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Knowledge, Attitude and Practices (KAP) of Asha Workers with regard to nutrition education

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Abstract

Nutrition is one of the important aspects that deal with good health and well-being of people. Nutrition education helps resolve nutrition problems by imparting nutrition education and bringing desirable changes in Knowledge, Attitude and Practices (KAP). The existing study was conducted to know the knowledge, attitude, and practices of ASHA Workers regarding Nutrition education for pregnant women and lactating mothers. A sample size of Forty-five respondents from three mandals of the Guntur district was selected and data were collected using pre-tested questionnaires. The random sampling procedure was used for the selection of the respondents. The results of the study found that ASHA Workers had a low to medium level of knowledge, poor attitudes, and poor practices during baseline tests after implementing an intervention program for the ASHA Workers for a period of one month a significant improvement in the Knowledge, Attitude, and Practices was observed during Endline test ($t=10.5$; $t=10.3$). The above findings can be used to plan digital material on nutrition education interventions that aim at bringing change in the behavior of the respondents i.e., KAP and it can be used as ready reckoners during sudden epidemics.

Keywords: ASHA Workers, Baseline, Endline, KAP, Nutrition Education Interventions

Introduction

Nutritional status is one of the key indicators of the health of a pregnant and lactating mother. Nutrition is a discipline directly connected with many other areas associated with human existence like agriculture, economics, medicine, food technology, engineering, biological sciences, sociology, anthropology, etc. Nutrition education is a critical aspect of better and healthy life and is defined as “a set of learning experiences designed to facilitate the voluntary adoption of eating and other nutrition-related behaviors favorable health and well-being” (Swaminathan. M, 1997) ^[5] which is interchangeably called social marketing, behavior change communication, community nutrition, and health promotion. Nutrition education should be practical and easily adaptable by inculcating food habits with available local food resources. Nutrition education should become a part of the community as it is very critical in determining the health status of the community. Nutrition education aims to resolve the nutritional difficulties among people through imparting knowledge and bringing desirable change in knowledge, practices, and attitude.

Nutrition education is one of the services that come under Health departments which are implemented by ASHA at the village level. They are the frontline disseminators of science-based facts related to nutrition. Hence, they need to be provided with the right information from the right

perspective with the right methodology to transfer the message understandably to the ultimate users. Nutrition education intervention is described as consciously planned actions aimed at improving a nutrition-related behavior or component of health status for an individual, a target group, or the entire community.

ASHAs is a trained female community health workers recruited under National Health Mission (NHM). They mobilize the people for participation towards increased utilization and accountability of the existing health services. The responsibilities of ASHA workers include a survey of health & related events, community sensitization on government programs, counseling, community mobilization, health planning, and immunization. The outcomes of the research will be considered while framing the appropriate education intervention suitable for the frontline disseminators in the Indian health delivery system.

Materials and Methods

The present study was conducted in three purposively selected mandals of the Guntur district of Andhra Pradesh. Fifteen ASHA Workers from each Mandal thus made a sample of Forty-five (45) respondents from three mandals were selected. An experimental research design was adopted to study the Knowledge, Attitude, and Practices (KAP) of ASHA Workers regarding nutrition education. A structured

questionnaire developed and used for the study consisting of 47 multiple choice questions was developed in the closure of the KAP with a score of 1 and 0 for the right and wrong answers, respectively. Thus, the maximum and minimum overall scores could be 47 and 1 for each respondent. The data were analyzed using frequency, percentages, Mean scores, and tests.

Results and Discussions

The profile of ASHA Workers includes Age, Education, Experience, Marital Status, Digital Literacy, and Mass media exposure. The results were depicted in the Table.1 Majority of the respondents belong to the 35-45 years age group, this might be due to the time of recruitment of the post. The other reason might be that people in middle age between 35 to 45 years are more likely to acquire new information and possess responsibility to share the

information and discharge their duties effectively, especially in educating lactating and pregnant mothers compared to young and old age people. The above results are in line with Khoisnam *et al.* (2022)^[4].

