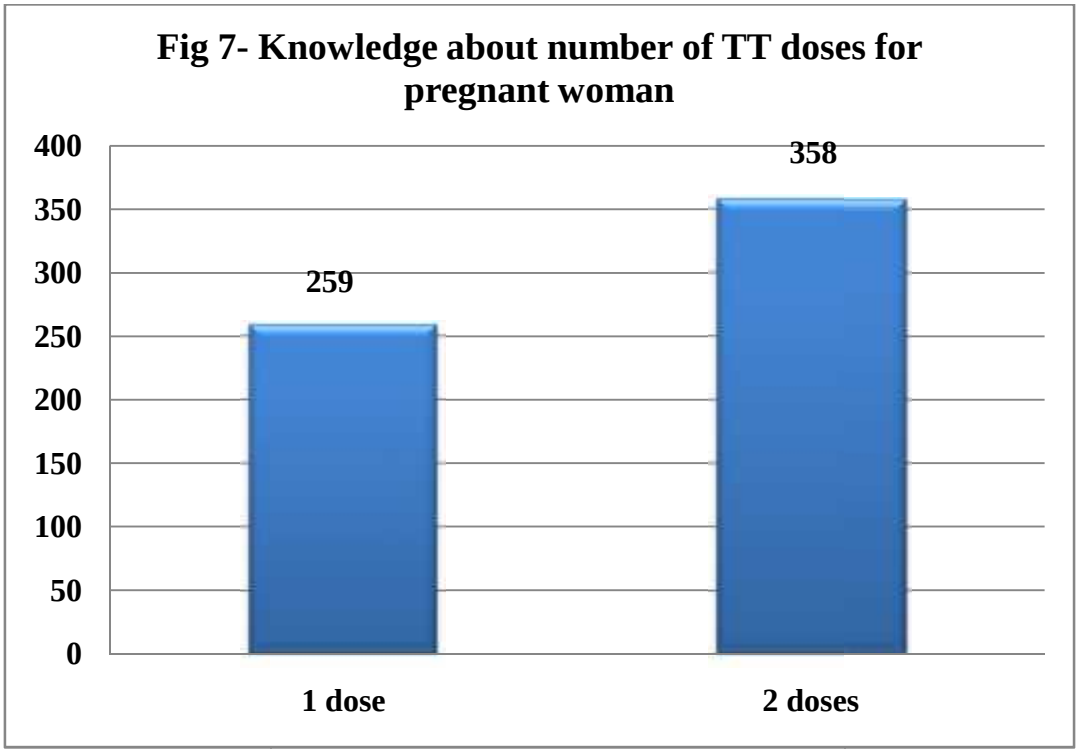


Table 6- Distribution of Knowledge regarding Maternal care among ASHAs.

Variables (n= 617)	Age (%)			Days of Training (%)		Education (%)		Duration of service (%)		Total (%)
	20-29	30-39	40-49	17 Days	23 Days	High School	College	<5 yrs	>5 yrs	
Number of ASHAs who replied ANC visits are necessary	197 (46.1)	228 (53.3)	2 (0.46)	58 (13.5)	369 (86.4)	360 (84.3)	67 (15.6)	138 (32.3)	289 (67.6)	427 (69.2)
ASHAs who replied minimum ANC visits should be 4.	189 (45.7)	222 (53.7)	2 (0.48)	61 (14.7)	352 (85.2)	356 (86.1)	57 (13.8)	175 (42.3)	238 (57.6)	413 (65.3)
ASHAs who responded that they accompany pregnant woman to health centre during labour pains.	258 (47.6)	281 (51.8)	3 (0.55)	76 (14)	466 (86)	469 (86.5)	73 (13.4)	202 (37.2)	340 (62.7)	542 (87.8)
ASHAs who told that they stay with her until her delivery is over	267 (46.8)	302 (53)	1 (0.17)	78 (13.6)	492 (86.3)	495 (86.8)	75 (13.1)	239 (42)	331 (58)	570 (91.8)
ASHAs who replied Hospital as ideal place of delivery	199 (33.7)	286 (48.5)	2 (0.33)	73 (12.3)	516 (87.6)	518 (87.9)	71 (12)	273 (46.3)	316 (53.7)	589 (95.4)
ASHAs who told that all deliveries require skilled birth attendants	203 (41.6)	283 (58.1)	1 (0.2)	69 (14.1)	418 (85.8)	410 (84.1)	77 (15.8)	199 (40.8)	288 (59.1)	487 (78.9)
ASHAs who replied the minimum PNC visits as 6	165 (47.1)	182 (52)	3 (0.8)	41 (11.7)	309 (88.2)	306 (87.4)	44 (12.5)	121 (34.5)	229 (65.5)	350 (56.5)
ASHAs who knew when to call a baby as low birth weight baby	97 (33.1)	196 (66.8)	0 (00)	29 (9.8)	264 (90)	250 (85.3)	43 (14.6)	101 (34.4)	192 (65.6)	293 (47.4)
ASHAs who opined why is it necessary for babies to be wrapped in blankets from head to toe after birth?	83 (27.5)	217 (72)	1 (0.33)	39 (13)	225 (74.7)	250 (83)	51 (17)	132 (43.8)	169 (56.2)	301 (48.7)
	χ^2= 61.6 df = 16 p =<0.05			χ^2= 6.05 df = 8 p = < 0.05		χ^2=7.51 df = 8 p = >0.05		χ^2= 34.0 df = 8 p = >0.05		

The above table represents knowledge of ASHAs regarding maternal care. It includes positive responses (i.e. **YES** & **the correct responses**) which ASHAs gave. Out of 617 ASHAs interviewed, 427 (69.2%) of them told a pregnant women should have ANC visits and 413(65.3%) ASHAs opined that a minimum of four ANC visits are required. While 542 (87.2%) ASHAs told that they should accompany pregnant woman transport to health centre during labour pains and 570 (92.8%) told that they should stay with the pregnant lady until her delivery is over. Also 350 (56.5%) ASHAs revealed that a recently delivered mother should have at least six PNC visits. Other questions regarding knowledge of ANC care revealed that, all the ASHAs (100%) told that, PHC (Govt) was most preferred place for ANC care, followed by Private institution (78.9%). Regarding the amount of food intake by pregnant women, 418 (67.7%) ASHAs opined that she should eat more than she normally does as she is eating for two. 519(84.1%) of ASHAs had knowledge of Iron and Folic acid tablets and were aware that it is taken to prevent anaemia during pregnancy.

From the above table, it was found that knowledge of ASHAs regarding maternal care was significantly associated with age and days of training.



The above figure represents knowledge of ASHAs regarding number of TT injections required during first pregnancy. 259 (42%) of ASHAs told one dose is required, where as 358 (58%) ASHAs told two as the required TT doses for a pregnant woman. Also ASHAs mentioned that only one dose of TT is required if the 2nd pregnancy occurs within 3 years of 1st pregnancy.

Table 7- Distribution of Knowledge regarding Child health among ASHAs

Variables (n= 617)	Age (%)			Days of Training (%)		Education (%)		Duration of service (%)		Total (%)
	20-29	30-39	40-49	17 Days	23 Days	High School	College	< 5 yrs	>5 yrs	
ASHAs who knew correctly what Exclusive Breast Feeding is	273 (47)	305 (52.5)	2 (0.34)	80 (13.7)	500 (86.2)	498 (85.8)	82 (14.1)	261 (45)	319 (55)	580 (94)
ASHAs who knew what colostrum is	269 (48)	288 (51.4)	3 (0.5)	76 (13.5)	484 (86.4)	479 (85.5)	81 (11.4)	226 (40.3)	334 (59.7)	560 (90.7)
ASHAs who told correctly when to start the initiation of Breast Feeding	240 (48.3)	254 (51.2)	2 (0.4)	65 (13.1)	431 (86.8)	414 (83.4)	82 (16.5)	168 (33.8)	328 (66.2)	496 (80.3)
ASHAs who told when the weaning of the baby should be started correctly	275 (47.4)	301 (51.8)	4 (0.68)	79 (13.6)	501 (86.3)	507 (87.4)	73 (12.5)	275 (47.4)	305 (52.6)	580 (94)
ASHAs who were aware of the correct immunisation schedule	132 (40.8)	191 (59.1)	0 (00)	53 (16.4)	270 (83.5)	267 (82.6)	56 (17.3)	129 (38.7)	194 (61.3)	323 (52.3)
ASHAs who knew what is meant by ARI correctly	288 47.2)	318 (52.1)	4 0.65)	86 (14)	524 (86)	528 (86.5)	82 (13.4)	255 (41.8)	355 (58.2)	610 (98.8)
ASHAs who could explain the steps in preparation of ORS correctly	287 (47)	320 (52.3)	4 (0.65)	86 (14)	525 (86)	528 (86.4)	83 (13.5)	290 (47.4)	321 (52.4)	611 (99)
	χ^2=8.95 df = 12 p = >0.05			χ^2= 0.762 df = 6 p = <0.05		χ^2= 6.47 df = 6 p = > 0.05		χ^2= 30.05 df = 6 p = <0.05		

The above table represents knowledge of ASHAs regarding Child health. It includes positive responses (i.e. **YES** & **the correct responses**) which ASHAs gave. Out of 617 ASHAs interviewed, 580(94%) ASHAs had proper knowledge about exclusive breast feeding and the duration, 560 (90.7%) told colostrum was necessary to the baby. Only 323 (52.3%) ASHAs had correct knowledge regarding schedule of immunisation. 580 (94%) ASHAs could tell when the weaning should be started correctly and 611(99%) ASHAs knew about ORS packets and steps in preparing it. Also, 610 (98.8%) of ASHAs knew what exactly ARI was. From the above table, it was found that Days of Training and Duration of service were significantly associated with Knowledge of ASHAs regarding Child Health.

When ASHAs were asked about what advice they would give to mothers when the babies are suffering from diarrhoea, 574 (93%) ASHAs told ORS, 264(42.8%) told homemade fluids as the treatment options. 97(15.2%) of ASHAs told that the babies should be referred to higher centre if the diarrhoea is severe.

