

## Original Research Article

# Assessment of knowledge among ASHAs in the delivery of contraceptive information and services in coastal Andhra Pradesh

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## ABSTRACT

**Background:** Government of India (GOI) is providing comprehensive integrated health care to the urban and rural people under the umbrella of National Health Mission. ASHA as an activist, a village level community health worker acts as an interface between the community and the public health care delivery system, and plays a central role in achieving population policy goals. The aim of study was to assess the knowledge component of ASHAs in the delivery of contraceptive information and services in coastal Andhra Pradesh.

**Methods:** A descriptive cross-sectional study was conducted in East Godavari district of Andhra Pradesh at sub-centres among 170 ASHA workers. The study area was selected by multi stage sampling technique. Data was collected using pre tested, semi-structured interview schedule. Qualitative data was expressed in percentages, and quantitative data was expressed in mean and standard deviation.

**Results:** The mean age of ASHAs was 28.4 years (SD±3.82). Majority (75.88%) of ASHAs had completed secondary level education, 72.94% had knowledge regarding contraception for newly married couple, and 68.23% were aware of the effective time period for intake of emergency contraceptive pills. 45.88% of ASHAs were unaware of safe period.

**Conclusions:** Majority of ASHAs had knowledge in certain areas of contraceptive information and services, whereas some are lacking knowledge regarding safe period, emergency contraceptive pills (EC pills), progesterone only pills, missed pills and period of condom use after vasectomy. Hence, it is essential to ensure that they receive quality training on contraceptive information and services from qualified personnel at regular intervals.

**Keywords:** ASHA, Contraceptive information, Knowledge, Services

## INTRODUCTION

India is the second most populous country in the world having a rapidly growing population which is currently increasing at the rate of 16 million each year.<sup>1</sup> It was the first country in the world to have launched National programme for family planning in 1952, whose main objective was to spread the knowledge of family planning methods and to develop an attitude favourable for adoption of contraceptive methods. Over the decades, the programme has undergone transformation in terms of

policy and actual programme implementation; and currently it was repositioned not only to achieve population stabilization goals but also to promote reproductive health, and to reduce maternal, infant and child mortality and morbidity.<sup>2</sup> The National health mission (NHM) encompasses its two Sub-Missions, the National Rural Health Mission (NRHM) and the National Urban Health Mission (NUHM). The main programmatic components include Health System Strengthening, Reproductive-Maternal- Neonatal-Child and Adolescent

Health (RMNCH+A), and communicable and non-communicable diseases.

The NHM envisages achievement of universal access to equitable, affordable & quality health care services that are accountable and responsive to people's needs.<sup>3</sup> National rural health mission was launched on 12th April 2005. One of the key strategies under the NRHM is having a Community health worker who is an Accredited Social Health Activist (ASHA) for every village with population of 1000. "Accredited" means recognized by the community, "Social" means she is from the same community, by the community and for the community, "Health Activist" means she has to spread awareness for health concerns and promotes change in health related practices.<sup>4</sup> ASHAs act as a bridge between the community and health system; They undergo training to acquire adequate knowledge and skills for performing their roles perfectly. Being the key person, they are supposed to provide preventive, promotive and curative health facilities in the community. She is selected from the village itself and accountable to the respective community.<sup>5</sup> ASHAs are considered as vital agents for inspiring the community to follow small family models by accepting various family planning methods. She counsels women on birth preparedness and importance of institutional delivery; and delivers contraceptive information and services at the door steps in the community.

Population explosion is a challenge for every country. It can negatively impact the economic growth of the country resulting in poverty; the key solution for this problem is adopting effective contraceptive methods, which not only control the population but also ensure better maternal and child health, thereby indirectly benefiting the whole nation. Delivery of effective contraceptive information and services depends upon the quantity and quality of knowledge among ASHAs, as they are the first person contacted and who could be called upon for any queries about family planning; it is important that ASHAs should be well aware of contraceptive information and services provided by government of India. Hence, the present study was conducted to assess the knowledge component of ASHAs pertaining to contraceptive information and services.

Objectives of the study was to study the socio-demographic profile of ASHAs, and to assess the knowledge component of ASHAs in the delivery of contraceptive information and services.