Majority of the ASHAs had completed secondary level school (73.34%) and had interacted with the investigator and expressed their knowledge, attitude, and practices. The reason might be minimum eligibility qualification for ASHAs was revised from primary level to secondary level of education which made them viruses possess a higher level of education.

Results depicted that majority (51.12%) of ASHA Workers the 5-10 years of experience. The reason might be due to the year of initiation of the project and scheme where the posts of ASHAs were created under NHM in the year 2005. The above results are in line with Catherine *et al.* (2018)^[2] and Bhagia *et al.* (2020)^[1].

Table 1: The profile of ASHA Workers includes Age, Education, Experience, Marital Status, Digital Literacy, and Mass media exposure n=45

S. No	Variables	Asha Workers	
		Frequency	%
Age			
1.	Below 35 Years	9	20.00
2.	35-45 Years	27	60.00
3.	Above 45 Years	9	20.00
Educational Qualifications			
1.	Secondary Level	33	73.34
2.	Intermediate	10	22.22
3.	Graduation	2	4.44
Work Experience			
1.	Below 5 Years	6	13.33
2.	Between 5-10 Years	23	51.12
3.	Above 10 Years	16	35.55
Marital Status			
1.	Unmarried	1	2.22
2.	Married	44	97.78
3.	Divorced	0	0.00
4.	Widowed	0	0.00
Digital Literacy			
1.	Low	5	11.12
2.	Medium	29	64.44
3.	High	11	24.44
Mean-2.15 : SD-0.80			
Mass Media Exposure			
1.	Low	17	37.78
2.	Medium	16	35.55
3.	High	12	26.67
Mean-1.93 : SD-0.79			

Results revealed that a great portion of the respondents ASHAs (97.78%) were married and the reason might be that, married local women will be given preference in recruitment of these local posts which will be selected by the community constituted with local members. The above results are in line with Usha *et al.* (2016)^[7] and Catherine *et al.* (2018)^[2].

Results reported that more than half of the respondents of ASHA workers (64.44%) fell under medium digital literacy. The reason might be due to the respondents are having medium to high digital literacy among ASHA Workers might be due to their regular usage of Tabs/Androids to report, interact, and intimation to their superiors and peers.

The government had provided every extension functionary with digital gadgets as part of e-Governance in India which was made mandatory to share the daily reports with images and videos as evidence. It was apparent nearly one-third (37.78%) of ASHA’s had low exposure to media. This might be due to their level of education and the experience was also low.

KAP of ASHA workers

Baseline test

The response of ASHA workers to the knowledge questionnaire on nutrition education is presented in Table 2. Over more than 70 per cent of the respondents have good

knowledge (answering right) on each of three statements out of 18. These are statement 2 had 75.56 per cent; statement 7 had 77.78 per cent and Statement 8 had 80.00 per cent. On the other side, more than 60 per cent of the ASHA Workers lacks knowledge of nutrition education (answering wrong) on eight statements out of 18. Of these statements 6, and 10, 11, 12, 13, 16, 17 & 18 all had an equal percentage (62.22%). The reason might be due to lack of knowledge on nutrition education and the probable reason might be due to their low level of education and various other factors like their age, the effectiveness of training, lack of continuing education, years of experience, motivation by supervisors, lack of incentives, etc. This view of them suggests that

Anganwadi teachers know about the government schemes like YSR sampoorna poshana and poshan tracker because they are bringing awareness on these schemes among the people who are eligible for this scheme especially pregnant women and lactating mothers and they are aware of the benefits of millets not for the product development and lacks knowledge on vaccines for new-borns and pregnant women, pregnancy risks, etc. While ASHA Workers know about pregnancy risks, growth monitoring frequencies, and also vaccines for pregnant and newborns, and lack knowledge on some of the aspects that they won't deal with their people.