Fig 8- Advice by ASHAs for treatment of diarrhoea

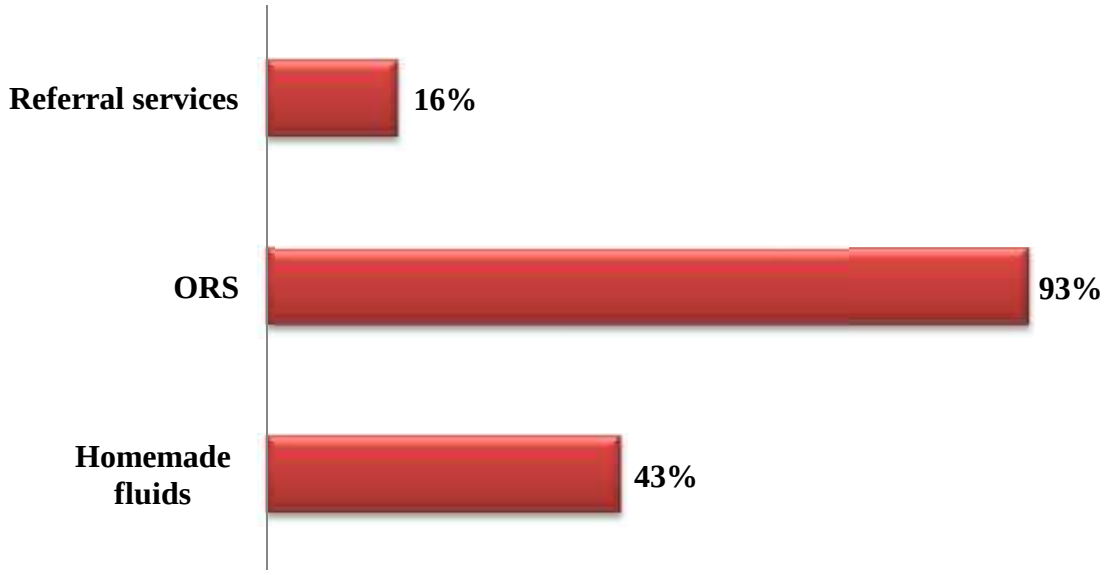


Table 8- Distribution of Knowledge regarding Drug Kit among ASHAs

Variables (n= 617)	Age (%)			Days of Training (%)		Education (%)		Duration of service (%)		Total (%)
	20-29	30-39	40-49	17 Days	23 Days	High School	College	<5 yrs	>5 yrs	
ASHAs who had Medicine Kit with them	264 (46)	305 (53.2)	4 (0.69)	81 (14.1)	492 (85.8)	504 (88)	69 (12)	249 (43.4)	324 (56.6)	573 (92.8)
ASHAs who had knowledge about the contents of medicine kit	169 (42)	233 (57.8)	1 (0.24)	49 (12.1)	354 (87.8)	352 (87.3)	51 (12.6)	181 (44.8)	222 (55.2)	403 (65.3)
	χ^2= 2.75 df = 2 p = <0.05			χ^2= 0.801 df = 1 p = <0.05		χ^2= 0.835 df = 1 p = >0.05		χ^2= 0.204 df = 1 p = >0.05		

The above table represents knowledge and availability of drug kits with ASHAs. 573 (92.8%) ASHAs had Medicine kit available with them while 403 (65.3%) ASHAs were aware of the contents of the medicine kit. Almost all ASHAs found the drug kit very useful. Most of them (91%) reported PHC as their main supply of the drugs.

From the above table, it was found that knowledge of ASHAs regarding drug kit and its content was significantly associated with Age and Days of Training.

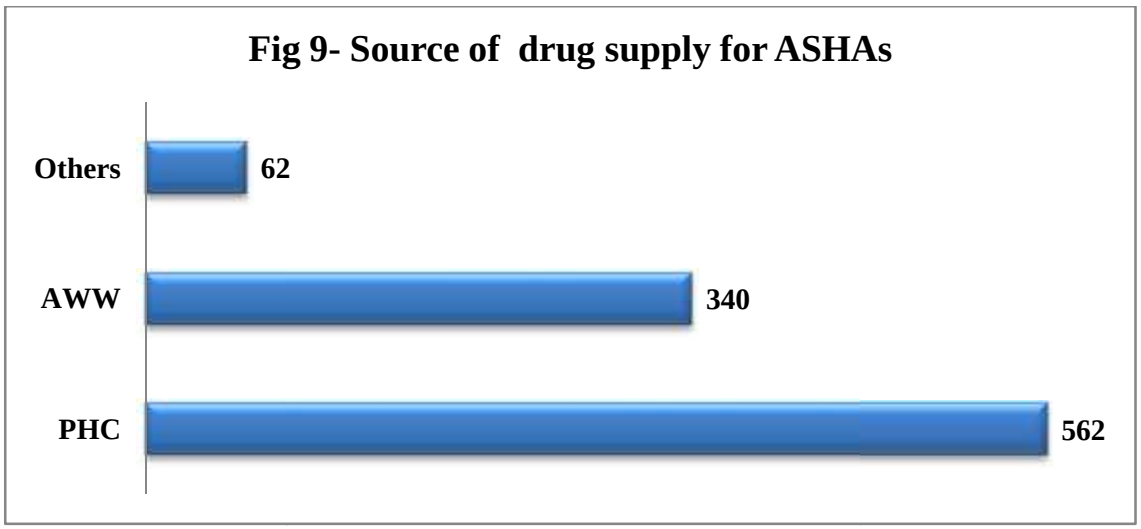


Table 9- Details regarding Role perception (Attitude) of ASHAs (n= 617)

	Total (%)	%
Does the ASHA feel it is Necessary to provide information about existing health services?	**617**	**100%**
Does the ASHA feel it is necessary to create awareness on health, hygiene and nutrition?	**617**	**100%**
Does the ASHA feel it is required to mobilise the community for accessing health services such as		
ANC	**603**	**97.7%**
PNC	**602**	**97.5%**
Instuitional delivery	**599**	**97.08%**
Illness/ Fever	**597**	**96.7%**
Birth preparedness	**597**	**96.7%**
New born care	**601**	**97.4%**
Exclusive Breast Feeding	**600**	**97.2%**
Immunization of mother	**596**	**96.5%**
Immunization of infants	**602**	**97.5%**
Use of Family Planning methods	**599**	**97.08%**

Table 4 shows Role perception (Attitude) of ASHAs. It includes positive responses (i.e. **YES**) which ASHAs gave. Out of 617 ASHAs, all the ASHAs felt that it is Necessary to provide information about existing health services to the community and to create awareness on health, hygiene and nutrition amongst the people. 603 (97.7%) of ASHAs had positive attitude towards mobilising the community for accessing health services such as ANC, 602 (97.5%) for ANC, 599(97.08%) for institutional delivery, 597 (96.7%) for birth preparedness, 601(97.4%) for new born care, 600(97.2%) towards exclusive breast feeding. 596 (96.5%) for immunisation of the mother, 602 (97.5%) for the immunisation of the infants and 599 (97.08%) for advice for use of family planning methods.

Table 10- Job performance of ASHAs

Variables (n= 617)	Age (%)			Days of Training (%)		Education (%)		Duration of Service (%)		Total (%)
	20-29	30-39	40-49	17 Days	23 Days	High School	College	<5 yrs	>5 yrs	
ASHAs who serve population ≤1000	145 (45.7)	169 (53.3)	3 (0.94)	43 (13.5)	274 (86.4)	246 (77.6)	71 (22.3)	121 (38.1)	196 (61.9)	317 (51.3)
ASHAs who work a minimum of 10 hours per week	137 (48.2)	145 (51)	2 (0.7)	36 (12.6)	248 (87.3)	254 (89.4)	30 (10.5)	111 (39)	173 (61)	284 (46)
ASHAs who distribute Iron and Folic acid tablets to pregnant women?	171 (42.2)	233 (57.5)	1 (0.2)	29 (7.1)	376 (92.8)	357 88.1)	48 (11.8)	177 (43.7)	228 (56.3)	405 (65.6)
ASHAs who educate mothers about Exclusive Breast Feeding?	280 (47)	313 52.4)	4 (0.67)	76 (12.7)	521 (87.2)	524 (87.7)	73 (12.2)	219 (36.6)	378 (63.4)	597 (96.7)
ASHAs who encourage mothers to breast feed during diarrhoea	221 (47)	247 (52.4)	3 (0.63)	63 (13.3)	408 (86.6)	399 (84.7)	72 (15.2)	199 (42.2)	272 (57.3)	471 (76.3)
ASHAs who assist ANM on immunisation days?	253 (47.2)	278 (52)	4 (0.7)	72 (13.4)	463 (86.5)	459 (85.7)	76 (14.2)	201 (37.5)	334 (62.5)	535 (86.7)
ASHAs who work as DOTS agent?	39 (38.6)	62 (61.3)	0 (00)	11 (10.8)	90 (89.1)	94 (93)	7 (7)	35 (34.6)	66 (65.4)	101 (16.3)
ASHAs who assist AWW in mobilisation?	269 (47.3)	295 (52)	4 (0.7)	76 13.3)	492 (86.6)	485 (85.3)	83 (14.6)	191 (33.6)	377 (66.4)	568 (92)
ASHAs who provide information about birth/death in their village to PHC/SC	284 (47)	316 (52.3)	4 (0.66)	84 (14)	520 (86)	521 (86.2)	83 (13.7)	213 (35.2)	391 (64.8)	604 (97.8)
ASHAs who are actively involved with PRI/VHSNC in their village?	271 (47.8)	291 (51.4)	4 (0.7)	77 (13.6)	489 (86.3)	507 (89.5)	59 (10.4)	205 (36.2)	361 (63.8)	566 (91.7)
	χ^2= 9.987 df = 18 p = <0.05			χ^2= 1.881 df = 9 p = < 0.05		χ^2= 3.228 df = 9 p = >0.05		χ^2= 11.431 df = 9 p = <0.05		

The above table represents the major activities carried out by ASHAs in their practice area. 317 (51.3%) ASHAs revealed that they serve for population less than or 1000 in number. 284(46%) of ASHAs reported that they work minimum of 10 hours per week. 405 (65.6%) ASHAs told that they are actively involved in distributing Iron and Folic acid tablets to pregnant women. 597 (96.7%) ASHAs informed that they educate mothers about exclusive breast feeding, while 471(76.3%) told that they encourage mothers to continue breast feeding when the child is suffering from diarrhoea. 535(86.7%) of ASHAs revealed that they assist ANMs on immunisation days and 568 (92%) assist AWW in mobilisation. 101(16.3%) ASHAs reported that they are currently working as DOTS agent. 604 (97.8%) ASHAs reported that they provide information about birth and death in their village to the concerning PHC/SC, whereas 566 (91.7%) ASHAs showed that they are actively involved in PRI/VHSNC in their village.

It was found that job performance of ASHAs was significantly associated with Age, Days of Training and Duration of service of ASHAs

In the current study it was also found that 559(91%) of ASHAs assisted Anganawadi worker in weight plotting and counselling of mothers on feeding of underweight children. 537 (87%) ASHAs told that they educate mothers on birth spacing. When asked about the reasons for children not attending the Anganawadi centre, most of the ASHAs told social restriction, like children from low caste, and lack of financial aid of beneficiaries as the most important reasons.

