

A survey was carried out in a Community College to find out about the proportion of 12-14 year olds who were experiencing lower back pain over a period of one month period.

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Jenny Wigram

Why is low back pain common in adolescence?

Today's young generation may be in danger of reaching adulthood as chronic low back pain sufferers.

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Everybody knows that low back pain (LBP) is common in adult life. It is not so commonly known that it is almost as prevalent in adolescence. When I started running a weekly physiotherapy clinic at South Dartmoor Community College, Devon, over 2 years ago, I was alarmed by the number of students seeking help for LBP.

This concern prompted me to carry out a survey to find out about the proportion of 12-14 year olds who were experiencing LBP over a period of one month. The survey also needed to discover whether LBP was associated with physical activity, what other factors might influence it, and how the students perceived their LBP. This article presents a synopsis of the results from the survey which was completed by 40% (n=202) of the 505 students in Years 8 and 9 at South Dartmoor Community College.

Population Studied

The low response rate of 40% of the total population of Years 8 and 9 rendered an unavoidable bias in the studied population. It is likely that students were more inclined to participate if they had already experienced LBP, or had parents or relatives with LBP. A higher proportion of girls than boys consented to participate, especially in Year 9.

LBP in the last one month

LBP was defined as "back pain at or below the waist, lasting for one day or more" and was illustrated with a manikin. 98 students (54% of the 106 girls and 43% of the 96 boys) reported

having LBP at some time in the previous month. 98 LBP sufferers, in a population of 202 young people, represents a remarkable 48% of the studied population.

Family history of LBP

There was a higher incidence of family history of LBP in the LBP students (82%) than in the symptom-free students (63%). LBP students were more likely to have both parents with a history of LBP. It is not known whether this is due to genetics or psychosocial factors, or to the bias in responses.

Physical Activity levels

The students were asked to complete a diary of their activity during one week. "Activity" was described as sports activities, both in and out of school, as well as any other physical activity such as disco-dancing, dog walking or walking/cycling to school.

The majority of students (55%) did less than the minimum level of at least one hour of moderate intensity physical activity a day, recommended by the Healthy Schools Programme. Boys were significantly more likely to exercise than girls. 48% boys compared with 29% girls did more than 8 hours activity per week.

Weekly activity of more than 16 hours was associated with LBP, but numbers were too small to test for statistical significance. Further research is needed to study the effects of over-activity. Whilst there was no association between activity and LBP, it is possible that

under-active students may be more prone to LBP later in life. A prospective study is indicated.

Hobbies

Answers were categorised into "sedentary", "active" and "both" groups. 47% students pursued sedentary hobbies, compared with 27% active and 26% both. There was no link with LBP. Only 14 students reported spending leisure time on a computer.

Growth spurts

44% students were "growing a lot" during the studied month. Boys undergoing a growth spurt were significantly more at risk of LBP than girls. This area warrants further research.

Students experiencing LBP

Pain Intensity

Students were asked to mark on a visual analogue scale of 0-10 the amount of pain they experienced when they had LBP. The average intensity was 5, with a range of 2-7 for boys and 2-10 for girls.

Causes of LBP

Many students, unprompted, blamed heavy school bags for their LBP. Few schools have lockers or personalised desks any more. Besides, students are not inclined to use lockers which are not secure or adequate in size, or which are inappropriately sited. Ways of minimising load as well as distance carried need to be identified. Overuse of their backs was also identified as a cause. This tallies with the findings of this survey that activity of more than 16 hours weekly was associated with LBP.

There are implications for sports education. Students should be encouraged to perform competitive or concentrated activity on alternate days, not daily, and for limited periods of time with regular rest intervals. Prolonged sitting and poor seating were mentioned by many students as causative factors. The provision of ergonomic seating and work stations is long over-due in our schools nationwide. At the same time students need to learn about looking after their backs, with emphasis on ergonomics and posture.

Frequency and duration of LBP

30% students reported one episode only in the previous month, 63% experienced it more than once, and 7% had it all the time.

49% had LBP for one day only, 38% suffered for several days, 9% for more than a week, and 4% for more than a month. These frequency and

duration results are worrying because research has shown that the strongest predictor for LBP in adulthood is having had a previous episode. Little research has been done to see if this predictive factor goes back to adolescence.

Aggravating factors

42% believed that activity aggravated their LBP. Other factors mentioned were sitting, prolonged bending, carrying and resting.

Easing factors

67% believed that rest eased their LBP, 15% favoured activity, and some benefited from medication, correcting their posture or applying ice. It is not known whether these beliefs are influenced by parents or relatives, or even family doctors. The current message being given by health professionals to adult LBP sufferers is to stay as active as possible. This message is based on research evidence concerning adult LBP. There is insufficient evidence of best practice concerning adolescent LBP.

Absence from school

Only 4 girls, and no boys were absent because of their LBP.

Physical activities

LBP had no influence on 58% students in sports and physical activities, but 35% had to decrease their activities, and 7% stopped all activities.

Conclusions

More research is needed in this area, particularly into the association of both growth spurts and over-activity with LBP. The results of this survey raise questions concerning the educational and health needs of adolescents.

Some students have expressed a need for formal learning about looking after their backs. This need could be fulfilled by including back education in the school curriculum. Here is a potential role for physiotherapists, under-utilised experts on back care, to educate not only the students, but their teachers and their parents.

Schools should provide ergonomic seating and work stations, in the same way that employers are obliged to do so by European legislation. Consideration needs to be given to the problem of heavy school bags, and the provision of secure storage space. Unless the above issues are addressed, today's young generation may be in danger of reaching adulthood as chronic low back pain sufferers as a result of their parents' negligence.

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