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REVALENCE OF BACKACHE AMONG SCHOOL GOING CHILDREN OF HYDERABAD, SINDH

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ABSTRACT

Background: The prevalence of backache is increasing in children with heavy weighed school bags and abnormal sitting posture both, at home and school. The aim of this study was to determine the prevalence of this much avoided issue of back pain among school going children of Hyderabad, Sindh.

Methodology: 240 pupils (range, 7-14 years old) were recruited in their respective schools of Hyderabad city. Inclusions were all the present students on that particular day of data collecting and excluding those who were absent that day. A preformed questionnaire form was filled with all due consent, following which, examination was done to check the parameters of height, weight, BMI, weight of school bag, and posture analysis.

Result: The prevalence of back pain was 46.7% among the total 240 subjects studied. Out of which 14.4% boys and 32.3% girls were affected. The majority of affected children were age group of 10-12 years old. In our study 61% children had school bags weighing around 5 kg, which is point to be considered by high officials of Primary Education System in Pakistan.

Conclusion: The symptoms of backache were significantly visible in those students carrying heavy bags in proportion to their own weight and BMI. This was also closely related to the time duration, subjects were spending in front of computer/ television. After analysis and all, it turned out that a significant number of students were affected by abnormal postures leading to backache-, which may be held equally responsible for further Alleviation of such symptoms later in life.

Keywords: Backache, Abnormal Posture, Ergonomics, BMI, Heavy bags, sedative life style

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INTRODUCTION

Low-back pain is a common phenomenon that affects public health [1]. Low-back pain has also been described as a public health problem in children [2]. Epidemiological evidence indicates that non-specific low-back pain presents during childhood. Estimates of lifetime prevalence for low-back pain in children vary from 13 to 51%, point prevalence ranges from 1 to 33% and prevalence of recurrent low-back pain ranges from 7 to 27% [3,4,5,6,7]. The prevalence of pain necessitating medical consultation varies from 8 to 16%, and pain interfering with activities such as school and leisure varies between 7 and 27% [3,4,7]. It appears that most of these cases were mild in nature [4,3]. In contrast, some children suffer from recurrent low-back pain. They can lead to greater disability and require increased medical attention. Most of the epidemiological research has investigated mechanical and physical factors as possible causative mechanisms. A recent study found that Italian schoolchildren were carrying weights that exceeded the body weight/load ratio limits proposed for adults, [8] and a number of studies have shown that backpack load was associated with LBP in childhood [9, 10] Also community studies report up to a half of children having experienced episodes of back pain, with the prevalence rising through the teenage years [11]. In contrast, children uncommonly seek medical help for back pain, but a specific or serious cause will be found in nearly half of these [11,12]. Serious causes may present with minor symptoms and the diagnosis is often delayed. Accordingly, follow-up is important in children where a specific cause cannot be found, and a failure of conservative treatment beyond 2 months warrants further investigation [13]. Hard work and excessive lifting strains have caused injury. In recent years more subtle stresses i.e. static and faulty postures are the usual root of back similar for males (30.7%) and females (30%) [14]. LBP has been shown to exist among children and adolescents, and some risk factors have been identified. These include growth spurt, too little activity, prolonged sitting on poorly designed furniture, and anthropometric factors [15,16,17,14]. The objectives of this study are to find out the prevalence of back pain among the children of district Hyderabad, located in the Sindh province of Pakistan. Although some studies have been done on low back pain among the adult population no such research has been done on children in this region. The aim of the present study is to find out the prevalence of back pain among the school going children in the city of Hyderabad, Sindh and to analyze the causes. Hyderabad districts are located in the province of Sindh in Pakistan. After Karachi, it is the second largest city of Sindh and the eighth biggest city in the country, with a total area of 1870 square kilometers and a total population of 17,74,685 (Health department, district Hyderabad). The city is divided into four Talukas, namely City, Qasimabad, Latifabad and Hyderabad Rural.

MATERIALS AND METHODS

The study was conducted between March 2014 to May 2014, in the city of Hyderabad, Sindh. Sample size of 240

subjects was calculated using the formula $n_0 = Z^2(1-\alpha/2) p(1-p)/d^2$. Cluster sampling technique used for the study. Each cluster consisted of school. A list of all the schools of Hyderabad had been obtained from the ministry of education, Hyderabad. Seven different schools had randomly selected for this study from among the schools of Hyderabad. Three of these school from the public sector and four from the private sector. A subject was both sexes equally included in the study. Subject's age between 10 and 16 years had been taken for this study. The data analyzed by using Statistical Packages for Social Sciences (SPSS) version 16.0. A double data entry method used to eliminate any human error. Frequency and percentage were computed for categorical variables like age, frequency of pain and posture analysis among the preschool going children. Mean with standard deviation, 95% confidence interval and median were also computed for quantitative variable like age, number of family members and type of pain.

