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Research Article

A study of knowledge of Anganwadi workers regarding minor ailments among children in Amritsar district of Punjab, India

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ABSTRACT

Background: Anganwadi workers (AWW) are India's primary tool against the menace of child malnourishment, infant mortality, and lack of child education, community health. The anganwadi workers should have basic knowledge of treatment of minor ailment. So with this aim this study was planned to assess the existing knowledge regarding minor ailments of children among anganwadi workers problems and in curbing preventable diseases.
Methods: The present study was conducted in the Department of Community Medicine SGRDIMSAR, Amritsar. By adopting stratified random sampling technique, 5 AWW were selected per each training session. A pre- designed and pre-tested questionnaire prepared was used to collect information from AWW. Pre-test and post-test assessment to determine the knowledge of minor ailments among AWW was done. The data collected was statistically analysed using SPSS 20.0 version.
Results: The study revealed that out of 135 AWW, 40% were in the age group of 25-45 years. Only 8.9% AWW were aware that a neonate should be referred in case he suffers from any of these conditions i.e. hypothermia, jaundice, fever. Awareness about newborn care practices was observed to increase with increase in education level. There was statistically significant improvement in the knowledge regarding minor ailments in post-test scores of AWWs.
Conclusions: Anganwadi workers are India's primary tool against the scourges of child malnourishment, infant mortality and curbing preventive diseases such as most minor ailments.

Keywords: Knowledge, AWW, Minor ailments, Children

INTRODUCTION

Child health is the corner stone of natural progress and the country which neglects the child, it future progress will be affected. Early childhood is a crucial development. The share of children (0-6 years) to the total population is 13.1% in 2011 period.[1] Integrated Child Development Services (ICDS) scheme is the foremost symbol of India's commitment to her children - India's response to the challenge of providing pre-school education on one hand and breaking the vicious cycle of malnutrition, morbidity, reduced learning capacity and mortality, on the other.[2] It is one of the largest child care programmes in the world aiming at child health, hunger, mal nutrition and its related issues.

India's primary policy response to child malnutrition, the ICDS program, is well-conceived and well-placed to address the major causes of child under nutrition in India**.** The ICDS has expanded tremendously over its 30 years of operation to cover almost all development blocks in India and offers a wide range of health, nutrition and education services to children, women and adolescent girls. ICDS program has emerged from small beginnings in 1975 to become India's flagship nutrition program.

The workers at the village level who deliver services are called anganwadi workers (AWW). Each AWW covers a population of 1000.[3]

An AWW in ICDS programme consumes a pivotal role in anganwadi centre due to her close and continuous contact with the community. Anganwadi workers are the most important and oft-ignored essential link of Indian healthcare.

Anganwadi workers are India's primary tool against the menace of child malnourishment, infant mortality, and lack of child education, community health problems and in curbing preventable diseases. They provide services to villagers, poor families and sick people across the country helping them access healthcare services, immunization, healthy food, hygiene, and provide healthy learning environment for infants, toddlers and children .[4]

The toll of under-five deaths over the past two decades is staggering: between 1990 and 2013, 223 million children worldwide died before their fifth birthday. Under-five deaths are increasingly concentrated in Sub-Saharan Africa and Southern Asia. About half of under-five deaths occur in only five countries: India, Nigeria, Pakistan, Democratic republic of the Congo and China. India (21 percent) and Nigeria (13 percent) together account for more than a third of all under-five deaths.[5]

Many common illnesses are present in children. It can be treated at home without needing to consult the doctor, many condition will get better on their own. Many minor ailments can be treated at home such as fever, common cold, cough, diarrhoea.

The leading causes of death among children under age five include preterm birth complications (17 percent of under-five deaths), pneumonia (15 percent), intrapartum-related complications (complications during labour and delivery; 11 percent), diarrhoea (9 percent) and malaria (7 percent). Globally, nearly half of under-five deaths are attributable to undernutrition.[5] More than half of under-five child deaths are due to diseases that are preventable and treatable through simple, affordable interventions.

Health workers are the backbone of health care systems. Without them, millions of mothers and children have little access to health care. Approximately 2.7 million children under the age of five receive no treatment for diarrhoea, which is a major killer of children. Of 25 developing countries, India has the highest number of children who do not receive even the most basic of healthcare services. Millions of children below the age of 5 are at great risk of dying every year from easily preventable diseases such as pneumonia and diarrhoea simply because they do not have access to a trained health worker.[6] The anganwadi workers have more chance to interact and to educate the mothers. So anganwadi workers should have basic knowledge of treatment of minor ailment. So with this aim this study was planned to assess the existing knowledge regarding minor ailments of children among anganwadi workers.

