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Research Article

Effectiveness of Planned Health Teaching on Knowledge of Anganwadi Workers Regarding Prevention of Worm Infestation among Under-five Children at Selected Anganwadi

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Abstract

Aim of Study: The aim of the present study is to assess the effectiveness of planned health teaching on the knowledge of anganwadi workers regarding prevention of worm infestation among under-five children at selected Anganwadi". **Materials and Methods:** Quantitative research approach with Quasi-Experimental research design, one-group pretest-posttest design was used for the study. A total of 60 anganwadi workers were selected by using the purposive sampling technique (non-probability technique). That 60 samples were equally divided into three groups each group containing 20 samples. Data were collected using structured knowledge questionnaires. Two groups are covered on the same day and divided them in morning and evening session, Third group on next day. Structured knowledge questionnaire also administered on the same day following the pre-test in each group on each day according to distribution. After 7 days, post-test was conducted to assess the gain in knowledge using the same structured knowledge questionnaire. **Result:** Results showed that there has been increase in knowledge of Anganwadi Workers after the administration of planned health teaching. In post-test knowledge mean score of 25.5 was higher than their pre-test mean score of 14.5. About 71.67% of the anganwadi workers had scored marks within very good category. The mean difference of pre-test and post-test knowledge scores was 11. Calculated "t" value is 29.54 at significant difference of 59 which is considered to be statistically significant at 0.05 level of significance, Thus, null hypothesis H0 is rejected and research hypothesis H1 is accepted which conclude that planned health teaching was effective in improving the knowledge of anganwadi workers regarding prevention of worm infestation. **Conclusion:** Thus study revealed that in pre-test knowledge mean score was 14.5, whereas in post-test knowledge mean score was found to be increased up to 25.5 Hence, it is concluded that planned health teaching was effective in improving knowledge of Anganwadi workers.

Key words: Anganwadi, Anganwadi workers, Effectiveness, Planned health teaching, Worm infestation

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Introduction

Intestinal parasitic infections are believed to be the most common and important public health problem worldwide. They constitute the greatest universal cause of morbidity and mortality. It is estimated that 60% of the world population is infected with enteric parasites. The parasitic diseases continue to be a significant health problem in both developed and developing countries. These infestations are common in under-five and school children and mainly lead to nutritional deficiency, anemia, growth retardation, and impaired learning ability. The intestinal parasitic infestations are acquired by ingestion,

inhalation, or penetration of the skin by infective forms and their high incidences are closely correlated to poverty and poor environmental hygiene (poor sanitary conditions, open defecation, poor handwashing facilities and ingestion of contaminated food, water, and vegetables). Such factors have a direct bearing on the frequency of parasitic infestations, and consequently, the prevalence of infestation varies in different states of India.[1,2]

Childrens are at the high risk of parasitic infection because of their behavioral aspects, hygiene knowledge, socio-economic status, and environmental pollution. The prevalence is almost the equivalent in both sexes (male and females). The underprivileged classes in urban and rural areas are further most affected by the helminths owing to soil pollution and miserable hygiene. Infected children transport the leading source of soil contamination by their unselective defecation in door yards and earthen-floored houses where resistant eggs remain viable cause child sick. The sickness they cause can be equally devasting worm infestations can cause stomach pain, cough, fever, vomiting, loss of appetite, fatigue, listlessness worms can limit nutrient absorption and lead to anemia, malnutrition, and abdominal pain thereby making children either too sick or too tired to concentrate. Children are infected more commonly and more heavily than adults because children are more likely come in direct contact with contaminated soils.[3]

The word parasites comes from Greek word "Parasites" which means, one stands at the meal of another. Parasites can live and reproduce for many years in humans, sucking blood leaching nutrients, and gradually taking over.[4]

