Original Research Article

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A study on impact of training programme on knowledge of maternal health care among ASHA workers in a tribal population of Tamil Nadu

Mohamed Jainul Azarudeen¹, M. Buvnesh Kumar²*, M. Logaraj³, Balaji Ramraj³

Department of Community Medicine, ¹Shri Sathya Sai Medical College & Research Centre Ammapettai, Thiruporur, Nellikuppam, ²Chettinad Hospital & Research Institute, CARE, Kelambakkam, ³SRM Medical College Hospital & Research Centre, Kattankulathur, Chennai, Tamil Nadu, India

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*Correspondence: Dr. M. Buvnesh Kumar, E-mail: buvnesh@gmail.com

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ABSTRACT

Background: Accredited Social Health Activist (ASHA) forms the backbone of NRHM who provides promotive, preventive, and curative health facilities in especially the vulnerable groups. There is a need to comprehensively look into the knowledge and performance of ASHA in terms of her job responsibilities in maternal health, hence this study was conducted to assess knowledge regarding maternal health care among the ASHA workers and to assess the impact achieved after the training programme.

Methods: Community based interventional study was conducted among ASHA's in Jawadhu Hills between April to July 2017, a pretested semi structured questionnaire was administered to elicit the knowledge of ASHA in regard to maternal health care. After the initial assessment, an intervention training programme was conducted based on a module prepared in their native language and post training assessment was done after two months. The statistical tests used were proportions, chi-square test. A p value less than 0.05 was considered to be significant.

Results: Based on the initial assessment around 60% of ASHA knew about the core ANC, which statistically (p<0.05) improved after the training programme. Based on danger signs of pregnancy less than 10% knew about vaginal bleeding (3.8%), swelling of legs (4.8%), visual disturbances (6%) which statistically (p<0.05) improved after the training.

Conclusions: Knowledge of ASHAs on various aspects of maternal health care was moderately adequate, before the training programme and it was significantly improved after the training programme, which shows that there is a need for regular fixed training programme to maintain the performance of ASHA.

Keywords: ASHA, Tribal health, Maternal health care

INTRODUCTION

Maternal health refers to the health of women during pregnancy, childbirth and the postpartum period. While motherhood is often a positive and fulfilling experience, for too many women it is associated with suffering, ill health and even death.¹ Almost, all maternal deaths (99%) occur in developing countries. More than half of these deaths occur in sub-Saharan Africa and almost one

third occur in South Asia. The high number of maternal deaths in some areas of the world reflects inequities in access to health services, and highlights the gap between rich and poor.² Maternal Health is important to communities, families and the nation due to its vast effects on the health of women, immediate survival of the newborn and long-term well-being of children, particularly girls and the well-being of families. Improvement of maternal health and decline of maternal

mortality ratio requires availability of large number of health services early in pregnancy.³ The Ministry of Health and Family Welfare (MoHFW), Government of India started National Rural Health Mission (NRHM) on 12th April 2005, to provide accessible, affordable and quality health care to the rural population, especially the vulnerable groups. One of the key components of NRHM is to provide every village in the country with a trained female community health activist known as Accredited Social Health Activist (ASHA).

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. ASHA will help in promotion of good health practices along with prevention of diseases and minimal curative care support.^{4,5} ASHA needs improved and updated skills for her to be successful in community. For this ASHA needs training regularly. The performance of ASHA's is crucial for the success of NRHM (NHM) and hence of the inclusive growth strategy of the government in India.⁶ Therefore an assessment of ASHA was performed, to assess the level of knowledge regarding maternal health care and the level of improvement achieved after the training programme.

METHODS

This community based interventional study was conducted in the tribal area in Jawadhu Hills, Tirupathur HUD, Vellore District, Tamil Nadu. After getting clearance from the institutional ethical committee, all the ASHA workers (eighty-three) who were registered with the concerned medical officer as per the list provided by the DDHS Tirupathur were included in the study for initial assessment which was done in April 2017. Under maternal healthcare, ASHA gives counseling to women on birth preparedness, danger signs and complications during pregnancy, balanced and nutritious diet, safe delivery, breastfeeding, supplementary feeding, referral, mobilise the community and facilitate them in accessing health and health related services.⁵

A pre-tested semi-structured questionnaire was used to collect the data on knowledge regarding ante natal care responsibilities, danger signs of pregnancy, danger signs during delivery and breast-feeding practices, after getting the informed consent on individual basis at their houses. For the training programme all the ASHA were divided into two groups and were asked to attend the refresher training programme in two PHC's. One day training was given for both the group of ASHA's separately. The training was based on the training module in Tamil, which was adopted from their module given by NRHM on maternal health. Training was given using audio visual aids, video lectures and charts. Total of 79 ASHA's attended the training programme. All the ASHA's were re-interviewed after two months (July 2017) of refresher training programme and were evaluated based on questionnaire. ASHA's who were not available on the day of training programme were excluded from the post training evaluation. Data was entered in MS-Excel spreadsheet and analysed using IBM SPSS for windows (version 20.0, Armonk, NY). The statistical tests used were proportions with 95% CI and chi-square test. A p value less than 0.05 was considered to be significant.