Table 2: Responses of ASHA Workers to Knowledge Questionnaires on Nutrition Education n=45

Q. No	Statements	Baseline test		Endline Test	
		ASHA Workers F(%)			
		Yes	No	Yes	No
1.	What are the long-term consequences for children born to Gestational Diabetes Mellitus (GDM) mothers?	26 (57.78)	19 (42.22)	35 (77.78)	10 (22.22)
2.	Gaining too much weight during pregnancy can raise the risk of	34 (75.56)	11 (24.44)	41 (91.12)	4 (8.88)
3.	What happens, If a pregnant woman has a folic acid deficiency	26 (57.78)	19 (42.22)	34 (75.56)	11 (24.44)
4.	What is the normal blood pressure of pregnant women?	27 (60.00)	18 (40.00)	34 (75.56)	11 (24.44)
5.	What is the formula used to calculate the date of delivery?	28 (62.22)	17 (37.78)	34 (75.56)	11 (24.44)
6.	Reasons for Introducing weaning food	17 (37.78)	28 (62.22)	35 (77.78)	10 (22.22)
7.	Frequency of growth monitoring	35 (77.78)	10 (22.22)	41 (91.12)	4 (8.88)
8.	What are the vaccines that should be given to newborns?	36 (80.00)	9 (20.00)	40 (88.89)	5 (11.12)
9.	Colostrum is important for the baby to maintain immunity	29 (64.44)	16 (35.55)	41 (91.12)	4 (8.88)
10.	Time of Initiation of Breastfeeding	17 (37.78)	28 (62.22)	35 (77.78)	10 (22.22)
11.	Are you aware of the benefits of millet and millet products for pregnant women	17 (37.78)	28 (62.22)	35 (77.78)	10 (22.22)
12.	Which of the following contains rich in calcium?	17 (37.78)	28 (62.22)	34 (75.56)	11 (24.44)
13.	Which of the following food items come under vitamin-c rich foods?	17 (37.78)	28 (62.22)	35 (77.78)	10 (22.22)
14.	Why do lactating mothers will not consume millet-based food products?	30 (66.67)	15 (33.33)	41 (91.12)	4 (8.88)
15.	During pregnancy, hypothyroidism can lead to	26 (57.78)	19 (42.22)	41 (91.12)	4 (8.88)
16.	What is the normal blood sugar for a pregnant woman	17 (37.78)	28 (62.22)	41 (91.12)	4 (8.88)
17.	What is the normal BMI range for pregnant women	17 (37.78)	28 (62.22)	43 (95.56)	2 (4.44)
18.	Which of the following foods are provided in YSR Sampoorna Poshana Scheme?	17 (37.78)	28 (62.22)	40 (88.89)	5 (11.12)

*Frequency in parenthesis indicates the percentage

Endline test

The response of ASHA Workers to the knowledge questionnaire on nutrition education is presented in Table 2. Over more than 90 per cent of the respondents have good knowledge (answering right) on each of seven statements

out of 18. These statements are 2, 7, 9, 14, 15, 16 & 17. On the other side, more than 20 per cent of the ASHA Workers lacks knowledge of nutrition education (answering wrong) on nine statements out of 18. These statements are 1, 3, 4, 5, 6, 10, 11, 12, 13.

Table 3: Responses of ASHA Workers to Attitude Questionnaires on Nutrition Education

Q. No	Statement	Baseline test		Endline test	
		ASHA Workers F (%)			
		Yes	No	Yes	No
1	Do you think breastfeeding improves infant brain development	14 (31.11)	31 (68.89)	35 (77.78)	10 (22.22)
2	Do you think millet is not recommended food for pregnant women and lactating mothers?	14 (31.11)	31 (68.89)	35 (77.78)	10 (22.22)
3	How well do you think it is to eat more food during pregnancy/lactation?	27 (60.00)	18 (40.00)	36 (80.00)	9 (20.00)
4	Do you think it is necessary to maintain a growth chart for a child	14 (31.11)	31 (68.89)	31 (68.89)	14 (31.11)
5	Are you aware of minced food supplements should be given before the 4 th month	25 (55.56)	20 (44.44)	40 (88.89)	5 (11.12)
6	Do you think colostrum contains IgA antibodies that help to maintain a child's immunity?	14 (31.11)	31 (68.89)	43 (95.56)	2 (4.44)
7	Lack of green leafy vegetables in the diet for pregnant women will lead to iron deficiency disease	26 (57.78)	19 (42.22)	40 (88.89)	5 (11.12)
8	How well do you think it is to eat vitamin foods during pregnancy/lactation?	33 (73.33)	12 (26.67)	43 (95.56)	2 (4.44)
9	Do you think it is necessary for gestational diabetes mellitus women to have a blood sugar test performed after delivery	14 (31.11)	31 (68.89)	36 (80.00)	9 (20.00)