It was estimated that infection with roundworm (Ascarislumbricoides), whipworm (Trichuristrichiura), and hookworms (Ancylostomaduodenale and Necatoramericanus) with associated morbidity, affect approximately 250 million, 46 million, and 151 million people, respectively. About half of the population in South India and 50% of school children in tribal areas of Central India are infected with Ascaris lumbricoides, Trichuristrichiura, or hookworm. In the Western part of Nepal, 86.7% of the pre-school children are infected with a single helminth infection and 13.3% with mixed infections. Thus, worm infestation is a public health problem needs immediate attention from policymakers in India and other South Asian countries.[5]

In this era under-five childrens are most vulnerable groups and are prone to repeated certain types of infections due to unhygienic practices lsuch as open-air defecation, improper handwashing, contamination of water, and soil. Anganwadi teachers are influential people in the community who are able to disseminate the knowledge to children's as well as to the caregivers. Anganwadi workers can educate the mother regarding the upliftment of the health of their children, and thereby they can minimize the health problems among children.[6]

Awareness is a key to the prevention of many diseases. Health and hygiene education among School children reduces the transmission and reinforcement by encouraging healthy behaviours. Increasing awareness among children's as well as caregivers about the problem can help to combat from disease.[7]

The anganwadi workers assume responsibility for assessing for potential complications such as malnutrition, anemia, gastro-intestinal infections, stunted growth, and unhygienic conditions in children. They are in direct contact with children and people in community so they can play a pivot role in providing basic health activities include supplementary nutrition, non-formal education pre-school education, nutrition and health education, immunization, health checkups among under-five children. Anganwadi workers can educate the mothers regarding the upliftment of health of their children and thereby they can minimize the health problems among children.[8] With this view in mind, researcher felt need to conduct the present study to assess the knowledge of anganwadi workers and will provide health teaching regarding the prevention of worm infestation so which will help to reduce the morbidity and mortality rates in children related to worm infestation.[9]

Objectives of the study

1. To assess pretest knowledge of Anganwadi workers regarding prevention of worm infestation among under-five children at selected Anganwadi
2. To evaluate effectiveness of planned health teaching on knowledge of Anganwadi workers regarding prevention of worm Infestation among under-five children at selected anganwadi
3. To find out the association between pre-test and post-test knowledge of anganwadi workers regarding prevention of worm infestation with selected demographic variables.

Hypothesis

- H_0: There will be no significant difference between pre-test and post-test knowledge of anganwadi workers regarding the prevention of worm infestation
- H_1: There will be a significant difference between pre-test and post-test knowledge of anganwadi workers regarding the prevention of worm Infestation
- H_2: There will be a significant association between pre-test and post-test knowledge with selected demographic variable.

Methodology

The proposed study was conducted at selected anganwadi center. Research design selected for the present study was a Quasi-Experimental research design, One group pretest-posttest design was used. Study period from October 27, 2018 to November 05, 2018. The study samples were selected using the Purposive Sampling technique (non-probability technique). That 60 samples were

equally divided into three groups each groups containing 20 samples. Data were collected by using structured knowledge questionnaires. Two groups are covered on same day and divided them in morning and evening session, Third group on next day. Researcher selected extra samples due to chance of absenteeism. The research was carried out according to Erniestiene Weidenbach's Theory.

Conceptual Framework

Tool and Data Collection Procedure

Research Tool consisted of structured knowledge Questionnaire which consists of two sections:

a. Section A – Demographic data of Anganwadi workers
b. Section B - Structured Knowledge Questionnaire regarding prevention of worm infestation. It consists of 35 questionnaires consists regarding Meaning of worm infestation, types, causes, life cycle, sign and

