


**Proceedings of the
2nd International Congress of Health and Well-being Intervention**

Health and Well-being in the Life cycle (ICHWBI 2021)

1st international conference on human kinesiology (ICOHK)



**International Conference
on Human Kinesiology**

Kinesi Lab 

28th & 29th MAY 2021

**INSTITUTO PIAGET UNIVERSITY
CAMPUS OF VISEU**

Coordination by:
Gustavo Desouzart



**INSTITUTO
PIAGET**

VISEU



RECI

Research in Education and
Community Intervention

**Proceedings of the
2nd International Congress of Health and
Well-being Intervention - ICHWBI 2021
and 1st international conference on human kinesiology - 1st
ICOHK**

**Coordination by
GUSTAVO DESOUZART**

Instituto Piaget

Proceedings of the 2nd International Congress of Health and Well-Being Intervention - ICHWBI2021 and the 1st International Conference on Human Kinesiology – 1st ICOHK

Author by

Instituto Piaget

Coordination by

Gustavo Desouzart

Graphic Design: Luís Batista and Gustavo Desouzart | **Images:** Luís Batista | **Pagination:** Daniela Marins

Edition: Instituto Piaget

Lote 544, 2.º, Av. João Paulo II, 1950-157 Lisboa

T. 21 831 6500

Email: info@viseu.ipiaget.pt ♦ web: <https://ipiaget.org/>

ISBN (e-book): 978-989-759-154-9

Edition - November 2021

Editorial board

Gustavo Desouzart

Experts panel

Zaida Azeredo | Adriana Lourenço | Ágata Vieira | Amândio Dias | Ana Margarida Varela | Beatriz Minghelli | Cândida Alves | Carlos Laranjeira | Carlos Tavares | Cidália Freitas | Denise Soares | Ernesto Filgueiras | Fábio Flores | Fernando Vieira | Isabel Silva | José Sousa | Joaquim Antunes | Luís Silva | Magda Guerra | Manuel Brás | Maria Correia | Maria Graça Pereira | Maria Helena Chéu | Marília Flora | Marta Leyton Roman | Miguel Fernandes | Neide Feijó | Nuno Cordeiro | Paula Rodrigues | Pedro Sá Leite | Poliana Lima | Providência Marinheiro | Rogério Rodrigues | Rosa Martins | Rui Gonçalves | Sabina Valente | Sandra Gagulic | Silvia Silva | Simone Rembold | Sónia Lopes | Valdemar Salselas | Vitor Martinho

This book contains information obtained from authentic and highly regarded sources. This is an edition made for publication of the works resulting from the ICHWBI2021 which are available on Congress website, where the reader will find a significant heterogeneity. Abstracts are ongoing or completed project-based research papers submitted by researchers from various academic degrees. This diversity is also found in the authors' scientific areas, reflecting on the variety of research themes presented at the Congress itself.

Reasonable effort has been made to publish reliable data and information, but the author and publisher cannot assume responsibility for the validity of all materials or the consequences of their use. The authors and publishers have attempted to trace the copyright holder of all material reproduced in this publication and apologize to copyright holder if permission to publish in this form has not been obtained. If any copyright material has not been acknowledged please write and let us know so we may rectify in any future reprint.

Based on ICHWBI2021 abstracts that are available at

<https://healthwellbeingcongress.ipiaget.org/pt-pt/abstracts>

significance of overall injury burden. Injury prevention programs are of undeniable importance, and the FIFA 11+ seems to be a valuable injury prevention strategy in futsal. However, there is a clear need for more studies in futsal players.

Acknowledgements: We would like to acknowledge Mr. Norberto Rei for his supportive involvement during the research experiment. We would also like to thank the commitment and dedication of all players, coaches and sports staff, and all technical supporting personnel, which made this study possible. The European Regional Development Fund through the Operational Competitiveness Program, and the Portuguese Foundation for Science and Technology (FCT) support the research unit CIAFEL (REF: UID/DTP/00617/2013). iBiMED is a research unit supported by the Portuguese Foundation for Science and Technology (REF: UID/BIM/04501/2019) and POCI-01-0145-FEDER-007628 funds.