## METHODS

This was a descriptive cross-sectional study, conducted at sub-centers of the selected PHCs of East Godavari district for six months from October 2017 to March 2018.

ASHAs recruited under NRHM providing services in the study area. A total of 170 ASHAs were working in the

sub-centers of the 5 selected PHCs, all were included for the study. The study sample was taken by multi stage sampling technique. In East Godavari district ASHA scheme is being implemented in 5 revenue divisions, consisting a total of 23 blocks with 103 PHCs. From each revenue division, one block was selected by simple random sampling method. From each block, one PHC was selected again by simple random sampling. Total five PHCs were selected; under each selected PHC, all sub-centers and all ASHAs were included for the study.

The study was approved by the Institutional Ethics Committee, GSL Medical College, Rajahmundry and necessary permission was obtained from District Medical and Health Officer, Kakinada, East Godavari district, Andhra Pradesh.

### *Inclusion criteria*

ASHAs who were willing to participate and ready to give consent for the interview were included in the study.

### *Exclusion criteria*

ASHAs who were not available for the interview during 3 successive visits to sub- centre, and ASHAs who had less than six months of work experience were excluded.

A predesigned, prevalidated and pretested semi structured schedule was used to collect information regarding socio-demographic profile of ASHAs, and a schedule to assess their knowledge regarding delivery of contraceptive information and services.

### *Data collection*

Field activities began with mapping procedure, listing of the selected blocks, PHCs and sub-centres, followed by listing of the study subjects. Visits were made to all the sub-centres of the selected PHCs, and all ASHAs were interviewed at the sub-centres. After explaining the purpose of the study, written informed consent was obtained; Information from study participants was obtained by semi- structured interview schedule method. The schedule included brief socio demographic information of ASHAs along with details of their knowledge regarding contraceptive information and services. Questions were prepared in English and translated to local Telugu language. Confidentiality and anonymity of the respondents was maintained throughout the study.

### *Data analysis*

The obtained data was analyzed by using the SPSS software, version 20. Qualitative data was expressed in percentages, and quantitative data was expressed in mean and standard deviation.

## RESULTS

A total of 176 ASHAs were enrolled for the study; 170 ASHAs participated in the study and 6 were excluded as they were not available for the interview. The mean age of ASHAs was 28.4 years (S.D. 3.82), and majority of them were in the age group of 26-30 years (Figure 1).

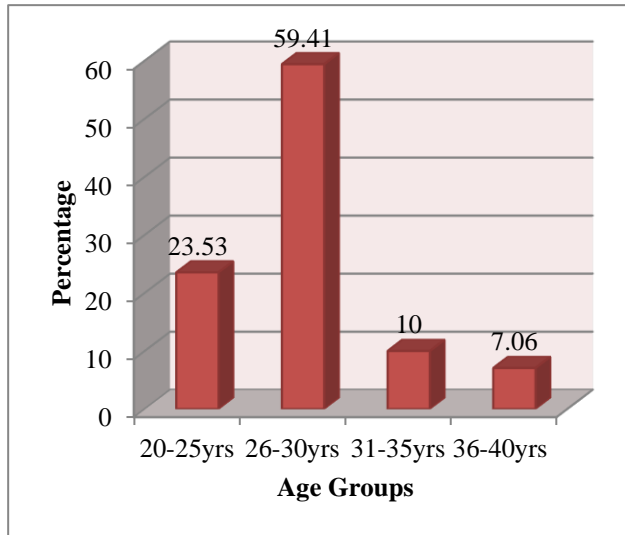


Figure 1: Age wise distribution of ASHAs.

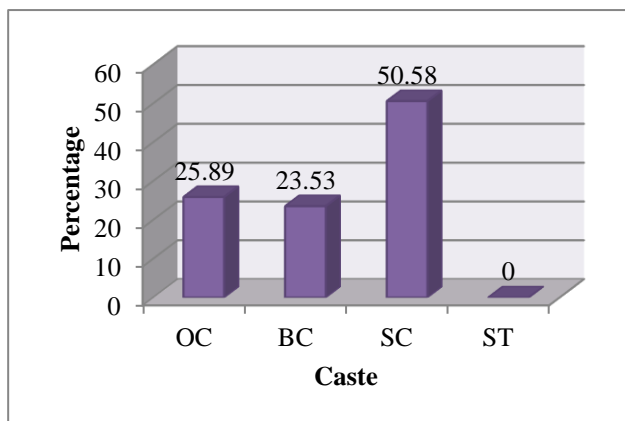


Figure 2: Distribution of ASHAs as per caste.

