Journal of Sport and Health Research 2025, 17(Supl 1):27-38

Zalupe S.; Marcen C. (2025). ¿Es el baile comparable como actividad física a otros deportes? *Journal of Sport and Health Research.* 17(Supl 1):27-38. https://doi.org/10.58727/jshr.114486

Original

¿ES EL BAILE COMPARABLE COMO ACTIVIDAD FÍSICA A OTROS DEPORTES?

IS DANCING COMPARABLE AS A PHYSICAL ACTIVITY TO OTHER SPORTS?

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Received: 14/03/2025
Accepted: 11/04/2025

Journal of Sport and Health Research 2025, 17(Supl 1):27-38

¿ES EL BAILE COMPARABLE COMO ACTIVIDAD FÍSICA A OTROS DEPORTES?

RESUMEN

El baile se percibe a menudo principalmente como una expresión artística, pero sus exigencias físicas se asemejan mucho a las de los deportes tradicionales. Este estudio analiza si la danza puede considerarse una actividad física comparable a los deportes convencionales mediante el análisis de la condición física de jóvenes bailarines, deportistas y estudiantes inactivos. Un total de 96 participantes (32 bailarines, 32 atletas y 32 estudiantes inactivos) se sometieron a una serie de pruebas físicas que medían la velocidad, la resistencia, la agilidad y la coordinación, incluyendo el sprint de 20 m, el salto de longitud, la carrera shuttle, el salto de cuerda y la carrera de resistencia de 800 m.

Los resultados indican que los bailarines obtuvieron sistemáticamente los mejores resultados, especialmente en los 20 m lisos (3,59 ± 0,29 s), el salto de longitud (2,17 ± 0,30 m) y los 800 m (3,24 ± 0,56 s), superando a menudo a los deportistas. Las bailarinas obtuvieron resultados superiores en pruebas de resistencia y coordinación intensiva, destacando en salto de cuerda (107,76±19,25) y en los 800 m lisos (3,68±0,50). Los resultados destacan el baile como una actividad física muy eficaz que desarrolla la fuerza, la agilidad y la resistencia a niveles comparables o incluso superiores a los de los deportes tradicionales.

Estos resultados respaldan el creciente reconocimiento del baile dentro de las ciencias del deporte y su potencial como método de entrenamiento físico estructurado. Este estudio contribuye al debate sobre la integración del baile en los marcos de la educación física y los deportes de competición, abogando por su aceptación más amplia como disciplina tanto artística como atlética.

Palabras clave: baile; deportes; forma física; agilidad; resistencia; jóvenes deportistas

IS DANCING COMPARABLE AS PHYSICAL ACTIVITY TO OTHER SPORTS?

ABSTRACT

Dance is often perceived primarily as an artistic expression, yet its physical demands align closely with those of traditional sports. This study explores whether dance can be considered a comparable physical activity to conventional sports by analyzing the physical condition of young dancers, athletes, and inactive students. A total of 96 participants (32 dancers, 32 athletes, 32 inactive students) underwent a series of physical tests measuring speed, endurance, agility, and coordination, including the 20m sprint, long jump, shuttle run, rope jumping, and 800m endurance run.

Results indicate that male dancers consistently achieved top performances, particularly in the 20m sprint (3.59±0.29s), long jump (2.17±0.30m), and 800m run (3.24±0.56s), often surpassing male athletes. Female dancers demonstrated superior results in endurance-based and coordination-intensive tests, excelling in rope jumping (107.76±19.25) and the 800m run (3.68±0.50). The findings highlight dance as a highly effective physical activity that develops strength, agility, and endurance at levels comparable to, or even exceeding, traditional sports.

These results support the growing recognition of dance within sports science and its potential as a structured physical training method. This study contributes to the discussion on integrating dance into physical education and competitive sports frameworks, advocating for its broader acceptance as both an artistic and athletic discipline.

