



AN EXPLORATORY STUDY TO ASSESS THE PREVALANCE AND CAUSATIVE FACTORS ASSOCIATED WITH WORM INFESTATION AMONG PRESCHOOL CHILDREN (3-5 YEAR) IN SELECTED RURAL AREA OF JABALPUR, WITH A VIEW TO PROVIDE MASS HEALTH EDUCATION.

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ABSTRACT Worm infestations are amongst the most common infections worldwide.. These infections are regarded as serious public health problem, as they cause iron deficiency anemia, growth retardation in children and other physical and mental health problems.

OBJECTIVES: Assess the prevalence and causative factors of worm infestation among preschool children (3-5year) in selected rural area of Jabalpur.

METHODS: Quantitative research approach (Descriptive Exploratory research design) is used to conduct the present study. Convenient sampling technique is used to select the sample size of 100 preschool children.

RESULT: 25% of preschool children are suffering from worm infestation. The mean score of causative factors of worm infestation is- Causative factor 1- **Feces** mean value is 2.92 with standard deviation 0.90. Causative factor 2- **Food** mean value is 3.28 with standard deviation 1.38. Causative factor 3-**Flies** mean value is 2.54 with standard deviation 1.4. Causative factor 4-**Fomites** mean value is 1.6with standard deviation 0.99. Causative factor 5-**Fingers** mean value is 4.51with standard deviation 1.89. Out of 25 positive samples the **finger** causative factor score highest (80%). There is significance variance between causative factors of worm infestation, between group df is 4 and within group 120,and the P value = 0.05 level = 3.92 and 0.01 level = 6.84 which is most significant and F – Ration = 23.61.

CONCLUSION: Out of 100 samples 25 samples are worm infestation positive. It indicates that the wellness level of preschool children is not good and the researcher found that there is significant association between causative factors of worm infestation and demographic variables. It also shows that poor as well as average hygienic condition can cause the worm infestation among preschool children & mainly the finger causative factor is most responsible for worm infestation.

KEYWORDS : Prevalence, Causative Factors, Worm Infestation, Preschool Children

INTRODUCTION

Intestinal parasites are worms, soft bodied organisms that can infest human and animals. Parasitic worms fall into several different classes and include hook worms, round worms, tapeworms, whipworms, and pinworms. The worm infestations are acquired by ingestion, inhalation or penetration in the skin by the infective worms. In India, favorable circumstances exist for high morbidity due to rapid industrialization. Open air defecation and added to it the menace of flies and other insects, poor personal cleanliness, habits of barefoot walking and poor disposal system of human excreta, favors worm infestation in children. Worm infestations are amongst the most common infections worldwide. It is estimated that some 3.5 billion people are affected, and that 450 million are ill as a result of these infections, the majority being children. These infections are regarded as serious public health problem, as they cause iron deficiency anemia, growth retardation in children and other physical and mental health problems. Epidemiological research carried out in different countries has shown that the social and economic situation of the individuals is an important cause in the prevalence of worm infestation. In addition, poor sanitary and environmental conditions are known to be relevant in the propagation of this infectious agents.

Worm infestation occurs when worms live as parasitic adults in the human gastrointestinal tract.

CAUSES OF WORM INFECTIONS

As children are quite dynamic and active, they tend to come in contact with germs easily. Some of the causes of worm infections include:

- Coming in contact with an infected surface such as soil containing eggs or germs at a playground or touching pets infected with worms
- Consuming infected food or water
- Improper hygiene
- Inadequate hand washing

PROBLEM STATEMENT

“An exploratory study to assess the prevalence and causative factor associated with worm infestation among preschool children (3-5year) in selected rural area of Jabalpur with a view to provide mass health education.”

OBJECTIVES

- Assess the prevalence of worm infestation among preschool children (3-5year) in selected rural area of Jabalpur.
- Assess the causative factor of worm infestation among preschool children (3-5year) in selected rural area of Jabalpur.

- Find out association between causative factor of worm infestation and the selected demographic variables.
- Assess the significant variance between causative factors of worm infestation in selected rural area of Jabalpur.
- Develop health education after the study through video in selected rural area of Jabalpur.

ASSUMPTION

- Growth and development of preschool children will be altered due to worm infestations
- Most of the children will be under weight.
- Causative factor may be responsible for worm infestation.

MATERIAL AND METHODS

RESEARCH METHODOLOGY

Quantitative research approach has been adopted in the present study. *Non-experimental descriptive exploratory* research design to assess the prevalence and causative factor associated with worm infestation among preschool children of Jabalpur Madhya Pradesh.” A presumed data is referred to as the research variable in the present study. Which is prevalence, causative factor? It refers to prevalence and causative factors associated with worm infestation among preschool children. Selected rural area of Jabalpur (Village Bilha, Shilpynagar & Saraswati Ghat) is the physical setting in this study. Present study sample is 100 preschool children. 100 samples were chosen by convenient sampling technique. Observation checklist used for assessing causative factors and stool examination conducted for assessing prevalence of worm infestation.