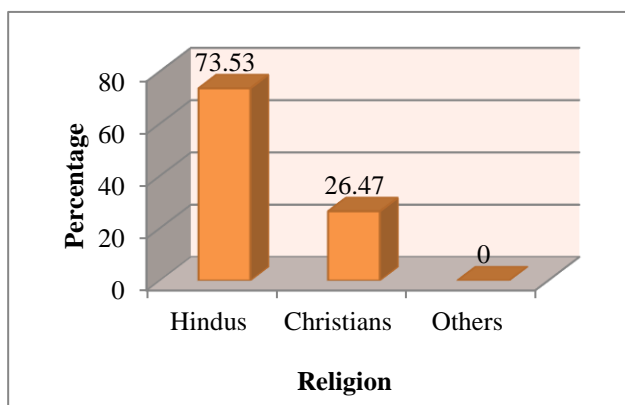


Figure 3: Distribution of ASHAs as per religion.

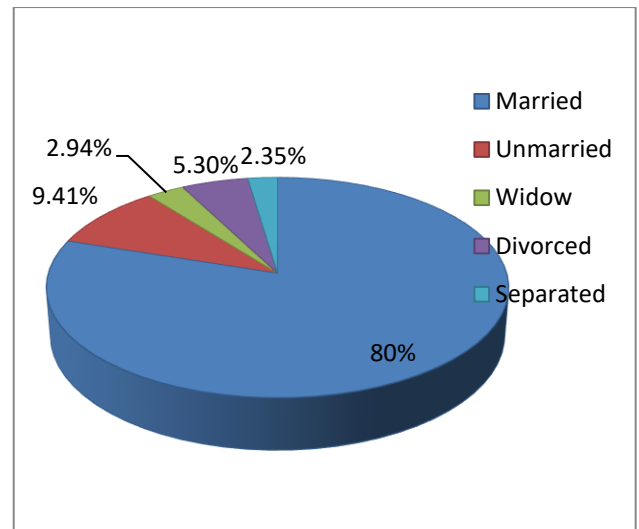


Figure 4: Marital status of ASHAs.

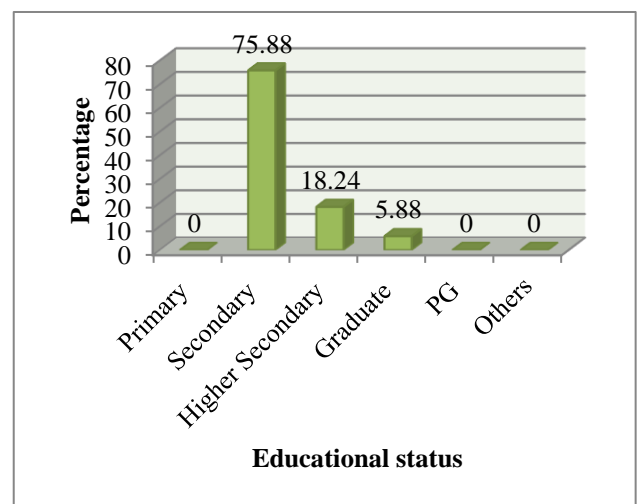


Figure 5: Educational status of ASHAs.

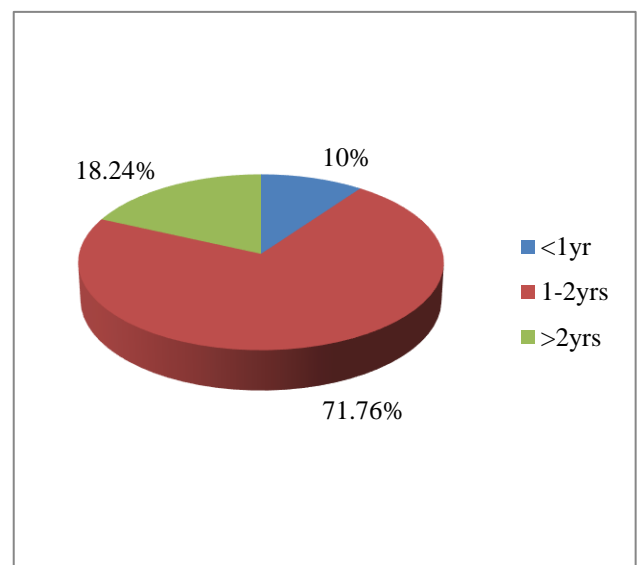


Figure 6: Duration of working experience as ASHA.