METHODS

The present study was conducted in the Department of Community Medicine SGRDIMSAR, Amritsar. Training of trainers for Anganwadi trainers was held at BFHUS, Faridkot on 13 March 2014. All the medical colleges of Punjab participated in this training. After being trained, training was held for AWW in the Department of Community Medicine SGRDIMSAR, Amritsar in the month of April which continued up to mid –May. Lists were received containing information (i.e. name, place of work) about AWW. Proposed training was to be provided to 1800 but due to drop out of some, 1680 AWW were trained during the above training. A total of 27 training sessions were held by adopting stratified random sampling technique, 5 AWW were selected per each training session. The nature and purpose of study was explained to AWW. The study was carried out with AWW consent and cooperation. A pre- designed and pre - tested questionnaire prepared in vernacular language was used to collect information from AWW. The basic information was collected in terms of her name, age, education and experience. The Questionnaire was designed so as to cover every aspect related to minor ailment among children. It included questions on different aspects of minor ailments like diarrhoea, respiratory infections, danger signs for referral etc. One mark was given for a correct response, while no mark was given for a wrong response or unanswered question. Pretest assessment to determine the knowledge of minor ailments among AWW was carried out before providing training and one post-test assessment was carried out after completion of training. Pre & post- test assessment was conducted using the same questionnaire. There were 28 questions in the questionnaire and each correct answer was given a score of 1. Thus, the test had maximum score of 28 in both pre & post test. Thus information was collected from 135 AWW. The data collected was statistically analysed using SPSS 20.0 version.

RESULTS

The study revealed that out of 135 AWW, 40% were in the age group of 25-45 years & 31.9% of workers belonged to age group of more than 55 years. The education profile of AWW revealed that 39.3% were educated till matric while 41.5% were educated till senior secondary level (Table 1). 14.8% were educated till graduate level and only 4.4% were educated till post – graduate level. The medium of education was Punjabi in majority (65.9%) of cases while 34.1% were educated in English medium. As regards work experience, maximum subjects had work experience of 10 years.

Only 8.9% AWW were aware that a neonate should be referred in case he suffers from any of these conditions i.e. hypothermia, jaundice, fever. Majority (54.8%) of AWW were of the opinion that neonate should be referred if he has jaundice whereas 21.5% of AWW were

of the opinion that neonate with fever must be referred while 14.8% believed that child with hypothermia should be referred. Maximum AWW were correct in identifying cold skin (21.5%), refusal to feed (35.6%) & decrease in heart beat (30.4%) as signs of hypothermia whereas 12.5% wrongly mentioned chest in drawing as signs of hypothermia.

Awareness regarding newborn care among AWW revealed that 60% of them believed that room where delivery is conducted should be kept warm. Almost half (48.1%) of the respondents were of the opinion that mother and child should be kept together. 61.5% of AWW opined that newborn should not be immediately bathed after birth.63% agreed that newborn should be wrapped in warm clothes while 37% did not agree.70.4% disagreed with the statement that child head should be left uncovered. 61.5% AWW disagreed that colostrums should not be given to newborns. Awareness about newborn care practices was observed to increase with increase in education level as depicted in Table 3.

Table 1: Socio- demographic profile of AWW.

		Frequency	Percentage
Age in years	less than 25	19	14.1
	25-35	29	21.5
	35-45	25	18.5
	45-55	19	14.0
	55 and above	43	31.9
Education	Matric	53	39. 3
	Senior Secondary	56	41.5
	Graduate	20	14.8
	Postgraduate	6	4.4
Medium	English	46	34.1
	Punjabi	89	65.9
Work Experience	less than 5	23	17.0
	5-10	73	54.1
	10-15	36	26.7
	More than 15	3	2.2

Table 2: Pre and post-test comparison of knowledge of anganwadi workers.

Knowledge Scores	Mean	Mean Difference	Standard Deviation	Standard error of mean	t value	p value
Pre-test	11.19	7.351	4.989	0.431	38.416	0.000
Post test	18.54		4.356	0.376		

As regards referral in case of diarrhoea, more than half of (51.1%) of respondents correctly mentioned that child who passed many loose stools in one hour should be referred . 44.4% respondents had correct information that thirsty child should be referred while 60.7% were correctly mentioned that child with sunken eyes should be referred & 45.2% AWW were of the opinion that child with blood in stools should be referred.47.4% incorrectly mentioned that child having normal intake should be referred. 57% AWW mentioned that child with diarrhoea should be given ORS while 30.1% opined that mother should stop feeding the child and 12.9% believed that child should be referred. ORS should be discarded if not used completely after 24 hours was mentioned by 45.2 % AWW.

