

Study of knowledge and skills of anganwadi workers regarding breastfeeding and infant and young child feeding practices

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ABSTRACT

Background: Field workers from the community are the key persons for spreading the knowledge about breastfeeding and infant and young child feeding practices among people. Antenatal counseling on breastfeeding and postnatal lactation support are likely to improve rates of exclusive breastfeeding. **Objective:** The present study was designed with the aim to examine the knowledge and skills of the anganwadi workers (AWWs), with respect to a few key elements of the services provided by them, in an urban city Patiala. **Materials and Methods:** An observational and cross-sectional study was carried out among the AWWs of urban Patiala in October-November 2012. 197 AWWs voluntarily participated. After taking oral consent, AWWs were interviewed with a pretested, semistructured, self-administered questionnaire developed in a local language. The answers were compared with the desired responses. The collected data were compiled in Microsoft Excel and analyzed with the help of SPSS version 20. **Results:** In the present study, more than 80% of all the AWWs had correct knowledge regarding initiation of breastfeeding, prelacteal feed, colostrum, exclusive breastfeeding, and complementary feeding. However, there were still some serious gaps such as in frequency of breastfeeding, continuation of breastfeeding after starting a complementary feed and during illness, and the concept of bottle feeding. **Conclusion:** The existing antenatal advice by AWWs on Breastfeeding and optimal infant and young child feeding is inadequate and needs to be strengthened.


KEY WORDS: Anganwadi Workers; Optimal Infant and Young Child Feeding; Breastfeeding; Complementary Feeding; Knowledge and Skills

INTRODUCTION

Breastfeeding is the perfect way to provide the best food for a baby's first 6 months of life. Adequate complementary feeding of children from 6 months to 2 years of age is particularly important for growth, development, and prevention of undernutrition. According to the WHO, 1.5 million infants

die every year because they are not adequately breastfed. Field workers from the community are the key persons for spreading the knowledge about breastfeeding and infant and young child feeding practices among people. Antenatal counseling on breastfeeding and postnatal lactation support are likely to improve rates of exclusive breastfeeding.

The Integrated Child Development Scheme (ICDS) was initiated nearly 40 years back, in October 1975, in response to evident problems of hunger and malnutrition, especially among children.^[1,2] Anganwadi worker (AWW) is the community-based voluntary frontline worker of the ICDS program. Selected from the community, she assumes the pivotal role due to her close and continuous contact with the beneficiaries. The AWW monitors the growth of children,

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organizes supplementary feeding, helps in organizing immunization sessions, distributes vitamin A, iron and folic acid supplements, treats minor ailments, and refers cases to medical facilities.^[3]

Attainment of ICDS program goals depends heavily on the effectiveness of the AWWs, which, in turn, depends on their knowledge, attitude, and practice.^[4-6]

Thus, the present study was designed to examine the knowledge and skills of the AWWs, with respect to a few key elements of the services provided by them, in an urban city Patiala.

MATERIALS AND METHODS

The study was observational and cross-sectional in nature, through interview of the AWWs and observation of their on the job skills. The study was conducted in October-November 2012. The study population comprised the AWWs, working at the anganwadi in ICDS projects of urban Patiala.

There are a total of 213 anganwadis in urban Patiala. 197 AWWs voluntarily participated in the study. After taking oral consent from the study population, AWWs were interviewed with a pretested, semistructured, self-administered questionnaire that was developed in a local language. The questionnaire contained 15 different breastfeeding and optimal infant and young child feeding (IYCF) parameters. In addition, health education regarding correct breastfeeding practices and infant and young child feeding practices was given to the AWWs after filling the questionnaire. The answers given by the participants were compared with the desired responses. The collected data were compiled in Microsoft Excel and analyzed with the help of SPSS software. The results are in percentages and proportions.

RESULTS

In the present study, mean age of AWWs was 34.6 years. Maximum number of AWW's 104 (52.7%) belonged to age group of 30-40 years. Lowest number of participants (3%) belonged to the age group of more than 50 years. 129 AWW's (65.5%) were educated up to matric. 46 AWW's (23.3%) were graduated. The mean working experience of AWWs was 13.8 years. The majority of them 114 (57.8%) had working experience of more than 10 years.

Table 1 shows the profile of AWW's.

Table 2 shows the various indicators of knowledge and skills of AWW's regarding breastfeeding and IYCF practices.