Keywords: dance; sports; physical fitness; agility; endurance; youth athletes

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INTRODUCCIÓN

Dancing has long been celebrated as a form of artistic expression, cultural tradition, and even a means of social interaction. However, an ongoing debate questions whether it should also be classified as a sport. While traditionally associated with creativity and performance, dance requires significant physical exertion, technical skill, and rigorous training—elements that align with many conventional sports (Koutedakis, & Jamurtas, 2004). Competitive dance, in particular, involves structured routines, scoring systems, and intense physical conditioning, much like gymnastics or figure skating. On the other hand, some argue that dance prioritizes artistry and aesthetics over direct competition, setting it apart from traditional sports (Twitchett et al., 2011). This discussion raises important considerations about what defines a sport and whether dance meets the criteria set by athletic organizations. By examining the physical demands, competitive aspects, and formal recognition of dance in sporting contexts, we can determine whether it should be acknowledged as both an art form and a legitimate sport (Malkogeorgos et al., 2013).

To determine whether dance qualifies as a sport, it must be evaluated using the same metrics applied to conventional athletic disciplines. Many sports are assessed based on physical conditioning, skill execution, endurance, strength, agility, flexibility, and overall performance. When analyzed through this lens, dance exhibits striking similarities to recognized sports such as gymnastics, figure skating, and martial arts, which combine technical precision with physical demands (Angioi et al., 2009).

Physical assessments play a crucial role in evaluating the fitness levels of adolescents and young adults, offering objective and measurable data on their health and physical capabilities. At this stage of life, physical development and exercise habits are fundamental in laying the groundwork for long-term well-being. These tests assess various fitness components, including cardiovascular endurance, muscular strength, flexibility, and agility—key indicators of a healthy lifestyle. Moreover, conducting regular evaluations helps identify strengths and areas needing improvement, encouraging the adoption of proper exercise routines and minimizing risks associated with inactivity. In both educational and sports settings, physical testing enhances self-awareness and motivation, allowing young individuals to set achievable goals and remain committed to their overall health (American College of Sports Medicine, 2013; Council of Europe, 1988; Léger et al., 1988; Ortega et al., 2008; Ruiz et al., 2009).

Additionally, fitness assessments serve as an effective means of comparing athletes across different sports and determining the specific physical requirements of each discipline. By measuring aspects such as aerobic capacity, muscular strength, agility, and flexibility, these tests provide valuable insights into the physiological and biomechanical characteristics of athletes. For instance, endurance tests like the 50-meter shuttle run (5 laps × 5 meters) are commonly used to evaluate cardiovascular fitness, facilitating comparisons between sports that heavily rely on aerobic endurance, such as soccer and basketball (Léger et al., 1988). Likewise, tests measuring strength and power, such as the vertical jump assessment, help distinguish performance levels in explosive sports like weightlifting and sprinting (Ruiz et al., 2009). These comparative analyses enable coaches and trainers to design tailored training programs, optimize athletic performance, and assist in talent identification, promoting a more data-driven approach to athlete development (Ortega et al., 2008). Such evaluations not only enhance individual capabilities but also provide a deeper understanding of how physical attributes align with the demands of various sports.

The following work is part of the DAYS Dancing Your Sport project, cofunded by the European Commission through the Erasmus+ Sport Programme (Ref. 101133504). This project was led by BK-95 Association (Latvia) as the project coordinator, with SPELL Association (Türkiye), AMA Events (Romania) and ADCS (Portugal).

The project was aimed to develop a research cycle on dancing, create an international collaborative dance, assemble a project's movie, and launch a campaign on dance benefits visibility. First of all, a literature review was carried on and, based on it, a questionnaire on self-reported benefits and barriers of dance was launched. Results showed that dancers scored higher on the well-being scale than athletes

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and students, as well as more benefits and barriers, being more affected by external evaluation. (Marcen et al., 2024).

Self-reported instruments, such as questionnaires and surveys, are commonly used in research to gather data on individuals' behaviors, attitudes, and experiences. While they offer practical advantages, several limitations can affect the accuracy and reliability of the data collected as social desirability bias, recall bias, acquiescence bias, or extreme response style (Brutus, & Wassmer, 2013; Zimmerman, 2024). It is acknowledged that the perception of young people themselves is of value. However, it is considered necessary to complement this subjective assessment with objective measures. The purpose of these measures is to corroborate the results of the subjective assessment. In this way, the results can be triangulated.

In consideration of the aforementioned points, the aim of this study is to objectively evaluate the physical condition of young dancers, comparing it with that of athletes from other sports and with a group of sedentary or inactive students.