Only 21.5% of AWW were aware of respiratory count required for diagnosing pneumonia. three fourth of respondents (76.3%) mentioned itching at night ,itching in webs of fingers, back of legs as sign of scabies whereas 23.7% incorrectly mentioned fever as a sign of scabies.

29.6% respondents correctly mentioned that milk should be avoided in anaemic child. Whereas green vegetables (17.8%), jaggery (37.0%), citrus fruits (15.6%) were incorrectly mentioned by AWW to be avoided in anaemic child.

Regarding danger signs requiring referral (Table 4), almost half (48.9%) of the respondents correctly mentioned that child with raised fontenella must be referred. Other reasons mentioned for referral were pus in umbilical cord (40%), chest in drawing (48.9%) and difficulty in breathing (51.1%). low grade fever was incorrectly mentioned as cause of referral by 27.4% of AWW. The level of education was observed to be positively associated with awareness about danger signs for referral among AWW.

Fever with rigors & chills indicate that child is suffering from malaria was known to more than half of respondents (58.5%). Only 27.4% AWW correctly mentioned that malaria can be a fatal disease in a child. The respondents believed that child with measles can have diarrhoea (30.4%), pneumonia (41.4%), blindness (17.8%) and weight loss (10.4%) as a complication.

As seen in Table 2, there was statistically significant improvement in the knowledge regarding minor ailments in post-test scores of AWWs. The difference was statistically significant ($p<0.000$).

DISCUSSION

The present study was conducted among AWW in Department Of Community Medicine SGRDIMSAR as a part of training programme. The study revealed that 40% of AWW belonged to age group of 25-45 years while 31.9% of workers belonged to age group of more than 55 years. While in another study done in Aurangabad city, maximum number of workers, (39.28%) were in the age group of 41-50 yrs.[7]

Table 3: Association of education & knowledge of AWW regarding newborn care practices.

Statement	Response of AWW	Education of AWW				p value
		Matric	Senior Secondary	Graduate	Postgraduate	
Room where delivery is conducted should be warm	Yes	16	16	16	6	0.000*
	No	37	40	4	0	
Mother and newborn should be kept together	Yes	19	21	19	6	0.000*
	No	34	35	1	0	
Newborn should be bathed immediately after birth	Yes	24	30	15	4	0.355
	No	19	26	5	2	
Newborn should be worn warm clothes	Yes	31	35	13	6	0.259
	No	22	21	7	0	
Colostrum should not be given to newborn	Yes	23	25	3	1	0.063
	No	30	31	17	5	
Newborn head should not be covered	Yes	21	19	0	0	0.003*
	No	32	37	20	6	

*significant at 0.05 level

Education profile of AWW revealed that 39.3% were matriculate and 41.5% were educated till senior secondary level 14.8% of AWW were graduates and 2% were post-graduates. Other study done by Gaurav Desai, Niraj Pandit and Diwakar Sharma in Vadodara District revealed that 37% were educated up to higher secondary level.[8] Similar findings were revealed in another study done by M.C. Sandhyarani and C. Usha Rao done among AWW in Mysore District where only around two percent have pursued post-graduation degree.[9] Education norms for selection of AWW are minimum 8th standard pass but in except 3% AWWs who had primary education, all others were "over-qualified in the study conducted in Vadodara District .[8] Majority of AWW were educated in Punjabi medium (65.9%) & 34.1% were educated in English medium. As regards work experience, maximum subjects (54.1) had work experience of 10 years .Similar findings were observed in study in ICDS block of Aurangabad City majority of AWW where had an experience of more than 10 yrs.[7]

AWWs had different opinion regarding referral of neonate. Only 8.9% were aware that a neonate should be referred in case he suffers from any of these conditions i.e. hypothermia, jaundice, fever. Rest of respondents had varied opinions. Maximum no. of AWW (54.8%) believed that neonate with only jaundice should be referred while 21.5% of respondents believed that neonate with fever should be referred and 14.8% were of the opinion that child with hypothermia requires referral. The knowledge scores were less than 38.3% for hypothermia as a condition for referral in mothers as observed in a study conducted by Oommen Accamma and Vatsa Manju in Trivandrum.[10] The awareness regarding the provision of referral services was found to be low among AWW in another study done by Prasanti Jena in Odisha where only 20 percent workers were having the knowledge about the children who need referral.[11]

Cold skin (21.5%), refusal to feed (35.6%) & decrease in heart beat (30.4%) were mentioned correctly as signs of hypothermia by AWW whereas 12.5% of them wrongly mentioned chest in drawing as signs of hypothermia.

