

# BOOK OF ABSTRACTS

**YOUNG  
RESEARCHERS  
MEETING**



**IJUP**  
4.5.6 MAIO 2022

**ONLINE**  
REITORIA  
DA U.PORTO

15.ª EDIÇÃO

**U.PORTO**



# **YOUNG RESEARCHERS MEETING**

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**U.PORTO**

 **Santander**  
Universidades

## **TÍTULO | TITLE**

Livro de Resumos do 15.º Encontro de Investigação Jovem da U.Porto

## **Universidade do Porto**

Vice-reitor para a investigação, inovação e internacionalização

Professor Doutor Pedro Rodrigues

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# PROGRAMA PROGRAM



ONLINE EVENT LINK (CLICK HERE)

RECTORATE OF THE UNIVERSITY OF PORTO

MAY, 4<sup>TH</sup>

MAY, 5<sup>TH</sup>

MAY, 6<sup>TH</sup>

08:00 – 18:00

## PARALLEL ORAL SESSIONS I

A1 – Mathematics  
A2 – Architecture I  
A3 – Chemistry I  
A4 – Environment I  
A5 – AgroFood I  
A6 – Health Sciences I

09:00 – 10:30

Break

## PARALLEL ORAL SESSIONS II

A1 – Health Sciences II  
A2 – Architecture II  
A3 – AgroFood II  
A4 – Environment II  
A5 – Physics I

10:40 – 12:00

Break

## PARALLEL ORAL SESSIONS III

A1 – Economics & Management  
A2 – Biological Sciences I  
A3 – Architecture III  
A4 – Chemistry III  
A5 – Sport Sciences I  
A6 – Health Sciences III

12:20 – 13:40

Lunch Break

## PARALLEL ORAL SESSIONS IV

A1 – Arts I  
A2 – Biological Sciences II  
A3 – Sport Sciences II  
A4 – Chemistry IV  
A5 – Architecture IV  
A6 – Health Sciences IV

14:30 – 16:00

Break

## PARALLEL ORAL SESSIONS V

A1 – Astronomy & Physics  
A2 – Arts II  
A3 – Sport Sciences III  
A4 – Biological Sciences III  
A5 – Health Sciences V

16:10 – 17:40

## PARALLEL ORAL SESSIONS VI

A1 – Biological Sciences IV  
A2 – Engineering I  
A3 – Physics II  
A4 – Language & Communication  
A5 – Health Sciences VI  
A6 – Psychology & Sciences of Education I

## PARALLEL ORAL SESSIONS VII

A1 – Biological Sciences V  
A2 – Engineering II  
A3 – Chemistry II  
A4 – Geo-Politics I  
A5 – Health Sciences VII  
A6 – Psychology & Sciences of Education II

## PARALLEL ORAL SESSIONS VIII

A1 – Biological Sciences VI  
A2 – Engineering III  
A3 – Geo-Politics II  
A4 – Health Sciences VIII  
A5 – Health Sciences IX  
A6 – Psychology & Sciences of Education III

## PARALLEL ORAL SESSIONS IX

A1 – Biological Sciences VII  
A2 – Engineering IV  
A3 – Law and Criminology I  
A4 – Health Sciences X  
A5 – Heritage & History I  
A6 – Psychology & Sciences of Education IV

## PARALLEL ORAL SESSIONS X

A1 – Law and Criminology II  
A2 – Health Sciences XI  
A3 – Psychology & Sciences of Education V  
A4 – Heritage & History II

08:30 – 09:00

Opening of the secretariat for all participants

09:00 – 10:00

## POSTER SESSION I

10 min

Coffee-break

10:10 – 11:00

## POSTER SESSION I

11:00 – 11:15

Break

11:15 – 12:00

## POSTER SESSION II

10 min

Coffee-break

12:10 – 13:15

## POSTER SESSION II

13:15 – 15:00

Lunch Break

15:00 – 18:00

CLOSING SESSION AND CELEBRATION  
OF THE 15-YEARS ANNIVERSARY OF IJUP



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## Effects of an online pilates method exercise program on balance, trunk strength and stability in the elderly

*Simone Geremia, Faculdade de Desporto, Portugal*

*Joana Cristina dos Reis Cavalheiro Sampaio, Faculdade de Ciências da Nutrição e Alimentação, Portugal*

*Elzier Sampaio de Queiroz Neto, Faculdade de Desporto, Portugal*

*Andreia Pizarro, Faculdade de Desporto, Portugal*

### Abstract

**Introduction:** Aging comes with it a series of physiological changes that lead to physical and cognitive decline. In the musculoskeletal system, the decrease of bone mineral mass and muscle mass are common, leading to osteoporosis and sarcopenia that are frequent causes of imbalances and increased risk of falls. Some studies have been carried out to evaluate the Pilates Method to delay or minimize these losses in the elderly population, but conclusive results have not yet been possible. Objectives: Our study aimed to investigate whether an online Mat Pilates exercise program is effective in increasing balance, strength and stability of the trunk muscles.

**Methods:** fourteen participants with a mean age 75.9 years (SD 5.8) were recruited into an online Pilates program. The program lasted five months, with two weekly sessions of approximately eighty minutes each, moderate intensity. Participants in the Pilates Group performed exercises from the method repertoire with the respective adaptations for this population. All of them were tested before and after the intervention with one leg stance, 1 min sit up and 1 min plank test. For statistical analysis, we used IBM SPSS software - version 26 and the test applied was the paired samples t-test.

**Results:** At the end of thirty-eight sessions, there was a difference in abdominal strength evaluated by the Sit Up Test in 1 min between pre test (M=28.8 rep, SD= 7.39) and post test (M= 38.8 rep, SD= 8.50),  $p = 0.003$ ; resistance and stability of the trunk by the Plank Test between pre test (M= 45.5 s, SD= 17.3), and post test (M= 60 s, SD= 0),  $p= 0.014$  and static balance by the Single Leg Test between pre test (M= 29.9 s, SD= 16.1) and post test (M=38 s, SD 11.18),  $p= 0.019$ .

**Conclusion:** This study suggests that an online Mat Pilates exercise program can be used for improvement of trunk strength and stability, as well as for balance in the elderly population.