MATERIAL Y MÉTODOS (METHODS)

Participants

A total of 32 dancers, 32 athletes from other sports, and 32 inactive students participated in this study. The participants ranged in age from 14 to 24 years (X=18.12±2.58), with 45.8% of the sample identifying as female and 54.2% as male.

Instruments

The instrument comprised a series of tests, repeated 20 times to minimise potential effects such as the time of the season, peaks in form, or human errors. All 5 exercises were selected in relation to both – athletes and dancers practicing needs. The battery of tests consisted of the following:

- 20-metre run (measured in time to complete). This exercise was taken from basketball control normatives to test explosion and speed.
- Long jump from a spot (measured in meters jumped). This exercise was taken from basketball control normatives to test explosion.
- 1-minute rope jumping (measured in jump number). This exercise was taken from basketball control normatives to test coordination and endurance.
- Shuttle run (measured in time to do 5 laps of 5 meters). This exercise was taken from basketball control normatives to test speed endurance.
- 800 m run (measured in time to complete). This exercise was taken from track and field control normatives to test speed endurance.

The development of this battery of tests was coordinated by sport trainers of sports schools in Latvia and two sport federations of Latvia - Track and Field Union and Basketball Union, on the basis of control normative exercises in the two sports - track and field and basketball. All 5 exercises are included also in control normatives of the track and field, yet the measurements were too high, therefore the measurements for all exercises except 800m were taken from basketball with more general and lower figures becoming able to be applied to different sport athletes including dancers. Measurements of 800m taken form track and field athletics control normatives were lowered, especially for the older target groups.

Procedures

Participants were recruited from the DAYS project itself. All of them signed an informed consent form and the families of the minors were informed about the project and this study.

Data analysis

The results obtained were processed using descriptive statistics. A correlation analysis was then carried out to see if there were any associations between the different variables, using Pearson's coefficient. Differences by gender and modality were analysed using t de Student and ANOVA test. ANOVA (Analysis of Variance) is a statistical test used to

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determine whether there are significant differences between the means of three or more groups. It does this by comparing variance within groups to variance between groups using the F-statistic and p-value. Then, the Tukey's HSD test was applied. It is a post-hoc analysis that follows ANOVA. Since ANOVA tells us that at least one group is significantly different, Tukey's HSD identifies which specific groups differ from each other. All analysis were made with Python version3.11.8.

RESULTADOS (RESULTS)

The results show differences according to modality, with dancers performing best on the rope jumping test, while athletes have better averages on the other tests. Less active students are the ones with the worst results in the five tests (Table 1).

Table 1. Test battery results by modality (mean and SD).

Modality	20m	Long	Shuttle	Rope	800m
Athletes	3.64 (±0.17)	2.09 (±0.25)	16.88 (±0.49)	103.82 (±19.21)	3.71 (±0.83)
Dancers	3.79 (±0.34)	1.99 (±0.30)	16.78 (±0.46)	110.32 (±18.18)	3.50 (±0.56)
Students	3.95 (±0.36)	1.86 (±0.24)	18.27 (±0.31)	96.96 (±18.37)	4.43 (±0.69)

In the same way, results show gender differences in all the tests in favour of the males, with the exception of rope jumping, where the females achieve a slightly higher average (Table 2).

Table 2. Test battery results by gender (mean and SD).

Gender	20m	Long	Shuttle	Rope	800m
Female	3.93 (±0.26)	1.88 (±0.20)	17.65 (±1.23)	104.90 (±18.43)	3.97 (±0.64)
Male	3.66 (±0.32)	2.07 (±0.30)	17.02 (±1.76)	102.69 (±19.94)	3.80 (±0.91)

When combining gender and modality, we obtain that the best results in the 20m run test were obtained by male dancers (3.59±0.29) and male athletes (3.60±0.19). Once again, this order is repeated in the long jump, with male dancers reaching an average of 2.17 meters (±0,30) and male athletes 2.15 meters (±0.25). A third test repeats the best records, the shuttle run (16.11±1.45 for male dancers and 16.67±1.59 for male athletes). However, when analysing the jumping, the male dancers (114.06±16.49) are followed in terms of best score by the female dancers (107.76±19.25). Finally, in the 800m run, the best are the male dancers (3.24±0.56), in this case with a bit of a difference even with male athletes (3.67±0.89).