*Frequency in parenthesis indicates the percentage

Baseline test

The response of ASHA Workers to the Attitude

questionnaire on nutrition education is presented in Table 3. Over more than 60 per cent of the respondents have a positive attitude (answering right) on each of two statements out of 9. This is Statement 3 had 60.00 per cent; Statement 8 had 73.33 per cent. On the other side, more than 60 per cent of the ASHA Workers have a negative attitude (answering wrong) related to nutrition education on five statements out of 9. These statements are 1, 2, 4, 6 & 9 all had an equal percentage (68.89%). It also might be due to their low level of education and various other factors like their age, the effectiveness of training, lack of continuing education, motivation by supervisors, personal attitude, etc. While ASHA workers know the information related to medicine and some are aware and unaware of nutrition-related

information that is helpful for pregnant women and lactating mothers.

Endline test

The response of ASHA Workers to the Attitude questionnaire on nutrition education is presented in Table 3. Over more than 80 per cent of the respondents have a positive attitude (Answering right) on each of six statements out of 9. These statements are 3, 5, 6, 7, 8 & 9. On the other side, more than 20 per cent of the ASHA Workers have a negative attitude (Answering wrong) related to nutrition education on five statements out of 9. These statements are 1, 2, 3, 4 & 9.

Table 4: Responses of ASHA Workers to Practice Questionnaires on Nutrition Education n=45

Q. No	Statement	Baseline test		Endline test	
		ASHA Workers F(%)			
		Yes	No	Yes	No
1	What is the minimum duration of exclusive Breast Feeding?	12 (26.67)	33 (73.33)	35 (77.78)	10 (22.22)
2	At what age do supplementary foods need to be started	12 (26.67)	33 (73.33)	35 (77.78)	10 (22.22)
3	When do you usually suggest eating fresh citrus fruits for pregnant women and lactating mothers	12 (26.67)	33 (73.33)	35 (77.78)	10 (22.22)
4	Are you demonstrating any millet-based food recipes for pregnant women and lactating mothers?	12 (26.67)	33 (73.33)	39 (86.66)	6 (13.33)
5	Weight is a good indicator of a child's growth	30 (66.67)	15 (33.33)	43 (95.56)	2 (4.44)
6	What is the time gap between feedings?	29 (64.44)	16 (35.55)	39 (86.66)	6 (13.33)
7	Do pregnant women who consume green leafy vegetables during the night times suffer from high blood pressure	12 (26.67)	33 (73.33)	43 (95.56)	2 (4.44)
8	During the pregnancy period should Green Leafy Vegetables take?	24 (53.33)	21 (46.67)	40 (88.89)	5 (11.12)
9	During the pregnancy period should Uncooked Seafood taken?	12 (26.67)	33 (73.33)	39 (86.66)	6 (13.33)
10	During the pregnancy period should Raw papaya take?	12 (26.67)	33 (73.33)	39 (86.66)	6 (13.33)
11	During pregnancy period should Nuts take?	25 (55.56)	20 (44.44)	40 (88.89)	5 (11.12)
12	During pregnancy period should Caffeine take?	12 (26.67)	33 (73.33)	39 (86.66)	6 (13.33)
13	During the pregnancy, the period should soybean be taken?	26 (57.78)	19 (42.22)	40 (88.89)	5 (11.12)
14	During pregnancy period should alcohol take?	12 (26.67)	33 (73.33)	39 (86.66)	6 (13.33)
15	During the pregnancy, period should you till seeds?	12 (26.67)	33 (73.33)	40 (88.89)	5 (11.12)
16	During the pregnancy period should unpasteurized milk taken?	12 (26.67)	33 (73.33)	39 (86.66)	6 (13.33)
17	During pregnancy period should sweets take?	27 (60.00)	18 (40.00)	43 (95.56)	2 (4.44)
18	Special foods consumed by mother after delivery	12 (26.67)	33 (73.33)	39 (86.66)	6 (13.33)
19	Along with pregnant and lactating mothers which among the following family household members are consuming YSR Sampoorna Poshana Foods?	12 (26.67)	33 (73.33)	39 (86.66)	6 (13.33)
20	Which of the following value-added products were preferred to prepare and consume from ragi flour?	28 (62.22)	17 (37.78)	39 (86.66)	6 (13.33)

