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## **BOOK OF ABSTRACTS**

**International workshop**

**SCIENCE AND LEISURE BUILD BRIDGES TOGETHER**

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# **BOOK OF ABSTRACTS**

**International workshop**

**SCIENCE AND LEISURE BUILD BRIDGES TOGETHER**

Venue:

Huelva University, Spain

Official opening 10:00 AM (Huelva time), 12th of May 2023

**Editors:**

**Angel-Alex Hăisan**  
**Estefanía Castillo Viera**  
**Vania Loureiro Brandao**  
**Svetoslav Stefanov**  
**Magdalena Majer**

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ALBA IULIA

2023

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**SCIENTIFIC COMMITTEE**

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**STEFANIYA Belomazheva-Dimitrova**, Assoc. Prof., "St. Cyril and St. Methodius" University of Veliko Tarnovo, Bulgaria

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*12<sup>th</sup> of May 2023 – Huelva, Spain*

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**MILEN Vidinovski**, Assist. Prof., “St. Cyril and St. Methodius” University of Veliko Tarnovo, Bulgaria

**DANIELA Pandulcheva**, PhD, “St. Cyril and St. Methodius” University of Veliko Tarnovo, Bulgaria

**DANCHO Pandulchev**, PhD, “St. Cyril and St. Methodius” University of Veliko Tarnovo, Bulgaria

## **PROGRAM**

(Spain time zone)

**10:00 – 10:30**

**Opening speech – GUEST SPEAKER**

**María Antonia Peña Guerrero**

*Rector of the University of Huelva*

**CHAIRWOMAN**

**MARGARIDA Gomes**

*Assist. Prof., Instituto Politécnico de Beja, Portugal*

**10:30 – 10:40**

**EXERCISE FOR OLDER ADULTS. UP AGAIN SENIOR INTERVENTION PROTOCOL**

*Daniela Miranda, Margarida Gomes, Bebiana Sabino, Vânia Loureiro Instituto Politécnico De Beja, Portugal*

**10:40 – 10:50**

**FUNCTIONAL TRAINING FOR POSTURE: EVALUATION AND EXERCISE PROTOCOL ON HEALTHY CAMPUS**

*Gonçalo Casaca, Pedro Bento, Luís Murta, Nuno Loureiro, Vânia Loureiro Instituto Politécnico de Beja, Portugal*

**10:50 – 11:00**

**PHYSICAL ACTIVITY COUNSELLING AND EXERCISE PRESCRIPTION ON HEALTHY CAMPUS**

*Rui Costa, Nuno Loureiro, Paula Paixão, Vânia Loureiro Instituto Politécnico de Beja, Portugal*

**11:10 – 11:20**

**WALKING ON THE STREET. HOW DOES THE URBAN PATHWAYS PROMOTE AN ACTIVE AND HEALTHY LIFESTYLES?**

*Nuno Pereira, Pedro Bento, Margarida Gomes, Vânia Loureiro Instituto Politécnico de Beja, Portugal*

**11:20 – 11:30**

**PROMOTING HEALTH THROUGH PHYSICAL ACTIVITY. HEALTHY CAMPUS POLYTECHNIC UNIVERSITY OF BEJA**

*Madalena Pereira, Helena Barbosa, Nuno Loureiro, Vânia Loureiro Instituto Politécnico de Beja, Portugal*

**11:30 – 11:40**

**MULTICOMPONENT EXERCISE PROGRAM. UP AGAIN SENIOR PROJECT**

*Alexandra Ribeiro, Margarida Gomes, Nuno Loureiro, Vânia Loureiro Instituto Politécnico de Beja, Portugal*

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### **11:40 – 11:50**

**CHILDREN'S PERCEPTION OF GENDER STEREOTYPES IN SPORTS**

*Rubén Bueno Martín, María Del Carmen Montes Reyes, Deborah Rosu Rosu, Isabel Vázquez Martín  
University of Huelva, Spain*

### **11:50 – 12:00**

**PERSONALITY AND CAREER FIT TESTING. THE CASE OF FUTURE KINESIOTHERAPISTS IN ROMANIA**

*George-Adrian Trian  
„1 Decembrie 1918” University of Alba Iulia, Romania*

### **12:00 – 12:10**

**REHABILITATION THROUGH EXERGAMES-TYPE PLATFORMS**

*Florentina Malina Pruteanu  
„1 Decembrie 1918” University of Alba Iulia, Romania*

### **12:10 – 12:20**

**INNOVATIVE THERAPIES IN THE RECOVERY OF PATIENTS WITH SPINAL CORD INJURY**

*Codruta Pasca  
„1 Decembrie 1918” University of Alba Iulia, Romania*

### **12:20 – 12:30**

**PAIN THERAPY IN DISC HERNIATION**

*Elena Viorica Grozăvescu  
„1 Decembrie 1918” University of Alba Iulia, Romania*

### **12:30 – 12:40**

**MAINTAINING RANGE OF MOTION THROUGH PHYSICAL THERAPY IN DUCHENNE-BECKER MUSCULAR DYSTROPHY**

*Claudia Donea  
„1 Decembrie 1918” University of Alba Iulia, Romania*

### **12:40 – 12:50**

**HYDROTHERAPY FOR PAIN RELIEF IN HIP OSTEOARTHRITIS**

*Lavinia-Maria Irinciuc  
„1 Decembrie 1918” University of Alba Iulia, Romania*

### **12:50 – 13:00**

**SEMI-ELASTIC AND ELASTIC TRAMPOLINE, MEANS FOR DEVELOPMENT OF COORDINATION IN CHILDREN**

*Alexandru Chirila  
„1 Decembrie 1918” University of Alba Iulia, Romania*

**Lunch 50 minutes**

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*Svetoslav Stefanov**Magdalena Majer*

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**14:00 – 14:10****INJURY MECHANISMS & TYPICAL  
INJURIES IN VOLLEYBALL***Katarzyna Ambrożkiewicz**The Bronislaw Czech University School  
of Physical Education, Cracow, Poland***14:10 – 14:20****INFLUENCE OF OBESITY ON MOTOR  
PERFORMANCE***Ilona Gabryś**The Bronislaw Czech University School  
of Physical Education, Cracow, Poland***14:20 – 14:30****LEISURE TIME PHYSICAL ACTIVITIES  
AMONG STUDENTS***Anna Witek**The Bronislaw Czech University School  
of Physical Education, Cracow, Poland***14:30 – 14:40****ADOLESCENT'S PHYSICAL ACTIVITY***Gabriela Cyran**The Bronislaw Czech University School  
of Physical Education, Cracow, Poland***14:40 – 14:50****INFLUENCE OF REGULAR ACROBATIC  
TRAINING ON STABILITY***Piotr Nenko**The Bronislaw Czech University School  
of Physical Education, Cracow, Poland***14:50 – 15:00****STATUS OF PHYSICAL CAPACITY OF  
LOWER SECONDARY EDUCATION  
STUDENT***Pitar Konstantinov**“St. Cyril and St. Methodius” University  
of Veliko Tarnovo, Bulgaria***15:00 – 15:10****DEVELOPMENT OF SPEED AND  
DYNAMIC POWER CAPABILITIES IN  
11-12 YEAR OLD STUDENTS***Velislav Cankov**“St. Cyril and St. Methodius” University  
of Veliko Tarnovo, Bulgaria***15:10 – 15:20****CHILDREN MOTOR ASSESSMENT IN  
SCHOOLS***Hristiyan Madarov**“St. Cyril and St. Methodius” University  
of Veliko Tarnovo, Bulgaria***15:20 – 15:30****DISABILITIES IN CONTEMPORARY  
SOCIETIES***Nikoleta Petrova, Zahari Zahariev**“St. Cyril and St. Methodius” University  
of Veliko Tarnovo, Bulgaria***15:30 – 15:40****Closing speech****ANGEL-ALEX Hăisan***„1 Decembrie 1918” University of Alba Iulia, Romania*



## ***ABSTRACTS***





**EXERCISE FOR OLDER ADULTS. UP AGAIN SENIOR  
INTERVENTION PROTOCOL****DANIELA Miranda<sup>a</sup>, MARGARIDA Gomes<sup>b</sup>, BEBIANA Sabino<sup>b</sup>,  
VÂNIA Loureiro<sup>b</sup>**

---

**Abstract**

*Regular exercise has multiple benefits in our health as well as reduce or prevent the risk of falls, disease progression, and frailty in older people. The Up Again Senior (UpAS) project is a program for older adults to maintain their level of independence, as well to reduce sedentary behaviors. The project is delivered to older adult population living in the community, aged 60 or older, and without major mobility limitations. UpAS is a multi-component exercise program (aerobic, strength, balance, and flexibility) carried out twice a week with a total duration of 60 minutes per session. The evaluation is realized every 3 months, combining health evaluation (blood pressure, resting heart rate and body composition) and physical fitness (strength, functional mobility, aerobic, and flexibility). After each evaluation a health and PF report is provided with individual results. In UpAS project we believe that physical activity and exercise is essential for health promotion, disease prevention and treatment in older adults. We also believe that the prescription of structured exercise should consequently be based on the proposed outcome (e.g., primary prevention, improvement in fitness or functional status or disease treatment), and individualized, adjusted and controlled like any other pharmacological treatment. This project is established to improve the quality of life of the older adults, develop their functional abilities and decrease the risk of falls.*

**Keywords:** *healthy aging, health assessment, physical activity, physical exercise*

---

**Author affiliation**

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<sup>b</sup>Polytechnic Institute of Beja, School of Education, Portugal.