If we focus on the results of women only, female athletes stand out above other women in the 20m run (3.74±0.07) and the long jump (1.93±0.18), while female dancers achieve better records in the shuttle run (17.23±1.31), rope jumping (107.76±19.25) and the 800m run (3.68±0.50).

Figures 1, 2, 3, 4 and 5 display graphically the differences by gender and modality for each of the battery test.

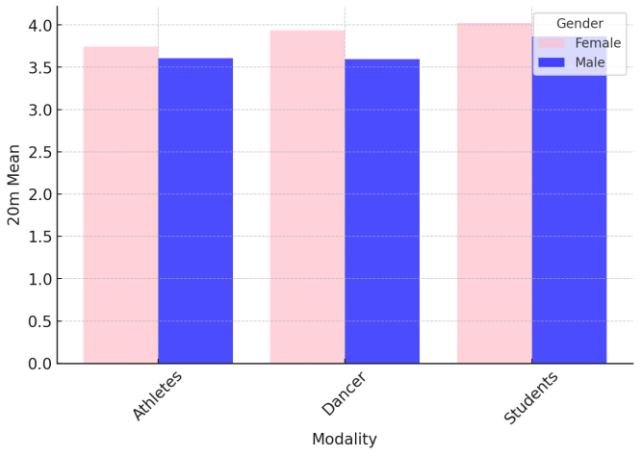

Figure 1. 20m run differences by gender and modality.

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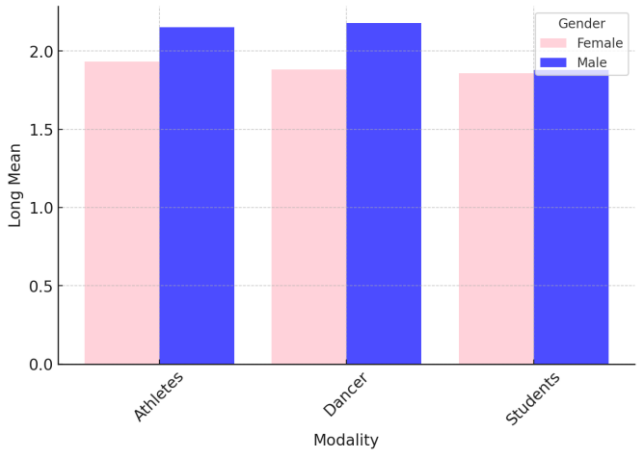

Figure 2. Long jump differences by gender and modality.

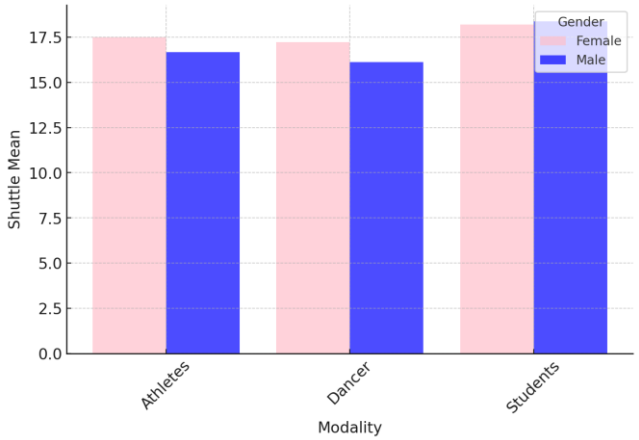

Figure 3. Shuttle run differences by gender and modality.

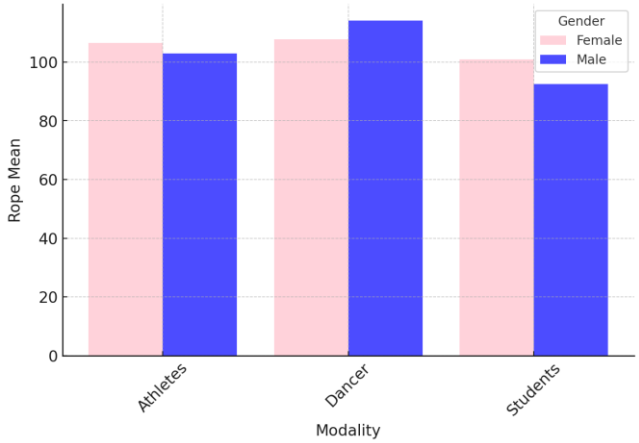

Figure 4. Rope jumping differences by gender and modality.