Fig 10- Reasons for children not attending AWC

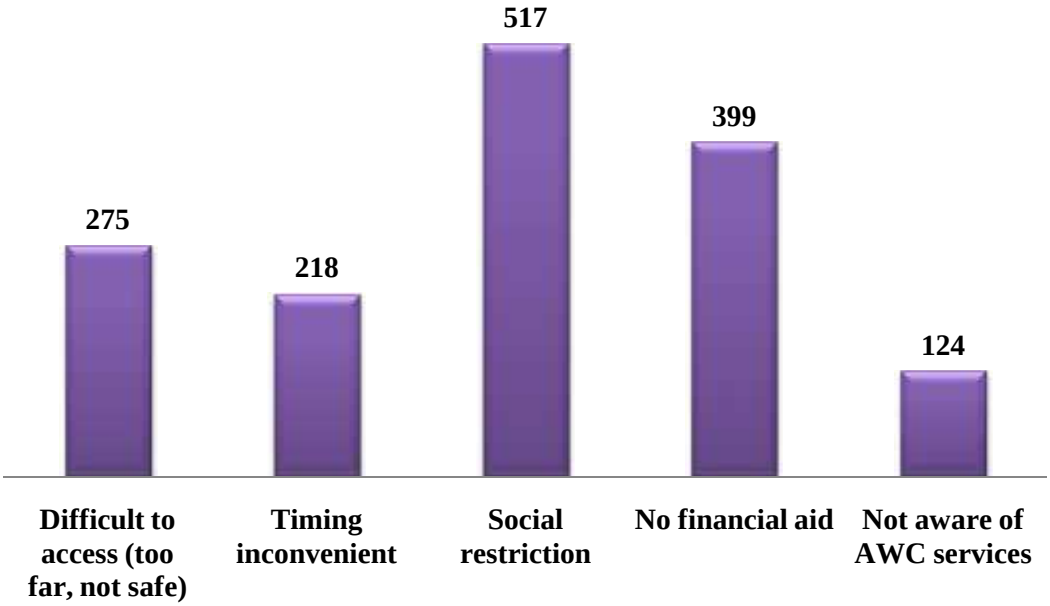
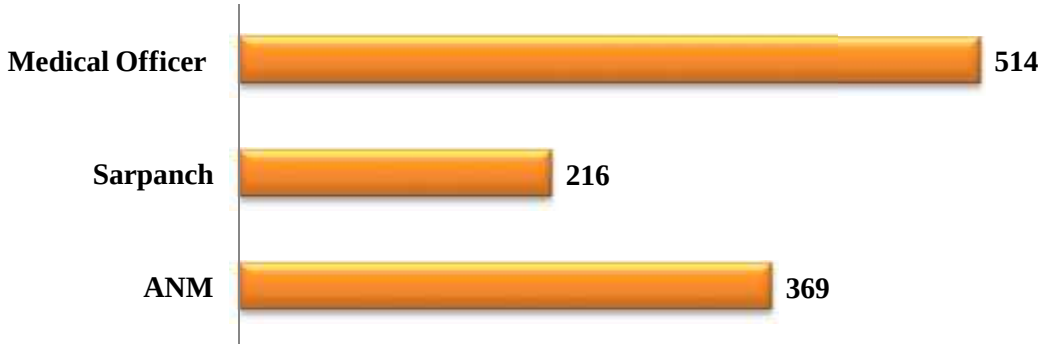


Table 11- Details regarding payments and difficulties faced by ASHAs (n=617)

	n	%
ASHAs who told that there is a delay in their payments?	**471**	**67.5%**
ASHAs who told that they have a Bank account	**604**	**97.8%**
ASHAs who opined that they are happy with their incentives?	**104**	**16.8%**
ASHAs who replied that they want monthly salary?	**617**	**100%**

Regarding payments to ASHAs, 471 (67.5%) ASHAs reported delay in their incentives. 604 (97.8%) ASHAs said they have their own bank account. Only 104 (16.8%) of ASHAs told that they were happy with their incentives and all the ASHAs told that they would prefer monthly salary instead of performance based incentives. Majority of ASHAs, 514(83%) reported the delay in their payments to the medical officer of the PHC under which they serve.

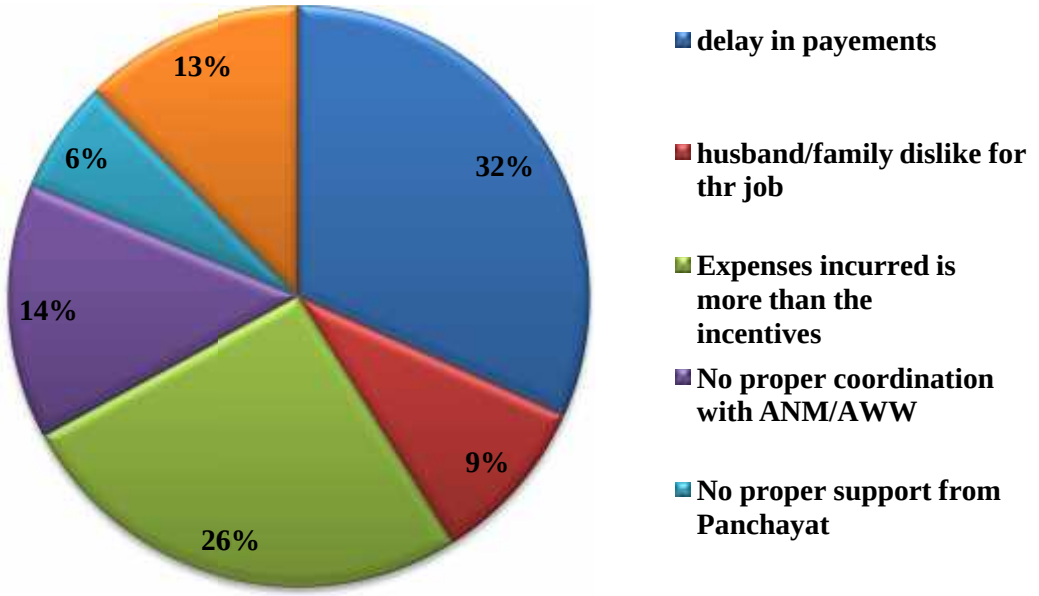
Fig 11- Person to whom ASHAs report their delay in payments?



Problems faced by ASHAs

The main problem faced by ASHAs were delay in their payments (32%), followed by their Expenses incurred is more than the incentives (26%) that they get.

Fig 12- Problems faced by ASHAs



DISCUSSION

The present study was carried out with the objective to study the Knowledge, Attitude and Practice of ASHAs of Vijayapur district along with description of their socio-demographic profile.

DEMOGRAPHIC PROFILE OF THE STUDY SUBJECTS.

Information about socio-demographic details of ASHAs along with information of their spouses can provide us the background against which the knowledge, attitude and practice of ASHAs can be studied.

In the present study out of 617 study subjects, maximum number of them were from the age group 30-39 (52.4%), followed by the age group of 20-29 (47%). The mean age of the study subjects in the given study was 30.67 years with S.D of 4.65, while the ASHAs in the age group above 40 were minimal (0.6%).

Maheshkumar Choudary et al., [48] in their study found that out of the total 194 ASHAs studied, 63 ASHAs (32.47%) were in the age group of 31-35 years, followed by 31.44% in the age group of 26-30 years, which was comparable to our study findings.

SR Shrivastava et al., [36] observed, out of the total 146 ASHA workers, 70 (47.9%) were below the age of 25 years, and is nearly similar to the present study finding. The minimum age of the ASHA worker was 17 years and the maximum age was 34 years.

Dr. Sarawati Swain et al., [18] in their study found that 70% of ASHAs were below 35 years and none were above 45 years. This is a major strength of the

programme. The young can be made to deliver service with motivation and capacity building support.

Prof. D.K. Srivastava et al.,[42] in their study showed that more than half (53.33%) of ASHAs were in the age group 20-29 years, very few (6.67%) were above 40 years and none below 20 years. This difference of majority of ASHAs in the particular age group can be attributed to preference of young women for this profession.

Ram Milan Prasot et al., [27] out of total studied ASHAs (400), majority (75.3%) of them were <35 years while rest were ≥35 years of age.

Abhay singh et al., [49] in their study observed that, majority of ASHAs, i.e, 45.2% and 40% were from age group 30-35yrs and 35-40 yrs, but the ASHAs in the age group of 25-30 yrs were only 8.1%.

National Health Systems Resource Centre (NHSRC)[24] conducted an evaluation of ASHA programme in eight states, namely, Andhra Pradesh, Assam, Bihar, Jharkhand, Kerala, Odisha, Rajasthan and West Bengal on 100 ASHAs and found that about two-thirds of ASHAs were in the 24 to 35 year age group, except in Kerala where only one-third belonged to this age group. In Rajasthan and Jharkhand the remaining were mainly in the 20 to 24 age group, whereas in Kerala, Assam, Odisha, Bihar and West Bengal the majority of the remaining were above 36 years of age. A study conducted by **B.R.D Medical College**[50], found that more than half of ASHAs were in the age group 20-29 years.

Charu Kohli et al., [40] in their study revealed that, mean age (±SD) of ASHAs was 31.84 ± 7.2 years. 8 (14.5%) ASHAs were less than 25 years, 31 (56.4%) belonged to age group of 25-35 years and 16 (29.1%) belonged to 35-45 years age group.

A study by **Desai PB et al.,** [51] showed that**,** out of 107 respondents 17 (15.9%) belonged to the age group of 20-25, 49(28%) to the age group of 26-30, 28(26.2%) to the age group 31-35, 12(11.20%) to the age group of 36-40 and 1(0.9%) to the age group 61 above. Majority of women were belonging to the age group of 26-40. This is because majority women prefer to work after marriage and children as they can contribute to the financial needs of the family.

A study by **Parthasarathi.R et al.,**[52] found that, the mean age of ASHA in the study (34.42 years) was higher than one observed by **Garg et al.,**[13] (31.36 years), **Kansal et al.,** [9](30.14 years), and **Mahyavanshi et al.,**[21] (27.8 years) an, about 67% and 17% of ASHAs in the study were between 31-35 and 25-30 years, respectively which is comparable with observations of **Kansal et al.,** [9] (84% in <35 years). However, dissimilar findings were observed by **Anil Cherian, et al.,**[20] (53% in 25-34 age group), **Garg et al.,**[13] (39% in 20-29 years), **Gopalan et al.,**[8] (45% in 25-30 and 32% in 31-35), **Saxena et al.,** [23](42% in 25-30 and 30% in 31-35) and **Shrivastava et al.,** [36] (47.9%- below the age of 25 years).

Out of 617 study subjects, in the present study, majority of ASHAs were married (68.6%) and educated up to high school (86.5%).

Ram Milan Prasot et al.,[27] in their study observed that, majority of ASHAs were married and all of ASHAs were educated up to required basic minimum qualification of 8th class while very few (7.5%) of them had educated up to graduate or above.