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### **Selective bibliography**

Loureiro, V., Gomes, M., Vieira, E., Almazán, A., & Loureiro, N. (2022). *Up Again Senior - Projeto de Promoção de Saúde Sénior através da Atividade Física*. In P. Soares (Ed.), *Envelhecimento Ativo e Saudável II MADT T*.

Loureiro, V., Sabino, B., Bento, P., Ferreira-Barbosa, H., Gomes, M., Paixão, P., Murta, L., & Loureiro, N. (2022). *Atividade Física e Desporto: Experiências, Desafios e Perspetivas*. Livro de Resumos do 9o Congresso Internacional de Atividade Física e Saúde. Instituto Politécnico de Beja.

Mazzeo, R. S., Cavanagh, P., Evans, W. J., Fiatarone, M., Hagberg, J., McAuley, E., & Startzell, J. (1998). Exercise and physical activity for older adults. *Medicine and Science in Sports and Exercise*, 30(6), 992–1008. <https://doi.org/10.1097/00005768-199806000-00033>

Mellow, M. L., Crozier, A. J., Dumuid, D., Wade, A. T., Goldsworthy, M. R., Dorrian, J., & Smith, A. E. (2022). How are combinations of physical activity, sedentary behaviour and sleep related to cognitive function in older adults? A systematic review. *Experimental Gerontology*, 159. <https://doi.org/10.1016/J.EXGER.2022.111698>

**FUNCTIONAL TRAINING FOR POSTURE: EVALUATION AND EXERCISE PROTOCOL ON HEALTHY CAMPUS****GONÇALO Casaca<sup>a</sup>, PEDRO Bento<sup>b</sup>, LUÍS Murta<sup>b</sup>, NUNO Loureiro<sup>b</sup>, VÂNIA Loureiro<sup>b</sup>**

---

**Abstract**

*Postural problems are a common issue affecting a significant portion of the population. Currently, working with a computer has become usual, as computers are being widely use in homes and workplaces, and the working time in a sedentary posture is increasing. These behaviors can have negative effects on health and well-being. Functional training is a different approach of exercise that is particularly effective for addressing postural problems and focus on movements relevant to daily activities. Functional exercises can help to strengthen the muscles that support good posture, including the core, back, shoulders, and hips. The functional training program, in Healthy Campus project, is carried out twice a week with a total duration of 60 minutes per session. The session protocol involves 2 circuits of functional exercises: the first circuit is related with strength dimension and the second is related with the cardiorespiratory fitness. At the baseline, all the participants underwent an evaluation that includes different tests: blood pressure, rest heart frequency, body composition and evaluation of the physical condition (squat test, single leg squat test and push-up test). With this exercise program we intend to promote health and well-being but also to reduce the postural problems in our academic community.*

**Keywords:** *training program, physical condition, body composition, health*

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### **Selective bibliography**

- Curnow, D., Cobbin, D., Wyndham, J., & Boris Choy, S. T. (2009). *Altered motor control, posture and the Pilates method of exercise prescription*. *J Bodyw Mov Ther*, 13(1), 104-111. <https://doi.org/10.1016/j.jbmt.2008.06.013>
- Dogra, S., Dunstan, D. W., Sugiyama, T., Stathi, A., Gardiner, P. A., & Owen, N. (2022). *Active Aging and Public Health: Evidence, Implications, and Opportunities*. <https://doi.org/10.1146/Annurev-Publhealth-052620-091107>, 43, 439–459. <https://doi.org/10.1146/ANNUREV-PUBLHEALTH-052620-091107>
- Loureiro, V., Sabino, B., Bento, P., Ferreira-Barbosa, H., Gomes, M., Paixão, P., Murta, L., & Loureiro, N. (2022). *Atividade Física e Desporto: Experiências, Desafios e Perspetivas*. *Livro de Resumos do 9o Congresso Internacional de Atividade Física e Saúde*. Instituto Politécnico de Beja.
- Loureiro, N., Calmeiro, L., Marques, A., Gomez-Baya, D., & Gaspar de Matos, M. (2021). *The role of blue and green exercise in planetary health and well-being*. *Sustainability* (Switzerland), 13(19). <https://doi.org/10.3390/su131910829>
- Silveira, E., Mendonça, C., Delpino, F., Souza, G., Pereira, L., Oliveira, C., & Noll, M. (2022). *Sedentary behavior, physical inactivity, abdominal obesity and obesity in adults and older adults: A systematic review and meta-analysis*. *Clinical Nutrition ESPEN*, 50, 63–73. <https://doi.org/10.1016/J.CLNESP.2022.06.001>

**PHYSICAL ACTIVITY COUNSELLING AND EXERCISE  
PRESCRIPTION ON HEALTHY CAMPUS****RUI Costa<sup>a</sup>, NUNO Loureiro<sup>b</sup>, PAULA Paixão<sup>b</sup>, VÂNIA Loureiro<sup>b</sup>**

---

**Abstract**

*Is well-established the benefits of regular physical activity (PA) in the prevention and treatment of many clinical conditions (especially noncommunicable diseases) and in promoting physical and mental wellbeing. This paper aims to present the framework of Physical Activity and Health Laboratory from IPBeja on PA brief counseling and tools to academic community. The protocol includes: 1) a PA brief counseling; 2) Anthropometric assessment (weight, body fat percentage, measured by TANITA, skinfolds: abdominal, chest, triceps, supra iliac and front thigh were measure using a SECA caliper). Muscle strength is also measured by handgrip Jamar dynamometer and aerobic fitness was assessed by 2 Minute Step Test. With this strategy is pretended to improve health and physical fitness outcomes in IPBeja community. These tools are key actions to promote PA using brief counseling and exercise prescription as a priority setting. Moreover, it challenges the community to identify PA self-relevant benefits and can be good for all academic community and administrators to implement environmental and policy changes and looking for to explore additional strategies for supporting healthy lifestyles on IPBeja campus.*

**Keywords:** *Fitness evaluation, health risk factor, prescription, sedentary lifestyle*

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- Marques, A., Peralta, M., Martins, J., Loureiro, V., Almanzar, P. C., & de Matos, M. G. (2019). *Few European Adults are Living a Healthy Lifestyle. American Journal of Health Promotion, 33(3), 391-398.* <https://doi.org/10.1177/0890117118787078>
- Mendes, R., Silva, M., Silva, C., Marques, A., Godinho, C., Tom, R., Agostinho, M., Madeira, S., Rebelo-Marques, A., Martins, H., & Teixeira, P. (2020). *Physical Activity Promotion Tools in the Portuguese Primary Health Care: An Implementation Research. International Journal of Environmental Research and Public Health, 17(815).* <https://doi.org/10.3390/ijerph17030815>
- Posadzki, P., Pieper, D., Bajpai, R., Makaruk, H., Könsgen, N., Neuhaus, A. L., & Semwal, M. (2020). *Exercise/physical activity and health outcomes: an overview of Cochrane systematic reviews. BMC Public Health, 20(1), 1–12.* <https://doi.org/10.1186/S12889-020-09855-3/TABLES/3>

## **WALKING ON THE STREET. HOW DOES THE URBAN PATHWAYS PROMOTE AN ACTIVE AND HEALTHY LIFESTYLES?**

**NUNO Pereira<sup>a</sup>, PEDRO Bento<sup>b</sup>, MARGARIDA Gomes<sup>b</sup>, VÂNIA Loureiro<sup>b</sup>**

---

### **Abstract**

*According to the United Nations, about 70 percent of the global population are estimated to live in cities by 2050. Active mobility is getting attention of those who manage our cities to find sustainable ways of promoting them. New ways of attracting the population to more sustainable modes of mobility be considered. It is in this context the project "Pax Julia urban routes" aims to encourage the use of active, sustainable, ecological mobility on Baixo Alentejo region (Beja, Portugal), mainly in urban center of the city. The project contains an implementation model organized in three phases – (1) data collection and characterization of urban routes, (2) development of the online platform and (3) dissemination and implementation of the project in the local community. To characterize the urban routes (n=10) it was used a system to classify it through the type (linear /circular), accessibility mode (walk /bike), distance (Km), duration (minutes), number of steps, number of sights, intensity of the route (low, moderate and / or high) and location (Google Maps application). The project will aim to 1) raise awareness of the importance of regular physical activity; 2) promote and allow universal access, in the ideal of "sport for all" and 3) raise community awareness of the use of active mobility.*

**Keywords:** *physical activity, cycling; urban routes; sustainable cities*

---

### **Author affiliation**

<sup>a</sup>3<sup>rd</sup> year bachelor student, Sport and Exercise specialization, Department of Arts, Humanities & Sports, School of Education, Polytechnic Institute of Beja, Portugal.

<sup>b</sup>Polytechnic Institute of Beja, School of Education, Portugal.