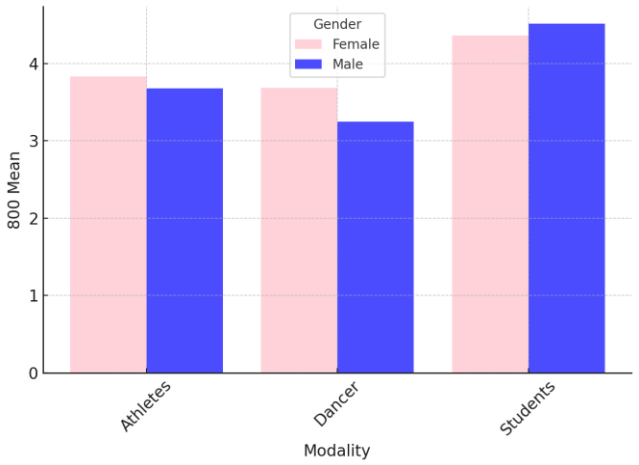

Figure 5. 800m run differences by gender and modality.

The ANOVA test (Table 3) shows a strong difference between groups in the 800m and in the shuttle run. Furthermore, all the tests have p-values below 0.05, meaning there are statistically significant differences among groups in every physical test. The 800m test ($p = 0.000002$, $F = 15.028$) shows the most significant difference. The rope test ($p = 0.019117$, $F = 4.130$) has the least significant difference but is still statistically significant.

Table 3. ANOVA test between groups (dancers, athletes and inactive students).

Test	F-statistic	p-value
20m	8.21801	0.000527
Long	5.815283	0.004186
Shuttle	10.967886	0.000053
Rope	4.130442	0.019117
800m	15.027986	0.000002

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The Tukey's HSD test showed significant differences (reject = True) between the following groups (Table 4).

- The 20m – Group Dancers differs significantly from 20m – Group Students ($p = 0.0002$).
- The 20m – Group Dancers differs significantly from all 800m groups (Dancers, Athletes, Students) ($p < 0.0001$). These results suggest that sprint performance (20m) and endurance performance (800m) are vastly different.

And non-significant differences (reject = False):

- 20m – Group Dancers vs. 20m – Group Athletes ($p = 0.7215$): This means their performance levels are similar.

Table 4. Significant differences between groups.

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Group 1	Group 2	Mean Diff	p-adj	Lower	Upper
20m - Group Dancers	20m - Group Athletes	0.8005	0.7215	-0.488	2.089
20m - Group Dancers	20m - Group Students	1.8015	0.0002	0.5131	3.09
20m - Group Dancers	800m - Group Dancers	174.1245	0.0	172.836	175.413
20m - Group Dancers	800m - Group Athletes	193.8254	0.0	192.5369	195.1139
20m - Group Dancers	800m - Group Students	213.6962	0.0	212.4077	214.9846

DISCUSIÓN (DISCUSSION)

Engaging in physical activity and sports is widely recognized for its positive impact on overall health and well-being, particularly among young individuals (Richards et al., 2015; Wilson et al., 2022; World Health Organization WHO, 2020). These advantages span across various domains, including cardiovascular health enhancement, chronic disease prevention, psychological well-being—such as improved stress management, relaxation, and reduced

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risk of depression (Pascoe et al., 2020)—and social benefits, such as fostering interpersonal connections (Buecker et al., 2021).

Despite these well-documented benefits, recent findings from the Special Eurobarometer on physical activity and sport reveal that only 12% of Europeans aged 15 to 24 engage in regular physical exercise (European Commission, 2022). This figure increases to 20% when incorporating other activities like cycling, gardening, or dancing, yet it remains a concerningly low percentage. Additionally, a gender disparity persists, with young women participating in physical activities even less frequently than young men (Chen et al., 2021).

However, the Eurobarometer also highlights dance as an especially popular activity among young Europeans, with women making up 86% of those who report engaging in it. Therefore, to prove that dance can contribute, in a similar way to other sports, to the acquisition and maintenance of good physical condition among young people, is a relevant topic for research and has numerous practical applications.

