



## Research Article

### EFFECT OF COUNSELING FOR CONSTIPATION IN PRIMARY SCHOOL CHILDREN: A SURVEY STUDY

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#### ABSTRACT

Constipation is a very common problem which affects large number of school going population of children. The most of the gastroenterologist, pediatricians and proctologist encounter with this problem routinely. Socio-economic factors play significant role towards the prevalence of disease. The dietary habits & life style pattern also leads constipation in children. This article presented a survey study based on primary school children suffered with constipation. The study revealed causes of constipation mainly associated with social & daily routine activities. The 83% of affected students were found to have bad dietary habits. The 56 % of affected children were found to possess lack of outdoor sports activity. Counseling to students, teachers and parents help to change their diet pattern and living habits in natural way. The present study also suggests guideline or rules to be adopted for curing problem of constipation in primary school children.

**KEYWORDS:** Survey, Constipation, Primary school, Daily routine.

#### INTRODUCTION

The digestive problems are very common amongst the school going children. Diarrhea, anorexia, acidity & constipation are one of them. The constipation may arise due to the improper dietary & daily routine and may be due the poor digestive fire. Painful defecation, infrequent & irregular defecation, abdomen pain, formation of bad smelling gas and anorexia are some classical symptoms of constipation [1-2]. The parents and guardians are worried about faulty diet (*Aahara*) and living habits (*Vihara*) which affect physical, mental, social and spiritual growth and development of their children. Parents come with their children for medical advice in such condition but only medical treatment is not complete solution for the constipation. So keeping this facts in mind we planned this survey study to cure constipation in primary school going children by natural way.

#### Material and Methods

1. Survey on children of primary school possesses symptoms of constipation.
2. Observation of dietary and life style pattern of such children.
3. Analysis of survey results to find statically significant.
4. Providing medical advisory suggestions to manage problem of constipation.

#### Inclusion Criteria

- Children of primary school.
- Age group of 6 to 12 years.
- Children possessed symptoms of constipation or painful defecation.
- Children of either sex.
- Children or parents who wished to participate in study willingly.

#### Exclusion Criteria

- Children of non primary groups.
- Age group below 6yrs and greater than 12 yrs.
- Children possessed symptoms of constipation associated with other chronic problem.
- Constipation associated with adverse effects of medicine.
- Children or parents not feel comfortable while survey process.
- Children with physical disabilities.
- Children associated with any systemic disorders.

#### Survey protocol

Stratified random sampling method was used to obtain the desired sample. The students for survey were selected from Rahuri Factory region of Maharashtra (India). Various schools from the region were visited and surveyed for the students possessed symptoms of constipation. Total 250 students of different primary schools were taken for the present study. Participants were belongs from variables study class, gender, religion, socio-economic status and severity of disease symptoms.

#### Data collection

The questionnaires were prepared and presented before diseased children and their parents to collect the data. The importance of investigation first described to the teachers, students and their parents. Respondent were briefed about the correlation of constipation with life style & dietary pattern. Before giving the check-list to the examinee, certain instructions were given for getting appropriate responses.

**Assessment Criteria**

The positive prevalence of constipation was assessed on basis of following symptoms:

- 1) Painful defecation
- 2) Infrequent & irregular defecation
- 3) Abdomen pain with formation of bad gas
- 4) Anorexia

**Suggestive management of constipation in participated children (Counseling)**

Children and their patients were counseled for the management of constipation as follows:

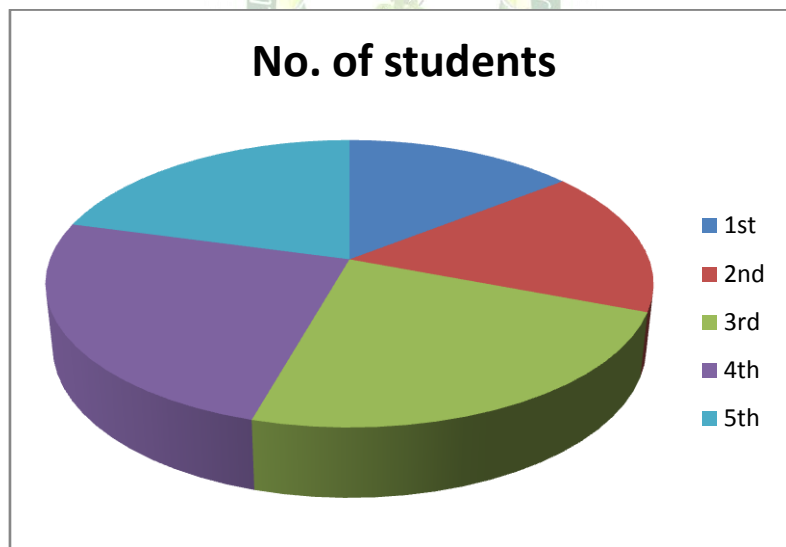
- Increase intake of fluids and fibrous diet (ladies finger, spinach, fenugreek, cabbage, cucumber, sour green, whole wheat flour etc ).
- Encourage regular toileting; the appropriate time of defecation fixed especial morning time to set biological clock.