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*12<sup>th</sup> of May 2023 – Huelva, Spain*

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### **Selective bibliography**

- DGS. (2020). *Programa Nacional para a Promoção da Atividade Física 2020*.  
[https://www.sns.gov.pt/wp-content/uploads/2017/10/DGS\\_PNPAF2017\\_V7.pdf](https://www.sns.gov.pt/wp-content/uploads/2017/10/DGS_PNPAF2017_V7.pdf)
- Loureiro, N., Calmeiro, L., Marques, A., Gomez-Baya, D., & Gaspar de Matos, M. (2021). *The role of blue and green exercise in planetary health and well-being*. *Sustainability*, 13(19), 1–12. <https://doi.org/10.3390/su131910829>
- Mueller, N., Rojas-Rueda, D., Cole-Hunter, T., de Nazelle, A., Dons, E., Gerike, R., Götschi, T., Int Panis, L., Kahlmeier, S., & Nieuwenhuijsen, M. (2015). *Health impact assessment of active transportation: A systematic review*. *Preventive Medicine*, 76, 103–114. <https://doi.org/10.1016/j.ypmed.2015.04.010>

**PROMOTING HEALTH THROUGH PHYSICAL ACTIVITY.  
HEALTHY CAMPUS POLYTECHNIC UNIVERSITY OF BEJA****MADALENA Pereira<sup>a</sup>, HELENA Barbosa<sup>b</sup>, NUNO Loureiro<sup>b</sup>, VÂNIA Loureiro<sup>b</sup>**

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**Abstract**

*A lower physical condition (PC) is associated with a sedentary lifestyle. Not engaging in regular physical activity (PA) and spending long periods sitting or lying down are associated with lower muscle strength, cardiovascular health, and overall PC. Incorporating regular physical exercise such as aerobic exercise, strength training, flexibility exercises, and other forms of PA that suit an individual's abilities and preference help to reduce one's sedentary behavior. Healthy Campus is a program aimed at promoting healthy and active lifestyles in Higher Education Academic Communities, aligned with the World Health Organization definition of Health. The program includes a field of action related to the management of the Healthy Campus approach within the university, as well as six fields of action and activities: Healthy Campus Management; Physical Activity and Sports; Nutrition; Disease Prevention; Mental and Social Health; Risk Behavior; Environmental, Health and Social Responsibility. In this way, Healthy Campus contributes to an improvement not only in physical, but also mental and social health, providing opportunities for all students to participate in physical activity for their health and well-being. This initiative can be good for all academic community and administrators expecting to implement environmental and policy changes and looking for to explore additional strategies for supporting healthy lifestyles on IPBeja campus.*

**Keywords:** *health, physical condition, physical activity, sedentary lifestyle*

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---

## **Book of abstracts**

*International workshop*

*Science and Leisure build bridges together*

*12<sup>th</sup> of May 2023 – Huelva, Spain*

---

### **Selective bibliography**

- Dogra, S., Dunstan, D. W., Sugiyama, T., Stathi, A., Gardiner, P. A., & Owen, N. (2022). *Active Aging and Public Health: Evidence, Implications, and Opportunities*. <https://doi.org/10.1146/Annurev-Publhealth-052620-091107>, 43, 439–459. <https://doi.org/10.1146/ANNUREV-PUBLHEALTH-052620-091107>
- Loureiro, V., Sabino, B., Bento, P., Ferreira-Barbosa, H., Gomes, M., Paixão, P., Murta, L., & Loureiro, N. (2022). *Atividade Física e Desporto: Experiências, Desafios e Perspetivas*. Livro de Resumos do 9o Congresso Internacional de Atividade Física e Saúde. Instituto Politécnico de Beja.
- Loureiro, N., Calmeiro, L., Marques, A., Gomez-Baya, D., & Gaspar de Matos, M. (2021). *The role of blue and green exercise in planetary health and well-being*. *Sustainability* (Switzerland), 13(19). <https://doi.org/10.3390/su131910829>
- Sabino, B., Gomes, M., Bento, P., Pereira, S., Murta, L., Loureiro, N., & Loureiro, V. (2022). INDICATORS OF A “HEALTHY CAMPUS”: UNDERSTANDING TO INTERVENE. In V. Loureiro, B. Sabino, Pedro Bento, H. Barbosa, M. Gomes, P. Paixão, L. Murta, & N. Loureiro (Eds.), *Atividade Física e Desporto: Experiências, Desafios e Perspetivas*. Livro de Resumos do 9o Congresso Internacional de Atividade Física e Saúde. Escola Superior de Educação - Instituto Politécnico de Beja.
- Silveira, E., Mendonça, C., Delpino, F., Souza, G., Pereira, L., Oliveira, C., & Noll, M. (2022). *Sedentary behavior, physical inactivity, abdominal obesity and obesity in adults and older adults: A systematic review and meta-analysis*. *Clinical Nutrition ESPEN*, 50, 63–73. <https://doi.org/10.1016/J.CLNESP.2022.06.001>

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## **MULTICOMPONENT EXERCISE PROGRAM. UP AGAIN SENIOR PROJECT**

**ALEXANDRA** Ribeiro<sup>a</sup>, **MARGARIDA** Gomes<sup>b</sup>, **NUNO** Loureiro<sup>b</sup>,  
**VÂNIA** Loureiro<sup>b</sup>

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### **Abstract**

In 2050, 20% of the world's population will be over the age of 65 years and 80% of older adults will be living in low- to middle-income countries. Maintaining good levels of physical fitness (PF) can be the key to preserve the quality of life and independence of older adult. This quantitative and longitudinal study was carried out with a non-probabilistic and convenience sample composed of 19 older adults, mostly female (66.2%) with a mean age of 75.33 years ( $\pm$ SD 6.15). The physical activity (PA) program was implemented according to the guidelines of project UP AGAIN SENIOR. The participants were evaluated in two different moments: at baseline and after participation in the PA program. All participants underwent assessment of blood pressure, rest heart rate (bpm), body mass index (BMI, Kg/m<sup>2</sup>), body fat mass (%) and PF indicators: handgrip strength test, Timed Up and Go test, Chair Stand 30 seconds test and 2 min Step Test (reps). There weren't found significant differences in weight, body mass index, handgrip as well as in the 2 min step test ( $p > 0.005$ ). Statistically significant differences in systolic blood pressure ( $t = -2.39$ ;  $p=0.017$ ), rest heart rate ( $t = -2.54$ ;  $p=0.011$ ) and in the legs strength ( $t = -2.32$ ;  $p=0.021$ ), were observed. This study provides evidence that community-based exercise program can improve PF in older adults and contribute to general health of the population in study. The exercise program provided necessary data to construct further exercise interventions.

**Keywords:** aging, body composition, physical fitness, balance

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---

## **Book of abstracts**

*International workshop*

*Science and Leisure build bridges together*

*12<sup>th</sup> of May 2023 – Huelva, Spain*

---

### **Selective bibliography**

- Loureiro, V., Loureiro, N., Gomes, M., Alves, A., Sabino, B., Bento, P., & Murta, L. (2021). #REDE UP em casa - Programa de exercício físico sentado destinados an adultos com mais de 65 anos – manual de apoio. Instituto Politécnico de Beja.[https://ipdj.gov.pt/documents/20123/262850/%23RedeUP+em+casa\\_Publico\\_exercicios\\_sentados2021.pdf/4119d1b8-6c08-285c-10f4-407de2dfe037?t=1612976509526](https://ipdj.gov.pt/documents/20123/262850/%23RedeUP+em+casa_Publico_exercicios_sentados2021.pdf/4119d1b8-6c08-285c-10f4-407de2dfe037?t=1612976509526)
- Marcos-Pardo, P. J., Orquin-Castrillón, F. J., Gea-García, G. M., Menayo-Antúnez, R., González-Gálvez, N., Vale, R. G. de S., & Martínez-Rodríguez, A. (2019). Effects of a moderate-to-high intensity resistance circuit training on fat mass, functional capacity, muscular strength, and quality of life in elderly: A randomized controlled trial. *Scientific Reports*, 9(1). <https://doi.org/10.1038/S41598-019-44329-6>
- Massy-westropp, N., Gill, T., Taylor, A., Bohannon, R., & Hill, C. (2011). Hand Grip Strength : age and gender stratified normative data in a population-based study. *BMC Research Notes*, 4(127).
- Podsiadlo, D., & Richardson, S. (1991). The Timed “Up & Go”: A Test of Basic Functional Mobility for Frail Elderly Persons. *Journal of the American Geriatrics Society*, 39, 142–148.
- Rikli, E., & Jones, J. (1999). Development and validation of functional fitness test for community-residing older adults. *Journal of Aging and Physical Activity*, 7(2), 129–161.