RESULTS

Of the total eighty-three ASHA's in the pre-training programme majority of the ASHA's 46 (55.4%) were in the age group of 20-29 years, followed by 34 (41%) were in the age groups of 30-39 years. Only 3 (3.6%) were above 40 years of age. The mean age was 29.3 years with S.D-4.87. More than fifty percent of ASHA's (54.2%) had studied up to middle school and 42.1% of ASHA above middle school. 80 (96.4% of ASHA's) were married and 65 (78.3% of ASHA's) were from three generation family. Majority 48 (57.8% of ASHA's) had served more than five years of service and 35 (42.2%) had served less than or equal to 5 years of service. Based on practices of accompanying pregnant mother to hospitals 56 (67.4%) have been doing it before the training programme which was improved to 100% after the training period.

Table 1: Comparison in the proportion of ASHA's having knowledge on ANC responsibilities before and after
training programme.

Responsibilities	Pre-training (n=83) Number %)	Post-training (n=79) Number (%)	Chi square χ2	P value
Registration of pregnancy	55 (66.3)	79 (100)	32.21	< 0.001
4 Health check-ups	53 (63.9)	79 (100)	35.04	< 0.001
At least 100 IFA tablets	54 (65.1)	79 (100)	33.62	< 0.001
At least One TT	51 (61.4)	79 (100)	37.95	< 0.001
Weight measurement	11 (13.3)	74 (93.7)	104.95	< 0.001
Abdominal check	3 (3.6)	79 (100)	150.43	< 0.001
Urine test	35 (42.2)	60 (75.9)	19.04	< 0.001
Urine test blood pressure check up	36 (43.4)	59 (74.7)	16.36	< 0.001
Blood test for anaemia	8 (9.6)	59 (74.7)	70.60	< 0.001

*Significant (p<0.05).

Table 1, shows the ASHA's knowledge on ANC responsibilities before and after training programme, of which more than 60% said registration of pregnancy, administration of 100 IFA tablets, four health checkups, at least 1 dose of TT injection as their responsibilities which improved to 100% after the training programme. The knowledge regarding abdominal check, blood test for Anemia were less than 10% which apparently improved

to above 75% after the training programme which was statistically significant p < 0.05.

Table 2, shows the ASHA's knowledge on danger signs of pregnancy before and after the training programme, less than 10% had knowledge on fast or difficult breathing, excessive vomiting, which improved after training to more than 95% and was statistically significant (p<0.05).

Table 2: Comparison in the proportion of ASHA's having knowledge on danger signs of pregnancy before and after training programme.

Danger signs of pregnancy	Pre-training (n=83) Number (%)	Post-training (n=79) Number (%)	Chi square (χ2)	P value
High fever with or without abdominal pain	17 (20.5)	79 (100)	27.98	< 0.001
Severe vaginal bleeding	3 (3.8)	45 (56.9)	49.34	< 0.001
Fast or difficult breathing	4 (4.8)	77 (97.5)	138.97	< 0.001
Convulsion and fits	22 (26.5)	66 (83.5)	53.06	< 0.001
Swelling of the legs, body or face	4 (4.8)	59 (74.6)	74.23	< 0.001
Visual disturbances	5 (6.0)	37 (46.8)	35.10	< 0.001
Hb <11 gm% after consuming IFA tablets	23 (27.7)	63 (79.7)	35.58	< 0.001
High BP ≥140/90 mm/Hg	57 (68.7)	61 (77.2)	1.49	0.221
Excessive vomiting	8 (9.6)	78 (98.7)	129.0	< 0.001

*Significant (p<0.05).

Table 3: Comparison in the proportion of ASHA's having knowledge on danger signs during delivery before and after training programme.