Keywords: warm-up; neuromuscular training, injury risk, morbidity, quality of life

References:

1. Richmond SA, Fukuchi RK, Ezzat A, Schneider K, Schneider G, Emery CA. Are joint injury, sport activity, physical activity, obesity, or occupational activities predictors for osteoarthritis? A systematic review. *J Orthop Sports Phys Ther.* 2013 Aug;43(8):515-B19. doi: 10.2519/jospt.2013.4796. Epub 2013 Jun 11.
2. Polinder S, Haagsma J, Panneman M, Scholten A, Bruggmans M, Van Beeck E. The economic burden of injury: Health care and productivity costs of injuries in the Netherlands. *Accid Anal Prev.* 2016 Aug; 93:92-100. doi: 10.1016/j.aap.2016.04.003. Epub 2016 May 10.
3. Thorborg K, Krommes KK, Esteve E, Clausen MB, Bartels EM, Rathleff MS. Effect of specific exercise-based football injury prevention programmes on the overall injury rate in football: a systematic review and meta-analysis of the FIFA 11 and 11+ programmes. *Br J Sports Med.* 2017 Apr;51(7):562-571. doi: 10.1136/bjsports-2016-097066. Epub 2017 Jan 13.
4. Reis I, Rebelo A, Krstrup P, Brito J. Performance enhancement effects of Fédération Internationale de Football Association's "The 11+" injury prevention training program in youth futsal players. *Clin J Sport Med.* 2013 Jul;23(4):318-20. doi: 10.1097/JSM.0b013e318285630e.
5. Lopes M, Rodrigues JM, Monteiro P, Rodrigues M, Costa R, Oliveira J, Ribeiro F. Effects of the FIFA 11+ on ankle evertors latency time and knee muscle strength in amateur futsal players. *Eur J Sport Sci.* 2020 Feb;20(1):24-34. doi: 10.1080/17461391.2019.1609588. Epub 2019 May 15.

P104

A utilização e percepção de eficácia dos ultrassons pelos fisioterapeutas portugueses

Sónia Gonçalves-Lopes⁽¹⁾, Manuel Piedade Paquete⁽²⁾, Pedro Harry-Leite⁽³⁾, José Luís Sousa⁽⁴⁾, Verónica Abreu⁽⁵⁾

¹ KinesioLab, Escola Superior de Saúde Jean Piaget Vila Nova de Gaia, Portugal, sonia.lopes@gaia.ipiaget.pt;

² KinesioLab, Escola Superior de Saúde Jean Piaget Vila Nova de Gaia, Portugal, manuel.paquete@gaia.ipiaget.pt;

³ KinesioLab, Escola Superior de Saúde Jean Piaget Vila Nova de Gaia, Portugal, pedro.leite@gaia.ipiaget.pt;

⁴ KinesioLab, Escola Superior de Saúde Jean Piaget Vila Nova de Gaia, Portugal, jose.sousa@gaia.ipiaget.pt;

⁵ KinesioLab, Escola Superior de Saúde Jean Piaget Vila Nova de Gaia, Portugal, veronica.abreu@gaia.ipiaget.pt

INTRODUÇÃO: Os ultrassons (US) são uma das ferramentas mais utilizadas pelos fisioterapeutas (Shah & Farrow, 2012), embora a sua eficácia não seja consensual (Wong et al., 2007). Frequentemente, a literatura descreve-a como uma corrente com poucos benefícios terapêuticos (Baker et al., 2001; Dogru et al.,

2008), mas parece continuar a merecer a confiança da maior parte dos profissionais (Armijo-Olivo et al., 2013). **Objetivo:** Caracterizar o perfil de utilização dos US pelos fisioterapeutas portugueses e a sua percepção de eficácia desta corrente. **Métodos:** Foi construído um questionário online, que depois de analisada a validade de conteúdo e fiabilidade, foi posteriormente distribuído a uma amostra de conveniência de fisioterapeutas portuguesas. **Resultados:** Participaram 544 fisioterapeutas, sendo que 424 utilizam a eletroterapia na sua prática diária. Os US são um dos dispositivos mais disponíveis (n=384, 91%) nos vários contextos de intervenção e também um dos mais utilizados (n=375, 92%) pelos fisioterapeutas portuguesas. A sua seleção está significativamente relacionada com o contexto de intervenção $t(4)=47.34, p<.001$ e tipo de prática $t(1)=18.41, p<.001$ sendo que, os fisioterapeutas que exercem a sua prática de forma autónoma utilizam significativamente menos (n=180, 48%) os US do que os fisioterapeutas que trabalham segundo prescrição médica (n=195, 52%). Por outro lado, a experiência do profissional parece não influenciar a seleção deste dispositivo. Entre os fisioterapeutas que utilizam sempre ou às vezes os US, 30% considera-os pouco ou nada eficazes. **Conclusões:** Apesar de a bibliografia não reunir consenso sobre a eficácia dos US, esta modalidade é muito utilizada pelos fisioterapeutas portugueses e a maioria considera-a eficaz.

Agradecimentos: Agradecemos a todos os fisioterapeutas que participaram neste estudo. Este resumo faz parte de uma equipa de investigação sobre os fisioterapeutas portugueses e a eletroterapia em Portugal.

