

Activity Breaks, attention, concentration and academic achievement: A systematic review of the literature

INPLASY202390082

doi: 10.37766/inplasy2023.9.0082

Received: 25 September 2023

Published: 25 September 2023

Arribas Galarraga, S¹; Maiztegi, J²; Luis de Cos, I³; Urrutia, S⁴.

Corresponding author:

Julen Maiztegi

julen.maiztegi@ehu.eus

Author Affiliation:

UPV/EHU.

ADMINISTRATIVE INFORMATION

Support - Provided by the University of the Basque Country through the Support to Research Groups (Code 21/047).

Review Stage at time of this submission - Completed but not published.

Conflicts of interest - None declared.

INPLASY registration number: INPLASY202390082

Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 25 September 2023 and was last updated on 25 September 2023.

INTRODUCTION

Review question / Objective Research question (RQ) - RQ.1 In what year was the article published? RQ.2 What is the position of the journal in the databases? RQ.3 What are the topics of the articles according to the journal's category in the databases? RQ.4 What is the geographical distribution of the publications? RQ.5 What research methodologies are used in the selected studies? RQ.6 Comparator? RQ.7 What educational levels are included in the research? or Age of participants? RQ.8 Number of participants? RQ.9 What areas of knowledge are involved in the studies? RQ.10 What type of interventions have been used in the research? RQ.11 Duration of the intervention? RQ.12 What measurement instruments were used to measure the variables? RQ.13 What is the relationship of active breaks with the variables attention, concentration and academic achievement?

Rationale In education, the optimization of academic achievement (AR) and the promotion of attention and concentration are essential objectives. Active breaks (AB) have emerged as a strategy to improve these aspects. ABs are physical activity (PA) breaks that take place in the school context during regular classes.

Condition being studied Analysis of interventions based on active breaks carried out in student population, such as Physical Activity in Academic Lessons (PAAL) Interventions / Physical Activity in Academic Lessons (PAAL) Interventions / Active Recess (AR) / Combined Physical Activity (CPA) to analyze the incidence on the variables attention, concentration and academic performance. The objectives are summarized in 13 research questions concerning the characteristics of the studies and the results on the variables academic achievement, attention and concentration.

METHODS

Participant or population Early Childhood Education / Primary Education / Compulsory Secondary Education / High School and/or Vocational Training / University Studies-Elementary education.

Intervention Physical Activity in Academic Lessons (PAAL) Interventions / Physical Activity in Academic Lessons (PAAL) Interventions / Active Recess (AR) / Combined Physical Activity (CPA).

Comparator 1. Passive control group or without physical activity 2. Reduced amount of physical activity 3. No control group.

Study designs to be included Empirical studies with quantitative methods.

Eligibility criteria Inclusion- Type of document Articles published in open access scientific journals- Language: english and spanish- Time period: From inception to 30.11.2022- Variables: 1. Attention; 2. Concentration; 3. Academic achievement Exclusion- Non-open access journals- Other languages - Theoretical review articles- Physical education classes- Physically active transfers.

Information sources • Web of Science (WOS) • SCOPUS • ERIC.

Main outcome(s) Incidence of different interventions based on active break on attention, concentration and academic achievement variables.

Data management In order to carry out the management of the data, Zotero.

Quality assessment / Risk of bias analysis None.

Strategy of data synthesis To carry out the synthesis and analysis of the information collected, a coding sheet consisting of 13 specific fields was implemented. This coding sheet was designed to structure and categorize the data in a systematic manner, facilitating the identification of patterns, trends and relationships in the information collected.

Subgroup analysis None.

Sensitivity analysis None.

Language restriction Articles published in English and Spanish are included. All other languages are excluded. Only english and spanish.

Country(ies) involved Spain (UPV/EHU).

Keywords Classroom-Based Physical Activity (CB-PA); Active Breaks (AB); Curriculum-Focussed Active Breaks (CF-AB); Physically Active Lessons (PAL); Attention; Concentration; Academic achievement.

Contributions of each author

Author 1 - Silvia Arribas Galarraga

- Study conception and design
- Data analysis and interpretation
- Report review.

Email: silvia.arribas@ehu.eus

Author 2 - Julen Maiztegi Kortabarria

- Study conception and design
- Data collection\
- Data analysis and interpretation
- Report writing
- Report review.

Email: julen.maiztegi@ehu.eus

Author 3 - Izaskun Luis de Cos

- Data analysis and interpretation
- Report review.

Email: izaskun.luis@ehu.eus

Author 4 - Saioa Urrutia

- Data analysis and interpretation.

Email: saioa.urrutia@ehu.eus