

Abstract

Title:

Using elements of health and physical education to mitigate the effect distance learning has on posture in adolescent female students.

Objectives:

To examine the effectiveness of a health and physical education intervention program on the posture of adolescent female students after six months of distance learning with no social contact, extracurricular activities or physical education class. To examine how the effects of returning to regular in-person learning influences daily routines, lifestyle habits, physical activity and psychological well-being of adolescent female students.

Methods:

The research used empirical research and quasi-experimental design utilising a pre-test intervention (10 months) and post-test methodology to determine changes in posture. The 6 tests used to obtain data on postural changes were the Mathias test, Trendelenburg-Duchenne test, Romberg stand, Forestier flexor test, Janda shortened knee flexor test and gluteus maximus muscle test. 28 subjects participated in the study, divided into an experimental group (14) and a control group (14). The intervention program consisted of exercises aimed at improving posture. The experimental group received the intervention program and was included in every physical education class during school (twice a week, 45 minutes per session) and included exercises to be performed at home. The control group did not receive the intervention program. The first measurement was conducted immediately after the subjects returned from distance learning in June 2021, the second measurement was conducted after the summer holidays in September 2021, and the third and final measurement was conducted in April 2022. A self-administered questionnaire consisting of 18 questions was completed by the subjects during the first and last measurements.

Results:

The health and physical education intervention program showed postural improvements in the experimental group in 5 of the 6 tests. There was no improvement in the Forestier flexion test, as the baseline results of all the subjects was negative. The control group showed improvements in posture, due to returning to standard routine and school, but the changes were not as significant compared to the experimental group. Results from the questionnaires revealed the subjects had irregular daily schedules throughout the quarantine period, and over half of the subjects slept less than 8 hours per day. Throughout the quarantine period, there was not a single day without mobile phone or computer usage. Most of their social interaction occurred online, which resulted in 24 subjects feeling lonely during distance learning. Only 3 subjects reported feeling lonely during the in-person school year. Majority of the subjects expressed a preference for attending school in-person rather than continuing with distance learning. Only 4 subjects indicated a desire to remain in distance learning. The findings emphasise the importance of physical exercise, social interaction among adolescents, and establishing regular routines.

Keywords:

Distance learning, posture, testing, daily routines, health