## **CHILDREN'S PERCEPTION OF GENDER STEREOTYPES IN SPORTS**

**RUBÉN** Bueno Martín<sup>a</sup>, **MARÍA** del Carmen Montes Reyes<sup>a</sup>,  
**DEBORAH** Rosu Rosu<sup>a</sup>, **ISABEL** Vázquez Martín<sup>a</sup>

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### **Abstract**

*Gender refers to the social concepts of the roles, behaviors, activities and attributes that each society thinks are appropriate for men and women. Sex is the biological trait that distinguishes men and women.*

*It can be said that sex refers to biology while gender belongs to culture, in other words, physical appearance, the way of communicating, the different tasks they perform and the values they have acquired.*

*On the other hand, the socialization of families and schools towards girls entails that sports practice is carried out according to the most stereotyped gender roles, performing activities such as gymnastics, dance, synchronized swimming, skating, etc., where aesthetics takes precedence over the fun provided by team play.*

*For all these reasons, the aim of the study was to find out the perception of primary school students on gender stereotypes in sport. For this purpose, the questionnaire 'Gender and relationship with sports practice and sport' was used. The sample consisted of 117 students from three Spanish schools.*

*Positive results were obtained since the students did not have acquired the stereotypes that society has set.*

**Keywords:** inequality, sport, discrimination, women

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*12<sup>th</sup> of May 2023 – Huelva, Spain*

---

### **Selective bibliography**

Alonso Gómez, C.B.; Rosa Camacho, N.; Ruiz Herrero, F. (2021). *Gender stereotypes in physical education. ESHPA - Education, Sport, Health and Physical Activity*. 5(1): 27-40.

Blández Ángel, J., Fernández García, E., & Sierra Zamorano, M. A. (2007). *Gender stereotypes, physical activity and school: The students' perspective. Profesorado: Revista De Curriculum y Formación Del Profesorado*, 11(2).

Domínguez Nacimiento, D. (2011). *Sport: A path to gender equality. Prisma Social: Revista De Investigación Social*, (7).

Fernández Torres, M. J., & Almansa Martínez, A. (2012). *Female identity in the field of Spanish soccer teams. I congreso internacional de comunicación y género. libro de actas: 5, 6 y 7 de marzo de 2012. facultad de comunicación. universidad de sevilla. (1st ed., pp. 587-602) Universidad de Sevilla, Facultad de Comunicación*. Retrieved from

Granda Vera, J., Alemany Arrebola, I., & Aguilar García, N. (2018). *Gender and its Relationship with the Practice of Physical Activity and Sporty. Apunts. Educación Física y Deportes*, 132, 123-141.

López, M., & Pardo, A. (2021). *Do gender stereotypes exist in physical activity and sport in a sample of barcelona adolescents? Revista Española De Educación Física y Deportes: REEFD*, (434), 56-65.

Matud Aznar, M.P., Fortes Marichal, D., Torrado Martín-Palomino, E. and Fortes Marichal, S. (2018). *Violence against women (Col. Cuadernos de Psicología 06). La Laguna (Tenerife): Latina*.

**PERSONALITY AND CAREER FIT TESTING. THE CASE OF  
FUTURE KINESIOTHERAPISTS IN ROMANIA<sup>a</sup>****GEORGE-ADRIAN Trian<sup>b</sup>**

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**Abstract**

*The idea of personality and career has been discussed since ancient Greece. The fathers of philosophy contemplated this idea of personal experience. In the centuries that followed many psychologists have advanced this idea in various forms. From these theories, so-called personality tests emerged to provide a starting point for those interested in pursuing a career.*

*Decision-making for the new generation of students has become a sum of factors. Since career choice is significant, many people are not sufficiently aware when they make the decision to pursue a field that piques their interest without thinking about the reason behind their choice. Most experts have debated the idea that career choice is a strictly vocational one and embodies a unique and distinct pattern depending on one's talents, needs and values. In essence, everyone follows a career that reflects the person's motivation.*

*The objective of the research was to find out if there is a specific pattern for those who wish to pursue this field of study.*

**Keywords:** *career, personal experience, kinesiotherapy*

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**Author affiliation**

<sup>a</sup>*This study was carried out with the support of a scientific performance grant awarded by "1 Decembrie 1918" University of Alba Iulia under contract number 494/ 04.07.2022.*

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## **Book of abstracts**

*International workshop*

*Science and Leisure build bridges together*

*12<sup>th</sup> of May 2023 – Huelva, Spain*

---

### **Selective bibliography**

*Gottfredson, L. S. (2005). Applying Gottfredson's Theory of Circumscription and Compromise in Career Guidance and Counseling. In S. D. Brown & R. W. Lent (Eds.), Career development and counseling: Putting theory and research to work (pp. 71–100). John Wiley & Sons, Inc.*

*Holland, J.L. (1997) Making Vocational Choices: A Theory of Vocational Personalities and Work Environments. 3rd Edition, Psychological Assessment Resources, Odessa*

*Lent R.W. (1994). Toward a Unifying Social Cognitive Theory of Career and Academic Interest, Choice and Performance(Monograph). journal of Vocational Behavior, 45-122.*

*Super, D. E. (1983). Assessment in career guidance: Toward truly developmental counseling. Personnel and Guidance Journal, 61(9),555-562. doi:10.1111/j.2164-4918.1983.tb00099.x*

*Mkondo, T., Mudzi, W., Mbambo, N. P. (2007). Factors influencing Zimbabwean physiotherapy students in choosing physiotherapy as a career, South African Journal of Physiotherapy, Vol 63, No. 3, a140, DOI: <https://doi.org/10.4102/sajp.v63i3.140>*

**REHABILITATION THROUGH EXERGAMES-TYPE PLATFORMS****FLORENTINA MALINA Pruteanu<sup>a</sup>**

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**Abstract**

*Exergames, or the promotion of physical activity through video games, have become an important element for many health professionals, as they represent a method of approaching recovery or carrying out physical activity in a different way from the traditional one.*

*Fueled by a desire of development, the field of exergames evolved over the last decade and various consoles, remote controls, devices based on motion sensors, such as Power Glove or Wii, have been created. This in turn led to the apparition of several platforms, such as, Virtual Reality (VR), Digital Wall, Mira, exergames intended for PlayStation, Xbox, Wii, etc., with the aim to offer a different approach to the realization of physical effort through traditional methods to increase motivation, concentration or interest in carrying out the exercises.*

*Through the exergames platforms, the recovery of several types of conditions or pathologies is achieved using various categories of games offered, both commercial and individualized. They help to improve coordination, balance, amplitude of movement, develop muscle strength, train muscles, maintain or increase muscle tone, as well as reducing sedentarism. At the same time, exergames facilitate attention, motivation and activity, their composition having an engaging and interactive style being dedicated to all age categories.*

**Keywords:** *exergames, rehabilitation, games*

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---

## **Book of abstracts**

*International workshop*

*Science and Leisure build bridges together*

*12<sup>th</sup> of May 2023 – Huelva, Spain*

---

### **Selective bibliography**

*Cikajlo, I., et al. (2020). Multi-Exergames to Set Targets and Supplement the Intensified Conventional Balance Training in Patients with Stroke: A Randomized Pilot Trial.*

*Fernandes, C. S. (2022). Exergames to Improve Rehabilitation for Shoulder Injury: Systematic Review and GRADE Evidence Synthesis.*

*Ferreira, S. et al. (2022). Acute Effects of Augmented Reality Exergames versus Cycle Ergometer on Reaction Time, Visual Attention, and Verbal Fluency in Community Older Adults.*

*Garcia-Agundez, A. et al. (2019). Recent advances in rehabilitation for Parkinson's Disease with Exergames: A Systematic Review.*

*Huang, K. et al. (2022). Exergame-based exercise training for depressive symptoms in adults: A systematic review and meta-analysis.*

*Liao, Y.-J. et al. (2022). Comparison of long-term effects of exergaming (Xbox one Kinect) and companionship programs on attitude towards dementia and the older adults among adolescents: a quasi-experimental longitudinal study.*

*Staiano, A. E. (2018). Home-based exergaming among children with overweight and obesity: a randomized clinical trial.*

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**INNOVATIVE THERAPIES IN THE RECOVERY OF PATIENTS  
WITH SPINAL CORD INJURY****CODRUTA Pasca<sup>a</sup>**

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**Abstract**

*Vertebro-medullary trauma is a complex pathology of the spine that involves damage to the spinal cord, resulting in partial or total damage to the muscles and nerves below the level of the injury. Thus, the motor and sensory functions are altered, represented by the paralysis of the limbs and the loss of tactile and painful sensitivity.*

*According to specialized literature, spinal cord trauma has a devastating psychological and social impact with an incidence of 15 to 40 cases per million per year. At the global level, the largest number of traumas are represented by road accidents which amount to 38% of their total. Other common causes are falls, especially in the elderly accounting for 31%, forms of violence such as gunshot wounds accounting for 14% and sports accidents accounting for 9%*

*Vertebral-medullary injuries affect the ability to walk and carry out daily activities, so therapeutic interventions that involve improving walking are very important. The Lokomat, which is a robotic skeleton of the lower limbs controlled by the computer, uses its rods to move only in the sagittal plane, being able to measure the angles of the hip and knee joints.*

*Functional electrical stimulation is a neuromuscular stimulation technique by which different types of electrodes are applied: intramuscularly implanted electrodes that allow well-controlled contractions even for deep muscles and non-invasive electrodes that are placed on the surface of the skin.*