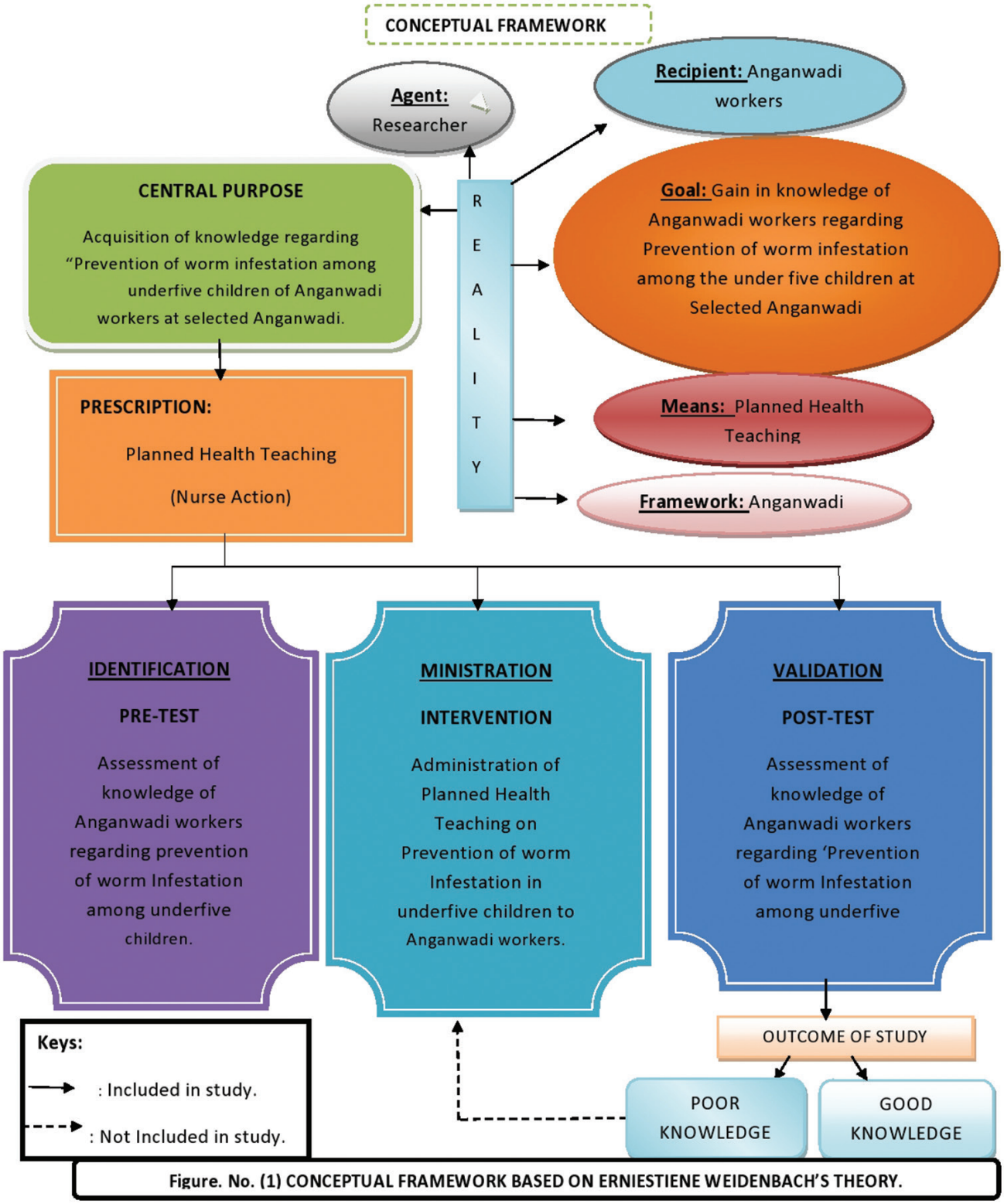

Figure. No. (1) CONCEPTUAL FRAMEWORK BASED ON ERNIESTIENE WEIDENBACH'S THEORY.

symptoms, complication and control, and preventive measures of worm infestation. Each Question carries 1 marks.

Methods of data collection relevant to objectives

- Permission was taken from the Child Development Project Officer regarding study selection of anganwadi workers from selected anganwadi
- The researcher firstly introduced herself to anganwadi workers
- Explanation about study given to anganwadi workers and written consent was obtained from the anganwadi workers of selected anganwadi
- Pre-test knowledge was assessed of Anganwadi workers with help of structured knowledge questionnaire as per the following session and group
- Planned health teaching was conducted for Anganwadi workers in three sessions are as follows: As per session wise, Post-test was conducted for same group after 7 days of Teaching with the help of structured knowledge questionnaire on 04/10/2018 and 05/10/2018.