The existing body of research emphasizes the multifaceted benefits of dance at physical, cognitive, and social levels. These include increased enjoyment, autonomy, enhanced creativity, improved body image, and the promotion of community bonds and positive social values (Atkins et al., 2019; Izabela et al., 2023; Monteiro, 2018; Schaillée et al., 2017). As a form of social and artistic expression, dance offers significant opportunities for youth health.

Specifically, this study has demonstrated the potential that dance has for its athletes to reach levels of physical condition similar to other sports, even superior in tests such as rope jumping, and in all cases, superior to young people who do not practice a formal sport, which would corroborate, with evidence, the findings of previous research (Tao et al., 2022).

The recognition of dance within the field of sports science has been growing, though not without debate (Guarino, 2025; Holst, 2017). Some scholars argue that competition may dilute its artistic essence (Fromel et al., 2002; Markula, 2018), while others highlight the ongoing tension between artistic expression and the development of physical and motor skills (Koutedakis & Jamurtas, 2004). Participation rates suggest that between 9% and 17% of children and young athletes engage in sports dance, making it one of the most gendered sports, with a predominantly female presence (Emmonds et al., 2024).

The conceptualization of sports dance as an athletic discipline is also evident in physiological research, which seeks to determine the physical demands and performance limitations associated with it (Zanchini & Malaguti, 2014; Zhang et al., 2022). Comparative studies examining dance and other sports suggest that dance can be classified as a moderate to vigorous activity (Andrieieva et al., 2021; Dos Santos et al., 2021). The hypothesis that male dancers would demonstrate the optimal physical condition, outperforming athletes and sedentary individuals who would obtain the lowest scores, is supported by the data obtained in this study.

Interestingly, due to the technical requirements, female dancers often experience higher intensity levels than their male counterparts (Vaczi et al., 2016). Furthermore, in this study, female dancers obtained higher marks than athletes in three out of five tests.

The analysis of performance across different physical tests, considering both gender and modality, reveals interesting trends in the distribution of athletic abilities in line with Rafferty (2010):

1. Sprint and explosive power: male dancers vs. male athletes:

- The 20m run results indicate that male dancers and male athletes achieve the fastest times, showing nearly identical performance. This suggests that the speed required in dance training—likely due to dynamic footwork and rapid movements—can be as effective in short sprints as traditional sports training.

- Similarly, in the long jump, male dancers surpass male athletes. This might be attributed to the explosive power and lower-body strength developed through jumps and leaps in dance.

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2. Agility and endurance: The dominance of male dancers:

- The shuttle run follows the same pattern, with male dancers leading slightly ahead of male athletes. This test, which evaluates agility and anaerobic endurance, highlights how the multidirectional movement patterns in dance training can enhance quick acceleration, deceleration, and directional changes.

- In rope jumping, male dancers outperform all other groups, with female dancers following as the second-best performers. This may reflect the emphasis on rhythm, coordination, and endurance in dance training, which involves frequent high-repetition, high-intensity movements.

- The most distinct result appears in the 800m run, where male dancers achieve a clear lead over male athletes. This suggests that dance may contribute more effectively to sustained aerobic endurance than traditional sports training, possibly due to prolonged practice sessions requiring high cardiovascular efficiency.

3. Performance of female athletes vs. female dancers:

- Female athletes excel in short sprints and explosive power, outperforming other female groups in the 20m sprint and long jump. This is likely because sports disciplines often emphasize sprint acceleration and lower-body strength for quick bursts of power.

- However, female dancers outperform in tests that require agility, coordination, endurance, and rhythmic movement: Shuttle run (reflecting agility and short-term endurance, where dance training provides an advantage); rope jumping (again, dance's emphasis on repeated footwork patterns and endurance likely contributes to this superior performance.

- Finally, the ability of female dancers to sustain longer aerobic efforts (800m run) surpasses that of other female groups, likely due to the sustained cardiovascular demands of dance sessions.

CONCLUSIONES
(CONCLUSIONS)

Male dancers consistently outperform in multiple areas—not just agility-based tests but also endurance (800m run) and even explosive power (long jump, sprint). This challenges the notion that sports training alone is the superior method for developing athletic ability.