**Table 1: Knowledge of ASHAs regarding contraceptive information and services.**

Knowledge component	Correct responders (N)	Percentage (%)
Supply of contraceptives by GOI*	170	100
Basic register for organizing Family planning work	152	89.41
Target couples to be counselled for FP**	170	100
Range of contraceptives to be carried in ASHAs kit	165	97.05
Birth spacing	170	100
Safe period	92	54.12
Contraceptive methods for newly married couple	124	72.94
Non contraceptive use of condom	147	86.47
Indications for emergency contraception	142	83.52
Effective time period for intake of EC pill***	116	68.23
Couples should be screened before delivering OCPs	166	97.64
Advise to be given if OCP user misses the pill	98	57.64
Contraception for a woman with single child	138	81.17
Ideal time for IUCD insertion	133	78.23
IUCD is to be avoided in nulliparous woman	170	100
Is there a need for contraception during lactation	165	97.05
Mala -N/D are to be avoided in lactating mothers	146	85.88
Contraceptive pill for lactating women	95	55.88
Vasectomy does not change a man's sexual ability	162	95.29
Period of condom use after vasectomy	51	30

\*Government of India, \*\*Family planning, \*\*\*Emergency contraceptive pill

However, 23.53% of ASHAs were between 20-25 years of age which is below the stipulated selection criteria. Half of them (50.58%) belonged to scheduled caste (Figure 2), and majority (73.53%) were Hindus by

religion (Figure 3). Study results showed that 80% of ASHAs were married (Figure 4), and majority (75.88%) had completed secondary level education (Figure 5). Greater number (71.76%) of ASHAs responded that they had work experience of 1-2 years (Figure 6).

While assessing ASHAs knowledge regarding contraceptive information and services, it was observed that all ASHAs had knowledge regarding supply of contraceptives by Government of India, target couples, birth spacing and IUCD contraindication. Majority (89.41%) of ASHAs had knowledge about basic register for organizing family planning work in the community. A significant number of ASHAs (97.05%) reported the correct range of contraceptives to be carried in ASHAs kit. When asked about safe period, 45.88 % of respondents were unaware of safe period. Majority (72.94%) had knowledge regarding contraceptive methods for newly married couple; whereas 13.53% of ASHAs were unaware of non-contraceptive use of condom. A greater number of ASHAs (83.52%) had knowledge regarding emergency contraception; however, 68.23% of ASHAs know about the effective time period for intake of emergency contraceptive pill. Responses from ASHAs regarding oral contraceptive pills (OCPs) indicate that majority (97.64%) had knowledge regarding screening of couples prior to the delivery of oral contraceptive pills; whereas 57.64% gave correct response regarding the advise that has to be given to the OCP user when she misses the pill. Majority (81.17%) of ASHAs had knowledge regarding contraceptive choice for a woman with single child, and 78.23% were aware of the ideal time for IUCD insertion.

A notable number (97.05%) of ASHAs opined that there is a need for contraception during lactation, and majority (85.88%) reported correctly that Mala N/D pills should be avoided in lactating mothers. Half of the ASHAs (55.88%) know about the contraceptive pill that can be suggested for lactating women. Majority (95.29%) of ASHAs had knowledge that vasectomy does not change a man's sexual ability; whereas only 30 % were aware of the correct period of condom use that can be suggested during post vasectomy period (Table 1).