*Frequency in parenthesis indicates the percentage

Baseline test

The response of ASHA Workers to the practice questionnaire on nutrition education is presented in Table 4. Over 60 per cent of the responses have good practices (answering right) on each of four statements out of 20. These are statement 5 had 66.67 per cent; statement 20 had 62.22 per cent; statement 17 "During pregnancy period should sweets taken", 60.00 per cent; statement 6 had 53.33 per cent. On the other side, more than 70 per cent of the ASHA Workers have poor practices (answering wrong) related to nutrition education on twelve statements out of 20. These statements are 1, 2, 3, 4, 7, 9, 10, 12, 14, 15, 16 & 19 all had an equal and same percentage (73.33%).

The reason might be due to a lack of practices in nutrition education and various other factors like their age, years of experience, lack of incentives, etc. The probable reason might be the practices of ASHA Workers are poor because they don't have more knowledge and attitude towards

nutrition education. From this perspective, the clientele who are managing both family and work which obstructs them from gaining information regarding nutrition education practices. From the above outcomes, it could be inferred that ASHA's Knowledge, Attitude, and practices need to be improved. The probable reason might be due to improper training from the National Health Mission (NHM). In the present study majority of the respondents are between 35-45 years old and married and can face family and societal conflicts that obstruct them to gain first-hand knowledge from the experts.

Endline test

The response of ASHA Workers to the practice questionnaire on nutrition education is presented in Table 4. Over 85 per cent of the responses have good practices (answering right) on each of seventeen statements out of 20. These statements are 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15,

16, 17, 18, 19 & 20. On the other side, more than 20 per cent of the ASHA Workers have poor practices (answering wrong) related to nutrition education each of three statements out of 20. These statements are 1, 2 & 3. The results were evident that there is an improvement in the KAP of ASHA workers. This might be due to the impact of the nutrition education interventions which aimed at bringing change in the behavior of the respondents i.e., KAP.

Table 5: Comparison of nutrition education scores Baseline and Endline test

	Variables	Mean scores	t-value
ASHA Workers	Baseline test	22.87	10.34*
	Endline test	43.24	

*Indicates significance of value at $p=0.05$

It is observed in the Table.5 Mean scores obtained from the Baseline test and Endline test were 22.87 and 43.24 respectively in ASHA Workers.

Paired t-test was done to assess the significant difference between Baseline and Endline test scores. In ASHA Workers, a significant difference between the Baseline and Endline tests a t-critical value of 2.021 at a 5% level of significance and a t-statistical value is 10.34*. Hence there is a significant improvement in Knowledge, Attitude, and Practices (KAP) among the respondents in the areas of nutrition education. The findings of Taksande *et al.* (2020) [6] also suggest that intervention has a positive impact on the Nutritional Knowledge, Attitude, and Practices of ASHA Workers.

Conclusion

Nutrition education is an important element aimed at improving the knowledge of different aspects of nutrition. Nutritional Knowledge, Attitude, and Practices (KAP) levels of ASHA Workers indicate that before the Endline test, they had low to medium levels of knowledge, poor attitudes, and poor practices. After implanting one month of an intervention program ASHA Workers improved their Knowledge, Attitude, and Practices during the Endline test. A significant difference was found in the Baseline and endline test intervention scores in the areas of nutrition.

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