Female dancers excel in endurance-based activities and coordination-driven tests, reinforcing the idea that dance provides well-rounded physical benefits beyond artistic expression.

Dance training contributes significantly to agility, endurance, and lower-body power, which are typically associated with traditional sports.

These results suggest that dance should be recognized as a highly effective form of physical training, not only for its artistic and expressive value but also for its ability to develop key athletic attributes across different populations. These results are confirmed by the ANOVA, where statistically significant differences are observed between the three groups for all the fitness tests proposed.

Some limitations to mention are the size of the sample (96 young people), and the fact that the measurements were taken by different personnel in each of the countries, which could lead to protocol errors and therefore errors in the measurements.

The practical applications are promising, with the possibility of expanding the sample to a greater number of young people, extending the battery of tests and perfecting the methods of data collection, for example, through the application of measurement and recording technology.

In conclusion, this work opens an exciting door to improving the physical condition of young people, and especially women, through a highly motivating,

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energising activity that brings other mental and social benefits, with innumerable applications in sports training and in physical education and school sports.

AGRADECIMIENTOS (ACKNOWLEDGEMENTS)

Funded by the European Union (Erasmus+ Sport). Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them.

This study could not have been carried out without the active and enthusiastic collaboration of the 96 young people, their trainers and all the staff of the DAYS project, to whom we would like to express our gratitude.

REFERENCIAS BIBLIOGRÁFICAS (REFERENCES)

1. American College of Sports Medicine. (2013). *ACSM's Guidelines for Exercise Testing and Prescription (9th ed.).* Lippincott Williams & Wilkins.

2. Andrieieva, O., Kashuba, V., Yarmak, O., Cheverda, A., Dobrodub, E., & Zakharina, A. (2021). Efficiency of children's fitness training program with elements of sport dances in improving balance, strength and posture. *Journal of Physical Education and Sport, 21,* 2872-2879.

3. Angioi, M., Metsios, G., Koutedakis, Y., & Wyon, M. A. (2009). Fitness in contemporary dance: a systematic review. *International journal of sports medicine, 30*(0).

4. Atkins, R., Deatrick, J. A., Gage, G. S., Earley, S., Earley, D., & Lipman, T. H. (2019). Partnerships to evaluate the social impact of dance for health: a qualitative inquiry. *Journal of Community Health Nursing, 36*(3), 124-138.7), 475-484.

5. Brutus, S. & Wassmer, U. (2013). Self-Reported Limitations and Future Directions in Scholarly Reports Analysis and Recommendations. *Journal of Management. 39*, 48-75. 10.1177/0149206312455245.

6. Chen, T.J., Watson, K.B., Michael, S.L., & Carlson, S.A. (2021). Sex-stratified trends in meeting physical activity guidelines, participating in sports, and attending physical education among US adolescents, youth risk behavior survey 2009–2019. *Journal of Physical Activity and Health, 18*(S1), S102-S113.

7. Council of Europe. (1988). *Eurofit: Handbook for the Eurofit Tests of Physical Fitness.* Council of Europe, Committee for the Development of Sport.

8. Dos Santos, G. C., do Nascimento Queiroz, J., Reischak-Oliveira, Á., & Rodrigues-Krause, J. (2021). Effects of dancing on physical activity levels of children and adolescents: a systematic review. *Complementary therapies in medicine, 56*, 102586.

9. Emmonds, S., Till, K., Weaving, D., Burton, A., & Lara-Bercial, S. (2024). Youth Sport Participation Trends Across Europe: Implications for Policy and Practice. *Research Quarterly for Exercise & Sport, 95*(1), 69–80. 9443/10.1080/02701367.2022.2148623.

10. European Commission (2022). *Special Eurobarometer 525. Sport and Physical Activity.* https://europa.eu/eurobarometer/surveys/detail/2668

11. Fromel, K., Vasendova, J., Stratton, G., and Pangrazi, R. P. (2002). Dance as a Fitness Activity: The Impact of Teaching Style and Dance Form. *Journal of Physical Education, Recreation & Dance, 73*(5), 26-30, 54.