Danger signs during delivery	Pre-training (n=83) Number (%)	Post-training (n=79) Number (%)	Chi square (χ2)	P value
Excessive bleeding	76 (91.6)	79 (100)	6.964	0.008
Prolonged labour for more than 12 hours	30 (36.1)	79 (100)	74.974	< 0.001
Placenta retained >30mins	25 (30.1)	79 (100)	85.992	0.001
High fever	12 (14.5)	79 (100)	120.304	0.001
Lower abdominal pain	29 (34.9)	78 (98.7)	73.458	< 0.001
Severe Headache	12 (14.5)	79 (100)	120.304	0.001
Convulsions	25 (30.1)	78 (98.7)	82.291	< 0.001
Foul smelling discharge from vagina	9 (10.8)	39 (49.4)	28.809	< 0.001

*Significant (p<0.05).

Table 3, shows ASHA's knowledge on danger signs during delivery, before and after training programme. Around 10-15% were only aware of high-grade fever and severe headache as danger signs during delivery which significantly improved to 100% after the training session and was statistically significant (p<0.05).

Figure 1, shows the distribution of ASHA's knowledge on breastfeeding practices before and after the training programme, knowledge on benefits of colostrum's was 47 (56.6%) which increased to 78 (98.73%) post-training and knowledge on exclusive breastfeeding was 53 (63.9%) which increased to 78 (98.73%) which was statistically significant with p<0.05.





DISCUSSION

In our study the mean age of ASHA was 29.3 years, 96.4% were married, 96.3% between middle school and graduation which was almost as per the NRHM guidelines an ASHA must be primarily, a woman resident of the village and preferably in the age group of 25 to 45 years. She should be a married, literate woman with formal education up to the eighth class.⁵

Based on ANC care before the training programme, 55 ASHA's (66.3%) had knowledge about registration of pregnancy which was less compared to study done by Valiveti et al (100%).⁷ 53 (63.9%) said four health check-ups needed which was less compared to study done by Kohli et al (74.5%).⁸ Knowledge regarding IFA tablets & TT injection was 54 (65.1%), 51 (61.4%) respectively which was less compared to studies done by Kaur et al (81.8%), Rajendra et al (99.4%).^{9,10} After the training programme the knowledge regarding the ANC in the above areas improved to hundred percentage and was also statistically significant.

Based on danger signs of pregnancy before the training programme, 17 (20.5%), 23 (29.1%), 22 (26.5%), 5 (6%), 4 (5.1%), 3 (3.8%) of ASHA had knowledge about high fever, severe anaemia, convulsions, visual disturbances, swelling of legs, severe vaginal bleeding respectively, which was less compared to study done by Dinesh P et al.¹¹ This enlightens about the importance of a training programme as ASHA mainly helps in reducing the MMR by giving right information at the right time to the pregnant mother so as to avoid maternal deaths.

Based on breastfeeding practices, initiation of breastfeeding, 82 (98.79% of ASHA's) had insisted the mothers for early initiation of breastfeeding which was similar to study done by Ishaque et al 98.5%, but was less in studies done by Darshan et al (82.3%), Fathima et al (83.5%).¹²⁻¹⁴ Only 47 (56.6% of ASHA) in our study had explained the benefits of colostrum's which was less compared to study by Ishaque et al (80.4%).¹² Only 53 ASHA's (63.9%) had compelled and insisted about exclusive breast feeding for first 6 months which was similar to study by Fathima et al (64.7%).¹⁴ Knowledge regarding exclusive breast feeding would have been low due to the fact that the traditional practices of tribal people using alternatives for breastfeeding. After the training programme the knowledge regarding exclusive breastfeeding increased to 98.7% which was statistically significant (p<0.05).

Based on practices of accompanying pregnant mother to hospitals 56 (67.4% of ASHA's) have been doing it before the training programme which improved to 100% after the training period but a study done by Kohli et al reported 34.5% only accompanied pregnant women to hospital which was lesser than the present study.⁸

Limitations

Post training knowledge of the ASHA's was assessed after two months of the training programme. If the assessment would have been done after six months or more there may be a change in their knowledge level which may be less or more in certain components.

CONCLUSION

Knowledge of ASHAs on maternal health care aspect in ante natal care was moderately adequate before the training programme and it was significantly improved after the training session. Based on the danger signs of pregnancy and during labour was not adequate which got better post training. Importance of colostrum feeding and exclusive breast feeding was low which may be due to the cultural factors and practices seen in tribal population. Significant improvement was seen in post training programme highlighting effects of training programme. If regular annual refresher training is provided without fail to the ASHA's it will have great impact on positive healthcare in Tribal areas.

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