- Encourage involvement of the school staff to help toileting.
- Parents and children were advised not to consume fast food, chocolate, marketed items and heavy oily food.
- Participants were advised to involve in outdoor sports activity, to increase physical activity.
- The students were also advised not to use mobile gaming and laptop excessively.
- Parents were advised to relief mental stress of their children by helping them in homework & not to put burden of expectation.
- The nutritious and portentous diet was suggested to improve physical strength.

**Observation and Results**

The belonging of students from various classes is as follows:

Class	No. of students
1 <sup>st</sup>	36
2 <sup>nd</sup>	41
3 <sup>rd</sup>	59
4 <sup>th</sup>	62
5 <sup>th</sup>	52



**Figure 1. Number of students belonging from various classes**

**Age:**-The majority of patients were from 8 to 12 years of age i.e.66% followed by 5-7 years of age34%.

**Sex:**-The numbers of affected girl child were of 44% and the boy patients were 56%.

**Dominant Ahar :** The 83% of affected students were found to have bad dietary habits such as; consumption of fiber less diet, fast food, chocolate, beverages and cold drinks marketed items and lack of nutrient foods. Consumption of bakery products such as; cake & pastry also leads gastric trouble.

**Diet:** The diet pattern showed that 67% were mix vegetarians and 33% patients were pure vegetarian.

**Time of defecation:** The inappropriate time of defecation also leads constipation. The missing of regular timing of defecation may leads constipation. The 45 % of affected children were found to possess disturbed time of defecation.

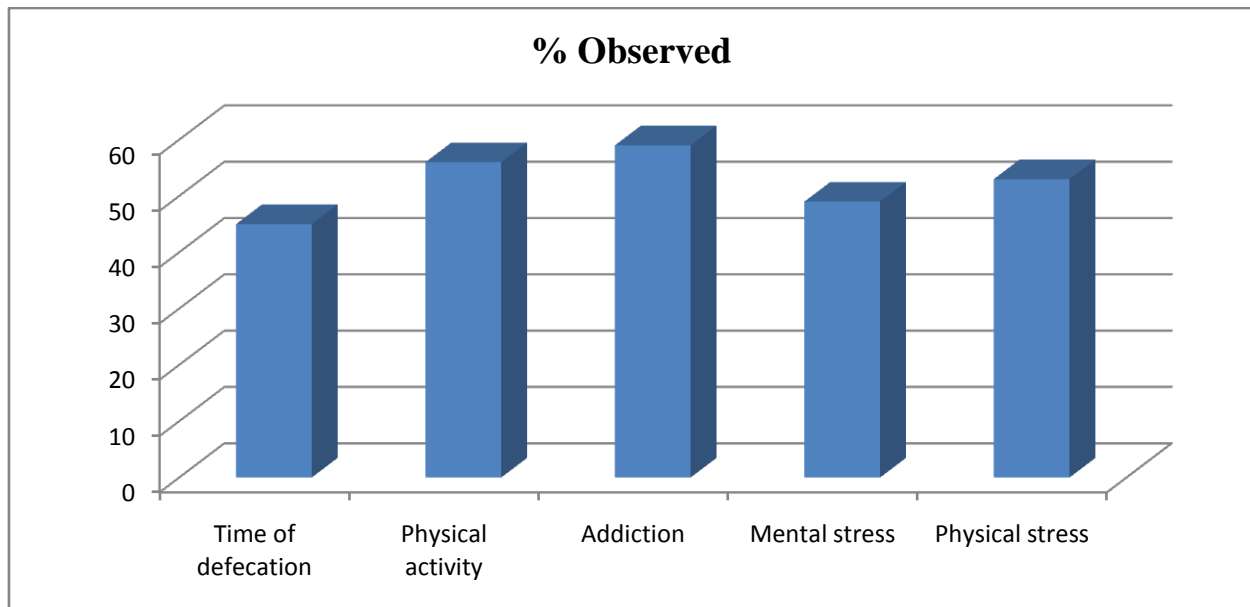
**Physical activity:** Lack of outdoor sports activity also found to be responsible for constipation. The 56 % of affected children were found to possess lack of outdoor sports activity.

