

# **A Study to Evaluate the Effectiveness of Structured Teaching Programme Regarding Control of Anemia and Worm Infestation among Male Adolescents at Madurai**

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## **Abstract**

**Background:** The main objective of the study was to evaluate the effectiveness of Structured Teaching Programme regarding control of anemia and worm infestations among male adolescents at Madurai.

**Methods and Results :** This study was employed at true experimental research design. Totally 60 male adolescents were included in the study. The study result showed that among control group pretest mean was 9.86 and standard deviation was 0.54. Post test mean 9.84 and standard deviation 0.60. Difference in mean percentage was 0.02. Worm infection status was same (46.7 % no worm and 53.3 moderate worm load) in pretest and post test without any change. Among experimental group pretest mean was 9.84 and standard deviation was 0.60. Post test mean was 12.23 and standard deviation was 1.05. Difference in mean percentage was 2.38. Worm infection status in pretest was 60% moderate worm load and 40 % no worm infection and all participants of experimental group were free from worm infection in post test. The t value was 7.62 and p value of the study was less than 0.001.

**Conclusion:** The structured teaching programme had highly significant on control of anemia and worm infestation among male adolescents

**Keywords:** *Anemia, Adolescent health, Male adolescents, Worm infestation.*

## **Introduction**

Adolescent stage is vital stage in human life. It is a stage of transformation of human form child to early adult. The physiological and psychological development is occurring at adolescent period. Hemoglobin is essential to carry the oxygen to the tissue. Decreased hemoglobin causes anemia and less supply of oxygen to tissues which affect normal growth and development among adolescents. Adolescents are highly active and interacting with the society for their socialization. There is a high chance for worm infection by the contaminated soil and

contaminated food. The main cause of anemia among adolescents is worm infestation. Through proper educational awareness may modify the behaviour of the adolescents and bring the changes in their social activities and reduce the worm infestation and anemia.

## **Statement of the Problem**

A study to evaluate the effectiveness of structured teaching programme regarding control of anemia and worm infestation among male adolescents at Madurai

## **Objectives**

1. To assess the pretest level of demographic variables among male adolescents at Madurai in experimental and control group
2. To evaluate the effectiveness of structured teaching programme regarding control of anemia and worm infestation among male adolescents in experimental group
3. To find the association between anemia, worm infestation and selected socio demographical variables in experimental and control group

## **Hypotheses**

H1: There is a statically significant difference between pre and post test of anemia and worm infestation among male adolescents in experimental group

H2: There is a statically significant association between anemia, worm infestation and selected socio demographic variables among male adolescents in experimental and control group

## **Methodology**

The research study was employed with quantitative research approach. The research design was true experimental research design. The pretest-posttest control group design was adopted for conducting this study. Totally 60 male adolescents aged between 12-18 years were participated in this study. Random sampling technique was used and male adolescents who satisfied the inclusion criteria were selected for this study.

## **Selection and Development of Study Instrument**

The instruments used in the study were

demographic variable proforma, and blood hemoglobin and stool examination. Demographic variables proforma consist of age, religion, occupation of parent, educational status of parent, family income and residential area of the adolescents.

## **Data Collection**

The data were collected from the students for the period of eight weeks. Rapport was established with adolescents after a brief introduction about the study and its purpose. The written consent was obtained from the adolescents after fully explaining the procedure of the study. Based on the criteria for sample selection, Totally 60 male adolescents with anemia and worm infestation were selected using lot method of random sampling and assigned as experimental and control group. The Pretest screening of hemoglobin and motion ova cyst done for both group students. Structured teaching programme regarding preventions anemia and worm infestations with laptop, pamphlet and power point presentation was given to the experimental group. The control group was allowed to stay as routine. Post test screening of hemoglobin and stool examination was done after two months among both groups. Data were analyzed for the findings.

## **Results and Discussion**

The findings revealed that among control group, most of the participants 53.3% had moderate anemia and 46.67% had mild anemia in pretest and 40% had mild anemia and 60% had moderate anemia in post test. Pretest mean was 9.86 and standard deviation was 0.54. Post test mean 9.84 and standard deviation 0.60. Difference in mean percentage was 0.02. Worm infection status was same (46.7 % no worm and 53.3 moderate worm load) in pretest and post test without any change.

Among experimental group 66.7 % had mild anemia and 33.3 % had moderate anemia in pretest and 53.3 % had mild anemia and 46.7 % had normal hemoglobin status in post test. Pretest mean was 9.84 and standard deviation was 0.60. Post test mean 12.23 and standard deviation 1.05. Difference in mean percentage was 2.38. Worm infection status in pretest was 60% moderate worm load and 40 % no worm infection and all participants of experimental group were free from worm infection in post test. The t value was 7.62 and p value of the study was less than 0.001 which was highly significant. Hence the hypothesis

H1 There is a statically significant difference between pre and post test of anemia and worm infestations among male adolescents in experimental group was retained.

There was no association between selected demographical variables and anemia, worm infection among male adolescents. Hence hypothesis H2 There is a statically significant association between anemia, worm infestation and a selected socio demographic variable among male adolescents in experimental and control group was detained.

**Table 1 Frequency and percentage wise distribution of pretest and post test anemia status among male adolescents in experimental and control group.**

Anemia status by hemoglobin level	Control group				Experimental group			
	Pre test		Post test		Pre test		Post test	
	f	%	f	%	f	%	f	%
Normal	0	0	0	0	0	0	14	46.7
Mild anemia	14	46.67	12	40	20	66.7	16	53.3
Moderate anemia	16	53.33	18	60	10	33.3	0	0
Severe anemia	0	0	0	0	0	0	0	0
Overall	30	100	30	100	30	100	30	100

**Table 2 Frequency and percentage wise distribution of pretest and post test worm infestation level among male adolescents in experimental and control group.**

Level of stool examination	Control group				Experimental group			
	Pre test		Post test		Pre test		Post test	
	f	%	f	%	f	%	f	%
No worm infection	16	46.67	16	46.67	12	40	30	100
Moderate worm load	14	53.33	14	53.33	18	60	0	0
Heavy worm load	0	0	0	0	0	0	0	0
Overall	30	100	30	100	30	100	30	100

**Table 3 Evaluate the effectiveness of Structured teaching programme by pretest and post test Mean, Standard deviation, 't' value**

Group	Pretest		Post Test		Difference in Mean	't' value	p- value
	Mean	SD	Mean	SD			
Control group	9.86	0.54	9.84	0.60	0.02	9.09	p<0.001***(HS)
Experimental Group	10.30	0.78	12.23	1.05	1.93		

### Conclusion

The structured teaching programme had highly significant on control of anemia and worm infestation among male adolescents. It is non invasive and non pharmacological interventions which is highly feasible. The authors were recommended to implement health awareness programme regarding anemia and worm infestations among male adolescents to promote positive health.

**Ethical Clearance :** Ethical clearance obtained from Institutional human ethical committee of Arupadai Veedu Medical College and Hospital, Puduchery

**Source of Funding-** Self

**Conflict of Interest** – I am doing my PhD in nursing at Vinayaka mission research foundation, Salem, India. As per curriculum I have to publish my original research at reputed journal. My specialty is M.Sc., Pediatric nursing. During my clinical posting I have witnessing the majority of male adolescents are with anemia and worm infestation. Indian government

are supplying the iron and folic acid tablets weekly to the adolescent girls through WIFS programme but ignoring male adolescents. Review of literatures also evidenced the prevalence of worm infection and anemia among male adolescents. Keeping this mind the investigator conducted this research.

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