Statistical analysis

1. Demographic variables were analyzed in terms of frequency and percentages. Paired t-test" was used to evaluate the effectiveness of planned health teaching on knowledge of anganwadi workers regarding prevention of worm infestation among under-five children
2. Chi-square test was used to find out the association between pre-test and post-test knowledge with selected demographic variable.

Results

Table 1 revealed that maximum of 56.67% of Anganwadi workers were of above 35 years of age, Majority of the Anganwadi workers, i.e. 50% have taken education till 8–10th std. Maximum Anganwadi workers about 56.67% having more than 10 years of working experience, Data reveals that about 65% of Anganwadi workers had identified case of worm Infestation. Maximum 65% of Anganwadi workers were having previous information regarding worm infestation.

- Table 2 reveals the effectiveness of Planned Health Teaching on knowledge of Anganwadi workers regarding prevention of worm Infestation
- The calculated 't' value that is 29.54 at 59 degree of freedom for 0.05 level of significance was much higher than the tabulated value at 5% level of significance that is 1.671. Hence, it was significantly interpreted that H_0 is rejected and H1 is accepted which states that the Planned health teaching was effective. In pre-test mean score is 14.5 while in post-test mean score is found to be 25.5 which shows mean score has increased.
- Table 3: Reveals that there was a significant association of $P < 0.05$ shows a significant association between Educational qualification and pre-test knowledge score and also $P < 0.05$ shows a significant association between Identification of cases of worm Infestation and pre-test knowledge score
- The obtained Chi-square value that is 0.773,0.045,0.388 of pre-test knowledge scores with demographic variables were not significant at 5% of level of significance while 4.904,5.053 were significant at 5% of level of significance
- In pre-test there was a significant association between educational qualification of Anganwadi workers and the identification of cases of worm infestation.
- Table 4 reveals that there was a significant association of $P < 0.05$ shows
- The obtained chi-square value that is 1.029,1.029 of post-test knowledge scores with demographic variables were not significant at 5% of level of significance

Table 1: Demographic data of anganwadi workers in terms of frequency and percentage (n=60)

Demographic variables	Frequency	Percentage
Age groups (in years)		
20–25	1	1.67
26–30	10	16.67
31–35	15	25.00
Above 35	34	56.67
Educational qualification		
1–4 th std	1	1.67
5–7th std	10	16.67
8–10th std	30	50.00
11–12th std	19	31.67
Year of experience in Anganwadi		
<1 years	00	00
2–5 years	10	16.67
6–10 years	16	26.67
More than 10 years	34	56.67
Identified any cases of worm infestation		
Yes	39	65.00
No	21	35.00
Previous source of information regarding worm infestation		
Working experience	39	65
Mass media	16	26.67
Health professional	05	8.33
Newspaper	00	00

Table 2: Significant difference in pretest and posttest Knowledge of Anganwadi workers regarding prevention of worm infestation (n=60)

Knowledge	Mean Score	SD	't' value	Degree of freedom	S/NS
Pre-test	14.5	9.30	29.54	59 (1.671)	Highly significant
Post-test	25.5	12.49			

Table 3: Association of pretest knowledge score of Anganwadi workers regarding prevention of worm infestation with their variables (*n*=60)

Demographic variables	Pretest score		Total	Chi-square test value	Significance of association
	8–14 (Average)	15–21 (Good)			
Age (in years)					
20–30	7	4	11	(df=1) X^2=0.773	Not Significant
31-above 35	24	25	49		
Total	31	29	60		
Education qualification					
1–7th Std	9	2	11	(df=1) X^2=4.904	Significant
8–12th Std	22	27	49		
Total	31	29	60		
Experience years					
More than 5	25	24	49	(df=1) X^2=0.045	Not Significant
Up to 5 years	6	5	11		
Total	31	29	60		
Identified any case					
Yes	16	23	39	(df=1) X^2=5.053	Significant
No	15	6	21		
Total	31	29	60		
Source of information					
Working experience	19	20	39	(df=1) X^2=0.388	Not Significant
Mass media and Health professional	12	9	21		
Total	31	29	60		