**Addiction:** The most of the children who having symptoms of constipation addicted to fast food, mobile gaming and excess use of laptop. The 59 % of affected children were found to possess lack of outdoor sports activity.

**Fluid intake:** Lack of water intake also resulted constipation in many children. The 37 % of affected children were found to possess lack of fluid intake.

**Mental stress:** Mental stress due to the excess burden of study, home work and parent’s expectation also leads constipation. The 49 % of affected children were observed as stressed mentally due to the excess burden of study & home work.

**Physical stress:** Physical stress due to the exhausted school timing and coaching contributes greatly towards the constipation. The 53 % of affected children were observed as physically stressed due to the excess burden of exhausted school and coaching timing.



**Contribution of causative factors towards disease prevalence in children**

- Ahar Rasa:** Sum of all signed ranks was 376. The numbers of pairs were 25. Z value was 4.34, which was statistically very significant,  $P < 0.0001$ . (Table 1)
- Time of defecation:** Sum of all signed ranks was 423. The numbers of pairs were 24. Z value was 4.25, which was statistically very significant,  $p < 0.0001$ . (Table 1)
- Physical activity:** Sum of all signed ranks was 425. The numbers of pairs were 28. Z value was 4.50, which was statistically very significant,  $p < 0.0001$ . (Table 1)
- Addiction:** Sum of all signed ranks was 341. The numbers of pairs were 28. Z value was 4.55, which was statistically very significant,  $p < 0.0001$ . (Table 1)
- Mental stress:** Sum of all signed ranks was 435, the number of pairs were 29. Z value was 4.70, which was statistically very significant,  $p < 0.0001$ . (Table 1)
- Physical stress:** Sum of all signed ranks was 300. The numbers of pairs were 24. Z value was 4.28, which was statistically very significant,  $p < 0.001$ . (Table 1)

**Table 1: Contribution of causative factors towards the prevalence of constipation in children**

Sr. No	Contribution of factors towards constipation	Sum of All Signed Ranks	No of Pairs	Z	P
1	Ahar Rasa	376	25	4.34	<0.0001
2	Time of defecation	423	24	4.25	<0.0001
3	Physical activity	425	28	4.50	<0.0001
4	Addiction	341	28	4.55	<0.0001
5	Mental stress	435	29	4.70	<0.0001
6	Physical stress	300	24	4.28	<0.0001

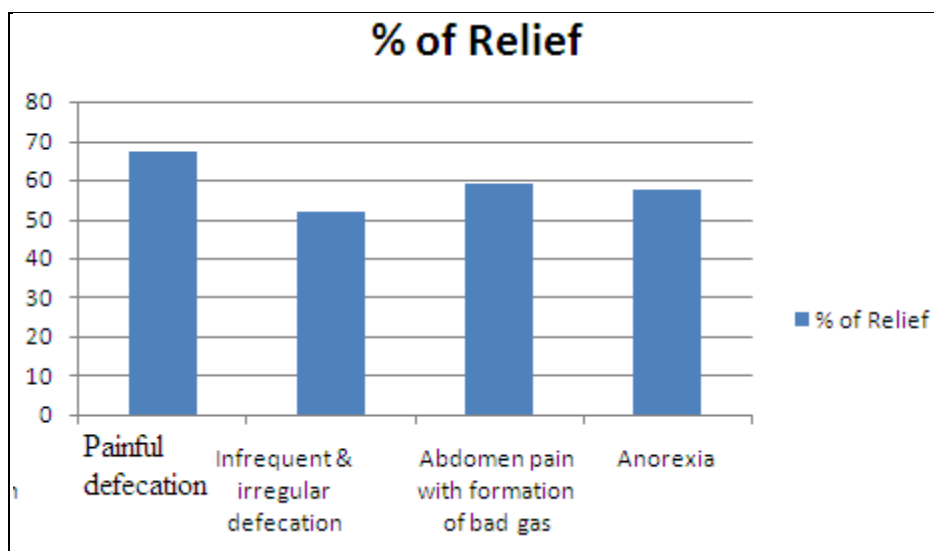
**Wilcoxon Matched-Pairs- Signed-Ranks Test**