Most common problem encountered by the females in lactation according to AWWs was insufficient breast milk, as stated by 71.3% of AWWs followed by sore breast and

Table 1: Profile of AWW's

Parameters	Number of AWW (%)
Age (years)	
<30	36 (18.2)
30-40	104 (52.7)
40-50	51 (25.8)
>50	6 (3)
Education (grade)	
8 th	10 (5.07)
10 th	129 (65.5)
12 th	12 (6)
Graduation and above	46 (23.3)
Experience as AWW (years)	
0-5	26 (13.19)
5-10	57 (28.9)
10-15	83 (42.1)
>15	31 (15.7)

AWW: Anganwadi worker

child reluctant to breastfeeding. Nobody received training regarding breastfeeding and IYCF. All of them showed their positive attitude for attending IYCF training. In addition, there were no breastfeeding support groups in the urban Patiala.

DISCUSSION

In the present study, maximum number of AWW's, 104 (52.7%) were in the age group of 30-40 years. 129 (65.5%) of AWW's were matriculate. Maximum number of workers 114 (57.8%) had experience of more than 10 years. 97.9% of all the AWW's had correct knowledge that breastfeeding should be started immediately after birth. Only 2% thought that breastfeeding should be started only after secretion of milk has started. 95.9% of AWWs had knowledge that prelacteal feeds should not be given to the baby. In our study, only 55.3% AWWs had knowledge that gripe water, ghutti, and honey were harmful to the baby. The majority of AWWs (99%) knew that the child should be exclusively breastfed for the first 6 months of life. Only 17.2% of AWWs knew that if a sick child is given oral medication, it still counts in exclusive breastfeeding. Others believed that even oral medication cannot be given during exclusive breastfeeding. 92.8% of AWWs believed that mother's milk is better for the health of the baby than cow's milk during first 6 months of age. Only 63% AWW's emphasized continuation of breastfeeding after introduction to complementary feeding. Furthermore, half of the AWW's knew that breastfeeding reduces mother's weight, provides contraceptive benefit due to lactational amenorrhea and helps involution of the uterus. Only 6% knew that breastfeeding reduces the incidence of breast cancer. Only 40% of AWWs believed that breast milk contains immunity forming substances that help in decreasing the incidence of

Table 2: Indicators of knowledge and skills about breastfeeding and IYCF practices among AWWs (*n*=197)

Knowledge	Desired answer	Response	
		Correct (%)	Incorrect (%)
Time of initiation of breastfeeding	As early as possible	193 (97.9)	4 (2.1)
Prelacteal feed should not be given to the baby	Yes	189 (95.9)	8 (4.1)
Colostrum should be given to the baby	Yes	189 (95.9)	8 (4.1)
Frequency of breastfeeding	On demand	64 (32.5)	133 (67.5)
Low birth weight baby should be breastfed more frequently	Yes	53 (27)	144 (73)
Age up to which child should be exclusively breastfed	6 months	195 (99)	2 (1)
If a sick child is given oral medication, it still counts in exclusive breastfeeding	Yes	34 (17.2)	163 (82.8)
Mothers milk is better for the baby than cow's milk	Yes	183 (92.8)	14 (7.2)
Age up to which a child should receive breastmilk even if complementary feed is started	2 years and beyond	124 (63)	73 (37)
Breastfeeding is of advantage to the mother as well	Yes	100 (51)	97 (49)
Breastfeeding reduces episodes of diarrhea and acute respiratory infections	Yes	79 (40)	118 (60)
Breastfed child should be made to burp after every feed	Yes	134 (68)	63 (32)
Bottle feeding should be totally avoided	Yes	85 (43)	112 (57)
Instructions to the lactating mother			
Lactating mothers should take consult from the doctor before taking any medicines	Yes	138 (70.3)	5 (29.7)
Lactating mother should keep religious fasts	No	53 (26.9)	144 (73.1)
Lactating mother should be given additional diet as compared to the other family members	Yes	55 (27.9)	142 (72.1)
Motivation of lactating mother for contraception use is necessary	Yes	67 (34)	130 (66)
Complementary feeding			
Age of introduction of complementary food	6 months	165 (83.7)	32 (16.3)
Complimentary food should be started with water	No	11 (5.6)	186 (94.4)
Consistency of complementary feed	Semisolid	45 (22.8)	152 (77.2)

AWW: Anganwadi worker, IYCF: Optimal infant and young child feeding

diarrhea and acute respiratory disorders. Only 68% AWWs believed that the child should be burped after every feed to avoid regurgitation. Only 43% of the AWWs believed that bottle feeding should be totally avoided. 70.3% AWWs believed that lactating mothers should take consultation from a doctor before taking any medication. In the present study, only a quarter of the AWWs had correct knowledge regarding diet during lactation. Many AWW's (34%) believed that a female cannot be pregnant during first 6 months of lactation. About 84% of AWWs felt that 6 months was the right age to start complementary feeding to the infant. While about 10% were in favor of starting complementary feed at the end of 4 months. Regarding consistency of complementary food, only 23% told that the correct consistency of complementary food should be semi-solid and many believed that starting complementary food should be liquid especially "daal ka paani." 6% of the AWW's believed that complementary food should be started by giving water to the child.