Table 4: Association of posttest knowledge score of Anganwadi workers regarding prevention of worm Infestation with their variables (*n*=60)

Demographic variables	Post-test scores		Total	Chi-square statistic	Significance of association
	(0–21) Good knowledge	(22–35) very good +excellent			
Age (in years)					
20–30	3	8	11	(df=1) X^2=1.029	Not Significant
31-above 35	5	44	49		
Total	8	52	60		
Educational qualification					
1–7th std	5	6	11	(df=1) X^2=8.864	Significant
8–12th std	3	46	49		
Total	8	52	60		
Experience in years					
More than 5	5	44	49	(df=1) X^2=1.029	Not significant
Up to 5 years	3	8	11		
Total	8	52	60		
Identified any case					
Yes	1	38	39	(df=1) X^2=8.679	Significant
No	7	14	21		
Total	8	52	60		
Source of information					
Working experience	2	37	39	(df=1) X^2=4.622	Significant
Mass media & Health professional	6	15	21		
Total	8	52	60		

while 8.864, 8.679, and 4.622 were significant at 5% of level of significance

- In the post-test there was a significant association between the educational qualification of Anganwadi workers, identification of cases of worm infestation, and previous source of information.

Discussion

One group pre-test post-test research design was used, in a pre-experimental design was selected to assess the knowledge of Anganwadi workers regarding the prevention of malnutrition among under-five children in selected ICDS centers at Jaipur. Researcher also tried to assess the effectiveness of structured teaching programs and also to find out the association between selected demographic variables with knowledge of Anganwadi workers regarding prevention of malnutrition among under-five children. Fifty Anganwadi workers were selected who met the inclusion criteria. The sampling technique adopted for the study is purposive sampling technique. The tool used was structured knowledge questionnaire. Data were collected using structured knowledge questionnaire on the prevention of malnutrition among under-five children. On the 1st day, pre-test was conducted by administering knowledge questionnaire after the pre-test single-day teaching session was carried out for Anganwadi workers through lecture cum discussion method. After 7 days of teaching session, again knowledge questionnaire was administered to Anganwadi workers to assess post-test knowledge. The data were collected and transferred to a master sheet prepared for each section of the tool. Descriptive and inferential statistics were used to analyze data. The overall analysis of the data reveals that Majority 54%had moderate knowledge followed by 40% had adequate knowledge and 6% of the Anganwadi workers had inadequate knowledge regarding early diagnosis and prevention of Malnutrition in pre-test. After the administration of structured teaching program 56% of the Anganwadi workers had adequate knowledge, followed by 38% who had moderate knowledge and 6% of them had inadequate knowledge regarding prevention of Malnutrition. It was concluded that the findings of the study showed that there was an improvement in the knowledge of Anganwadi workers as evidenced by significant differences between pretest and post-test knowledge score. The total difference in the mean of overall knowledge score was with 19.92 The 't' value of 18.65 is found to be significant at level of $P < 0.05$. The 't' value was found to be significant. It means there is gain in knowledge level of Anganwadi workers regarding prevention of malnutrition. Due to the structured teaching program researcher thought to use same teaching technique, i.e. planned health teaching regarding the prevention of worm infestation, and tried to evaluate the effectiveness of planned health teaching on knowledge of Anganwadi workers regarding prevention of worm infestation among under-five children at selected Anganwadi.[8,9]

