

IMPACT OF IN-SERVICE TRAINING ON KNOWLEDGE OF ANGANWADI WORKERS REGARDING ANEMIA AND NUTRITIONAL KITCHEN GARDENING

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ABSTRACT

Anemia is widely prevalent in India and affects both sexes and all age group. It is a major public health problem in developing countries especially in preschool children and during pregnancy. Tapi is tribal dominated district. In tribal areas, nutritional anemia remains as a major health problem due to nutritional deficiency, repeated infection and high prevalence of sickle cell anemia. In this regard the prime importance should be focused on nutritious diet of the tribal community with proper knowledge. The Anganwadi worker is a community based front line worker of the ICDS programme. She plays a crucial role in promoting child growth and development. Knowledge plays an important role for achieving desired results. Thus, the present study was conducted to know the knowledge of Anganwadi workers about anemia and nutritional kitchen gardening with specific objectives. KVK, NAU, Tapi has organized total four In-Service training programmes on 'Different types of anemia and its control measures and nutritional kitchen gardening' during the year 2019-20 in collaboration with ICDS, Tapi. Total 173 Anganwadi workers from Dolvan and Vyara block of Tapi district were participated. Keeping the theme of In-Service training content in mind a simple objective type questionnaire were prepared and administered to trainees before training and after training as pre and post training evaluation respectively. The data was analyzed with appropriate statistical tools such as frequency, percentage, rank, mean, standard deviation, pair 't' test and co-efficient of correlation (r) test. It is found that the knowledge of Anganwadi workers regarding anemia and nutritional kitchen gardening was increased after participating in In-service training and difference between before and after In-service training was found to be statistically highly significant. The independent variables viz. age was negatively significant relationship with knowledge of Anganwadi workers whereas education had positively significant.

Keywords : in-service training, knowledge, anemia, nutritional kitchen gardening, anganwadi workers

INTRODUCTION

A healthy citizen contributes to the development of a country. Tribes are considered as the primitive groups who are backward and have a shyness to contact with the community for their rights and services. Healthcare system should take efforts to reduce health problems among tribes and reduce their vulnerability to become a backward group. Anemia is widely prevalent in India and affects both sexes and all age group. It is a major public health problem in developing countries especially in preschool children and during pregnancy. The National Family Health Survey-II conducted in 1998-99, documented that about 74% children between the ages 6-35 months were anemic. Evidence indicates that iron deficiency anemia is associated with impaired performance on a range of mental and physical factors in children including physical coordination and

capacity, mental development, cognitive abilities and social and emotional development. A majority of rural and tribal women suffer from anemia which leads to low birth weight among babies (Jhamtani, 1995). In tribal areas, nutritional anemia remains as a major health problem due to nutritional deficiency, repeated infection and high prevalence of sickle cell anemia. In this regard the prime importance should be focused on nutritious diet of the tribal community with proper knowledge. The *Anganwadi* worker is a community based front line worker of the ICDS programme. She plays a crucial role in promoting child growth and development. She is also an agent of social change, mobilizing community support for better care of young children. In view of this the present study was undertaken to know the knowledge of *Anganwadi* workers about anemia and nutritional kitchen gardening with the following objectives.

OBJECTIVES

- (1) To study the profile of *Anganwadi* workers
- (2) To assess the knowledge of *anganwadi* workers before and after in-service training on anemia and nutritional kitchen gardening
- (3) To ascertain the relationship between personal attributes and knowledge of *Anganwadi* workers

METHODOLOGY

Krishi Vigyan Kendra, Navsari Agricultural University, Vyara, Dist. Tapi has organized total four In-Service training programmes on ‘Different types of Anemia and its control measures and nutritional kitchen gardening’ during the year 2019-20 in collaboration with ICDS, Tapi. Total 173 *Anganwadi* workers from Dolvan and Vyara block of Tapi district were participated in In-Service training programmes. For studying the impact of In-Service training on knowledge of *Anganwadi* workers regarding anemia and its control measures and nutritional kitchen gardening, trainees were exposed through various effective communication media which included lectures, discussion, film show, games during the training period. Keeping the theme of In-Service training content in mind a simple objective type questionnaire having total fifteen questions were prepared and administered to trainees before training and after training as pre and post training evaluation respectively. The level of knowledge regarding nutritional aspects was measured as response given by trainees. The correct answer was given ‘1’ score whereas ‘0’ score was given to incorrect answer. The data was analyzed with appropriate statistical tools such as frequency, percentage, rank, mean, standard deviation, pair ‘t’ test and co-efficient of correlation (r) test.