In the present study, maximum number of AWW's, 104 (52.7%) were in the age group of 30-40 years. Gupta *et al.*,^[7] in their study at ICDS block worked out the average age of AWWs to be 23.7 years. Khan and Hasan,^[8] reported that 50%

of AWWs were more than 35 years of age. Three decades of ICDS, a comprehensive assessment of the program at national level undertaken by National Institute of Public co-operation and Child Development made an observation that 30% of AWWs were in the age group of 25-35 years.^[9] In our study, 129 (65.5%) of AWWs were matriculate which is consistent with many other studies. Vasundhara and Harish,^[10] in their project observed that 96.16% of AWW's had education up to the high school level, and 2 were graduates. Kapil *et al.*,^[11] in their study found that 88% AWWs had completed primary school. In a study by Chaturvedi *et al.*,^[12] 37% AWW's had completed 10th grade. In our study, it was found that maximum number of workers 114 (57.8%) had experience of more than 10 years. In a study by Kapil *et al.*,^[11] it was found that maximum number of workers (70%) had an experience of more than 10 years. In a similar study by Chaturvedi *et al.*,^[12] more than half of the workers had worked for more than 15 years as AWWs. In the present study, 97.9% of all the AWWs had correct knowledge that breastfeeding should be started immediately after birth. Similar findings have been reported among other health-care personnel.^[13-15] Only 2% thought that breastfeeding should be started only after secretion of milk has started. Similar findings were reported

from women teachers,^[14] AWWs,^[16] Medical officers,^[13] Child Development Project Officers,^[17] and ANMs.^[18] In a study by Dorle *et al.*,^[19] only 21.3% AWWs had knowledge regarding correct time of initiation of breastfeeding. In this study, 95.9% of AWWs had knowledge that prelacteal feeds should not be given to the baby. However, in contrast to this, only 55.55% AWWs had knowledge that gripe water, ghutti, and honey were harmful to the baby. In a study by Dorle *et al.*,^[19] only 81.5% of AWWs had correct knowledge about prelacteal feeds. In our study, only 55.3% AWWs had knowledge that gripe water, ghutti and honey were harmful to the baby. 95.9% of AWWs believed that colostrum should be given to the child. Earlier studies documented contrary results.^[20,21] The encouraging findings in the present study may be due to increased emphasis on the importance of teaching of the subject of breastfeeding and because of repeated health educational messages on this topic through mass media. However, very few of AWWs could highlight the nutritional properties of colostrums. The frequency of breastfeeding was one of the parameter against which correct response was given only by a few AWWs (32.5%). Concept of “on demand” breastfeeding was known by very few of the AWW’s. Moreover, very few of them (27%) knew that low birth baby should be fed more frequently. Similar findings were reported by other research workers.^[15,20] Majority of AWWs (99%) knew that the child should be exclusively breastfed for first 6 months of life. Various other studies have reported variable results regarding this.^[12,16,19,22] Only 17.2% of AWWs knew that if a sick child is given oral medication, it still counts in exclusive breastfeeding. Others believed that even oral medication cannot be given during exclusive breastfeeding. 92.8% of AWW’s believed that mother’s milk is better for the health of the baby than cow’s milk during first 6 months of age. Similar results were seen in a study by Chaturvedi *et al.*^[12] But for a child, more than 6 months of age many AWW’s believed that complementary food should contain cow’s milk and that too diluted with water. Not much emphasis was laid on the continuation of breastfeeding after starting complementary feeding. Only 63% AWWs emphasized continuation of breastfeeding after introduction to complementary feeding. In a study by Parikh and Sharma,^[23] only 6% AWWs had knowledge regarding the continuation of breastfeeding. In another study,^[12] 95% of AWWs had correct knowledge about continuation of breastfeeding. This aspect of IYCF needs to be emphasized during the preplacement training of AWWs. In addition, half of the AWWs knew that breastfeeding reduces mother’s weight, provides contraceptive benefit due to lactational amenorrhea and helps involution of the uterus. Only 6% knew that breastfeeding reduces the incidence of breast cancer. Only 40% of AWWs believed that breast milk contains immunity forming substances that help in decreasing the incidence of diarrhea and acute respiratory disorders. The WHO recommends encouraging child to drink and eat during illness and provide extra food after illness to help child recover quickly.^[24] In the present