SAMPLE SELECTION CRITERIA

INCLUSION CRITERIA:

STUDY INCLUDES:

- Preschool children in age group 3-5 year who are living in selected rural area (Bilha, Saraswati Ghat & Shilpi nagar) of Jabalpur.
- Preschool children who are willing to participate in the study.
- Preschool children who are available during the period of data collection.

EXCLUSION CRITERIA:

STUDY EXCLUDES-

- Those who are not willing to be a part of study due to hesitation.
- Those who were sick during data collection.

TECHNICAL INFORMATION

TOOL-1:

Observation checklist to assess the causative factors of worm infestation. It is divided into two sections.

SECTION A:-

socio demographic variables of preschool children which includes 5 items such as age, education status of mothers, type of housing, dietary habit, family monthly income.

SECTION B:-

Observation checklist to assess the causative factors of worm infestation. It is sub classified in to five areas which are- feces, food, flies, fomites and fingers.

TOOL 2- BIO-PHYSICAL TEST

- Stool test is conducted for 3-5 year children to determine the prevalence of worm infestation.

PROCEDURE OF DATA COLLECTION

The main study is conducted at selected rural area (village- Bilha, saraswati ghat & shilpi nagar) of Jabalpur M.P. after taking permission from CMO and Sarpanch and taking informed and written consent from study participants. Sterile container administered for stool collection to every participant. Observation done by the investigator with the help of checklist. The period of data collection was 19 days. The data was collected from 17/08/18 to 04/08/18. During this period investigator collected the data regarding prevalence and causative factors of worm infestation.

DATA COLLECTION METHODS

- The data was coded and transformed to a master sheet for data analysis.
- Demographic variables are analyzed by using frequency and percentage.
- Causative factors are analyzed using frequency, percentage, mean, and SD.
- Chi-square was used to find out the association between causative factors associated with worm infestation and selected demographic variables.
- ANOVA test was used to find out the significance variance between causative factors if worm infestation.

RESULT

25% of preschool children are suffering from worm infestation. The mean score of causative factors of worm infestation is- Causative factor 1- **Feces** mean value is 2.92 with standard deviation 0.90. Causative factor 2- **Food** mean value is 3.28 with standard deviation 1.38. Causative factor 3-**Flies** mean value is 2.54 with standard deviation 1.4. Causative factor 4-**Fomites** mean value is 1.6with standard deviation 0.99. Causative factor 5-**Fingers** mean value is 4.51with standard deviation 1.89.Out of 100 samples 71% have average score, 29 % have poor score for feces causative factor, 8% have good score, 80% have average score & 12% have poor score for food causative factor, 26% have good score, 50% have average score for flies causative factor, 4% have poor score, 55% have average score, 45 % have poor score for fomites causative factor &42% have good score, 51% have average score & 07% have poor score for finger causative factor. There is significant Association between causative factors of worm infestation and each demographic variable. Out of 25 positive samples the **finger** causative factor score highest (**80%**). There is significance variance between causative factors of worm infestation, between group df is 4 and within group 120,and the P value = 0.05 level = 3.92 and 0.01 level = 6.84 which is most significant and F-Ration = 23.61.

DISCUSSION

Prevalence of worm infestation findings revealed that 25 samples are worm infestation positive out of 100; it indicates that the wellness level of preschool children is not good.

The mean score of causative factors of worm infestation is- Causative factor 1- **Feces** mean value is 2.92 with standard deviation 0.90. Causative factor 2- **Food** mean value is 3.28 with standard deviation 1.38. Causative factor 3-**Flies** mean value is 2.54 with standard deviation 1.4. Causative factor 4-**Fomites** mean value is 1.6with standard deviation 0.99. Causative factor 5-**Fingers** mean value is 4.51with standard deviation 1.89

Findings revealed that Out of 100 samples 71% have average score, 29 % have poor score for feces causative factor, 8% have good score, 80% have average score & 12% have poor score for food causative factor, 26% have good score, 50% have average score for flies causative

factor, 4% have poor score, 55% have average score, 45 % have poor score for fomites causative factor &42% have good score, 51% have average score & 07% have poor score for finger causative factor.

There is significant Association between causative factors of worm infestation and each demographic variable.

There is significant variance between causative factors of worm infestation. Out of 25 positive samples fomites causative factor have minimum 33% score, and finger causative factor have maximum 80% score. The source of variance between group = 4 df and within group = 120 df. P value 0.05 level = $F = 3.92$ & 0.01 level = $F = 6.84$. The calculated F- Ration value = 23.61.

Health education provide to the population of selected rural area of Jabalpur. It includes the meaning, causes, symptoms, prevention & treatment of worm infestation.

DISCRPTION OF PREVALENCE OF WORM INFESTATION AMONG PRESCHOOL CHILDREN according to stool test report.

