IMPACT OF POSTURAL EDUCATION ON CHILD’S SITTING POSITION IN CLASSROOM AND ON BACK PAIN

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I. INTRODUCTION

Low back pain concerns 70% of a global population and can appear as soon as primary school; mainly due to poor sitting position (SP) [1]. This study aimed to evaluate the influence of school furniture associated with postural education on schoolchildren’s SP in classroom and on back complaints.

II. METHODS

Seventy-seven first primary schoolchildren were divided into an experimental group (EG) (n=46) and a control group (CG) (n=31) and took part in this study.

This 2-school-year-cluster randomized controlled study included 5 phases of evaluation (E1 to E5):
- E1: Evaluation before any intervention
- E2: Evaluation after having provide a triangular cushion and 3 months of postural education (PE)
- E3: Evaluation after 6 months using the cushion
- E4: Evaluation of the holiday effect
- E5: Evaluation after 2 years using the cushion

At each step of the study, the children's (SP) was assessed with a specific observation form composed of different items (max score = 11/11 corresponding to an ideal SP).

In addition, a questionnaire about spinal pains was submitted at the beginning of the study and at the end of each school-year.

III. RESULTS

Compared with the CG and except from E3 to E4, the children’s of the EG significantly improved their SP at each step of the study (p<0.02) (Figure 1). Specifically, the use of the cushion combined with the PE resulted in a more open trunk-thighs angle (p<0.02), better maintenance of the lumbar lordosis (p=0.03) and better support of both feet on the ground (p=0.02).

The intervention tends to decrease back pain, specifically in neck and lumbar spine (figure 2).

The children’s sitting position in the classroom was improved using ergonomic furniture combined with a postural intervention. This approach also tends to reduce back complaints. Further studies are needed to confirm those results. A better and more comfortable sitting position could improve behavior and concentration in primary school children.

REFERENCES