

EFFICACY OF STABILIZATION EXERCISE ON BACK PAIN AND ASSOCIATED DISABILITY IN PATIENTS WITH BACK PAIN AMONG ADOLESCENT 19-23 YEARS

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Abstract

Back Pain (BP) is defined as pain that affects the back of the trunk, a common experience among people all over the world. Life prevalence is reported to be up to 84%, and the prevalence of BP appears to be about the same in adolescents. The risk of having BP later in life, if you have experienced episodes of pain during adolescence, is high. Our work has revealed that BP is already prevalent in individuals at the age of 14 and increases throughout adolescence and early adulthood.

To determine the scores of disability on back pain (BP) using Mody (Oswestry Modified Disability Questionnaire) for the attitudes of daily life.

In this study, 39 students aged 19-23 years were enrolled, we used the standardized MODY (Oswestry Modified Disability Questionnaire) for the attitudes. We studied gender differences, prevalence, and disability of back pain.

We have also studied changes in BP in adolescence depending on hours spent in physical activity.

Significantly, more girls than boys have had episodes of back pain in their lives. Those who were physically active reported back pain (BP) to a significantly higher extent than those who were physically inactive in their spare time. Gender and leisure time for those who were physically active appear to be important risk factors for BP some time in life. There was a higher risk of girls having back pain more than 30 days or every day last year if they had back pain some time earlier in life.

This study shows that back pain (BP) is common in adolescents, more common in girls than boys. High physical activity was associated with the risk of having BP, length of time with BP, and disability due to BP.

Key Words: Adolescent Back Pain, quality of life, disability, physical activity.

INTRODUCTION

Back pain (BP) is defined as a discomfort or pain in the spine area, a common experience among people all over the world.

The lifetime prevalence is reported to be as high as 84%, disability rates 12%, and the prevalence of Back Pain (BP) seems to be almost the same among adolescents as among adults.

Hellsing et al found an odds ratio of 4.29 for Back Pain (BP) and Low Back Pain (LBP) later in life if there was an experience of back pain in adolescence, and other authors have also found a relationship between BP in adolescence and BP in adulthood.

There are different opinions about whether back pain is a normal life experience in adolescence that is unrelated to Back Pain (BP) in adulthood or whether previous BP in adolescence is related to BP in adulthood.

Adolescents competitive athletes seem to have more BP than in a non-athletes group. In Japan, in a cross-sectional study, an odds ratio of 1.57 for back pain and low back pain was found in an active sports group (9.8 h/wk), compared to a non-sports group.

A recent review showed that the correlation of self-reported disability of physical activity and activity was in better condition for patients with chronic back pain. To improve objectivity, body function measures have

been used, e.g., spinal mobility and extensor-lumbar muscle strength, although the correlation with disability level is very weak. Pain on the back coming from a mechanical origin is identified by the presence of or absence of symptoms and signs in different postures or long postures movements. Mechanical back pain is common, which is treated conservatively with physical therapy. Clinical guidelines for back pain recommend remaining active and early return to physical activity as a means of faster recovery with fewer concomitant disabilities. However, these clinical guidelines are contradictory in practice, describing patient-specific training that varies according to the individual assessment of the clinician and imply general nonspecific exercises which are prescribed to any patient with back pain without considering the individual clinical sign. Although the basic stabilization using strengthening the transverses abdominis is an essential part of a comprehensive rehabilitation program for back pain and instability, as well as strengthening local multifidus using biofeedback pressure units, have been shown to be effective.

Physical disability risk factors include: difficult sports, high level of competition and

high amount of time spent on physical activity. The purpose of this study was to evaluate the prevalence of back pain (BP), and associated physical disability in an adolescence population in relation to sport activity level, age, and gender, to evaluate also the effects of stabilization exercise.

SUBJECT AND METHODS

All adolescents participated in this study were divided in 19 girls and 20 boys (ages 19-23 years). Primarily, self-reports have been used for clinical purposes as well as for reviews to assess daily functioning. We decided to include a performance task that assesses physical activity that can specifically be prevented by back pain. For the choice of self-reported disability questions and weight gain performance tasks, we selected only questionnaires / tests that are specific to back pain and from which all are psychometric, including response. Properties were studied in populations relevant to back pain and have been published in peer-reviewed journals. Other criteria for selection were: being available in English at least, and for performance task measures, easy to administer, inexpensive and time-consuming when used in clinical practice.

The ODI has been developed to assess pain-related disability in people with acute, subacute, or chronic back pain. Since it was first published in 1980 (version 1.0), several different versions have been developed, including ODI version 2.0, and (MODY/MODQ) Modified Oswestry Disability Questionnaire. The MODQ covers 1 item on pain and 9 items on activities of daily living (personal care, lifting, running, walking, sitting, standing, sleeping, sex life, social life, and traveling). The chosen statements receive scores: statement A=0; statement B=1; C=2; D=3; E=4; F=5. Total scores can range from 0 (highest level of function) to 50 (lowest level of function).



Figure 1

To accommodate patients who do not respond to every sections, clinicians can calculate a "percentage of disability" on the basis of the total possible points. Fairbank and his colleagues (1980) interpret "percentage of disability" scores in this manner: 0% to 20% minimal disability 20% to 40% moderate disability, 40% to 60% severe disability, 60% to 80% crippled, 80% to 100% bed bound (or exaggerating symptoms).

a significantly higher extent than those who were physically inactive in their spare time. Of those who had ever experienced BP, having suffered physical disability more than one day in previous months was more common in active sports adolescents than in physically inactive (9.47% and 5.21%). Physical disability eight days or more was experienced in 19.74% of subjects, and disability more than 30 days was reported in about 6.58 % of subjects.

Table 1 (Stabilization Exercise)

- Abdominal drawing-in in 4-point kneeling and supine position
- Opposite upper and lower extremity lift in quadruped position
- Straight leg raise exercise in prone position
- Supine lower extremity in supine position
- Straight leg raise exercise in supine position
- Horizontal side-support exercise in side lying position

RESULTS AND DISCUSSION

The overall prevalence of having BP sometimes during their life was for the group without gender comparison 18.4%, last month 19%. Significantly, more girls than boys have had episodes of back pain in their lives (15.37% girls and 10.47% boys, respectively, $P < 0.001$). Those who were physically active reported back pain (BP) to

Gender and leisure time for those who were active appear to be important risk factors for BP some time in life. There was a higher risk of girls having back pain more than 30 days or every day last year if they had back pain some time earlier in life. Subjects who have undergone basic stabilization exercises demonstrated a decrease in pain. These findings were also reported in similar studies

by Koumantakis and O'Sullivan of chronic low level of back pain.

CONCLUSION

This study shows that back pain (BP) is common in adolescents, more common in girls than boys, and showed that the stabilization exercise proved to be effective in management of back pain in terms of greater reduction of pain. Girls also had BP more often and for longer periods of time. High physical activity was associated with the risk of having BP, length of time with BP, and disability due to BP. Future studies should focus on the exercise regimens, clinical treatment, and clinical diagnosis of female subjects and adolescent athletes with more than 6 hours / week of leisure sports activity.

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