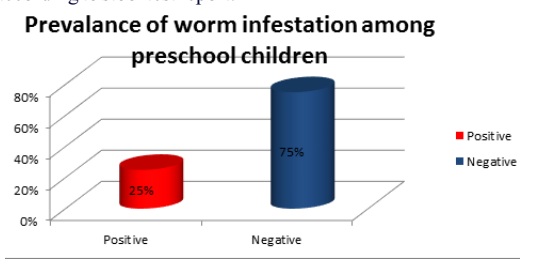


Fig. 1 Bar diagram representing the distribution of prevalence of worm infestation among preschool children

DISTRIBUTION OF CAUSATIVE FACTORS OF WORM INFESTATION AMONG PRESCHOOL CHILDREN

Table 1: Frequency, percentage, mean & standard deviation distribution of causative factors (feces) of worm infestation

N=100						
S. NO.	Score	Range	Frequency	Percentage	Mean	Standard Deviation
1.	Good	5-6	00	00%	2.92	0.90
2.	Average	3-4	71	71%		
3.	Poor	1-2	29	29%		

Table 2: Frequency, percentage, mean & standard deviation distribution of causative factors (food) of worm infestation

N=100						
S.NO.	Score	Range	Frequency	Percentage	Mean	Standard Deviation
1.	Good	5-7	08	08%	3.28	1.38
2.	Average	3-4	80	80%		
3.	Poor	0-2	12	12%		

Table 3: Frequency, percentage, mean & standard deviation distribution of causative factors (flies) of worm infestation

N=100						
S.NO.	Score	Range	Frequency	Percentage	Mean	Standard Deviation
1.	Good	4-5	26	26%	2.54	1.4
2.	Average	2-3	50	50%		
3.	Poor	0-1	24	24%		

Table 4: Frequency, percentage, mean & standard deviation distribution of causative factors (fomites) of worm infestation

N=100						
S.NO.	Score	Range	Frequency	Percentage	Mean	Standard Deviation
1.	Good	4-5	00	00%	1.6	0.99
2.	Average	2-3	55	55%		
3.	Poor	0-1	45	45%		

Table 5: Frequency, percentage, mean & standard deviation distribution of causative factors (fingers) of worm infestation

N=100

S.NO.	Score	Range	Frequency	Percentage	Mean	Standard Deviation
1.	Good	5-8	42	42%	4.51	1.89
2.	Average	3-4	51	51%		
3.	Poor	0-2	07	07%		

• SIGNIFICANT VARIANCE BETWEEN CAUSATIVE FACTORS OF WORM INFESTATION.

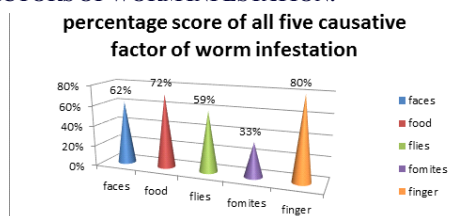


Fig. 2 Cone diagram representing the distribution and percentage of all five causative factors of worm infestation among preschool children

NURSING IMPLICATION

The nursing personnel can organize regular meeting and health education programme for preschool children mothers to impact knowledge, attitude, practice about the worm infestation.

As a health professional, the nurse who are in field setting have major responsibility in providing adequate information to the preschool children mothers regarding worm infestation and its prevention

CONCLUSION

Findings reveal that the hygienic condition of maximum sample is average & poor & it creates the causes of worm infestation & is also responsible for worm infestation. out of 100 samples 25 samples are worm infestation positive. It indicates that the wellness level of preschool children is not good and the researcher found that there is significant association between causative factors of worm infestation and each demographic variable. Poor as well as average hygienic condition can cause the worm infestation among preschool children and they are vulnerable for the worm infestation. Mainly the finger causative factor is most responsible for worm infestation.

REFERENCES

1. BT Basvanthappa, Community Health Nursing, 2nd edition, (2008), Jaypee brothers medical publisher pvt. Ltd, New Delhi.
2. K. Park, park's textbook of preventive and social medicine, 9th edition, (2007) m/s Banarsi das Bhanot publishers.
3. Keshav Swarnkar, community health nursing, 3rd edition, (2012), N.R. Brothers.
4. K.K. Gulami, community health nursing, 2nd edition, (2015) jaypee publications, New Delhi.
5. Datta Parul, Pediatric Nursing, 2nd edition, (2009), jaypee publications.
6. Brig Hemant Kumar, Capt Kalpana Jain, Study of prevalence of intestinal worm infestation and efficacy of anthelmintic drugs. Armed Forces Medical Services (AFMS), March 2014.
7. Ikram Ullah, Ghulam Sarwar, Sabina Aziz, Intestinal worm infestation in Khan, primary school children in rural Peshawar, Gomal Journal of Medical Sciences July- December 2009, vol 7, no.2.
8. www.ncbi.nlm.nih.gov/pubmed/24592785, worm infestation among the school children of dhankuta district, 2013 march
9. www.roij.com/.effectiveness of structured teaching programme on prevention of worm infestation among school children, 2015.
10. www.rguhs.ac.in/cdc/assess the effectiveness of planned teaching programme regarding prevention of worm infestation among mothers with school going children in the selected phc's of rural bangalore, karnataka, 2010.