**Keywords:** *spinal cord, injury, Lokomat*

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---

## **Book of abstracts**

*International workshop*

*Science and Leisure build bridges together*

*12<sup>th</sup> of May 2023 – Huelva, Spain*

---

### **Selective bibliography**

*Atkins, D. K. & Bicke, S. C. (2021). Effects of functional electrical stimulation on muscle health after spinal cord injury. doi:doi.org/10.1016/j.coph.2021.07.025*

*Bach, R. J. et al. (2020). Conventional Respiratory Management of Spinal Cord Injury.*

*Chin-Marquez, C. & Popovic, R. M. (2020). Functional electrical stimulation therapy for restoration of motor function after spinal cord injury and stroke: a review. doi:doi.org/10.1186/s12938-020-00773-4*

*Ehrmann C., et al. (2020). Impact of spasticity on functioning in spinal cord injury: an application of graphical modelling.*

*Nam, Y. K., et al. (2017). Robot-assisted gait training (Lokomat) improves walking function and activity in people with spinal cord injury: a systematic review.*

*Piira, A., et al. (2019). Robot-assisted lokomotor training did not improve walking function in patients with chronic incomplete spinal cord injury: a randomized clinical trial.*

**PAIN THERAPY IN DISC HERNIATION****ELENA VIORICA Grozăvescu<sup>a</sup>**

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**Abstract**

*The spine is the most important component of the skeleton and locomotor system, being considered the central axis of our physical structure.*

*According to specialized studies, spinal disorders occur for 80% of adults, but only in 20% of cases is it a true spinal pathology. Although lumbar disc herniation mostly affects adults, it also occurs in children or teenagers, 40% of all cases occurring in the 10-16 age group.*

*This condition can occur after intense physical activity, when the correct muscle-joint warm-up procedures are not followed before training. Also, among factors are - repeated trauma, repetitive overextension and rapid growth in height. According to specialized studies, lumbar disc herniation occurs only in 3 out of 10 patients due to congenital malformations.*

*Medical recovery aims to return the patient to his daily activities, increase and maintain muscle strength, control the correct posture of the spine. Applying a physical therapy program increases the chances of obtaining better results in a shorter time. All this is only possible when continuity, rhythmicity and consistency are ensured within the physical therapy sessions.*

*Physical exercises are recommended to prevent lumbar disc herniation, the trunk muscles being strengthened, which helps to stabilize and support the spine.*

**Keywords:** *therapy, disc herniation, physical exercises*

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---

## **Book of abstracts**

*International workshop*

*Science and Leisure build bridges together*

*12<sup>th</sup> of May 2023 – Huelva, Spain*

---

### **Selective bibliography**

Bailey J., (2019), *et al* *The effect of parity on age – related degenerative changes in sagittal balance. Spine (Phila Pa 1976), doi: 10.1097/BRS.0000000000003234.*

Cameron M. H., (2008), *Physical Agents in Rehabilitation: From Research to Practice, 2nd Edition Saunders, London.*

Guten G., (1981), *Herniated lumbar disk associated with running. A review of 10 cases, The American Journal of Sports Medicine, doi: 10.1177/036354658100900305.*

Leboeuf – Yde C., (2009), *Pain in the lumbar, thoracic or cervical regions: do age and gender matter? A population – based study of 34,902 Danish Twins 20 – 71 years of age, BMC Musculoskeletal Disorders, 10:39.*

Rasouli M. R., (2014), *Minimally invasive discectomy versus microdiscectomy/open discectomy for symptomatic lumbar disc herniation, Cochrane Database Syst Rev doi: 10.1002/14651858.CD010328.pub2.*

**MAINTAINING RANGE OF MOTION THROUGH PHYSICAL THERAPY IN DUCHENNE-BECKER MUSCULAR DYSTROPHY****CLAUDIA Donea<sup>a</sup>**

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**Abstract**

*Duchenne muscular dystrophy is a severe, X-chromosome genetic degenerative disease that affects only males, while females are only carriers. This pathology is produced by recessive mutations that occur at the level of the gene and that disrupt the reading frame of the messenger RNA, leading to the complete lack of dystrophin. Becker muscular dystrophy is a progressive disease, genetic on the X chromosome, but in this case the reading frame of the messenger RNA allows the translation of shorter but partially functional dystrophins.*

*The standard therapy that can delay the progression of the disease is based on corticosteroids. Physical therapy is a supportive therapy that uses a multidisciplinary approach. In muscular dystrophies, low-intensity exercises are recommended because they will preserve and improve the patients' functional status, compared to high-intensity eccentric muscle contractions, which will accentuate the pathology of the disease. The main goals in the management of dystrophy are the mitigation of muscle wasting and the prevention of secondary skeletal deformity.*

*Physical therapy in the early stages of the pathology aims to increase joint amplitude, prevent muscle contractures and scoliosis, but most importantly, keep the subject in the ambulatory phase for as long as possible. The first musculotendinous contractions will occur at the level of the calf, affecting the gastrocnemius and posterior tibial muscles.*

**Keywords:** *physical therapy, muscular dystrophy, Duchenne-Becker*

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---



## **Book of abstracts**

*International workshop*

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*12<sup>th</sup> of May 2023 – Huelva, Spain*

---

### **Selective bibliography**

*Bernardini C., (Ed.) (2018) Duchenne Muscular Dystrophy, Methods and Protocols. 10.1007/978-1-4939-7374-3.*

*Bushby, K.M.D., Thambyayah, M. and Gardner-Medwin, D. (1991). Prevalence and incidence of Becker muscular Dystrophy. The Lancet, 337 (8748), 1022 – 1024. doi:10.1016/0140-6736(91)92671-n.*

*Ciafaloni, E., and Moxely, RT (2008). Treatment options for Duchenne muscular dystrophy, Current treatment options in neurology, 10(2), 96 – 93. doi:10.1007/s11940-008-0010-4.*

*Falzarano M. S., Scotton C., Passareli C. and Ferlini A. (2015) Duchenne Muscular Dystrophy: From Diagnosis to Therapy. doi: 10.3390/molecules201018168.*

*Gao, QQ și McNally, EM (2015). The Dystrophin Complex: Structure, Function and Implication for Therapy. 1223 – 1239. doi:10.1002/cphy.c140048.*

*Hżecka J. (2019) Hydrotherapy in nervous system diseases. Journal of Education, Health and Sport; 9 (1):55-60. <http://dx.doi.org/10.5281/zenodo.2535943>.*

**HYDROTHERAPY FOR PAIN RELIEF IN HIP OSTEOARTHRITIS****LAVINIA-MARIA Irinciuc<sup>a</sup>**

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**Abstract**

*Pain relief is important because pain can affect individual's quality of life. It can affect locomotion, sitting and getting up from a chair, going up and down stairs, putting on shoes, bending over, getting in and out of the car, etc.*

*Due to the holistic nature of the body, the appearance of lameness during walking affects other muscle and joint structures and various deficiencies may occur. An important factor in pain relief is gravity. Through hydrotherapy, the water takes over the body weight and the pressure from the joint, allowing the reduction of pain in carrying out the exercise protocols.*

*Hydrotherapy is a scientifically recognized natural treatment method that uses water, temperature, lack of gravity, lack of joint pressure and physical exercise as therapeutic factors.*

*The buoyancy of the water helps reduce the weight on the hip joint, which can help reduce pain and improve mobility. The resistance provided by the water helps to tone the muscles around the hip joint, which can improve stability and reduce the risk of imbalance and falls. The heat of the water can also help relax muscles and improve circulation, which can relieve pain and stiffness.*

*Hydrotherapy is done by performing a series of exercises in a pool under the guidance of a kinesiotherapist. These exercises may include walking, lower limb biomechanics movements, and exercises to develop range of motion. The intensity of the exercises can be adjusted according to the person's level of pain and mobility.*

**Keywords:** hydrotherapy, pain, osteoarthritis

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---

## **Book of abstracts**

*International workshop*

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---

### **Selective bibliography**

- An J, Lee I, Yi Y. (2019). *The Thermal Effects of Water Immersion on Health Outcomes: An Integrative Review. Int J Environ Res Public Health.* 16(7):1280. doi: 10.3390/ijerph16071280.
- Dias JM, Cisneros L, Dias R, Fritsch C, Gomes W, Pereira L, Santos ML, Ferreira PH. (2017). *Hydrotherapy improves pain and function in older women with knee osteoarthritis: a randomized controlled trial. Braz J Phys Ther.* (6):449-456. doi: 10.1016/j.bjpt.2017.06.012
- Gudmundsson P, Nakonezny PA, Lin J, Owhonda R, Richard H, Wells J. (2021). *Functional improvement in hip pathology is related to improvement in anxiety, depression, and pain catastrophizing: an intricate link between physical and mental well-being. BMC Musculoskelet Disord.* 22(1):133. doi: 10.1186/s12891-021-04001-5.
- Katz JN, Arant KR, Loeser RF. (2021). *Diagnosis and Treatment of Hip and Knee Osteoarthritis: A Review. JAMA.* 325(6):568-578. doi: 10.1001/jama.2020.22171.
- Nho SJ, Kymes SM, Callaghan JJ, Felson DT. (2013). *The burden of hip osteoarthritis in the United States: epidemiologic and economic considerations. J Am Acad Orthop Surg.* 21 Suppl 1:S1-6. doi: 10.5435/JAAOS-21-07-S1.
- Prieto-Alhambra D, Judge A, Javaid MK, Cooper C, Diez-Perez A, Arden NK. (2014). *Incidence and risk factors for clinically diagnosed knee, hip and hand osteoarthritis: influences of age, gender and osteoarthritis affecting other joints. Ann Rheum Dis.* 73(9):1659-64. doi: 10.1136/annrheumdis-2013-203355.