## DISCUSSION

The present study was conducted to study the socio-demographic profile of ASHAs, and to assess their knowledge in the delivery of contraceptive information and services. A total of 170 ASHAs were interviewed; all were working in their respective villages, which is an important and positive finding of the study indicating that they can identify the needs of the community. As per GOI guidelines, ASHA should be preferably in the age group of 25 to 45 years.<sup>5</sup> In the present study the mean age of ASHAs was 28.4 years (SD±3.82) and majority of ASHAs (59.41%) were between 26 to 30 years of age. Thus majority of the ASHAs may be considered young, this may be the strength for the programme as they are

energetic and enthusiastic at this age and may deliver better services with proper motivation and capacity building. In a study conducted by Saxena et al the average age of ASHAs was 31 years with majority of them in the same age group as in the present study.<sup>6</sup> In contrast to this finding, a study conducted in Kerala reported that majority of ASHAs belonged to the age group of 42 to 45 years, and none below 30 years.<sup>7</sup> Study finding regarding social status of ASHAs revealed that more than half of the ASHAs (50.58%) belonged to scheduled caste. This finding was similar to a survey conducted in Andhra Pradesh, which reported that 57% of ASHAs were from scheduled caste category.<sup>8</sup> This observation supports that adequate representation of ASHAs from the disadvantaged population group will ensure to serve such groups better. In the present study it was also observed that there are no ASHAs from scheduled tribe; In contrast to this finding a study conducted in Nagaland revealed that all ASHAs included in the study were from scheduled tribe, this notable difference between the two studies may be due to socioeconomic variations.<sup>9</sup> In the present study it was found that majority (73.53%) of ASHAs belonged to Hindu religion. The study area being Hindu dominated, it was but natural that Hindus were found in good number in the present study. This proportion was lower than that reported by Fathima et al, which found that 97% of ASHAs were Hindus.<sup>10</sup> Information regarding marital status of ASHAs showed that 80% were married, this is in concordance with a study conducted by Garg et al, which found that 88.57% of ASHAs were married.<sup>11</sup> This observation supports that majority of ASHAs being married, they can discuss better and convey the contraceptive information to the eligible couples. In the current study 9.41% of ASHAs were unmarried. This finding is contrary to the guidelines of ASHA workers selection. A similar study conducted in Nagaland reported that as high as 12% of ASHAs were unmarried; a proportion comparable with that of the present study.<sup>9</sup> NHM guideline directs that ASHA should be a literate woman with formal education up to eighth standard. Present study findings represent that majority of ASHAs (75.88%) have completed their secondary school of education, this finding indicates that the selection criteria of the ASHAs was as per the norms of NHM guidelines. The data also revealed a wide range of qualifications starting from secondary school education, higher secondary to graduates reflecting the diversity of the women enrolled as ASHAs in the study area. A study conducted in Andhra Pradesh found that 86% of ASHAs had above 7th standard of school education.<sup>8</sup> The probable reason for the difference in the findings between the two studies could be the difference in the level of education among study participants and availability of educated women. It was also observed that majority (71.76%) of ASHAs had working experience of 1-2 years, this finding was similar to a previous study which reported that 76% of ASHAs had more than 18 months of work experience.<sup>8</sup> Long working experience preferably more than one year helps ASHA in understanding her

roles and responsibilities in providing contraceptive information and services to those who are in need.

Contraceptive methods are the preventive methods that help women to avoid unwanted pregnancies. Regarding knowledge of ASHAs on supply of contraceptives, all were aware that contraceptives were freely provided by Government of India. Provision of free supply of contraceptives encourages the eligible couples who are in need to utilize the contraceptive services. Majority (89.41%) of ASHAs were aware that eligible couple register is the basic register essential for organizing family planning work in the community. All ASHAs (100%) had knowledge that newly married couples, couples with one child, and those couples who have 2-3 living children are considered as target couples who are to be counselled for family planning. Majority (97.05%) responded correctly that condoms, OCPs and ECPs are the contraceptives to be carried in ASHAs kit. In a similar study conducted by Saxena et al at Uttar Pradesh, 70.3% ASHAs responded that oral contraceptive pills were available with them.<sup>12</sup> Availability of drugs and contraceptives in ASHAs kit builds confidence in the community on ASHAs when they approach ASHA in times of need. All ASHAs know that birth spacing of 3 years is required after the birth of first child, whereas 54.12% were aware of safe period, knowledge in this area is very essential for ASHAs while distributing contraceptives; she will have clarity regarding to whom and for how long she can provide contraceptive services.