In the present study, "Effectiveness of Planned Health Teaching on Knowledge of Anganwadi workers regarding prevention of significant association between Education level and post- test knowledge score and also $P < 0.05$ shows significant association between Identification of cases of worm Infestation, sources of previous information and Educational Qualification with post-test knowledge score. Quasi-experimental one group pre-test post-test research design was used. A total of 60 Anganwadi workers was selected by purposive sampling technique as per the inclusion criteria. Structured Knowledge Questionnaires was used to as research tool which consists of two sections. Prior to the collection of data, written permission was obtained from the Child Development Project Officer. Informed consent was taken from all the Anganwadi workers before conduction of study. On 1st day (day 1), pre-test was conducted at selected Anganwadi. Planned health teaching was also administered on the same day following after the pre-test. On the 7th day (day 7) post-test was conducted to assess the gain in knowledge using same Structured Knowledge Questionnaire. The findings of the study revealed that Maximum of 56.67% of Anganwadi workers were of Above 35 years of age, 25% of Anganwadi workers were of 31-35 years of age, 16.67% of Anganwadi workers were of 26–30 years of age and only 1.66% of Anganwadi workers were of 20–25 years of age. Majority of the Anganwadi workers that is 50% were educated till 8–10th standard, 31.67% had qualification 11–12th standard, about 16.67% were educated till 5–7th standard while only 1.66% of Anganwadi workers educated till 1–4th standard. In Anganwadi maximum Anganwadi workers about 56.67% having more than 10 years of experience, 26.67% were having 6–10 years of experience while about 16.67% were having 2–5 years of working experience. Data reveals that about 65% of Anganwadi workers had identified case of worm Infestation while only 35% of Anganwadi workers have not identified case of worm infestation. Maximum 65% of Anganwadi workers were having previous information regarding worm infestation through their working experience, 26.67% of Anganwadi workers were having previous information of worm infestation through Mass media while about 8.33% of Anganwadi workers were having previous source of information through Health professionals. Findings show that pre-test knowledge mean score was 14.50 and post-test mean score was 25.5. The post-test mean score was significantly greater than pre-test mean score. The data presented shows that 't' value was statistically highly significant calculated 't' value =29.095, table value 't'=1.671, $P < 0.05$]. Hence the null hypothesis (H_0) is rejected and H_1 research hypothesis is accepted. Chi-square test was used to find out the association and there is a significant association was found between knowledge and educational qualification of Anganwadi workers and identified any cases of worm infestation in pre-test while in post-test educational qualification of Anganwadi workers, Identified any cases of worm Infestation and previous source of information. The present study concluded that the Anganwadi workers had less appropriate knowledge regarding the prevention of worm Infestation. After the

administration of Planned Health Teaching knowledge level has improved can be noticed in post-test knowledge. Overall, the Planned Health Teaching was effective in increasing the knowledge.

Conclusion

It was found that knowledge level of Anganwadi workers was between average to good knowledge level during pre-test but after administration of planned health teaching knowledge level has improved to good, very good and excellent knowledge regarding prevention of worm infestation among under-five children at selected Anganwadi center.

References

1. Rituparna B, Lal BK, Promukh B, Kumar PU. An analytical study of intestinal parasitosis in children. Int J Community Med Public Health 2017;4:2543-7.
2. Mandira M, Hamida K. Soil transmitted helminthic infestation in diarrheal and non-diarrheal children in Mirpur slum area of Dhaka city. Bangladesh J Zool 2016;44:219-28.
3. Kasturi B. Textbook of Community Health Nursing. 17th ed. New Delhi: Jaypee Publications; 2004. p. 245.
4. Park K. Textbook of Preventive and Social Medicine. 21st ed. Jabalpur: Bhanot; 2017. p. 140.
5. Research, Education, Action; 2012. Available from: http://www.muse.jhn.ed. [Last accessed on 2021 May 17].
6. Park K. Textbook of Preventive and Social Medicine. 21st ed. Jabalpur: Bhanot; 2000. p. 148.
7. Binu M, Priyadarshini S, Huban T, Erna RJ. Empowering mother of underfive children on prevention of helminthic infestation. Int J Nurs Educ 2011;3:18-21.
8. Kumar SA, Chand GM, Vikas S. Assessment of structured teaching programme on knowledge of the Anganwadi workers regarding prevention of malnutrition among under five children in selected ICDS centres at Jabalpur. Int J Appl Res 2017;3:118-20.
9. Basavanthappa BT. Textbook of Community Health Nursing. 2nd ed. New Delhi: Jaypee Publication; 2015. p. 558.