Care provided during the neonatal periods is critical to ensuring the health of mother and baby. Room where delivery is conducted should be kept warm as replied by 60% of AWW. Mother and child should be kept together was the response of almost half (48.1%) of AWW. Only

38.5% of AWW believed that newborn should not be immediately bathed after birth.63% of respondents were in agreement with the statement that newborn should be wrapped in warm clothes. 70.4% disagreed with the statement that child's head should be left uncovered & 61.5% disagreed that colostrums should not be given to newborns. Awareness about newborn care practices was observed to increase with increase in education level. Similar observation was made in another study by Prasanti Jena where knowledge score was observed to be higher for graduated women as compared the other qualified women.[11]

Table 4: Association of education with knowledge of AWW regarding danger signs in a child for which referral is required.

Statement	Response of AWW	Education of AWW				p value
		Matric	12	Graduate	Postgraduate	
Child with raised fontenella needs referral	Yes	25	18	19	6	0.000*
	No	28	38	1	0	
Child has difficulty in breathing	Yes	23	24	16	6	0.002*
	No	30	32	4	0	
Child has discharge from umbilical cord	yes	13	17	16	6	0.000*
	No	40	39	4	0	
Child has low grade fever	Yes	18	16	3	0	0.172
	No	35	40	17	6	
Child with in drawing of chest needs referral	Yes	20	24	18	4	0.000*
	No	33	32	2	2	

*significant at 0.05 level

57% AWW mentioned that child with diarrhoea should be given ORS while 30.1% opined that mother should stop feeding the child and 12.9% believed that child should be referred. Regarding referral of a child with diarrhoea more than half of respondents believed that child who passed many stools in one hour should be referred. A thirsty child should be referred was mentioned by 44.4% of respondents while 60.7% were correctly mentioned that child with sunken eyes should be referred. Child with blood in stools was mentioned by 45.2% of AWW while 47.4% incorrectly mentioned that child having normal intake should be referred.

Referral of sick children to higher centre was found to less (8.3%) as observed in another study done in Gujarat State, India.[12] ORS should be discarded if not used completely after 24 hours was mentioned by 45.1 % AWW. While another study by Prasanti Jena revealed that around 76.6% workers had correct knowledge about ORS. The difference could be because education level was found to be on higher side (30% AWW had education up to graduation level and above) in study by P Jena. [11]

Awareness about respiratory count for diagnosing pneumonia was found to be low among respondents, only 21.5% of AWW were aware about this whereas awareness about scabies was found to be on higher side among AWW. 76.3% of AWW mentioned itching at night, itching in webs of fingers and back of legs as sign of scabies whereas 23.7% incorrectly mentioned fever as a sign of scabies. As regards awareness levels about foods to be avoided in anaemic child, 29.6% respondents correctly mentioned that milk should be avoided in anaemic child whereas green vegetables (17.8%), jaggery (37.0%), citrus fruits (15.6%) were incorrectly mentioned by AWW to be avoided in anaemic child.

Less than half of AWW were aware about signs for referral in case of a child. Almost half (48.9%) of the respondents correctly mentioned that child with raised fontenella must be referred. Other reasons mentioned for referral were pus in umbilical cord (40%), chest in drawing (48.9%) and difficulty in breathing (51.1%). Low grade fever was incorrectly mentioned as cause of referral by 27.4% of AWW.

Awareness levels about malaria as a disease was found to be on lower side. Only 27.4% AWW correctly mentioned that malaria can be a fatal disease in a child. More than half of respondents (58.5%) mentioned that fever with rigors & chills indicate that child is suffering from malaria. The respondents believed that child with measles can have diarrhoea (30.4%), pneumonia (41.4%) blindness (17.8%) and weight loss (10.4%) as a complication.

Significant improvement was observed in the knowledge regarding minor ailments in post-test scores of AWWs. Similarly statistically significant improvement in the knowledge regarding integrated management of childhood illnesses was observed in post test score of CHWs in another study by Mankar M et al.[13]

CONCLUSION

AWW lack the skills, resources and equipment they need to save children's lives. Low cost interventions could reduce neonatal mortality by up to 70 per cent if provided universally. While AWWs tend to be well-educated, they are often poorly trained for ICDS tasks .Anganwadi workers are India's primary tool against the scourges of child malnourishment, infant mortality and curbing preventive diseases such as most minor ailments. Strengthening health systems to provide interventions to all children will save many young lives.

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