study, 97% of AWW’s believed that breastfeeding should be continued when the child is sick. Similar findings were reported from study by Bhasin *et al.*,^[16] where 93.7% AWWs had correct knowledge about breastfeeding a sick child. In a study by Parikh and Sharma,^[23] only 6% AWWs advised continuation of breastfeeding during illness. Continuation of breastfeeding during illness has been documented by other workers also.^[13,14,17] Only 68% AWWs believed that the child should be burped after every feed to avoid regurgitation. In a study by Bhasin *et al.*,^[16] maximum numbers of AWWs (78.3%) knew the importance of burping. It is very important to teach the art of burping and should be included in the preplacement and during the job training sessions of the AWW’s. Only 43% of the AWWs believed that bottle feeding should be totally avoided. This was very discouraging aspect. It may be due to knowledge gained from peer group or by observing this practice readily adopted by other working females in the locality. 70.3% AWW’s believed that lactating mothers should take consultation from a doctor before taking any medication. Contrary to this, in the study by Bhasin *et al.*,^[16] 93.6% AWW’s knew the importance of consultation with a doctor before taking any drug. In our study, only a few AWW’s told that some medicines can be harmful to the baby by getting secreted in the breastmilk. In the present study, only a quarter of the AWWs had correct knowledge regarding diet during lactation. Similar results were also observed from the various other studies.^[13-15,18,19] In a study by Dorle *et al.*,^[19] none of the AWWs had correct knowledge about extra nutrition for lactating mothers. This aspect of IYCF was lacking in many other studies also and needs to be emphasized during preplacement training of the AWW’s. Another aspect was enquired about advising contraceptives to the lactating females. Many AWW’s (34%) believed that a female cannot be pregnant during first 6 months of lactation. This is a misbelief and should be taken care of during training session. About 84% of AWWs felt that 6 months was the right age to start complementary feeding to the infant. While about 10% were in favor of starting complementary feed at the end of 4 months. Others believed that complementary food can be started at any time depending on the health of the child. If the child is weak the complementary food should be started early according to some AWW’s. This is a wrong concept and should be cleared during training sessions. Regarding consistency of complementary food, only 23% told that the correct consistency of complementary food should be semisolid and many believed that starting complementary food should be liquid specially “daal ka paani.” Very few AWWs knew about ways to increase the energy and nutrient density of the complementary feeds. 6% of the AWW’s believed that complementary food should be started by giving water to the child. This is a wrong concept and is to be clarified during training sessions. Besides, many myths were also prevalent among AWWs which needs to be corrected to improve IYCF practices.

- a. Size of breast determines the quantity of milk secretion. Similar results were also found in a study by Al-Matrafi HB in Makkah city^[22]
- b. There is increased requirement of water in a child who is exclusively breastfed during peak summer months
- c. A pregnant female should not breastfeed the child
- d. One of the workers also suggested giving top feed along with mothers feed to a low birth weight baby to enhance its growth.

No concept of expressing and storing the breastmilk to sustain breastfeeding in a child of working mother was prevalent among AWWs. Hence, the AWWs should have knowledge and skills to teach methods of expressing breastmilk and storing it for later feeding. Satpathy *et al.*^[25] conducted a study of AWWs on their knowledge, attitude, and practice surveys on breastfeeding, and reported that an average knowledge regarding breastfeeding was adequate. Haldar *et al.*^[24] reported that their training in infant feeding practices improved the knowledge of the participants and that repeat sessions were very useful. The results of the study showed that a relatively large proportion of AWWs were aware of a number of key principles of IYCF practices. However, there were still some serious gaps such as in frequency of breastfeeding, continuation of breastfeeding after starting complementary feed and during illness, and the concept of bottle feeding, in their knowledge and understanding which needs to be corrected by regular IYCF training before and during placement of AWW's.

Strength and Limitations of the Study

The strength of this study is that the topic is of public health concern and not much studies have been done on this topic in this area. Limitation of the study is that since this study was done in a small number of AWWs, so the results cannot be generalized to other populations.

CONCLUSION

The existing antenatal advice by AWWs on Breastfeeding and IYCF is inadequate and needs to be strengthened. The government should make provisions for training of AWWs related to breastfeeding and infant and young child feeding practices for improvement of their knowledge.

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