**SEMI-ELASTIC AND ELASTIC TRAMPOLINE, MEANS FOR  
DEVELOPMENT OF COORDINATION IN CHILDREN****ALEXANDRU Chirila<sup>a</sup>**

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**Abstract**

*The extremely dynamic trajectory of society's development in this period requires adaptation efforts from education to integrate into its rhythm and to achieve its major objectives. In this sense, education is subject to continuous improvements, aimed at ensuring a new quality of both student training and the process through which this training is carried out.*

*In these conditions, special attention must be paid to the acquisition of knowledge, skills and motor skills, principles that will be increasingly promoted in the instructional-educational process to be used in practical activity.*

*Coordination represents an important process of the body's activity carried out by the central nervous system, and in a general aspect, it represents a common quality of the nervous system as well as of different muscle groups, prepared in terms of strength, suppleness, speed for performing motor actions with a complex structure.*

*This motor quality, although it manifests a pronounced innate character, is nevertheless educable based on the principle of conditioned reflexes. The period between the ages of 8 and 13 is the most suitable for its development. This age is favored by the mobility and elasticity of the nervous processes and, of course, by the elasticity of the muscles. Also now, the position of the center of gravity is at a rather low height, thus being a favorable position for defeating the self-preservation reflex.*

**Keywords:** *children, coordination, development*

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---

## **Book of abstracts**

*International workshop*

*Science and Leisure build bridges together*

*12<sup>th</sup> of May 2023 – Huelva, Spain*

---

### **Selective bibliography**

Heinen T. (2011). Evidence for the spotting hypothesis in gymnasts. *Motor Control*, 15(2):267-84. doi: 10.1123/mcj.15.2.267

Hurson C, Browne K, Callender O, O'Donnell T, O'Neill A, Moore DP, Fogarty EE, Dowling FE. (2007). Pediatric trampoline injuries. *J Pediatr Orthop*, 27(7):729-32. doi: 10.1097/BPO.0b013e318155ab1.

Kettler, J. (2018). *The Next Big Thing Goes Up and Down, and Sometimes Sideways*. New York Times, p. SP7

Kimball, D. (1999). Part 7. Diving Training Stations and Spotting Rigs for Trampoline, Dry Board, Dry Platform and Wet Board. In J. L. Gabriel (Ed.), *U.S. Diving safety training manual* (2nd ed., pp. 81-88). Indianapolis, IN: United States Diving, Inc

Sands, W. A., Varmette, M. K., Bogdanis, G. C., Donti, O., Murphy, B. V., & Taylor, T. J. (2019). Comparison of bounce characteristics on three types of trampolines. *Science of Gymnastics Journal*, 11(2), 223-237. <https://doi.org/10.52165/sjg.11.2.223-237>

**INJURY MECHANISMS & TYPICAL INJURIES IN VOLLEYBALL****KATARZYNA Ambrożkiewicz<sup>a</sup>**

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**Abstract**

*The International Federation of Volleyball estimates that 500 million people play volleyball worldwide. Since the beginning of the 1980s, there has been a significant increase in the number of people practicing indoor and beach volleyball, and thus an increase in injuries.*

*More damage occurs when striking and blocking than when passing or setting. Most injuries are related to repetitive jumping and hitting the ball overhead. Overuse injuries are slightly more common than acute injuries and result from faulty technique, the number of repetitions or the type of playing surface. Elite athletes are at higher risk of overuse injuries, possibly due to more hours of practice. Overall, elite players reported fewer injuries compared to their local division players, and their injury profile was different.*

*Ankle sprains, shoulder strain injuries, knee injuries, patellar tendinopathy and anterior cruciate ligament injury are the major injuries to be addressed among these athletes. The clinician caring for volleyball players should be aware of the types of injuries suffered by these players and how to help them return to the game quickly and appropriately.*

*Many of these injuries can be prevented by paying close attention to sport-specific skill technique and a few simple preventive interventions. Targeted training interventions, based on the athlete's risk level, are suggested to minimize the occurrence of these injuries. With an accurate diagnosis by a sports physician, appropriate treatment can be initiated and often an athlete can return to training and competition with minimal downtime.*

**Keywords:** volleyball, injury, shoulder strain injuries, knee injuries

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---

## **Book of abstracts**

*International workshop*

*Science and Leisure build bridges together*

*12<sup>th</sup> of May 2023 – Huelva, Spain*

---

### **Selective bibliography**

- Bere, T., Kruczynski, J., Veintimilla, N., Hamu, Y., & Bahr, R. (2015). Injury risk is low among world-class volleyball players: 4-year data from the FIVB Injury Surveillance System. *British Journal of Sports Medicine*, 49(17), 1132–1137. doi:10.1136/bjsports-2015-09495
- Briner, W. W., Jr., & Kacmar, L. (1997). Common injuries in volleyball: Mechanisms of injury, prevention and rehabilitation. *Sports Medicine*, 24(1), 65–71. doi:10.2165/00007256-199724010-00006
- Eerkes, K. (2012). Volleyball injuries. *Current Sports Medicine Reports*, 11(5), 251–256. doi:10.1249/JSR.0b013e3182699037
- Reeser, J. C., Verhagen, E., Briner, W. W., Askeland, T. I., & Bahr, R. (2006). Strategies for the prevention of volleyball related injuries. *British Journal of Sports Medicine*, 40(7), 594–600, discussion 599–600. doi:10.1136/bjism.2005.018234
- Tsigganos, G., Beneka, A., Malliou, P., Gioftsidou, A., Zetou, H., & Godolias, G. (2007). Is the incidence in volleyball injuries age related? A prospective study in Greek male volleyball players.

**INFLUENCE OF OBESITY ON MOTOR PERFORMANCE****ILONA Gabryś<sup>a</sup>**

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**Abstract**

*Obesity is becoming an epidemic all over the world in both adults and children. Currently worldwide over 1 billion people are overweight and over 300 million are obese.*

*Overweight and obesity in children is increasingly becoming a serious health threat. Results of different studies carried out on obesity reveal the fact that it is one of the main causes for many physiological disorders but also for musculoskeletal ones.*

*Obesity also leads to a decrease in physical activity and in consequence physical fitness and motor efficiency decrease. All these create the perfect frame for taking a closer look at the physical activity of children.*

*Research literature shows that obesity negatively affects the level of motor fitness. To encourage obese children to adhere to the principles of physical activity, it is important that the activity is adapted to their abilities.*

*Weight-bearing exercises should be limited at the beginning of interventions with obese participants and alternative aerobic activities should be adopted.*

**Keywords:** *obesity, motor performance, health*

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## **Book of abstracts**

*International workshop*

*Science and Leisure build bridges together*

*12<sup>th</sup> of May 2023 – Huelva, Spain*

---

### **Selective bibliography**

- Bagherniya M, Mostafavi Darani F, Sharma M, Maracy MR, Allipour Birgani R, Ranjbar G, Taghipour A, Safraian M, Keshavarz SA. (2018). Assessment of the Efficacy of Physical Activity Level and Lifestyle Behavior Interventions Applying Social Cognitive Theory for Overweight and Obese Girl Adolescents. *J Res Health Sci.* 18(2):e00409
- Casajús JA, Leiva MT, Villarroya A, Legaz A, Moreno LA. (2007). Physical performance and school physical education in overweight Spanish children. *Ann Nutr Metab.*;51(3):288-96. doi: 10.1159/000105459.
- Deforche B, Lefevre J, De Bourdeaudhuij I, Hills AP, Duquet W, Bouckaert J. (2003). Physical fitness and physical activity in obese and nonobese Flemish youth. *Obes Res.* 11(3):434-41. doi: 10.1038/oby.2003.59
- Godoy-Cumillaf A, Fuentes-Merino P, Giakoni-Ramírez F, Duclos-Bastías D, Merellano-Navarro E. (2022). Effectiveness of a physical activity intervention on the overweight and obesity of Chilean schoolchildren. *Medicine (Baltimore).* 101(39):e30908. doi: 10.1097/MD.00000000000030908
- Shamah Levy, T., Morales Ruán, C., Amaya Castellanos, C. et al. (2012). Effectiveness of a diet and physical activity promotion strategy on the prevention of obesity in Mexican school children. *BMC Public Health* 12, 152. <https://doi.org/10.1186/1471-2458-12-152>

**LEISURE TIME PHYSICAL ACTIVITIES AMONG STUDENTS****ANNA Witek<sup>a</sup>**

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**Abstract**

*Physical activity represents a very broadly concept and it can manifest in all sorts of forms, among which recreation. Recreation through physical activity is an ideal form used in physical education classes, as well as for sporting activities. Leisure activities are one of the main examples of combining physical exercise with recreation.*

