

# Assessment the Risk Factors and Incidence of Low Back Pain among Higher Secondary Students in Selected School at Kanchipuram Dist Tamil Nadu India

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## Abstract

Cross sectional research design study was conducted to “Assessment of the risk factor and incidence of low back pain among higher secondary students selected school at Kanchipuram District, Tamil Nadu, India”. The objectives of the study were to assess the demographic variables with the risk factors of low back pain. To assess the incidence of low back pain among higher secondary school students. To associate the risk factors and incidence of low back pain among higher secondary school students with elected demographic variables. Convenient sampling technique was followed and 102 higher secondary students selected school who met inclusion criteria were in the higher secondary school students participate from the class 11<sup>th</sup> to 12<sup>th</sup>. Students who are available in data collection student who can read and understand Tamil/English.

The collected data were formulated and analysed by using cross sectional research design and inferential statistics. Result shows, that Maximum no of low back pain in secondary school students were in the age group of 59(84%), among sex of male participated were 53(52%) are low back pain secondary school student majority of playing participation in the games was “Yes” 96(94%),majority of low back pain for secondary school students hobbies like sports 62(61%), among the this students maximum height are 55(54%) and maximum weight of the students 58(57%), the majority of students BMI 58(57%), are low back pain in secondary school students bag weight of 79(77%).

There is significant association of assessment of the risk factor and incidence of low back pain among higher secondary school students with demographic variables like participation in the games, bag weight. But there is no significant of assessment of the risk factor and incidence of low back pain among higher secondary school students.

**Keywords:** Risk factor, Incidence, bags, low back pain, Higher secondary students.

## Introduction

The prevalence of low back pain (LBP) among

secondary school students is increasing. The magnitude of the problem is not well quantified. Evidence shows LBP in adolescents can be a significant risk factor for back pain in adulthood<sup>1</sup>. The present study aimed to determine the lifetime prevalence of LBP among secondary school students from schools of an urban metropolitan city and the prevalence of LBP in the presence of associated factors<sup>2</sup>.

It has been estimated that over 80% of the population will report low back pain (LBP) at some point in life and each year 7% of the adult population consult their

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GP with symptoms<sup>11</sup>. Prevalence increases with age, reaching a peak during the sixth decade of life. Until recently little was known about LBP at young ages. Clinically it was perceived to be uncommon with few children consulting because of LBP in primary care<sup>3</sup>. Large prospective epidemiological studies have shown that, in those free of LBP at baseline, the best predictor of future onset is a previous history of LBP. Therefore, to understand the epidemiology of LBP and what predisposes someone to a trajectory of LBP in adult life, it is important to examine the condition at young ages, to determine factors responsible for onset of initial episodes and to examine whether LBP in childhood is related to symptoms in adulthood<sup>4</sup>.

Estimates of LBP prevalence in children and adolescents vary widely between studies depending on the age of study participants and on methodological differences. Particularly in terms of LBP definition<sup>6</sup>, prevalence of 24% in schoolchildren aged 11–14 years in the one year prevalence to be 26% in schoolchildren aged 12–17 years in Switzerland. The one year prevalence of LBP “with limitation to activity” to be 17.6% in 14 year old Finnish children<sup>10</sup>. Also in report a prevalence of 18%, using the same definition. Even studies that record pain over a very short time interval (for example, point prevalence) reveal that as many as 1 child in 20 may be suffering from LBP at any one time. As in adults, prevalence of LBP in childhood increases with age and has been shown repeatedly to be higher in girls than in boy<sup>12</sup>.

### **Materials and Method**

The methodology of research indicates the general patterns of organizing the procedure for getting valid and reliable data for investigation. Research approach for the present study was a Quantitative research approach. The Cross sectional research design seems to be the most appropriate design for this study. The study was conducted in the selected area in pooncheri villages, Kanchipuram District, Tamil Nadu. The selected school of higher secondary students residing who fulfilled the sampling criteria was included in the study.

#### **Sampling Criteria:**

#### **Inclusion Criteria:**

- Student participate from the class 11<sup>th</sup> to 12<sup>th</sup>
- Students who are available in data collection student who can read and understand Tamil/English.

#### **Exclusion Criteria:**

- Higher secondary school students who are not willing to participate in the study
- Have the history of back injury
- By using Convenient sampling technique 102 samples were selected.
- The tool used for the study consists of the demographic variables like age, sex, educational status, Hobbies, Height, Weight, BMI, Bag weight, Family history of low back pain.

#### **Findings of the Study:**

- Maximum no of low back pain students were in the age group of 15-16 years 59(58).
- Maximum male 53(52%) are low back pain for secondary school students.
- Majority of participation in the games 96(94%).
- Majority of secondary school students hobbies 62(61).
- Majority of secondary school students height 151-170cm 55(54%).
- Majority of weight 58(57%).
- Majority of secondary school students BMI 10-20 kg 46(45%)
- Majority of secondary school students bag weight 1-6 kg 23(23)
- Demographic variables shows that there is significant association between in the participation in the games and bag weight
- A demographic variable shows that there is no significant association between in the age, sex, hobbies, BMI.
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- Regarding to the risk factors secondary school students for low back pain in the how many time is spent carriage from to school 48(47%), the type of bag 50(49%), how many books in the school bag 49(48%), method of carriage 86(84%).

- Regarding to the incidence of low back pain among higher secondary school students in the you have to back pain 65(64%), if you have to any problem related to back pain 54(53%), frequency of back pain 57 (56%), whether you were prone to get back pain 43(42%).

### Discussion

Back pain among high school students all over the world is on the rise. It is one of the most underestimated public health problems in today's generation. Musculoskeletal pain in school children is becoming new topic of health concern. Government recommendation of safe load limit of schoolbag is 10% of body weight. The study aimed to determine the prevalence of musculoskeletal health problems in higher secondary school students.

There has been rising incidence of LBP among many young adults and children, which is of concern. There have been a few studies regarding LBP but very few in this part of the world. This study was hence conducted to assess the prevalence of lower back pain among the young adults in our area.

### Conclusion

Back pain is common, with about nine out of ten school students experienced in their school life. Some estimate up to 95% of people will experienced back pain at some point in the life. .

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