RESULTS AND DISCUSSION

Profile of Anganwadi workers

(1) Age

The data in Table 1 revealed that majority of *Anganwadi* workers (54.33 per cent) were in the middle age group, 23.70 per cent were in the old age group and 21.97 per cent were in the young age group.

Table 1: Distribution of Anganwadi workers according to their age (n=173)

| Sr. No. | Categories | Frequency | Per cent |
|---------|---------------------------|-----------|----------|
| 1 | Young age (below 35 yrs) | 38 | 21.97 |
| 2 | Middle age (35 to 50 yrs) | 94 | 54.33 |
| 3 | Old age (above 50 yrs) | 41 | 23.70 |

(2) Education

Table 2: Distribution of Anganwadi workers according to their education level (n=173)

| Sr. No. | Education level | Frequency | Per cent |
|---------|------------------|-----------|----------|
| 1 | Primary | 01 | 00.58 |
| 2 | Secondary | 33 | 19.08 |
| 3 | Higher Secondary | 65 | 37.57 |
| 4 | Graduate | 54 | 31.21 |
| 5 | Post Graduate | 20 | 11.56 |

It is evident from Table 2 and figure 1 that 37.57 per cent of *Anganwadi* workers had education up to higher secondary school, followed by graduate (31.21 per cent), secondary school (19.08 per cent) and post graduate (11.56 per cent) respectively. Nearly half (42.77 per cent) of the respondents had education upto graduate and above level.

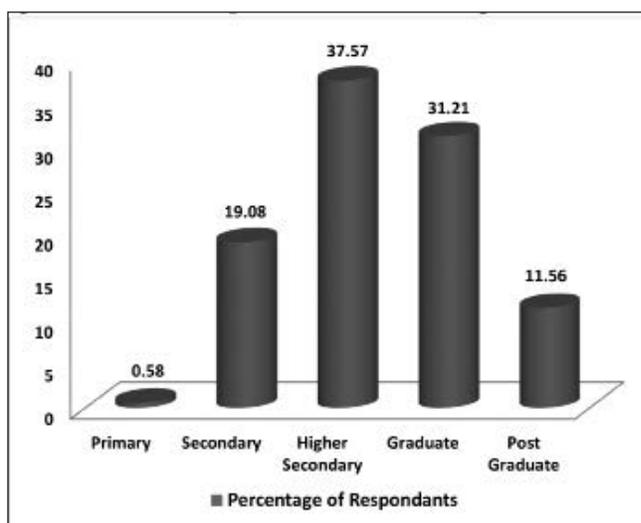


Fig. 1 : Distribution of Anganwadi workers according to their education

Knowledge level before and after in-service training

The data presented in Table 3 indicated that more than half of respondents gained nutritional aspects after participating In-service training were: Daily requirement of vegetables in balanced diet (Rank-I), Folic acid and vitamin-B₁₂ are responsible for formation of RBC(Rank-II), Types of sickle cell anemia(Rank-III), Prenatal testing for sickle cell anemia during pregnancy(Rank-IV). Whereas other nutritional aspects such as normally lifespan of human red blood cell is app. 120 days, yellow sticky trap is used for IPM in vegetables, causes of sickle cell anemia, Hb is an iron containing protein present in RBC and control measures of sickle cell anemia, effect on human health by using excess

amount of chemical fertilizers and pesticides in Agricultural crops, vitamin-C is an essential for adequate absorption of iron in body and major nutrients available in vegetables were ranked fifth, sixth, seventh, eighth, ninth, tenth and eleventh respectively.

Table 3: Knowledge gain by Anganwadi workers on Anemia and nutritional kitchen gardening (n=173)