*An active lifestyle is very important especially in the developmental stage of children and adolescents. The purpose of this study was to investigate and determine the level of targeted physical activity among students and graduates, mainly from the field of tourism and sports. Based on the results of the survey, the forms of activity and recreation most willingly undertaken by students were also examined.*

*We also examined the forms of physical activity and the physical and psychological benefits of systematic activity. The principles of sports, recreational and health training were also presented.*

**Keywords:** *leisure time, physical activities, students*

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## **Book of abstracts**

*International workshop*

*Science and Leisure build bridges together*

*12<sup>th</sup> of May 2023 – Huelva, Spain*

---

### **Selective bibliography**

*Bielec G., Półtorak W., Warchoń K. (2011). Zarys teorii i metodyki rekreacji ruchowej. Proksenia, 39-40, 128 ss., Kraków*

*Birch K. MacLauren D. George K. (2012). Fizjologia Sportu. Wydawnictwo Naukowe PWN, 262 ss., Warszawa*

*Chydziański W. (2007). Techniki kinezyterapeutyczne stosowane w rehabilitacji. [W:] J. Kiwerski (red.) Wydawnictwo Lekarskie PZWL, s. 70. Warszawa*

*Danielewicz J. Bytniewski M. (2005). Wychowanie do Rekreacji na Lekcjach Wychowania Fizycznego. Roczniki Naukowe AWF w Poznaniu, 54-2005: 33-40*

*Drabik J. (1997). Promocja aktywności fizycznej. Wydawnictwo Uczelniane AWF, 21 ss., Gdańsk.*

**ADOLESCENT'S PHYSICAL ACTIVITY****GABRIELA Cyran<sup>a</sup>**

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**Abstract**

*According to WHO, more than 80% of school going adolescents worldwide do not allocate the current recommended time of 60 minutes per day for physical activity. The digitization of the society and the comfort of life caused a significant decrease in healthy lifestyles. A child spends more than 2 hours a day in front of a screen.*

*Looking at human development, participation in physical activities declines the most during adolescence. The problem is lack of additional sports activities in schools and even if they would exist, the costs would be often too high for parents to cover. Girls at the age of puberty give up participation in sports clubs and children whose parents have a high socio-economic rarely walk to school or ride a bicycle.*

*In this context it is necessary to develop and implement public health interventions to promote child health. To increase the availability of physical activities for every child, the number of sports activities in schools should be accelerated and their attractiveness should be shown. Allow free access to sports activities and increase the safety of children on their way to and from home to school.*

**Keywords:** *adolescence, physical activities, health*

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## **Book of abstracts**

*International workshop*

*Science and Leisure build bridges together*

*12<sup>th</sup> of May 2023 – Huelva, Spain*

---

### **Selective bibliography**

- Belcher B.R., Berrigan D., Dodd K.W., Emken B.A., Chou C., Spruijt-Metz D. (2010). Physical activity in US youth: Effect of race/ethnicity, age, gender, and weight status. *Med. Sci. Sports Exerc.* 42:2211–2221. doi: 10.1249/MSS.0b013e3181e1fba9.
- Brodersen N.H., Steptoe A., Boniface D.R., Wardle J. (2007). Trends in physical activity and sedentary behaviour in adolescence: Ethnic and socioeconomic differences. *Br. J. Sports Med.* 41:140–144. doi: 10.1136/bjism.2006.031138.
- Hjort RL, Agergaard S. (2022). Sustaining Equality and Equity. A Scoping Review of Interventions Directed towards Promoting Access to Leisure Time Physical Activity for Children and Youth *Int J Environ Res Public Health.* Jan 22;19(3):1235. doi: 10.3390/ijerph19031235.
- Musić Milanović S., Buoncristiano M., Križan H., Rathmes G., Williams J., Hyska J., Duleva V., Zamrazilová H., Hejgaard T., Jørgensen M., et al. (2021). Socioeconomic disparities in physical activity, sedentary behavior and sleep patterns among 6- to 9-year-old children from 24 countries in the WHO European region. *Obes. Rev.* 22:e13209. doi: 10.1111/obr.13209.
- Vilhjalmsón R., Kristjansdóttir G. (2003). Gender differences in physical activity in older children and adolescents: The central role of organized sport. *Soc. Sci. Med.* 56:363–374. doi: 10.1016/S0277-9536(02)00042-4.

## **INFLUENCE OF REGULAR ACROBATIC TRAINING ON STABILITY**

**PIOTR Nenko<sup>a</sup>**

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### **Abstract**

*The study examined the influence of regular training on stability in youth people. Acrobatic is the type of sport in which balance is very important element. This kind of discipline includes a lot of jumps, forward rolls and difficult positions. Stability is the ability to maintain balance. That type of sport involves a lot of strength and flexibility from acrobats.*

*In the present study took part 24 students with an age between 11 and 13, who achieved the requirements for inclusion. They were students from one public school and from a sport's club in Olkusz.*

*Stability has been tested using Y- Balance Test. This is an easy to conduct test but to perform it you need to have a research kit. A person stands on the middle platform and his task is to move the smaller platform forward, sideways and inward while standing on one leg.*

*Better postural stability was exhibited by acrobatic athletes relative to non-athletes. Regular training in acrobatics increase the stability of the body's base.*

**Keywords:** *stability, gymnastics, youth, training*

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## **Book of abstracts**

*International workshop*

*Science and Leisure build bridges together*

*12<sup>th</sup> of May 2023 – Huelva, Spain*

---

### **Selective bibliography**

- Barrío ED, Ramirez-Campillo R, Garcia de Alcaraz Serrano A, RaquelHernandez-García R. (2022). *Effects of core training on dynamic balance stability: A systematic review and meta-analysis. J Sports Sci. Aug;40(16):1815-1823. doi: 10.1080/02640414.2022.2110203.*
- Opala-Berdzik A, Głowacka M, Juras G. (2021). *Postural sway in young female artistic and acrobatic gymnasts according to training experience and anthropometric characteristics. BMC Sports Sci Med Rehabil. Feb 12;13(1):11. doi: 10.1186/s13102-021-00236-w.*
- Opala-Berdzik A, Głowacka M, Słomka KJ. (2021). *Characteristics of Functional Stability in Young Adolescent Female Artistic Gymnasts. J Hum Kinet. Jan 30;77:51-59. doi: 10.2478/hukin-2021-0051. PMID: 34168691*
- Sloanhoffer, H.L., harrison, K.D., McCrory, J.L. (2018). *Dynamic Stability in Gymnasts, Non-Balance Athletes, and Active Controls, International Journal of Exercise Science 11(1): 1-12*
- Voropay S. M. (2014). *The influence of special acrobatic classes on the expression levels of sustainability of the vestibular analyzer of young 6-8 year-old all-round fighters attending basic training groups / S. M. Voropay, O. M. Buryanovaty // Pedagogics, psychology, medical-biological problems of physical training and sports. № 11. - C. 13-17*

## **STATUS OF PHYSICAL CAPACITY OF LOWER SECONDARY EDUCATION STUDENT**

**PITAR Konstantinov<sup>a</sup>**

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### **Abstract**

*The status of the physical capacity of students is a very accurate and objective indicator, through which the efficiency of the educational process in physical education and sports can be assessed.*

*The aim of this research is to determine the current state of the physical capacity among the students from V<sup>th</sup> grade from SU "Vela Blagoeva", Veliko Turnovo.*

*The study was conducted on 23 students which were chosen on based on physical capacity and achievements. Tests have been applied, taken from the new system for assessing the physical capacity of students. A test battery was used, which includes the following indicators – running (sprint) 20m and 40m from a high (standing) start, squat jumps and only squat for 20 seconds.*

*The results of study were processed mathematically and statistically by applying comparative analysis, student's t-test, variation analysis.*

*Results for this age group, revealed that it is recommended to use tools and techniques to develop the strength of the upper limbs and of the abdominal muscles.*

**Keywords:** *emotional stress, health, competition, sports*

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### **Author affiliation**

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## **Book of abstracts**

*International workshop*

*Science and Leisure build bridges together*

*12<sup>th</sup> of May 2023 – Huelva, Spain*

---

### **Selective bibliography**

- Jessiman, P., Kidger, J., Spencer, L. et al. (2022). *School culture and student mental health: a qualitative study in UK secondary schools. BMC Public Health 22, 619. <https://doi.org/10.1186/s12889-022-13034-x>*
- Polet, J., Hassandra, M., Lintunen, T. et al. (2019). *Using physical education to promote out-of school physical activity in lower secondary school students – a randomized controlled trial protocol. BMC Public Health 19, 157. <https://doi.org/10.1186/s12889-019-6478-x>*
- Svansdottir, E., Arngrimsson, S.A., Sveinsson, T. et al. (2015). *Importance of physical health and health-behaviors in adolescence for risk of dropout from secondary education in young adulthood: an 8-year prospective study. Int J Equity Health 14, 140. <https://doi.org/10.1186/s12939-015-0272-x>*
- Toptaş D.P., Tzarova, R., (2021). *Effect of the Physical Education and Sport Classes on the Physical Capacity of Children with Special Educational Needs, Educational Policy Analysis and Strategic Research, V16, N1*