Journal of Sport and Health Research 2025, 17(Supl 1):27-38

12. Guarino L. (2015). ¿Es la danza un deporte? Un debate del siglo XXI. *Revista de Educación en Danza, 15*(2): 77-80.

13. Holst J. (2017). Sport as art, dance as sport. *Auc Kinanthropologica, 53*(2): 138-145.

14. Izabela, H., Katarzyna, B., & Krzysztof, P. (2023). The level of selected motor-cognitive abilities of young female professional dancers in the context of perfectionism. *Journal of Physical Education & Sport, 23(*6), 1407–1415. https://doi.org/10.7752/jpes.2023.06172

15. Koutedakis, Y., & Jamurtas, A. (2004). The dancer as a performing athlete: physiological considerations. *Sports Medicine, 34*(10), 651-661

16. Léger, L. A., Mercier, D., Gadoury, C., & Lambert, J. (1988). The multistage 20 metre shuttle run test for aerobic fitness. *Journal of Sports Sciences, 6*(2), 93–101.

17. Malkogeorgos, A., Zaggelidou, E., Zaggelidis, G., & Christos, G. (2013). Physiological elements required by dancers. *Sport Science Review, 22*(5-6), 343.

18. Marcen, C., Martínez-Domínguez. E y Monserrat-Revillo, S. (2024). Benefits of dance for the health and well-being of youth: comparison with athletes and sedentary. *European Journal of Human Movement, 53*, 114-130. 10.21134/eurjhm.2024.53.2

19. Markula, P. (2018). The Intersections of Dance and Sport. *Sociology of Sport Journal, 35*(2), 159–167. https://doi:9443/10.1123/ssj.2017-0024.

20. Ortega, F. B., Ruiz, J. R., Castillo, M. J., & Sjöström, M. (2008). Physical fitness in childhood and adolescence: a powerful marker of health. *International Journal of Obesity, 32*(1), 1–11.

21. Rafferty, S. (2010). Considerations for Integrating Fitness into Dance Training. *Journal of Dance Medicine and Science, 14(*2), 45-49.

22. Richards, J., Jiang, X., Kelly, P., Chau, J., Bauman, A., & Ding, D. (2015). Don't worry, be happy: cross-sectional associations between physical activity and happiness in 15 European countries. *BMC Public Health, 15(*1), 1-8.

23. Ruiz, J. R., Castro-Piñero, J., Artero, E. G., Ortega, F. B., Sjöström, M., Suni, J., & Castillo, M. J. (2009). Predictive validity of health-related fitness in youth: a systematic review. *British Journal of Sports Medicine, 43*(12), 909–923.

24. Tao, D., Gao, Y., Cole, A., Baker, J. S., Gu, Y., Supriya, R., ... & Awan-Scully, R. (2022). The physiological and psychological benefits of dance and its effects on children and adolescents: A systematic review. *Frontiers in physiology, 13*, 925958.

25. Twitchett, E. A., Angioi, M., Koutedakis, Y., & Wyon, M. (2011). Do increases in selected fitness parameters affect the aesthetic aspects of classical ballet performance?. *Medical problems of performing artists, 26*(1), 35–38.

26. Vaczi, M., Tekus, E., Atlasz, T., Cselko, A., Pinter, G., Balatincz, D., ... & Wilhelm, M. (2016). Ballroom dancing is more intensive for the female partners due to their unique hold technique. *Physiology International, 103*(3), 392-401

27. World Health Organization (2020). *WHO guidelines on physical activity and sedentary behaviour*. https://www.who.int/publications/i/item/9789240015128

28. Wilson, J. C., Quinn, B. J., Stratton, C. W., Southwick, H., & MacDonald, J. P. (2015). Athletes doing arabesques: important considerations in the care of young dancers. *Current sports medicine reports, 14*(6), 448-454.

29. Zanchini, A., & Malaguti, M. (2014). Energy requirements in top-level DanceSport athletes. *Journal of Human Sport & Exercise, 9*(1), 148–156. https://doi:9443/10.4100/jhse.2014.91.15

30. Zhang, M., Zhang, Y., & Hao, L. (2022). Physiological and biochemical monitoring in dancesport athletes. *Revista Brasileira de Medicina do Esporte, 28*, 800-802.

31. Zimmerman, M. (2024). The value and limitations of self-administered questionnaires in clinical practice and epidemiological studies. *World Psychiatry, 23*(2):210-212. doi: 10.1002/wps.21191.