Keywords: ultrassom, fisioterapia, utilização, eficácia

Referencias:

- Armijo-Olivo, S., Fuentes, J., Muir, I., & Gross, D. P. (2013). Usage Patterns and Beliefs about Therapeutic Ultrasound by Canadian Physical Therapists: An Exploratory Population-Based Cross-Sectional Survey. *Physiotherapy Canada. Physiotherapie Canada, 65*(3), 289–299. <https://doi.org/10.3138/ptc.2012-30BC>
- Baker, K. G., Robertson, V. J., & Duck, F. A. (2001). A review of the therapeutic ultrasound: Biophysical effects. *Physical Therapy, 81*(7), 1351–1358.
- Dogru, H., Basaran, S., & Sarpel, T. (2008). Effectiveness of therapeutic ultrasound in adhesive capsulitis. *Joint Bone Spine, 75*(4), 445–450. <https://doi.org/10.1016/j.jbspin.2007.07.016>
- Shah, S. G. S., & Farrow, A. (2012). Trends in the availability and usage of electrophysical agents in physiotherapy practices from 1990 to 2010: A review. *Physical Therapy Reviews, 17*(4), 207–226. <https://doi.org/10.1179/1743288X12Y.0000000007>
- Wong, R. A., Schumann, B., Townsend, R., & Phelps, C. A. (2007). A Survey of Therapeutic Ultrasound Use by Physical Therapists Who Are Orthopaedic Certified Specialists. *Physical Therapy, 87*(8), 986–994. <https://doi.org/10.2522/ptj.20050392>

P105

Neuroqualyfam: Neurodegenerative diseases and family quality of life

Adília Fernandes⁽¹⁾, Carlos Magalhães⁽²⁾, Maria Augusta Mata⁽³⁾, Maria Helena Pimentel⁽⁴⁾

^{1,2,3,4} Unidade de Investigação em Ciências da Saúde: Enfermagem (UICISA:E), Instituto Politécnico de Bragança, Campus de Santa Apolónia, 5300-253 Bragança, Portugal, hpimentel@ipb.pt

BACKGROUND: Based on the diagnosis create a comprehensive support plan focused on families caring for people with neurodegenerative diseases, through the implementation of the first ICT platform in the cross-border, for assessment of family needs and support resources that favour the training of family care functions. **Objectives:** Strengthen the cooperation between institutions responsible for research on

neurodegenerative diseases in Castilla y León and in Northern and Central Portugal and improve family quality of life outcomes and optimize resources to support and assist family caregivers [1]. **Methods:** Epidemiological diagnosis of the most prevalent neurodegenerative diseases in the district of Bragança, through data obtained from the Northeast Local Health Unit [2]. **Results:** This project aims to strengthen the cooperation between institutions responsible for research and care of neurodegenerative diseases in Castilla y León and in the North and Center of Portugal, in order to improve family quality of life outcomes and optimize resources to support and assist families caring for patients. Discussion and **Conclusions:** Given the aging of the population under consideration, an annual increase of these pathologies is predictable, with a consequent increase in the needs of family caregivers. And so it is urgent to implement specialized social support [3] and enable the family members to care with quality and at the same time to prevent health problems in those who care.

Acknowledgements: Programa de Cooperação Transfronteiriça, Interreg V-A Espanha-Portugal (POCTEP) 2014-2020.

Keywords: Neurodegenerativas, qualidade de vida familiar.

References:

- [1] <https://neuroqualyfam.usal.es/pt-pt/>
- [2] ULSNe. Unidade Local de Saúde do Nordeste. Serviço de estatística, 2019.
- [3] Rocha, Ana R. O. Pessoas com Demência: que respostas sociais em Portugal, dissertação de mestrado em Gestão e Economia da Saúde apresentada à Faculdade de Economia da Universidade de Coimbra, 2016. Disponível em: <https://estudogeral.sib.uc.pt/bitstream/10316/32406/3/Pessoas%20com%20dem%C3%Aancia.pdf>

P107

Influence of an exercise program in low back pain in ambulance drivers

Débora Pacheco⁽¹⁾ & Sofia Lopes^(2,3,4)

¹ E Escola Superior de Saúde do Vale do Sousa, CESPU-IPSN, Portugal, beapacheco@live.com.pt

² Departamento de Tecnologias de Diagnóstico e Terapêutica, Escola Superior de Saúde do Vale do Sousa, CESPU-IPSN, Portugal, sofia.lopes@ipsn.cespu.pt

³ Escola Superior de Saúde, Politécnico do Porto, Portugal

⁴ Centro Investigação e Reabilitação, Escola Superior de Saúde, Politécnico do Porto, Portugal