**DEVELOPMENT OF SPEED AND DYNAMIC POWER  
CAPABILITIES IN 11-12-YEAR-OLD STUDENTS****VELISLAV Cankov<sup>a</sup>**

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**Abstract**

*Physical education and sports classes are often neglected at school. They are the basis of a good and rich working capacity of a person, which is directly determined by the level of physical qualities. The basic physical qualities are five in number: speed, strength, endurance, agility, and flexibility. Each of which can be divided into different forms of manifestation. Each physical quality has its own sensitive period for development. Speed and dynamic strength are easy to improve on the age of 11-12.*

*The aim is the development of speed and explosive power qualities in 11-12-year-old students by conducting physical education and sport at school. Methodology of the study: 2 different tests were used for the individual qualities, consistent with the anatomical characteristics of 11-12-year-old students. They are 10 and 30 meters runs for the speed. And for the dynamic strength are long jump from place and throwing 3kg dense ball.*

*The results of the study prove that modern methods of physical education and sports, which are used in the school environment, are enough adequate and support the peculiar development of speed and dynamic-strength qualities in 11-12-year-old students.*

**Keywords:** *educational system, psychical education and sport, speed, power*

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## **Book of abstracts**

*International workshop*

*Science and Leisure build bridges together*

*12<sup>th</sup> of May 2023 – Huelva, Spain*

---

### **Selective bibliography**

- Brown KA, Patel DR, Darmawan D. (2017). *Participation in sports in relation to adolescent growth and development. Transl Pediatr.* 6(3):150-159. doi: 10.21037/tp.2017.04.03.
- Golle K, Muehlbauer T, Wick D, Granacher, U (2015) *Physical Fitness Percentiles of German Children Aged 9–12 Years: Findings from a Longitudinal Study. PLoS ONE* 10(11): e0142393. doi:10.1371/journal.pone.0142393
- Haugen, T., Seiler, S., Sandbakk, Ø. et al. (2019). *The Training and Development of Elite Sprint Performance: an Integration of Scientific and Best Practice Literature. Sports Med - Open* 5, 44. <https://doi.org/10.1186/s40798-019-0221-0>
- Oliver, Jon L.; Lloyd, Rhodri S., Rumpf, Michael C. (2013). *Developing Speed Throughout Childhood and Adolescence: The Role of Growth, Maturation and Training. Strength and Conditioning Journal* 35(3):p 42-48, DOI: 10.1519/SSC.0b013e3182919d32
- Rodrigo R.C., Antonio García-Hermoso, Jason Moran, Helmi Chaabene, Yassine Negra, Aaron T. Scanlan, (2022). *The effects of plyometric jump training on physical fitness attributes in basketball players: A meta-analysis, Journal of Sport and Health Science, Volume 11, Issue 6, Pages 656-670, ISSN 2095-2546, <https://doi.org/10.1016/j.jshs.2020.12.005>.*

**CHILDREN MOTOR ASSESSMENT IN SCHOOLS****HRISTIYAN Madarov<sup>a</sup>**

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**Abstract**

*Assessing children's motor activity in school can provide valuable information on their physical development and help identify any areas that may need improvement.*

*There are various tests that can be used to assess motor activity in children, depending on their age and abilities. A very common test that can assess children's motor activity is the 50 and 100-meter sprint test. In this test, the child sprints as quickly as possible for distances of 50 or 100 meters. The time it takes to complete the sprint is recorded and can be used to assess the child's speed and their motor activity levels and productivity. Another great test for the subject is jumping from a standing position, that's a great way to improve the child's coordination, balance, and physical strength. The most common exercise is the two-footed jumps: this involves jumping up and down on both feet, either in place or while moving forward or backward. Children can jump over a line or marker for added challenge. It is very important to ensure proper form and safety measures are in place for the tests so injuries can be prevented.*

*Overall, assessing children's motor activity in school can provide valuable information for promoting healthy physical development and identifying areas that may need improvement. By using standardized tests and informal assessments, schools can gain a better understanding of a child's motor activity and tailor physical education programs to meet their needs.*

**Keywords:** *assessment, motor skills, children*

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---

## **Book of abstracts**

*International workshop*

*Science and Leisure build bridges together*

*12<sup>th</sup> of May 2023 – Huelva, Spain*

---

### **Selective bibliography**

Griffiths A, Toovey R, Morgan PE, et al (2018). Psychometric properties of gross motor assessment tools for children: a systematic review *BMJ Open* 8:e021734. doi: 10.1136/bmjopen-2018-021734

Hestbaek L, Vach W, Andersen ST, Lauridsen HH. (2021). The Effect of a Structured Intervention to Improve Motor Skills in Preschool Children: Results of a Randomized Controlled Trial Nested in a Cohort Study of Danish Preschool Children, the MiPS Study. *Int J Environ Res Public Health*. 23;18(23):12272. doi: 10.3390/ijerph182312272

Song HQ, Lau PWC, Wang JJ. (2022). Investigation of the motor skills assessments of typically developing preschool children in China. *BMC Pediatr*. 11;22(1):84. doi: 10.1186/s12887-021-03098-w

Sutapa P, Pratama KW, Rosly MM, Ali SKS, Karakauki M. (2021). Improving Motor Skills in Early Childhood through Goal-Oriented Play Activity. *Children (Basel)*. 2;8(11):994. doi: 10.3390/children8110994

Strooband, K.F.B., Howard, S.J., Okely, A.D. et al. (2022). Validity and Reliability of a Fine Motor Assessment for Preschool Children. *Early Childhood Educ J* (2022). <https://doi.org/10.1007/s10643-022-01336-z>

**DISABILITIES IN CONTEMPORARY SOCIETIES****NIKOLETA Petrova<sup>a</sup>, ZAHARI Zahariev<sup>a</sup>**

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**Abstract**

*There are nearly 8 billion people on Earth, and each one of them has their own identity, that is, they are different. Each person is different and unique as an individual. In every society there are people and groups who for some reason are marginalized - unemployed, dependent, disabled, etc., they show peculiarities that distinguish them from the generally accepted norms of behavior.*

*People with disabilities face unique challenges and obstacles in their everyday lives. These challenges can range from physical barriers that prevent them from accessing buildings and transportation, to societal stigmas and discrimination that limit their opportunities for education, employment, and social interaction. However, it is important to recognize that having a disability does not mean that someone is less capable or less valuable than someone without a disability. In fact, many people with disabilities have overcome incredible odds and accomplished amazing things in their lives. It is also important to note that disabilities can be visible or invisible. While some disabilities are obvious, such as a person who uses a wheelchair, others may not be immediately apparent, such as someone with a mental illness or a learning disability.*

*People with disabilities should be afforded the same rights and opportunities as everyone else. This includes the right to access public spaces, education, and employment without facing discrimination or barriers. Additionally, society should work to accommodate the needs of people with disabilities, whether that means installing ramps and elevators or providing resources and support for those with mental health conditions.*

**Keywords:** *assessment, motor skills, children*

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---

## **Book of abstracts**

*International workshop*

*Science and Leisure build bridges together*

*12<sup>th</sup> of May 2023 – Huelva, Spain*

---

### **Selective bibliography**

- Babik I, Gardner ES. (2021). *Factors Affecting the Perception of Disability: A Developmental Perspective*. *Front Psychol.* 12:702166. doi: 10.3389/fpsyg.2021.702166.
- Carmel S. (2019). *Health and Well-Being in Late Life: Gender Differences Worldwide*. *Front Med (Lausanne)*. 6:218. doi: 10.3389/fmed.2019.00218
- Choi PH, Ma PS, Mak WY, Mok NP, Cynthia Lai YY, Chien CW. (2022). *Participation of children with and without disabilities in home, school, and community in Hong Kong: A 2-year longitudinal study*. *Hong Kong J Occup Ther.* 35(1):71-83. doi: 10.1177/15691861221087274
- Izzego A, Lim M, Schiavon G, Esposito G. (2020). *Children with Developmental Disabilities in Low- and Middle-Income Countries: More Neglected and Physically Punished*. *Int J Environ Res Public Health.* 17(19):7009. doi: 10.3390/ijerph17197009
- Kruithof K, Suurmond J, Harting J. (2018). *Eating together as a social network intervention for people with mild intellectual disabilities: a theory-based evaluation*. *Int J Qual Stud Health Well-being.* 13(1):1516089. doi: 10.1080/17482631.2018.1516089
- Lissitsa S, Madar G. (2018). *Do disabilities impede the use of information and communication technologies? Findings of a repeated cross-sectional study - 2003-2015*. *Isr J Health Policy Res.* 7(1):66. doi: 10.1186/s13584-018-0260-x
- Matsaure K, Chindimba A, Zimano FR, Ruffin F. (2020). *Looking under the veil: Challenges faced by people with disabilities in cross-border entrepreneurship*. *Afr J Disabil.* 9:645. doi: 10.4102/ajod.v9i0.645
- Shandra CL. (2011). *Life-Course Transitions Among Adolescents with and Without Disabilities: A Longitudinal Examination of Expectations and Outcomes*. *Int J Sociol.* 41(1):67-86. doi: 10.2753/IJS0020-7659410104