A study by **Prof. D.K. Srivastava et al.,**[42] revealed that Most of the ASHAs (>90%) were having a qualification between 8th to 12th class; which is sufficient for their proper learning and performance as ASHA. Almost all the ASHAs were married

except two, out of whom one was widow and other one separated, which is dissimilar to the present study undertaken, where 12.4% of the ASHAs were widowed and 19.1% were separated.

Dr. Sarawati Swain et al., [18] in their study found that, even though the selection criteria were 8th Class at some places it had been reduced to 5th class. Approximately half (42.5%) of the ASHAs had high school level education or more. The marital status revealed that majority (72.5%) were married, very few were separated and some were widows.

Maheshkumar Choudary et al., [48] in their study stated that, Majority (89.69%) were married and having primary (49.49%) and secondary (34.02%) level of education.

A study by **Parthasarathi.R et al.,** [52] found that, marital status of ASHAs in their study was 100%, which is comparable with **Mahyavanshi et al.,**[21] (90%-married), **Garg et al.,**[13] (89%-married) and **Kansal et al.,**[9] (100%-married). The educational status of ASHAs showed that, 27%, 35% and 39% of ASHAs completed secondary, higher secondary and graduate level of education respectively and was lesser than the observations made by **Garg et al.,**[13] (96% completed middle school (class 8), **Gopalan et al.,**[8] (85% completed class 8), **Saxena et al.,**[23] (Class 8 -51%, secondary-20%) and **Shrivastava et al.,**[21] (45.9% - Below secondary level), but better **Kansal et al.,**[9] (class 8 -31%, secondary- 37%, higher secondary-22%, and graduation-10%),

Dr. Rekha Bhatnagar et al.,[7] in their study found that, most of the ASHAs in the study area were married, 90 % in urban, 93 % in rural and 95 % in tribal block. Among the ASHAs belonging to urban block, 40 % had studied up to secondary; followed by 36 % ASHAs had completed middle level (7th std). 48 % ASHAs in the

rural block had completed middle level and 38 % had completed secondary. In the tribal block almost 50 % studied up to middle level and around 6 % of the ASHAs in all three blocks were graduates, showing similarity to the present study.

In the present study it was found that, amongst 617 respondents, (95.8%) ASHAs were Hindus, (2.9%) were Muslims with monthly income less than 5000 (74.4%).

A study by **Aparajita Dasgupta et al.,** [53] stated that most of the ASHAs (71.69%) were Hindus. An observation which is similar to the present study. Also majority of ASHAs belonged to lower socio-economic class (67% in class 4 and 5 of modified Prasad scale), the findings which corroborated with that of **Gopalan et al.,** [8] (70% in below poverty line category), on the other hand, **Saxena et al.,** [23] observed that 69% of ASHAs belonged to class 2 and 3 of modified Prasad scale

Prof. D.K. Srivastava et al., [42] in their study observed that more than half (61.67%) of ASHAs belonged to below poverty line. It is also an indicator of poverty status of rural areas of this region and the selection of ASHA from the poorer segment of the society.

Farah N. Fathima et al., [17] in their study found that, an overwhelming majority (97%) were Hindus, and nearly two-thirds belonged to socially disadvantaged caste groups. A finding similar to the present study. Majority of ASHAs (59%) were from households with income of 1,000 to 3,000 Indian Rupees (INR) (US$ 18-50) per month; about 16% were from households with income of <1,000 INR per month. For most ASHAs (78.4%), the chief earning member of the family was the husband. ASHA herself was the chief earning member in 31% of the households, collaborating with findings of the present study.

A study by **Desai P.B**[51]**,** observed that out of 107 respondents, 102 (95.5%) were Hindu, 1(.9%) were Jain, 1(.9%) were Muslim and 3(2.7%) were Buddhist. Regarding income, Out of 107 respondents, 95(88.8%) were from the income group of 0-5000, 10(9.3%) were from the income group of 5001-10000, 1(0.9%) were from the income group of 10001-15000 and 1(0.9%) were from the income group of 15000 above. These observations are similar to the present study.

Our study points out the need for inclusion of ASHAs representing minority communities for better representation of religion of all sections.

In the present study, most of the ASHAs (78.1%) revealed that they come from nuclear family. This finding is similar to the study conducted by **NRHM**[3] in seven states (69.4%), **Parthasarathi.R et al.,** [52] (65.4%), **Ram Milan Prasot**[27] (60%), **Neera Jain**[22] (63.8%).

Details about selection of ASHAs in the present study showed that for 98.5% of ASHAs there were no focused group discussions held in their village, before they were appointed as ASHAs. Majority of ASHAs (87.4%) revealed that there were no Grama Sabha meeting held during selection and only 2.6% worked as community based worker before joining as ASHA.

This highlights for better monitoring of selection committees at village level.

In a study conducted by **Nirupama Bajpai et al.,** [15] showed that in several cases Focus Group Discussions were not held before selection of ASHA, more than one candidate was not shortlisted and also Gram Sabha was not held during the selection. PRI members played major role in ASHA selection except in Chhattisgarh,

where the entire village were likely involved in the selection process. In Rajasthan, 40% of ASHAs had work experience as a community health worker before joining as ASHA.

In the present study, when asked about major role played in selection as ASHA, responses showed that, women of the same village had a major role (39.9%), followed by village panchayat (32%), men of the village (15.3%) and entire village (12.7%). Details about major factors influencing in ASHAs decision in becoming a community health worker, showed major reason as financial necessity (40.5%), willingness to improve health status of community, followed by peer pressure (14.2%) and to attain self-confidence/self respect (4.9%)

Saji Saraswathy Gopalan et al., [8] in their study revealed that the major motivational factor was self-motivation (84.7%), the community participation in activities (63.2%) and peer support (77.2%).

A study by **Saraswati swain et al.,** [18] showed that the most important factor motivating them for this job is to earn some money as indicated by the majority (71.3%) of the ASHAs. The second most important factor is that this job gives them opportunity to serve the community as well (33.8%).

Prof. D.K. Srivastava et al., [42] in their study revealed that major motivating factor for ASHAs were either money (81.66%) or absorption in government job (66.66%). However some were also interested in charity (43.33%) and improvement in self-esteem (36.66%).

A study by **Ravindra H. Dholakia et al.,** [15] observed that most of the ASHAs mentioned the desire to improve health facilities in the village as the primary motivating factor. 62.5 %to get more exposure in village and 60.8% as peer pressure.

84.3% of ASHAs reported social prestige and 34% of ASHAs consider financial incentives as a motivating factor for taking up the job.

Perception about quality of training session showed that 86.1% of ASHAs had 23 days of training with 5.2% of ASHAs thought it was over crowded. About 84.6% of ASHAs said that the teacher was able to explain clearly, 72.8% of ASHAs informed that content of training was appropriate and 18.5% expressed the need of refresher training. Majority of ASHAs (79.1%) told that they got adequate facilities for accommodation and food during training and 17.8% told that they did not receive any compensation for attending the training.

A study by **Saraswati Swain et al.,** [18] observed that, most of the ASHAs had received induction training for 23 days over a year. The first round was of seven days, and followed by another four rounds of training, each lasting for four days. In their study, most of the ASHAs admit that the training is beneficial (97.5%), nearly half of them (41.3%) did not consider the training to be adequate. Majority of the ASHAs (87.5%) were satisfied with the training, while 12.5% of ASHAs were not. There was no periodic refresher training pointed out by the ASHAs. Majority of the ASHAs (78.8%) said that all the trainers were able to explain their topic properly while about a quarter of them informed that some trainers have been not able to explain the topic properly. All the trainees have been given the training modules and they have gone through them.

Dr. Shiv Prakash et al., [42] in their study observed that the induction training was followed by periodic training for about two days, once in every alternative month for all the ASHAs. All the trainees were given the training modules and they had gone through them. Majority of (96.67%) were paid stipend for the training, but two did not

receive the stipend due to some reason. About 86.66% of the ASHA received the second training and only 13.33% of the ASHA were not able to receive the second training. 59.7% of ASHAs felt that accommodation and food was unsatisfactory. Training modules had been given to all.

A study by Nirupama Bajpai et al., [15] found that majority of ASHAs (87.6%) found that the training session was overcrowded. 54% reported that they faced language barrier during the training session. 27% of ASHAs thought the trainers were not competent enough to clarify their doubts. 33 % told that food and accommodation facility given to them during the training were unsatisfactory.

A study conducted by **National Institute of Public Cooperation and Child Development**[24] showed that, duration of training ranged from 7 days to 23 days or more. The study further revealed that only 66 % of ASHAs had undergone the requisite training of 23 days or more. About one-fourth (24%) of them had undergone more than six rounds of training and another one-fourth had 5 to 6 rounds of training

Knowledge of ASHAs

The knowledge of ASHAs on the nature of the activities and job responsibility is the prerequisite for effective service delivery. The ASHAs have been interviewed to assess their knowledge about their job responsibilities.

The present study made an attempt study the knowledge and awareness of ASHAs regarding care during pregnancy.

In the current study all the ASHAs had fair knowledge about ANC care, 69% of the ASHAs told that they knew the procedure of registering a pregnant woman. Also, nearly 70% of the ASHAs could give proper details about number and details of ANC visits. These findings were similar to the study done by **Barge Sandhya et al.,**[54] where knowledge about tasks to be performed by ASHAs were assessed and 83% ASHAs responded by mentioning about ANC care and accompanying delivery cases. However in a study by **Dr Saraswati Swain et al.,** [18] half of the ASHAs have poor knowledge about their job responsibilities in ANC care and 45% have average knowledge and 5% good knowledge, owing to the reason of ASHAs working in tribal area.

In our study, when asked about, whether they should accompany pregnant mothers to hospital to delivery and stay until the delivery is over, nearly 88% gave positive response saying that they accompany and stay until the delivery is over. Similar trend was observed in the study done by **Sangeeta Kori et al.,** [55]. Also, in a study done by **Hema Bhatt et al.,** [16] revealed that most of the ASHAs have comprehended accompanying pregnant mother to hospital and counselling community on safe delivery, ANC/PNC. These findings can be attributed in the light of the fact that one of the key motivational factors which drive ASHAs are financial gains and

since delivery and site -related events are financially rewarding, they are becoming the areas of primary interest to the ASHAs.

However in a study conducted by **Nirupam Bajpai et al.,**[15] ASHAs lack knowledge to perform their jobs regarding ANC care, as most have not completed the stipulated 23 days of training as recommended by the MoHFW.

When asked about minimum number of ANC visits that a pregnant woman should have, 66% of ASHAs replied as four. These findings were roughly similar to **Dr. Rekha Bhatnagar et al.,**[7] where 72.3% of the ASHAs mentioned 4 as minimum ANC visits. However in a study done by **National Institute of Public Cooperation and Child Development,** only 24% responded for 4 check-ups.