In the aspect of knowledge regarding contraceptive methods for newly married couple, 72.94% of ASHAs were aware that condoms or pills can be advised to newly married couple who wants to delay the first child; in contrast to this finding, a study conducted in Kerala by Ratnam et al reported that all (100%) ASHAs were aware of contraception for newly married couple.<sup>7</sup> In the present study 13.53% of ASHAs were unaware of non-contraceptive use of condom as a preventive measure for sexually transmitted infections. Regarding emergency contraception majority (83.52%) of ASHAs know that emergency contraception is advised to those women when the couple has not used any contraceptive and had unprotected sex, and want to avoid pregnancy. In a study conducted by Chavan et al, 83.33% of ASHAs had more than fifty percent knowledge on emergency contraception, this finding is consistent with the present study finding.<sup>13</sup> It was also observed that 68.23% of ASHAs had knowledge regarding emergency contraceptive pills that they are effective only within 72 hours of unprotected sex. This observation indicates that 31.77% of ASHAs were unaware of this contraceptive information which is very essential and has to be informed to the eligible couples while distributing EC pills in the field area; as beyond 72 hours the EC pill is ineffective. In contrast to this finding, a study conducted by Saxena et al reported that only 57.8% of ASHAs were aware of effective period within which the emergency contraceptive pill has to be taken.<sup>12</sup>



Majority (97.64%) of ASHAs were aware that couples should be screened before delivering OCPs, whereas 57.64% of ASHAs responded correctly that they would advise the OCP user to take the missed pill as soon as she remembers and to continue the next pill at usual time. Similar to this study finding was a study conducted by Pal et al, which reported that 56.84% had knowledge on missed pill.<sup>14</sup> All ASHAs had knowledge that IUCD is to be avoided in a woman who has never been pregnant, 81.17% of them had responded that they advise IUCD for a woman with single child, where as 78.23% know exactly the ideal time for IUCD insertion. In a study conducted by Saxena et al, 76.6% of ASHAs know that IUCD insertion should be within ten days of LMP, this finding is in line with the present study finding.<sup>12</sup> Regarding contraception for lactating women, majority (97.05%) of ASHAs opined that there is a need for contraception during lactation, and 85.88% were aware that Mala N or Mala D pills are to be avoided in lactating mothers. This is consistent with the findings of Shet et al, which reported that 83% of ASHA workers were aware of the contraceptive information that combined oral contraceptive pills should not to be used during lactation.<sup>15</sup> In the present study half (55.88%) of the ASHAs had knowledge that progesterone only pills are the contraceptive pills that can be given to lactating women. This finding was consistent with Shashank et al, which reported that only 56.1% of ASHAs had knowledge on contraception for lactating mothers.<sup>16</sup> Less number of years of experience as ASHA may be responsible for lack of knowledge on contraception during lactation. As high as 95.29% of ASHAs responded correctly that vasectomy does not change a man's sexual ability.

Knowledge of ASHAs in this area helps them in counselling the eligible male population and motivating them for male sterilization. Only 30% of ASHAs were aware that condoms should be used for 90 days following vasectomy. The study finding was similar to a study conducted by Jayasree et al who reported that only 29.2% gave correct response.<sup>17</sup> Knowledge of ASHAs in this area is very essential because majority of rural population are still in the wrong notion that they do not require any contraception during post vasectomy period.

## CONCLUSION

The present study shows that majority of ASHAs had knowledge in certain areas of contraceptive information and services, whereas some of the ASHAs are lacking knowledge regarding safe period, effective time period for intake of emergency contraceptive pills, progesterone only pills, missed pills and period of condom use after vasectomy. Hence, improvement is needed, and it is essential to ensure that they receive quality training on contraceptive information and services from qualified personnel at regular intervals.

## Limitations

Small sample size, lack of information on training modules completed by ASHAs and application of ASHAs knowledge in practice was not assessed; these factors were the limitations of the study.

## Recommendations

It is very much evident from the current study that there is a need for periodic assessment of ASHAs followed by training in those areas where they are lacking knowledge, to update their knowledge level. Training should be more on demonstration rather than theory so that ASHAs can improve in the quality of knowledge on contraceptive information and services. Monitoring of ASHAs work in the community is very essential to ensure that knowledge is converted into practice as well.

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