**Effect of counseling on symptoms score**

Children and their patients were counseled for adopting disciplined daily routine and balanced dietary habits. The repeated survey revealed that the counseling greatly improves symptoms of constipation as follows:

**Table 2: Effect of counseling on symptoms**

Sr. No	Symptom	% of Relief
1	Painful defecation	67.2240
2	Infrequent & irregular defecation	52.0488
3	Abdomen pain with formation of bad gas	58.7444
4	Anorexia	57.5271



**Figure 2. Effect of counseling on symptoms of constipation**

**DISCUSSION**

Stratified random sampling method was used to obtain the desired sample. The students for survey were selected from Rahuri Factory region of Maharashtra (India). Various schools from the region were visited and surveyed for the students possessed symptoms of constipation. Total 250 students of different primary schools were taken for the present study. Participants were belongs from variables study class, gender, religion, socio-economic status and severity of disease symptoms.

The survey study includes children from of primary school, belongs from age group of 6 to 12 years & possessed symptoms of constipation. The questionnaires were presented in front of children & their parents regarding the symptoms of constipation & daily life routine including dietary habits. The finding of survey raveled that the children of age group 8 to 12 suffered more than age groups 5-7 years (Figure 1) may be due to the increase level of mental & physical stress. The high ratio of boy may because of the high % of boy in school as compared to girl child. The consumption of fiber less diet, fast food, chocolate, marketed items and lack of nutrient foods also contributes significantly towards the constipation [3-5] since these food items may disturb bowel movement as well as digestive enzyme (Table 1). However pattern of mix vegetarians and pure vegetarian not affect significantly prevalence of constipation in Children time of defecation also leads disturbed bowel movement due to the imbalanced biological clock. Lack of physical activity

such as outdoor sports activity also found to be responsible for constipation due to the improper digestion. Addiction of mobile gaming and laptop uses resulted lack of gastric induction associated with physical movement thus causes constipation and indigestion. Lack of water intake also resulted constipation may be because of formation of hard stool which resulted difficulty in defecation. Constipation also occurs due to the mental and physical stress since stress disturbed process of transportation and blood circulation and thus diminished bowel movement. [6-7]

Children and their patients were counseled for adopting disciplined daily routine and balanced dietary habits. The repeated survey revealed that the counseling greatly improves symptoms of constipation as mentioned in table and figure 2.

**1) Limitation of Study**

- The procedure is not possible in non cooperative children.
- The premature age of children may have faulty interpretation of their comments.
- Large population of different region may be included for conclusive results.
- Need of consideration of other factors also important along with diagnostic test.
- Additional studies are required to identify the association with constipation.

## 2) Scope of Study

- Study established the prime causes of constipation in children of early age groups.
- Study signifies the life style and dietary habits contribution towards the constipation.
- Study presented importance of counseling to manage problem of constipation.
- Study provide path for surveying large population regarding gastric problem.

## CONCLUSION

Study concluded that the constipation is 42% problem amongst primary school children. Socio-economic factors play significant role towards the prevalence of disease. The disturbed dietary & life style pattern resulted symptoms of constipation and further progress in children significantly. The improvement in daily routine activities & dietary habits helps to cure constipation as well as happiness of children. Regularity of bowel habit is good for gastro enteric function. Increasing incidence of constipation in primary school children is the need to change food habits (*Aahara*) and daily routine and living habits (*Vihara*) of children. Counseling help to parents and children how to change their diet pattern and living habits in natural way.

### Cite this article as:

Kanchan M Borkar, Anantkumar V Shekokar. Effect of Counseling for Constipation in Primary School Children: A Survey Study. International Journal of Ayurveda and Pharma Research. 2017;5(8):67-71.

**Source of support: Nil, Conflict of interest: None Declared**

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