In the present study majority (96%) of ASHAs opted for Hospital as preferred place of delivery. This was similar to study done by, **MKCGMC et al.,**[35] **State Institute of Health & Family Welfare,** and **Singh et al.,**[10]

In contrast, a study by **Indian Institute of Population Scineces**[56] in Odisha, about 60 per cent of deliveries still take place at home according to DLHS 3 survey.

Regarding Post Natal Care, in present study surprisingly only 56.7% had proper knowledge about postnatal visits which is quite low. Also, only 48% knew what are the criteria for a baby to be termed as “Low Birth weight baby”. These findings are similar to **MKCGMC et al.,**[35] and **Sharma et al.,**[31,] where only 28.3% and 33.4% had proper knowledge of PNC respectively. A study by **NIPCC**[3] in four states showed that, the percentage of beneficiaries who were visited at home, by ASHAs, soon after delivery, during the postnatal period, were on 1st day (43%); 3rdday (56%); 7thday (55%); 14th day (31%); 21st day (33%); 28thday (20%); and 42nd day (19%).

This component of Post Natal Care and importance needs to be highlighted in training to reduce maternal morbidity.

There was significant association of Knowledge of ASHAs regarding ANC/PNC care with Age and Days of training. The possible reasons for association may be due to, the younger age group (20-29) may be more enthusiastic towards learning and the (30-39) age group can be attributed to free from family responsibility, their more time spending towards work and the need to support their family financially. Also, ASHAs who underwent 23 days of training had significant association when compared to ASHAs who had 17 days of training. This shows duration and quality of training need to be focussed and monitored for proper functioning of ASHAs.

In the current study, 94% of ASHAs had a proper knowledge about Exclusive breast feeding and weaning. **Dr. B. Mohapatra et al.,**[57] had similar findings to the current study. Also studies by **Mahyavanshi, K.D et al.,**[21] and **The Population Council**[43] gave similar findings.

However, a study by **NHSRC**[28] in Rajasthan revealed that only 23.4% of ASHAs had proper knowledge of duration of EBF and weaning attributing to the factor that the trainers did not explain the content material properly during training session.

About 91% of ASHAs had knowledge about colostrum and said it is essential for babies to boost their immunity and health. 94% of ASHAs had good knowledge about weaning and told it should start with mashed food and green leafy vegetables should be added regularly in complementary feeds. This was similar to a study

conducted by **Gosavi et al.,** [25] where it was found that ASHAs told to add, mashed egg, meat, fats and oils, whenever possible.

Majority (74.7%) of ASHAs had poor knowledge regarding schedule of immunisation as they had little knowledge as to when to take child for vaccination and for which vaccine. Regarding dosage, level of knowledge of ASHAs of the present study is considerably good, with the exception for doses of Hepatitis B and vitamin A supplementation. This was similar to the study done by **SIHFW.** In a study done by **Singh K. Manish et al.,** [10] majority (70%) of ASHAs had poor knowledge regarding schedule of immunisation as they had little knowledge as to when to take child for vaccination and for which vaccine. On contrary, **Mahyavanshi, K.D, et al.,** [21,] found that considerable proportion of ASHAs (63%) knew immunisation schedule and which the vaccine preventable diseases are.

Almost all the ASHAs in our study had the knowledge of ORS packets and their uses, with 99% able to explain the steps of ORS solution preparation correctly. Similar results were obtained in a study conducted by **Maheshkumar Choudary et al.,** [48] and **Laura M Lamberti et al.,** [58] where knowledge scores of ASHAs regarding ORS were good, owing to the reason of ASHAs undergoing refresher training recently. However in a study by **Mrigen Deka et al.,** [59] revealed that majority of ASHAs had neither clarity nor the steps in preparing ORS solution.

Responses on knowledge about personal hygiene and maintaining menstrual hygiene were positive in the current study. These findings were similar in other studies done by **P.K.Garg et al.,** [13] and **B.Waskel et al.,** [39]

Knowledge of ASHAs regarding child health was significantly associated with days of training and duration of service of ASHAs. ASHAs who underwent 23 days of training, were more exposed to details of the topics when compared to ASHAs who underwent 17 days of training. Also, ASHAs who had served the community, for more than 5 years seemed to have more knowledge about child health, as against to ASHAs who had served less than 5 years.

Attitude (Role Perception) of ASHAs

In our current study on 617 ASHAs, all the ASHAs felt it is necessary to provide information about existing health services and it is necessary to create awareness on health, hygiene and nutrition in the community. This was similar to the study conducted by **Desai PB et al.,** [51] and **Saurabh R Shrivastava et al.,** [36]

Majority of ASHAs had a positive attitude towards their roles and responsibilities regarding ANC, PNC, Institutional delivery, Birth Preparedness, Exclusive Breast Feeding, New Born Care, Immunization of Mother and Infants and use of Family Planning. Similar results have been obtained by multi-state survey by **National Institute of Public Cooperation and Child Development**[24] also studies by **Mrigen Deka et al.,** [59] **Charu Kohli et al.,**[40] and **Shrivatsa et al.,**[42]

However in a study by **H R Salve et al.,** [63] it was found that 21.3% of ASHAs had negative and stigmatised attitude towards mental health.

Drug kit: availability and knowledge of the contents

A drug kit is provided to the ASHA to treat minor ailments in the society. In the present study 92.8% of ASHAs had received the drug kit, whereas all the ASHAs opined that it was useful. This was similar to study by **Dr. Saraswati Swain et al.,** [18] where in 75% have received the kit with medicine and six have received the empty kits. A study by **Hema Bhatt**[16] revealed that 14.5% of ASHAs reported they received medicine kits which were incomplete in many respects. Majority of ASHAs lacked knowledge on proper doses of drugs. It was found that they were not able to use AYUSH medicines that are in the kit because of lack of knowledge about the doses and utility of these drugs.

A study by **CORT**[29] in Madhya Pradesh, found that government had not provided the kit, but few drugs were provided on an adhoc basis.

When enquired about the frequency of drug kit replishnment almost equal percentage of ASHAs said monthly and anytime. A study by **Dr Saraswati Swain et al.,** [18] revealed that 81.7% of ASHAs have stated that the medicine kits are not replenished regularly. ASHAs also opined that, since minor symptoms like fever and diarrhoea are commonly occurring events in every village setting and ready availability of drugs with them, will not only enhance her reputation amongst the community but also make her more acceptable to them. Similar findings were found in a study by **Public Health Resource Society**[43].

Knowledge of Drug kits and contents of the kit was significantly associated with age and days of training. This can be explained due, as the age of ASHAs increases, they are more experienced and more aware of medicines and what they are used for. ASHAs who had 23 days of training might have more topics covered in detail regarding drug usage and their doses, when compared to ASHAs who had only 17 days of training.

Practice of ASHAs

Nearly half (48.6%) of the ASHAs in our revealed that they are catering to population of more than the stipulated norm of 1,000. This is because of lesser number of ASHAs working against expected number this district. These results were found similar to a study by **Hema Bhatt**[16], where it was found that at many of the places the ASHAs had to cater a population more than 1000. **Bhatnagar et al.,**[7] found that almost 50 per cent ASHAs were covering population ranging from 1000-1500.

However, the density of ASHA deployment varies across and within states, with most states having over 50 per cent of ASHA catering to a population of less than 1000. In a study conducted by **National Institute of Public Cooperation and Child Development**[24] found that in tribal areas of Jharkhand, Khammam and Banswara, ASHA density is less than one per 500, in about 25 per cent, 36 per cent and 19 per cent, respectively, indicating that states have interpreted the norms to suit their contexts to some extent.

Large number of ASHAs covering a population of more than 1000 reflects urgent need to fill the vacancies.

Home visits are an opportunity to provide preventive, promotive and curative care. In the current study nearly half of ASHAs (51.4%) revealed that they cover less than 10 household per week. These findings were similar to, **Nirupama Bajpai**[15] in her study; found that ASHAs visited on an average 3 to 4 household per day in a village.

91.2% and 89.6% of ASHAs in the current study revealed that they regularly register all pregnant women in their service area and inform ANM about pregnancies they have registered. These findings were similar to a study by **State Institute of**

Health & Family Welfare, Uttar Pradesh[22]**.** A study by **Haider et al.,** [60] also revealed that majority of ASHAs were actively involved in registering of pregnant women.

In the current study, surprisingly only 65.6% of ASHAs revealed that they keep a constant tab on consumption of Iron and Folic acid tablets by pregnant women. However in a study by **Partha Pratim Pal et al.,** [61] 62% of the ASHAs revealed that, they made sure all the pregnant women consume Iron and Folic Acid tablets.
Lack of awareness amongst 35% of ASHAs in our study about Iron and Folic acid shows the need of refresher training or onsite supplementation supervision.

Almost all ASHAs (97%) revealed that they encourage mothers to start breast feeding within 30 minutes of delivery and educate mother on exclusive breast feeding. This was consistent with the results of the study done **N.Bajpai et al.,** [15] (96%). A similar study by **Sushama S. Thakre et al.,**[37] and **Divakar S. Nayak et al.,**[62] showed 99.4% and 88.6% of ASHAs were giving effective knowledge and training to the mothers on exclusive breast feeding.

43.1% ASHAs told that, they would advice mothers to stop breast feeding at the age of 6 months. These results were roughly similar to a study by **Dr. Shobha Malini et al.,** [35] (45.6%). This suggests there is a need for clarity between weaning and stopping of exclusive breast feeding through refresher training to ASHAs.

Regarding immunisation activities, 86.7% of ASHAs told that they were well aware of immunisation dates in their concerned PHCs and assist ANMs on immunisation days. This was consistent with the study by **N.Bajpai et al.,** [15] and **S.Kori et al.,** [55]

Only 16.3% of ASHAs revealed that they work or had worked as DOTS agent. This may be attributed to the factor that many ASHAs had least knowledge about DOTS and RNTCP. The results are consistent with a study by **Dr. Sarawati Swain et al.,** [18] (24.1%).

Where as a study by **S. M. Sagare et al.,**[44] and **Farah N. Fathima et al.,**[17] showed that more than half of the ASHAs (58.14%) & (59.9%) in the study group were working as DOTS agent.

When asked about the distance between the area of the work and nearest CHC/FRU, majority of ASHAs told 10-12km on average. They also mentioned that the usual mode of transport of patients was by rented car (63.9%) followed by using "108" (41.1%). These findings were consistent by **Hema Bhatt**[16], where usage of "108" was not the first choice, as the availability of "108" being operated was very low in number. Also majority of ASHAs listed as transportation of expectant mothers was a major hurdle in shifting them to nearest health facility. In the villages, the transport services were not available especially at night time. Further the charges incurred were much higher than the sanctioned amount for transportation.

