INTERNATIONAL JOURNAL OF RESEARCH CULTURE SOCIETY
Monthly Peer-Reviewed, Refereed, Indexed Journal
Volume - 7, Issue - 1, January - 2023

ISSN(O): 2456-6683
[Impact Factor: 6.834]
Publication Date: 20/01/2023

IJRCS

DOIs:10.2017/IJRCS/202301006 --:-- Research Paper / Article

A study to assess the knowledge of primary school teachers on ill effects of carrying heavy school bags in children at selected rural schools, Mangalore

Mr. Pradeepa M.
HOD and Principal , Dept of Community Health Nursing , Srinivas Institute Of Nursing Sciences, Valachil Padavu ,Mangalore, Karnataka ,India-574143
Email:pmmhills@gmail.com

Abstract: *Today school bag carried by school children as a daily load becomes a health problem. back pain in school children is becoming a new topic of growing health problem raising a red flag and an alarm about the dangers associated with improper childhood school bag weight and use. the weight of school bag and the negative consequences of such a heavy load may cause back pain and damage the spine in children. the role of teacher is important and fundamental in children health care. so it is necessary to assess the teacher's knowledge on ill effects of school backpack. a study was conducted on the "a study to assess the knowledge of primary school teachers on ill effects of carrying heavy school bags in children at selected rural schools , mangalore.*

Key Words: *primary school, rural schools, carrying heavy school bags, knowledge.*

1. INTRODUCTION:

Children are the major consumers of health care in india, about 42% of the children below the age of 16 occupy the major portion of population of the country and also belong to age group in which good healthful living style could be inculcated; good health is essential for learning and cognitive aptitude of children. ensuring that children are healthy and able to learn is an indispensable constituent of an effective education system. it is all the more important to impart them with right knowledge at right time.[1]next to home, schools play an important role in supporting the health and well-being of children and young people. the healthy schools toolkit is designed to help schools to 'plan, do and review' health and well-being improvements for their children and young people and to identify and select activities and interventions effectively. this approach will ensure schools put in place the most appropriate services and meet the needs of children and young people.[2]the modern school child is required to carry a variety of heavy objects to school. the weight of bag of school children is mainly contributed by text books, note books (separate for school & private tuition), collection books, project album, and assignments as the academic materials. other materials such as lunch box, snack box, water bottle, pencil box, umbrella, etc, are the other articles cause increase in weight of the bag .large books, stationery, sports kits, and even laptop computers are often a mandatory part of the child's inventory. many children carry all the separate things in a school bag, usually a backpack.[3]today school bag carried by school children as a daily load becomes a health problem. it leads to damage of muscles, damage of blood vessel, poor lung functioning and poor bone development. the daily physical stresses associated with carrying backpacks cause significant forward lean of the head and trunk. a large number of grade school children and adolescents are reported to have upper limb including back, neck, and shoulder pain.improper backpack use can also lead to poor posture. abnormal postural adaptations could result in pain and disability in school going children.heavy backpacks which carried improperly on the backs or shoulders of school children can put pressure on their joints and ligaments and may be associated with several potential health problems and have a substantial economic impact either direct medical care costs or indirect costs of disability.[4]

2. REVIEW OF LITERATURE:

- **Review of literature related to the ill effects of carrying heavy school bags**:

Across sectional exploratory study was conducted in chennai, south india to determine the prevalence of musculoskeletal pain and their relationship with school bags weight. a total of 510 elementary school children comprising of 297 boys and 213 girls aged between 6 to 12 years participated in the study. relationship between each pupil's body weight and school bag weights were measured using standard technique. a complete designed questionnaire also used to identify prevalence of pain. a high prevalence of muscular-skeletal pain 60.6%children respectively was

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[Impact Factor: 6.834]
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reported and the most common area being back and neck. the study results conclude that a significant positive association was found between percentage of school bag weight and presence of musculoskeletal pain among the children.[5]

- **Review of literature related to knowledge of teachers regarding the ill effects of carrying heavy school bags.**

A study conducted in DMI School, Meerut to know the awareness of teachers about backpack on 100 children aged 10 to 13 years .Data was collected through an interview cum record schedule. Results revealed that 60% teachers agreed that carrying of heavy bags considered to be a serious problem while 79% of teachers agreed that poorly positioned backpack and the duration of carrying can be reasons for altered posture. Teachers (90%) were not aware with the guideline given by Central Government Backpack Act. All teachers disagreed that the school was providing a locker facility. Therefore, the study concludes that further education regarding back pack may encourage the teachers in overall development of child that will affect the child's outcomes for success in education.[6]

3. MATERIAL AND METHOD:

Research approach

Descriptive research can be described as a formal process adopted to observe and document aspects of situation as it naturally occurs and some time to serve as a starting point for hypothesis generation or theory development.

Research design

Descriptive design is used to describe the knowledge of primary school teachers regarding ill effects of carrying heavy school bag.

Setting

The study was conducted in selected rural schools in mangalore.

Variables under investigation

In this study the variables are age of the teacher, gender, religion, medium of teaching, years of experience in teaching, previous knowledge about ill effects of school bag.

Population

the population for the present study comprised of **primary school teachers** from rural schools mangalore, who is present during the period of data collection.

SAMPLING PROCEDURE:

Sample and sample size

the sample for the present study was 50 teachers from rural primary schools, mangalore, who meet the criteria.

SAMPLING TECHNIQUE

Non probability purposive sampling technique was adopted because purposive sampling is a sampling technique which is based on the belief that a researcher's knowledge about the population can be used to hand picks the cases to be included in the sample.