| Sr. No. | Nutritional aspects | Before Training | | After Training | | Difference in Percent | Rank |
|---------|--|-----------------|---------|----------------|---------|-----------------------|------|
| | | Frequency | Percent | Frequency | Percent | | |
| 1 | Daily requirement of vegetables in balanced diet | 50 | 28.90 | 171 | 98.84 | 69.94 | I |
| 2 | Folic acid and vitamin-B ₁₂ are responsible for formation of RBC | 28 | 16.18 | 145 | 83.81 | 67.63 | II |
| 3 | Types of sickle cell anemia | 14 | 08.09 | 123 | 71.09 | 63.00 | III |
| 4 | Prenatal testing for sickle cell anemia during pregnancy | 62 | 35.83 | 164 | 94.79 | 58.96 | IV |
| 5 | Normally lifespan of human red blood cell is approximately 120 days | 86 | 49.71 | 168 | 97.10 | 47.39 | V |
| 6 | Yellow sticky trap is used for IPM in vegetables | 62 | 35.83 | 137 | 79.19 | 43.36 | VI |
| 7 | Causes of Sickle cell Anemia | 29 | 16.76 | 100 | 57.80 | 41.04 | VII |
| 8 | Haemoglobin is an iron containing protein present in RBC | 58 | 33.52 | 116 | 67.05 | 33.53 | VIII |
| 9 | Control measures of sickle cell anemia | 18 | 10.40 | 76 | 43.93 | 33.53 | VIII |
| 10 | Effect on human health by using excess amount of chemical fertilizers and pesticides in Agri. crops. | 108 | 62.42 | 163 | 94.21 | 31.79 | IX |
| 11 | According to WHO, Vitamin-C is an essential for adequate absorption of iron in body | 113 | 65.31 | 163 | 94.21 | 28.90 | X |
| 12 | Major nutrients available in vegetables | 96 | 55.49 | 119 | 68.78 | 13.29 | XI |
| 13 | Vitamin-A is essential for good vision | 156 | 90.17 | 162 | 93.64 | 03.47 | XII |
| 14 | In addition to minerals and vitamins, protein is also available in drumstick as compared to other vegetables | 146 | 84.39 | 152 | 87.86 | 03.47 | XII |
| 15 | Deficiency of iron produces the anemia disease in human beings | 169 | 97.68 | 173 | 100.00 | 02.32 | XIII |

Before in-service training, the majority of Anganwadi workers (90 percent, 84 percent and 98 percent) already had knowledge about vitamin-A is essential for good vision, In addition to minerals and vitamins, protein is also available in drumstick as compared to other vegetables and deficiency of iron produces the anemia disease in human beings respectively. So that after In-service training, there was no major difference in knowledge about these nutritional aspects which were ranked twelfth and thirteenth, respectively.

Table 4: Average score of knowledge of Anganwadi workers among before and after in-service training (n=173)

| Category | No. of respondents | Mean Score | Standard Deviation | 't' value |
|----------------------------|--------------------|------------|--------------------|-----------|
| Before In-Service Training | 173 | 07.404 | 1.414 | 32.54* |
| After In-Service Training | 173 | 12.508 | 4.949 | |

* Significant

It is observed from Table 4 that the knowledge of *Anganwadi* workers regarding anemia and nutritional kitchen gardening was increased after participating in In-service training and difference between before and after In-service training was found to be statistically highly significant. This shows that the impact of In-service training about anemia and nutritional kitchen gardening on *Anganwadi* workers.

Relationship between independent variables and knowledge of *Anganwadi* workers after In-Service Training

Table 5: Relationship between independent variables and knowledge of *Anganwadi* workers after In-Service Training (n=173)

| Sr. No. | Independent Variables | Correlation co-efficient (r) |
|----------------|-----------------------|------------------------------|
| X ₁ | Age | -0.3369* |
| X ₂ | Education | 0.3321* |

* Significant at 5 per cent level of probability

The data presented in Table 5 revealed that the independent variables viz. age was negatively significant relationship with knowledge of *Anganwadi* workers indicated that the young *Anganwadi* workers had more knowledge while old aged respondents had less knowledge about anemia and nutritional kitchen gardening. This might be reason that the In-service training had made a good impact on respondents who had young to middle age group. The findings are in line with Patel et al.(2016), Soni et al.(2013) and Sharma et al.(2013).

Education had positively significant relationship with knowledge of *Anganwadi* workers. This might be reason that the In-service training had made a good impact on respondents who had a good education level and created the significant association between education and knowledge of *Anganwadi* workers. The finding is an agreement with Soni et al.(2019), Kalasariya et al.(2015) and Chaudhari et al.(2015).

CONCLUSION

It is clearly indicated from the results of this study that majority of *Anganwadi* workers had young to middle aged and nearly half (42.77 per cent) of *Anganwadi* workers had education upto graduate and above level. More than half of respondents had gained nutritional knowledge about anemia and nutritional kitchen gardening after in-service training were: Daily requirement of vegetables in balanced diet (Rank-I), Folic acid and Vitamin-B₁₂ are responsible

for formation of RBC(Rank-II), Types of sickle cell anemia(Rank-III) and prenatal testing for sickle cell anemia during pregnancy(Rank-IV). The knowledge of *Anganwadi* workers regarding anemia and nutritional kitchen gardening was increased after participating in in-service training and difference between before and after In-service training was found to be statistically highly significant. The independent variables viz. age was negatively significant relationship with knowledge of *Anganwadi* workers whereas education had positively significant.

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