A study by **Dr Sarawati Swain et al.,** [18] found that "108" was the common mode of transport. Also 3% of ASHAs revealed that, PRI members help in arranging transport during the non-availability of "108".

Regarding the ASHAs visit to Anganawadi centre, 40.5% Of ASHAs told that they visit more than 3 times a month. They also mentioned that they assist AWW (92%) in maintaining the records of children and pregnant. They also mentioned their help in mobilizing pregnant and lactating women and infants for nutrition supplement. These findings were roughly similar to a study by **Dr Shobha Malini et al.,** [35] and

Hiader et al., [60] where 53% and 59.5% of ASHAs visited the AWC more than 3 times in a month and assisting AWW in updating the list of eligible couples and also the children less than one year of age in the village.

In the current study all the ASHAs opined that the reasons for children not attending AWC, was due to social restriction and deprived financial assistance of the beneficiaries. These findings collaborated with the study done by **Shilpa Karir et al.,** [19] and **Dr Vandhana Kanth et al.,** [20] where difficult in accessing the AWC was also listed as the major cause for children not going to AWC.

In our study, practice of ASHAs was significantly associated with age, days of training and length of service. This can be explained as the age increases their roles and responsibilities becomes more clear to them and also they are comparatively more free from indulgence in household activities, like rearing of small children, pregnancy etc., when compared to ASHAs in younger age group. It was found that ASHAs who had extra 6 days of training, when compared to 17 days of training seem to do understand more and perform their duties better. Length of service was also a major factor in their performance. ASHAs who were more experienced by their service (>5 years) were significantly associated with their roles and responsibilities.

Payments and Incentives

83.3% of ASHAs in our study reported that were not happy and satisfied with their incentives and expressed the need for fixed salary on a monthly basis. These findings were roughly similar to a study done by **Mony et al.,** [47] where majority of ASHAs wanted better incentives for the services that they were giving.

67.5% of the ASHAs in the current study told that there is delay in their payments and most of them report to Medical Officer in-charge followed by ANMs. This observation was also made by **Dr Smitha P.K**[46] where nearly 70% of ASHAs reported the delay and cited as non-availability of funds from the government as the reason for the delay.

A study by **MKCGMC**[35] showed that roughly 40 % of the ASHAs got payments within one week, another 40 % got it between a week and a month, and the remaining 20 %, and it took over a month to avail of the cash benefit.

In the current study 32 (5.2%) ASHAs reported that they are asked for a cut from their incentives by Medical Officer/ANMs. Similar findings were found in a study by **Dr. Sarawati Swain et al.,** [18] where an ASHA reported that the Doctor demands Rs. 200 for each delivery case that she accompanies and if she deny paying, he refuses to put his signature in JSY Card. Whereas another ASHA reported that Dai demands Rs. 50, ANM Rs. 100 and even the doctor demands money at the time of delivery and if it is a male child, beneficiary is forced to fulfil their demand.

These findings are of concern and to be addressed by District Health Administration for transparent functioning of ASHAs.

ASHAs involvement in Village Health Sanitation Nutrition Committee and Panchayat Raj Institution

As a member or member secretary of the Village Health, Sanitation and Nutrition Committee (VHSNC), ASHAs are expected to help convene the monthly meeting of the VHSNC and provide leadership and guidance to its functioning with the help of elected member of Gram Panchayat, who leads the committee.

In our study, 92% of ASHAs were well aware of the objectives of Village Health Sanitation Nutrition Committee and were actively involved in it. It is similar to the findings in the study done by **KCDS et al.,** [30] where awareness about the objectives of the VHSCs was highest among the ASHAs when compared to ANMs. The study also found that ASHAs were well aware about the formation process of VHSNC.

However in a study by **Das A et al.,** [53] most of the ASHAs (82.5%) have indicated that the villages do not have a VHSC. Only 14.5% of ASHAs have indicated about the existence, out of them only 11 have attended the meeting during the last one month to one week.

58.9% of ASHAs told that they received good support from PRI member in regard to community mobilisation and celebration of health days. The results were roughly similar to study **Dr. Shobha Malini et al.,** [35]

Problem Faced by ASHA

In the current study, the main problem faced by ASHAs was delay in their payments. 471 (32%) ASHAs reported the same. All the ASHAs collectively opined the preference for monthly based salary, instead of incentives. This finding was similar to a study done by **MKCGMC et al.,** [35] and **Sharma et al.,** [31]

Other problems include, expenses incurred more than incentives, non-cooperation by ANM/AWW and no proper support from Panchayat. These results were consistent in a study conducted by **Kumar P.B et al.,** [9] and **Mony et al.,** [47]

SUMMARY

In our study, it was found that,

- Maximum number of ASHAs were from the age group 30-39 (52.4%), followed by the age group 20-29 (47%). The mean age of the study subjects in the given study was 30.67±4.65, while the ASHAs in the age group above 40 were minimal. Majority of ASHAs were married (68.6%) and High School Educated (86.5%). 95.8% of ASHAs were Hindus, with monthly income less than 5000 (74.4%).
- Women of the same village had a major influence in selection of ASHAs (39.9%), followed by village panchayat (32%), men of the village (15.3%). Details about major factor in ASHAs decision in becoming a community health worker showed that 40.5% of ASHAs said that the major factor was financial and wanted to improve health status of community. It was followed by peer pressure (14.2%) and to gain self respect/ confidence (4.9%).
- Regarding training of ASHAs, 86.1% of ASHAs had 23 days of training with 5.2% of ASHAs thought it was over crowded. 84.6% of ASHAs said that the teacher was able to explain clearly. Majority of ASHAs (79.1%) told that they got adequate facilities for accommodation and food during training and 17.8% told that they did not receive any compensation for attending the training.
- About 69% of the ASHAs told they know the procedure of registering a pregnant woman. Also, nearly 70% of the ASHAs could give proper details about number and details of ANC visits. 88% of ASHAs gave positive response saying that they accompany and stay until the delivery is over. 66% of ASHAs replied four as the minimum number of ANC visits that a pregnant woman

should have. Only 56.7% of ASHAs had proper knowledge about postnatal visits which is quite low. Also, only 48% knew what are the criteria for a baby to be termed as “Low Birth weight baby”. 94% of ASHAs had a proper knowledge about Exclusive breast feeding and weaning and only 23.4% of ASHAs had proper knowledge of duration of EBF and weaning. Majority (74.7%) of ASHAs had poor knowledge regarding schedule of immunisation as they had little knowledge as to when to take child for vaccination and for which vaccine.

- 92.8% of ASHAs had received the drug kit however all the ASHAs agreed that it was useful. Majority of ASHAs lacked knowledge on proper doses of drugs.
- Nearly half (48.6%) of the ASHAs under this current study revealed that they are catering to population of more than the stipulated norm of 1,000. Only 65.6% of ASHAs revealed that they keep a constant tab on consumption of Iron and Folic acid tablets by pregnant women. 97% of ASHAs told that they encourage mothers to start breast feeding within 30 minutes of delivery and educate mother on exclusive breast feeding. 86.7% of ASHAs told that they were well aware of immunisation dates in their concerned PHCs and assist ANMs on immunisation days. Only 16.3% of ASHAs revealed that they work as DOTS agent. 40.5% Of ASHAs told that they visit AWC more than 3 times a month.
- 83.3% of ASHAs reported that they were not happy and content with their incentives and demanded fixed salary on a monthly basis. 67.5% of the ASHAs in the current study told that there is delay in their payments and most of the report to Medical Officer in-charge followed by ANMs.

- In the current study, the main problem faced by ASHAs (32%) was delay in their payments, followed by expenses incurred more than incentives, non-cooperation by ANM/AWW and no proper support from Panchayat.

CONCLUSION

- Many of the ASHAs are catering to a population of more than the stipulated norm of 1,000. Some population in some of the villages in the Muddebihal taluk is spread over large areas and the ASHAs failed to visit certain areas and certain section of the population remained un-served and un-reached. Measures need to be taken to address these issues
- On the whole, knowledge of ASHAs about care during pregnancy and care of newborn was considerably good. Whereas knowledge of ASHAs about the immunisation schedule was found to be inadequate.
- There is a dire need to upgrade the availability of Drug kits and also adequate training of ASHAs on the use of medicines in the kit.
- Activities linked to financial incentives were getting high priority and other activities are given less importance by the ASHAs.
- Transportation of expectant mothers was a major problem. In the villages, the transport services were not available, especially at night time. Further, ASHAs told that the charges were much higher than the sanctioned amount for transportation.
- The entire compensation received by ASHAs per month is very low which is quite inadequate for their sustenance.

RECOMMENDATIONS

- The study revealed that nearly 50 % of ASHAs were catering to a population of more than 1000 indicating a burden on them. The selection criteria of ASHAs should be adhered to the guidelines strictly and needs to be monitored by involvement of all the stake holders.
- An aptitude test at a pre recruitment level should be considered for hiring of new ASHAs. As mere education level was not a significant factor for ASHAs capability to understand her roles and responsibility and capability to perform her work.
- Duration and content of training was found to be a significant factor in the work performance of ASHAs. Hence, importance should be given in this area. Refresher training at regular interval should be imparted at PHC, Block and district level on specific topics and skills.
- Develop a clearly defined, finite list of responsibilities for the ASHA so that she is fully aware of the roles and activities she must fulfil. Ensure that distinct roles and responsibilities are clearly communicated between the ASHA, ANM, and AWW, to avoid overlap and increase efficiency at PHC level.
- The irregularity in the area of supply of medicine kits should be investigated and appropriate action should be taken. The ASHAs must get the medicine kits complete in all respects and replenished regularly.
- Compensation for ASHAs should be suitably increased. Payment should be done at the work site without any delay through cheque. Possibility of making direct release of money at PHC level should be explored by the government.
- The role of ASHA facilitator needs to be made more accountable at taluk level, by increasing their number and frequency of visits to the field area for monitoring and supportive supervision work of ASHAs.

LIMITATIONS

- This was a cross-sectional study and involved self reporting of ASHAs. There may be chances of bias in terms of reporting high knowledge and job performance. Hence an onsite observational study would have been better.
- We did not include the beneficiaries for assessing the job performance of the ASHAs.