BACKGROUND: Occupational health aims to prevent occupational hazards, promote and protect the health of workers. Given the high prevalence of low back pain associated with work-related musculoskeletal injuries, it is important to study this topic. The functional incapacity in these individuals, drivers, comes from low back pain as a consequence of risk factors inherent to work activity. Exercise has been found to be beneficial when directed at lower back pain. **Objectives:** To verify the effect of an exercise program on reducing the functional disability of low back pain in ambulance transport drivers. **Methods:** A Quasi-experimental study carried out on 27 individuals, ambulance transport drivers from the Portuguese Red Cross. Ambulance drivers with experience for at least 6 months and with chronic low back pain were included. Individuals that did not sign off was excluded and had pathologies associated with low back pain. A sample characterization questionnaire and the Oswestry Disability Index instrument was applied to assess the disability generated by low back pain before and after the exercise program. The sample was divided non-randomly into an experimental group (n = 14), where an exercise program was applied for 12 weeks, with a weekly session and a duration of approximately 40 minutes per session. The control group (n = 13) did not execute

the exercise program. All subjects were evaluated before and after the application of the exercise program. Data were analyzed the IBM SPSS 24.0 software, with a significance level of 0.05. **Results:** It was observed that the sample presented a degree of functional disability generated by low back pain. Statistically significant differences were found in the Body Mass Index value (p = 0.043). Regarding driving time per day there were also statistically significant differences (p = 0.034). Regarding the Oswestry Disability Index instrument, it was found that the groups do not present homogeneity at the initial moment. In the analysis between M0 and M1 there were statistically significant differences, p = 0.002 and p = 0.017, (experimental group and control group, respectively). **Conclusions:** The exercise program was found to have an effect on the reduction of functional disability generated by low back pain in ambulance drivers.

Acknowledgements: The all drivers who participated in this study.

Keywords: Low Back Pain; Occupational Health; Physical Activity; Physiotherapy

References:

- E. Schneider, X.Irastorza. (2010). Work-related musculoskeletal disorders in the EU — Facts and figures. *Stress The International Journal on the Biology of Stress*. <https://doi.org/10.2802/10952>
- Grotkasten, Silke & Kienzerte, Huberte (2001). *Gimnasia para la columna vertebral* (8a ed.). Barcelona: Editorial Paidotribo.
- WHO. (2019). *Atividade Física - Folha informativa nº 385. Organização Mundial Da Saúde*, (385), 4. Retrieved from <http://www.who.int/mediacentre/factsheets/fs385/en/>

P108

O Efeito de um jogo de realidade virtual no controlo postural dos idosos

Manuel Piedade Paquete⁽¹⁾, José Luís Sousa⁽²⁾, Sónia Gonçalves-Lopes⁽³⁾, Pedro Harry-Leite⁽⁴⁾, Verónica Abreu⁽⁵⁾

¹ KinesioLab, Escola Superior de Saúde Jean Piaget Vila Nova de Gaia, Portugal, manuel.paquete@gaia.ipiaget.pt;

² KinesioLab, Escola Superior de Saúde Jean Piaget Vila Nova de Gaia, Portugal, jose.sousa@gaia.ipiaget.pt;

³ KinesioLab, Escola Superior de Saúde Jean Piaget Vila Nova de Gaia, Portugal, sonia.lopes@gaia.ipiaget.pt;

⁴ KinesioLab, Escola Superior de Saúde Jean Piaget Vila Nova de Gaia, Portugal, pedro.leite@gaia.ipiaget.pt;

⁵ KinesioLab, Escola Superior de Saúde Jean Piaget Vila Nova de Gaia, Portugal, veronica.abreu@gaia.ipiaget.pt;

INTRODUÇÃO: O processo de envelhecimento acarreta perdas funcionais, nomeadamente do controlo postural (Rath & Wade, 2017), tornando-se por isso necessário encontrar estratégias para diminuir o impacto destas alterações. A atividade física é uma terapia não farmacológica capaz de melhorar o controlo postural dos idosos (Gauchard et al., 2003). A adesão a programas de atividade física pode ser um problema para o idoso por falta de espaços de segurança, falta de hábito, entre outros fatores (Rivera-Torres et al., 2019). Os jogos de realidade virtual, podem ser uma ferramenta terapêutica para promoção da atividade física, permitindo maior motivação, prazer com a sua prática e variedade de estímulos (Betker et al., 2006). **Objetivos:** Avaliar o efeito de um jogo de realidade virtual sobre o controlo postural em idosos saudáveis. **Métodos:** Estudo quasi-experimental, com pré-teste, pós-teste e grupo de controlo. Foi aplicado ao grupo experimental um protocolo de realização de um jogo da consola Wii através de caminhada com obstáculos, realizado 3 vezes por semana durante 3 semanas. Amostra de 29 idosos (17 mulheres e 12 homens com uma média de idade de 75,1±7,9), distribuídos aleatoriamente em dois grupos: Grupo Controlo (n = 15) e o Grupo Experimental (n = 14). Os idosos foram avaliados pelas escalas Berg Balance Scale (BBS) e Timed up and Go (TUG). **Resultados:** No teste TUG, as melhorias foram estatisticamente significativas em