The demographic data were collected using a structured baseline performa prepared by the investigator. the knowledge of primary school teachers was assessed by using structured questionnaire.

the method used for data collection was as follows

- the research investigator introduced him to the subjects and established the good rapport with them
- the written consent was obtained from each primary school teachers
- appropriate orientation was given to the subjects about the aim of the study, nature of the questionnaire and adequate care was taken for protecting the subjects from potential risk including maintaining confidentiality, security and identity
- non probability sampling technique was used to give equal chance to each and every subjects
- the socio demographic variables collected from the subject and used to done to assess the subject knowledge through structured questionnaire
- data collected was then tabulated and analysed

Description of the tool:
In order to determine the existing knowledge on ill effect of carrying heavy school bag among rural primary school teachers, a structured knowledge questionnaire was used with a total number of 30 items. for convenience sake the tool is divided in to section a and section b.

- Section a: demographic profile
- Section b: structured knowledge questionnaire on ill effect of carrying heavy school bags.

Section a: demographic profile: it consists of age of the teacher, gender, religion, medium of teaching , years of experience in teaching, previous knowledge of ill effect of school bags, source of information,.
Section b: structured knowledge questionnaire: it consists of 30 questions with four sub areas, such as general concepts of school bags (2 items), ideal school bags (4 item) warning signs and ill effect of heavy school bags (16 items) strategy to control ill effect (8 item).
the items were of multiple choice types with one correct answer and each carrying one score. the total maximum score would be 30 and the minimum score zero

4. ANALYSIS AND DISCUSSION:

Data will be analysed using both descriptive (frequency, percentage, range, mean, median, standard deviation) and inferential statistics (chi-square). The obtained data were entered into the master sheet for tabulation and statistical processing. the analysis of data were organized and presented under the following sections.
Section a: description of demographic variables
Section b: analysis of knowledge of teachers regarding ill effects of carrying heavy school bags
Section d: association between the knowledge scores of the respondent on ill effects of carrying heavy school bag and the demographic variables

Section a: description of demographic variables of school teachers
The entire sample comprised of 50 school teachers. The sample characteristics are described under the sub headings of age of the teacher, gender, religion, medium of teaching, Years of experience in teaching, previous knowledge about ill Effects of school bags, source of knowledge

Table 1: description of demographic variables

n=50

sl. no.	Demographic variables	Frequency	Percentage
1.	age of the teacher [in years]		
	a. less than 25	7	14
	b. 26- 35	14	28
	c. 36- 45	20	40
	d. above 45	9	18
2.	gender		
	a. male	12	24
	b. female	38	76
3.	religion		
	a. hindu	11	22
	b. christian	38	76
	c. muslim	1	2
	d. others specify ____	0	0
4.	Medium of teaching		
	a. kannada	24	48
	b. english	26	52
5.	Years of experience in teaching		
	a. less than 5	7	14
	b. 6-10	16	32

	c. 11-15	17	34
	d. above 15	10	20
6.	Previous knowledge about ill effects of school bag		
	a. yes	17	34
	b. no	33	66
7.	Source of knowledge		
	a. mass media	16	53
	b. family members	6	20
	c. health personnel	5	17
	d. others	3	10

Section b: analysis of knowledge level of school teachers regarding ill effects of heavy school bag

Table 2: knowledge level of school teachers regarding ill effects of heavy school bag
n = 50

level of knowledge	range of scores	percentage of score	number of response	percentage of response
poor	0-10	0-33	0	0
average	11-20	33-67	44	88
good	21-30	67-100	6	12
total			50	100

Section c: association between the knowledge scores and the selected demographic variables regarding ill effects of heavy school bag

This section deals with the association between the demographic variables and pre-test knowledge scores of subjects on ill effects heavy school bag. in order to determine the association, a null hypothesis was formulated and chi-square test was used.

Table 3: chi-square value for selected demographic variables and mean knowledge scores
n=50

Sl. No.	Demographic variables	Chi-square value	df	Table value	p-value inference	
1.	Age of the teacher	0.055	1	3.84	P>0.05	NS*
2.	Gender	0.658	1	3.84	P>0.05	NS*
3.	Religion	2.797	1	3.84	P>0.05	NS*
4.	Medium of teaching	0.053	1	3.84	P>0.05	NS*
5.	Years of experience in teaching	0.215	1	3.84	P>0.05	NS*
6.	Previous knowledge about school bullying	0.238	1	3.84	P>0.05	NS*
7.	Source of knowledge	2.437	2	5.99	P>0.05	NS*

S*= Significant, NS*= Not significant

5. FINDINGS:

The major findings of the study

- 40% of school teachers were in the age group of 36-45 years.
- 76% of teachers were females.
- 76% of them were Christians.

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[Impact Factor: 6.834]
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- 52% of them were teaching in English medium school.
- 34% of them had 11-15 years of teaching experience.
- 34% of them had previous knowledge regarding ill effects of carrying heavy bag
- 53% of them gained knowledge from mass media.
- The overall level of knowledge was average, viz., 88%, 12% of them had good knowledge whereas 18% had poor knowledge.
- the total knowledge score was 45.07% with mean± sd 13.52±2.757.
- Comparing the selected demographic variables with the mean pre-test knowledge score, there was no significant association between mean pre-test knowledge score and demographic variables.

6. CONCLUSION:

The central concept of the present study was assessment of the knowledge of teachers regarding ill effects of carrying heavy school bag this would help the school teachers to gain knowledge in the respective areas and take necessary measures.

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