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ANEXXURES

PROFORMA

1) Reference Number:
2) Date of Interview:
3) Village:
4) Taluk:
5) District:

Personal Information
8) Age: _____
9) Marital status: Unmarried/ Married/ Widowed/ Divorced/ Separated
10) Education: _____
12) Religion: Hindu/ Muslim/ Other_____
14) Household income: Rs_____/m
15) No. of members in your household: _____
16) Husband's occupation: _____
17) Household type: Nuclear/ Joint
18) Does the ASHA work for same village/ village Panchayat she stays in? **Y/N**
19) Month and year of joining ASHA programme: ___, ____ (mm/yy)

Selection of ASHAs
20) Were there any focused groups discussions held in your village before selection? **Y / N**
21) How many other candidates, apart from you, were shortlisted candidates for ASHA selection? ___
22) Was there a Gram Sabha meeting held during the selection process? **Y/N**
23) Who do you think had a major role in your selection? Entire village/ Village Panchayat or other leaders/ mainly men in the village / Women in the village only /_____
24) Before joining as an ASHA, did you work as a community based worker? **Y / N**
25) For how long? ____
26) Major factor in your decision to become an ASHA- Financial incentives/ opportunity to get more exposure/ wanted to improve health facilities/ peer pressure.

Training
27) How many full days of training did you get? __ /23
28) How many ASHA trainees were there with you in the session? ____
29) Did you think it was overcrowded? **(Y / N)**
30) Was the teacher able to explain clearly? **Y / N**
31) Content of the training: (0-inadequate, 1-appropriate, 2- Excessive, 3-Need refresher training)
32) Did you get adequate facilities for accommodation and food during the training? **Y / N**
32) If no, what were the problems__?
34) Did you receive any compensation for attending training? **Y / N** How much? Rs_____
35) Do you get regular on job training? **Y / N**
36) Who provides it? (ANM/NGO/Other_____)

Refresher training, (not applicable ASHAs who have less than 6 months of service,)
37) Do you get any refresher training? **Y/ N/ NA** (not applicable to ASHA of less than 6 months) If no/ NA, go to next section.
38) Where did you get the training (PHC/sub centre)
39) Duration of the training? __
40) How often do you get such refresher training? _____
41) Ideally, how often would you like it? Monthly/ 3 monthly/ 6 monthly/ annually
42) Who provides the training? _____
43) Do you get any incentives to attend? _____
44) Do they address your difficulties encountered in daily work? **Y / N**

Knowledge of ASHAs

Antenatal /postnatal counselling and breastfeeding

1) Have u registered any pregnant woman/ helped the ANM? **Y/N**
2) Should a pregnant woman should have ANC visits? **Y/N**
3) If yes, HOW MANY TIMES SHE SHOULD HAVE ANC s visits?
4) Place of ANC care- at her home/ANM quarters/ PHC/ private institution
5) Should a woman consume usual quantity/ more than usual/ less than usual of food?
6) How many iron and folic acid tablets she should consume during pregnancy?
7) How many doses of TT she should receive?
8) Is hospital/ home delivery better?
9) Should you accompany the pregnant woman transport to health centres/ institutions during labour pains? **Y/N**
10) Should you stay with her till the delivery is over? **Y/N**
11) How many times do u visit POST-NATAL MOTHER? _____
12) Should u accompany the ANM during her visit? **Y/N**

Child health

13) When the child should be put up to breast? < 30 minutes, >30 min
14) Colostrum, necessary for the new-born? **Y/N**
15) Knowledge about exclusive breast feeding? **Y/N**
16) Knowledge about weaning? **Y/N**
17) Duration of EB -up to 6 months/ up to 9 months
18) Have you heard of immunization? **Y/N**
19) What you will advise for diarrhoea? Homemade fluids/ ORS/ referral.
20) Do u have ORS packets with you? **Y/N**
21) Can they explain the steps in preparing ORS fluids? **Y/N**
22) Can they explain what ARI is? **Y/N**

Personal hygiene-

23) How often would you advice to take Bath- once/twice daily
24) Proper hand-washing? **Y/N**
25) Nails trimming? **Y/N**
26) Change of clothes? **Y/N**
27) Wearing footwear **Y/N**
28) How to clean clothes used as sanitary pads- wash in ordinary water and soap/ wash in boiling water and soap/ dry it in dark space/ dry it in sunlight.

Attitude

29) Does the ASHA feel it is necessary to provide information about existing health services? **(Y / N)**
30) Does the u feel it is necessary to create awareness on heath, hygiene and nutrition? **(Y / N)**
31) Does the ASHA feel it is required to mobilize the community in their access to the health services such as?
32) ANC (Ante Natal Care)? **(Y / N);**
33) PNC (Post Natal Check-up) **(Y / N);**
34) Institution delivery **(Y/N)**
35) Immunization? **(Y / N)**
36) Illness/Fever? **(Y / N)**
37) Do she feel counselling women on following aspects will help to maintain health?
38) Birth preparedness? **(Y / N)**
39) New born care? **(Y / N)**
40) Exclusive Breast feeding? **(Y / N)**
41) Immunization of infants? **(Y / N)**
42) Use of contraceptives/Family planning measures? **(Y / N)**
43) Personal hygiene **(Y / N)**

Drugs

1) Do you have a drug kit? **Y / N**
2) Are they useful? **Y / N**
3) How often do you get it restocked? _____monthly/ anytime.
4) From whom do you get your supply? PHC/ AWW / Other___

Practice

5) What population size do you serve? _____
6) How many households do you visit on an average per week? _____
7) How many hours do you work per week as an ASHA?
8) Have you conducted any group talks/ discussion in past 3 months on: **Y / N**
9) Do you register all pregnant women in your area? **Y / N**
10) How many pregnant women have you registered? _____
11) Do you regularly inform ANM regarding pregnancies registered by you? **Y/N**
12) Source of ANC- ANM/ MO/PRIVATE PRACTIONER
13) Out of pregnant women registered, how many got 1 TT dose____ 2 TT dose_____
14) How many received iron and folic acid tablets?
15) How much? ( )
16) Did they consume all the tablets? **Y/N**
18) Total number of deliveries among women you had registered?
19) Of these, how many had home deliveries? -
20) At how many home deliveries, were you present?
21) Did u call ANM for conducting delivery?
22) How many women did you refer to a government institution for delivery? -
23) Of these, how many did you accompany yourself on their trip to the hospital? -
24) Do u stay with the mothers, until the delivery is over? **Y / N**
25) Distance to institutional place of delivery where you usually refer patients: _____
26) How did they usually travel there? On foot / car / cart
27) How much money did you get from the JSY scheme per delivery? Rs_____
28) Does anyone demand a cut (part of the incentive) from you as a condition of you getting the money? or/ ANM/ Dai/ MO / Other _____ b) How much _ Rs _____
29) Did you educate mothers on Breastfeeding? **Y / N**
30) Did u encourage to start breastfeeding as soon as possible after-normal delivery? **Y / N**
31) Total number of births you have registered in past 1 year? _____
32) How many new-born babies did you visit yourself within 1 week of delivery? _____
33) Do you give info to mothers about proper latching of new-borns to breast? **Y / N**
34) When will you tell the mother to start gradual weaning? Never/ 6 m/ 1 y / 3 y
35) When will you advice mothers to stop breastfeeding completely? Never/ 6 m/ 1 y / 3 y
36) Are you aware of immunization days in your pertained PHCs? **Y / N**
37) Do u assist ANMs in immunization on immunization days? **Y / N**
38) After immunization what advice will you give to the mother?
39) Do u inform the mother about the next immunization date? **Y/N**
40) Should breastfeeding be continued if the baby has diarrhoea? **Y / N**
41) Are you a DOTS agent? **Y / N**
42) Do u inform about birth/ deaths in your village? **Y/N**
43) Do you have an Anganwadi clinic in your neighbourhood? **Y/N**
44) How many times in a month do you interact with AWW professionally? ___
45) Do you provide the AWW with info on pregnant /lactating women in the community? **Y / N**
(0=No; N= provide statistics but no further details; D= provides details about the women including their names but didn‘t follow-up; F= follow-up with AWC to see that they attend here.)
46) Why do you think that children between 6m- 3 yrs. of age don‘t go to AWC?
- A=Difficulty in access (too far/ no safe road/ need to be accompanied/other)
- S=No suitable service provided for that age group; T= Timing inconvenient;
- R=Social restriction due to community/ caste etc; N= No financial backdrop, can buy good food;
- Q=Problem with quality of food; K=Didn‘t know about AWW services;

Payments and incentives

1) Source of incentives?
2) Do you usually experience a long delay in getting your incentives? **Y/N**
3) Who do you report delays to the ANM/Sarpanch/PHC Medical Officer?
4) Do you have a Bank account? **Y / N**
5) Are you happy with the incentives given under the programme? **(Y / N**)
6) Are you demanding regular monthly salary? **(Y / N)** How much? Rs. ____

Miscellaneous

7) Whom do you contact if?

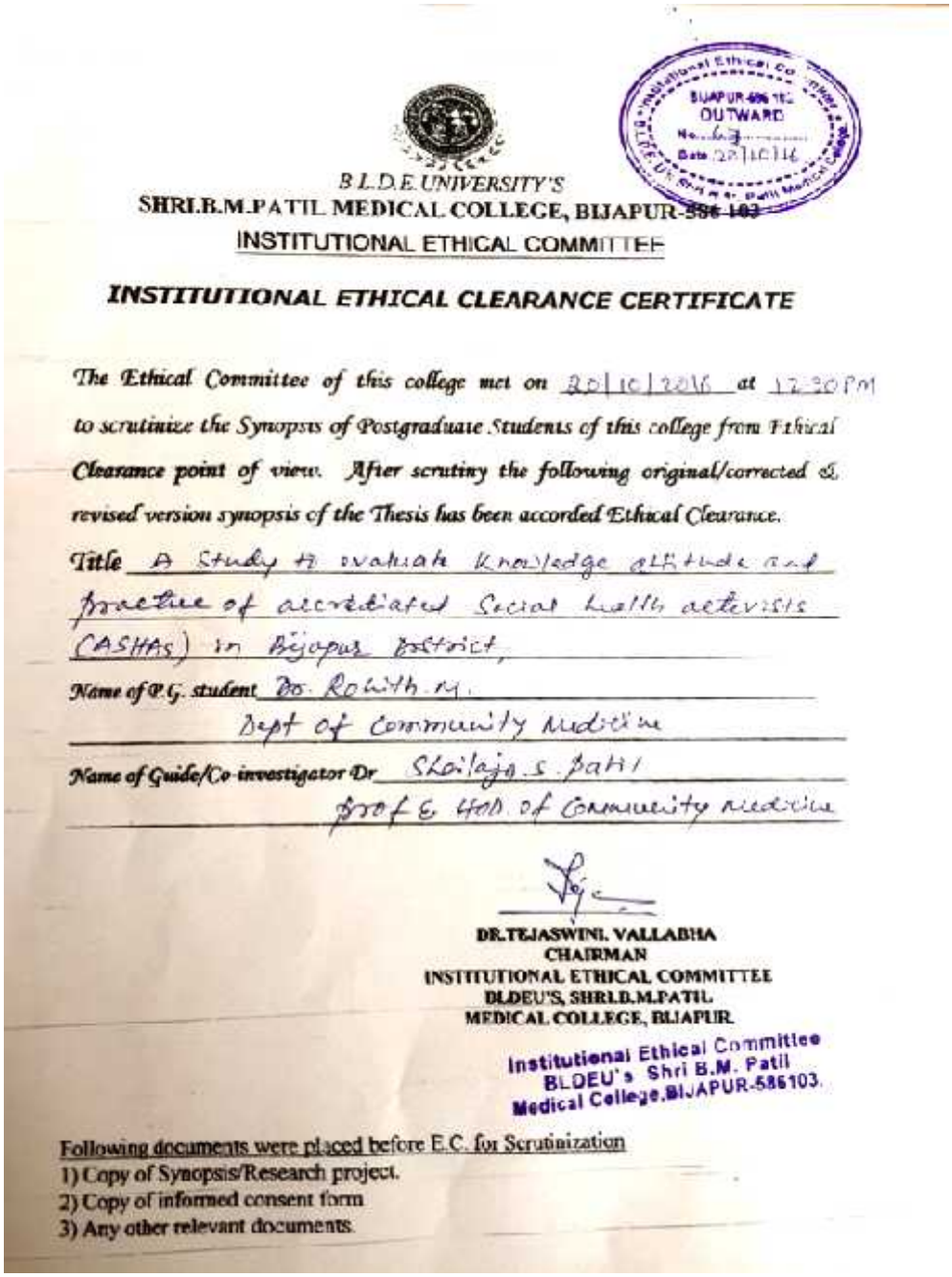
- You have questions about some patient? _____
- A pregnant woman develops sudden complications? _____
- Disputes regarding performance based incentives? _____