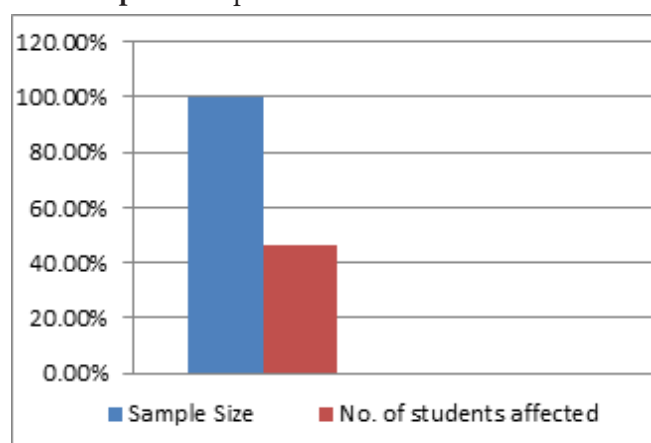
Chi-Square test had been used to compare different groups. $P \leq 0.05$ considered level of significant. The purpose of the study was explained to the subjects and their verbal informed consent will be obtained. All data was treated confidentially with no disclosure of identifying information.

RESULTS

After all the analysis was done, the results were surprising. We found out, that there is much of a significant difference between male and female subjects examined, may be because the bodily composition of PO₄, and Calcium deposition, plus metabolic activities. We felt that there is a huge dearth of proper education regarding ideal postures, importance of physical activities and things like that. Students were unaware about their posture and what that might yield them in senescence.

A huge number of school age children were already suffering from bad postures and an alarming number of them had symptoms of backache. The prevalence of back pain was 46.7% among the total 240 subjects studied. Out of which 14.4% boys and 32.3% girls were affected. The majority of affected children were age group of 10-12 years old. In our study 61% children had school bags weighing around 5 kg, which is a point to be considered by high officials of Primary Education System in Pakistan.

Graph 1: sample size and number of students



Weight of School Bags

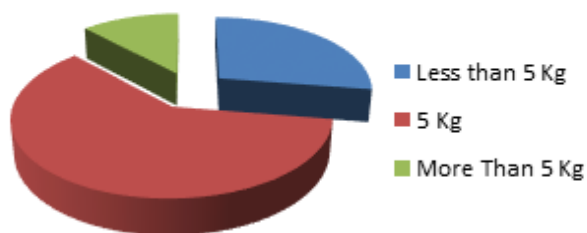
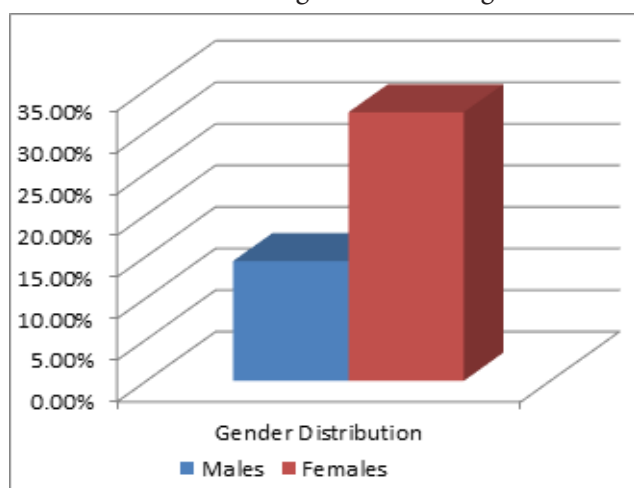


Chart 1: Weight of school bags



Graph 2: Gender distribution

DISCUSSION

Backache is proving to be a menace for our society, with an estimated prevalence of around 50% school age children, already affected by this nerve wrecking condition. The prevalence of this problem, when compared with our neighboring countries, i-e; Nepal and Bangladesh, they are by far in a much better state of condition when asked about their school age children. Despite the fact that they have to cover more distance by foot carrying heavy bags and cover long distances.

One of the reasons why they are at far better place when talked about backache, may be because in spite of them being included in developing countries, they give proper time to education, sports and health. Unlike them, our children spend more time in front of computers and television and lying down on inappropriate beds.

The purpose of this study was to become aware about this highly infiltrating disease, which is bringing about chronic dependency and is on the verge of making our adults handicapped.

First and foremost thing we did was selected this topic and get it approved by our Varsity's ethical committee so that this research study proves to be fruitful for everyone who is linked to this project directly or indirectly.

We then calculated the sample size, which was destined to be 240 through a particular formula. After which, we formed a questionnaire paper which consisted of questions regarding the subject's grade of study, family history regarding concerned problem, activities etc.

We then weighed their bags, weighed them and calculated the BMI, in order to be sure about their general state of health.

We were amazed to see so much warming and welcoming attitude by the school administration, faculty and staff, as well as the subjects.

After completion of the initial phase of Data Collection, now was the time we had to put the data on SPSS Version 16.0, for the analysis and evaluation of our primary objectives.

After the results were out, we reviewed the previous investigating articles, and found out that in Brazil more than 60% students of school going age suffer from back pain. Whereas in Mexico, the percentage of female students carrying heavy bags and positive family histories have an incidence of more than 42% of back pain and related symptoms

While our study concluded with the results, which stated that a huge number of school age children were already suffering from bad postures and an alarming number of them had symptoms of backache. The prevalence of back pain was 46.7% among the total 240 subjects studied. Out of which 14.4% boys and 32.3% girls were affected. The majority of affected children were age group of 10-12 years old. In our study 61% children had school bags weighing around 5 kg, which is a point to be considered by high officials of Primary Education System in Pakistan.

CONCLUSION:

The symptoms of backache were significantly visible in those students carrying heavy bags in proportion to their own weight and BMI. This was also closely related to the time duration, subjects were spending in front of computer/ television. After analysis and all, it turned out that a significant number of students were affected by abnormal postures leading to backache-, which may be held equally responsible for further Alleviation of such symptoms later in life.

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