8) Are you actively involved with the local Panchayat Raj Institution (PRI)/Village heath committee (VHC) in your village? **(Y / N)**
9) Do you receive proper support from the PRI and VHC for?

- Creating awareness for health and hygiene among the villagers? **(Y / N);**
- Conduction cleanliness and sanitation programmes? **(Y / N)**;
- Construction of household's toilets? **(Y / N);**
- Monetary requirements if any? **(Y / N);**

11) Why do you feel people tend not to avail public health services? _____
Q=Quality of service, K= Not aware, A= Health Services not available, C=Cost, T= Transport issues; O= other (specify)
12) Are you satisfied with your career prospects as an ASHA?**Y/N**
13) Is there increase in the institutional deliveries in last two-three years? **(Y / N)**
14) If so what are the reasons according to ASHA? _____

ETHICAL CLEARANCE CERTIFICATE



B.L.D.E. UNIVERSITY'S
SHRI.B.M.PATIL MEDICAL COLLEGE, BIJAPUR-586 103
INSTITUTIONAL ETHICAL COMMITTEE

OUTWARD
No. 643
Date 20/10/16

INSTITUTIONAL ETHICAL CLEARANCE CERTIFICATE

The Ethical Committee of this college met on 20/10/2016 *at* 12.30 PM *to scrutinize the Synopsis of Postgraduate Students of this college from Ethical Clearance point of view. After scrutiny the following original/corrected & revised version synopsis of the Thesis has been accorded Ethical Clearance.*

Title A Study to evaluate knowledge attitude and practice of accredited Social health activists (ASHAs) in Bijapur district,

Name of P.G. student Dr. Rohith M.
Dept of Community Medicine

Name of Guide/Co-investigator Dr Shilaja S. Patil
Prof & HOD of Community Medicine

DR.TEJASWINI. VALLABHA
CHAIRMAN
INSTITUTIONAL ETHICAL COMMITTEE
BLDEU'S, SHRI.B.M.PATIL
MEDICAL COLLEGE, BIJAPUR

Institutional Ethical Committee
BLDEU's Shri B.M. Patil
Medical College,BIJAPUR-586103.

Following documents were placed before E.C. for Scrutinization
1) Copy of Synopsis/Research project.
2) Copy of informed consent form
3) Any other relevant documents.

CONSENT FORM

Title of the Project

A Study to Evaluate Knowledge, Attitude and Practice of Accredited Social Health Activists (ASHAs) in Vijayapur District

Principal investigator's name: **Dr. Rohith M** (PG student in Community Medicine)

Guide: **Dr Shailaja S. Patil** (Professor and Head, Department of Community Medicine)

1. PURPOSE OF RESEARCH: I have been informed that this study will help to assess the socio demographic profile & knowledge, attitude and practice of ASHAs
2. PROCEDURE: I understand that this is a oral interview assisted survey where in necessary details required for this research will be asked by an interviewer. In this procedure I will be asked series of questions by the researcher regarding the topic.
3. RISK AND DISCOMFORTS: I understand determination of above mentioned procedure will not cause any discomfort to me and do not involve any risk to my health.
4. BENEFITS: I understand that my participation will have a direct benefit to me and it will be useful in assessing the roles and responsibilities of ASHAs in Vijayapur.
5. CONFIDENTIALITY: I understand that medical information produced by this study will become part of institutional records and will be subject to the confidentiality and privacy regulation of the said institute. Information of a sensitive personal nature will not be a part of medical record, but will be

stored in investigators research file and identified only by a code number. The code key connecting name to numbers will be kept in a separate secured location.

If the data are used for publication in the medical literature and for teaching purposes no names will be used and other identities such as photographs, audio and video tapes will be used only with my special written permission. I understand I may see the photographs and the video tapes and have the audio tapes before giving this permission.

6. REQUEST FOR MORE INFORMATION: I understand that I may ask more questions about the study at any time. Concerned researcher is available to answer my questions or concerns. I understand that I will be informed of any significant new findings discovered during the course of this study which might influence my continued participation. If during the study or later, I wish to discuss my participation in all concerns regarding this study with a person not directly involved, I am aware that the social worker of the Institute is available to talk with me. A copy of this consent form will be given to me to keep for careful re-reading.
7. REFUSAL OR WITHDRAWAL OF PARTICIPATION: I understand that my participation is voluntary and may refuse to participate or may withdraw my consent and discontinue participation in the study at any time without prejudice to my present or future care at this hospital. I also understand that researcher may terminate my participation in this study at any time after she/he has explained the reasons for doing so.

STUDY SUBJECT CONSENT STATEMENT:

I confirm that Dr Rohith M has explained to me the purpose of research, the study procedure that I will undergo, and the possible risk and discomforts as well as benefits that I may experience. Alternative to my participation in the study have also been to give my consent from. Therefore I agree to give consent to participate as a subject in this research project.

Participant: Date:

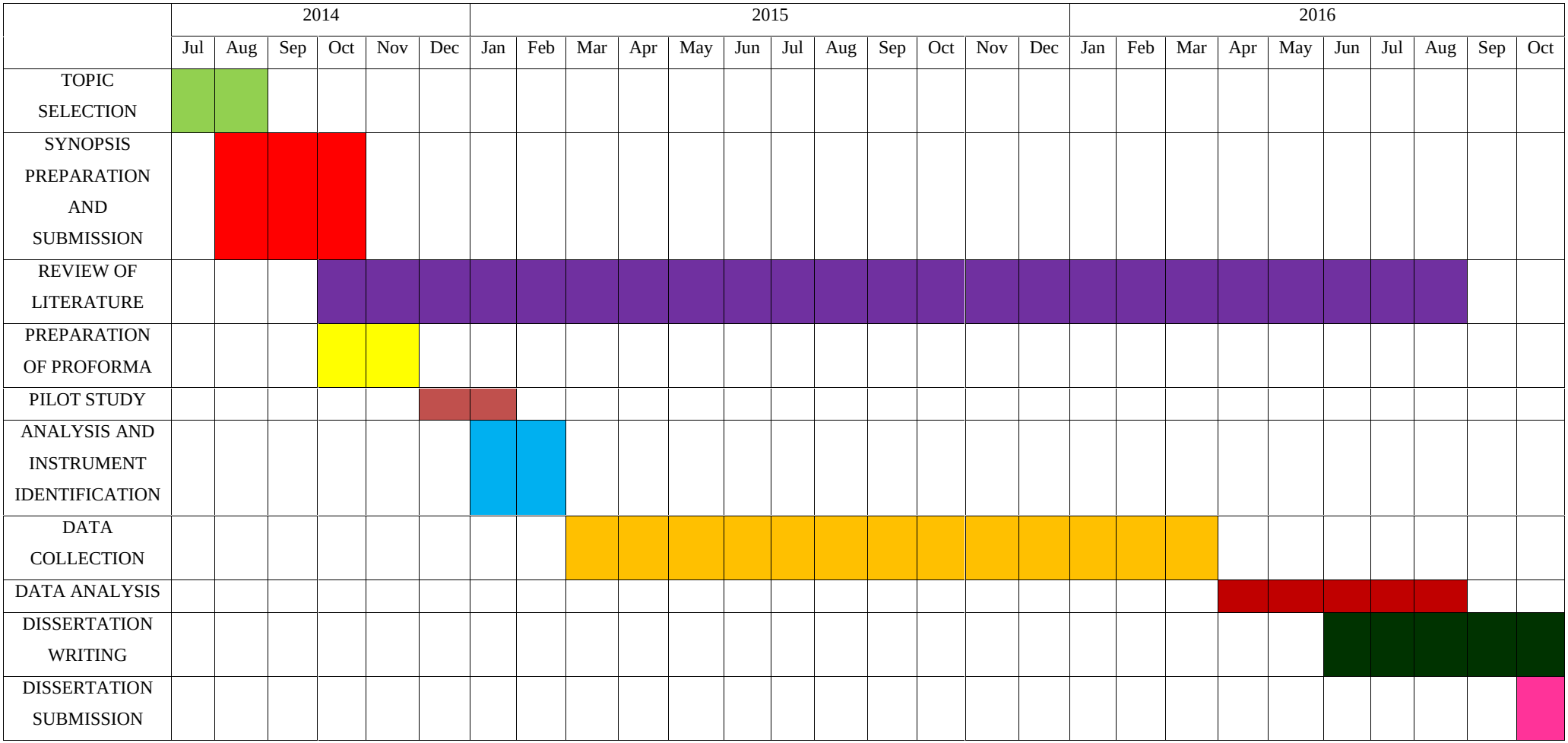
Interviewer signature:

MAP OF VIJAYAPURA

Following Taluks were selected for the study

- **Vijayapur Taluk**
- **Basavana Bagevadi Taluk**
- **Muddebihal Taluk**

GANTT CHART


2014
2015
2016
Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct
TOPIC SELECTION
SYNOPSIS PREPARATION AND SUBMISSION
REVIEW OF LITERATURE
PREPARATION OF PROFORMA
PILOT STUDY
ANALYSIS AND INSTRUMENT IDENTIFICATION
DATA COLLECTION
DATA ANALYSIS
DISSERTATION WRITING
DISSERTATION SUBMISSION