Impacto del deporte paralímpico en la resiliencia de personas con discapacidad: evaluación y *análisis* clave

Impact of paralympic sports on the resilience of people with disabilities: evaluation and key analysis

Authors

Karollyni Bastos Andrade Dantas [1]
Gabriel Gastélum-Cuadras [2]
David Arnoldo García Fernández [3]
Francisco Prado Reis [4]
Estélio Henrique Martin Dantas [5]

[1] Tiradentes University (Brazil)
[2] Autonomous University of Chihuahua (Mexico)
[3] Autonomous University of Chihuahua (Mexico)
[4] Tiradentes University (Brazil)
[5] Tiradentes University (Brazil)
Federal University of State of Rio de Janeiro (Brazil)

Corresponding author:
David Arnoldo García Fernández
dgarcia@uach.mx

How to cite in APA

Andrade Dantas, K. B., Gastélum-Cuadras, G., García-Fernández, D. A., Prado Reis, F., & Martin Dantas, E. H. (2025). Impact of paralympic sports on the resilience of people with disabilities: evaluation and key analysis. *Retos*, *64*, 724–732. https://doi.org/10.47197/retos.v64.109235

Abstract

Objective: The aim of this study was to compare the degree of resilience in people with motor disabilities, both those who do and do not practice para-sports.
Methodology: This cross-sectional, quantitative study was conducted with 351 para-athletes (PDAP - $\bar{X}$ = 30.9 ± 11.7 years) and 90 non-practicing individuals with motor disabilities (PDNP - $\bar{X}$ = 31.6 ± 9.3 years). Data collection was performed using a Google Forms questionnaire that included assessments of socioeconomic profile and resilience profile using the Wagnild and Young Resilience Scale. The data were analyzed using Chi-Square non-parametric tests, with significance set at $p < 0.05$.
Results: Both groups displayed homogeneous characteristics. Notably, 79.5% of para-athletes were male, while 40.0% of non-athletes were white. Most had incomplete high school, with a higher percentage among para-athletes (40.1%). The most common labor activity was "Works and takes care of family" (38.8%). PDAP scored higher in self-sufficiency (Δ% = 22.0%, p = 0.037) and serenity (Δ% = 51.2%, p = 0.025). In total, 81.6% showed high resilience, with PDAP significantly more likely to be in the high resilience category (Δ% = 44.3%, p = 0.008). Given that the calculated power of this experiment indicates an 88% possibility of extrapolation to other sample groups (with a β error = 12%), these findings are robust and highly generalizable.
Conclusion: Despite their physical disabilities, para-athletes demonstrated higher resilience than non-athletes, suggesting that para-sports may help them overcome physical limitations.

Keywords

Disability; mental health; paralympic sports: psychological impact; resilience.

Resumen

Objetivo: El objetivo de este estudio fue comparar el grado de resiliencia en personas con discapacidades motoras, practicantes y no practicantes de paradeportes.
Metodología: Estudio cuantitativo transversal realizado con 351 paradeportistas (PDAP - $\bar{X}$ = 30.9 ± 11.7 años) y 90 personas con discapacidades motoras no practicantes (PDNP - $\bar{X}$ = 31.6 ± 9.3 años). La recolección de datos se realizó mediante un cuestionario de Google Forms que incluyó evaluaciones del perfil socioeconómico y el perfil de resiliencia utilizando la Escala de Wagnild y Young. Los datos fueron analizados utilizando pruebas no paramétricas de Chi-Cuadrado, con una significancia $p < 0.05$.
Resultados: Ambos grupos mostraron características homogéneas. El 79.5% de los paradeportistas eran hombres, mientras que el 40.0% de los no atletas eran blancos. La mayoría tenía educación secundaria incompleta, con un mayor porcentaje entre los paradeportistas (40.1%). La actividad laboral más común fue "Trabaja y cuida a la familia" (38.8%). PDAP tuvo puntajes más altos en autosuficiencia (Δ% = 22.0%, p = 0.037) y serenidad (Δ% = 51.2%, p = 0.025). El 81.6% mostró alta resiliencia, siendo los PDAP significativamente más propensos a estar en la categoría alta (Δ% = 44.3%, p = 0.008). Dado que el poder calculado de este experimento indica un 88% de posibilidad de extrapolación a otros grupos muestrales (con una tasa de error β = 12%), estos hallazgos son sólidos y muy generalizables.
Conclusión: A pesar de sus discapacidades físicas, los paradeportistas demostraron mayor resiliencia, lo que sugiere que los paradeportes pueden ayudarles a superar sus limitaciones físicas.

Palabras clave

Deporte paralímpico; discapacidad; impacto psicológico; resiliencia; salud mental.

Introduction

Resilience is a human quality observable in individual journeys of overcoming and adapting to adversities. In the specific context of people with motor disabilities, resilience becomes a vital force, challenging stigmas and breaking physical and social barriers (Flaskerud, 2022).

In the field of psychology, resilience is defined as the capacity to recover quickly from difficulties and adapt well in the face of adversity, trauma, or significant sources of stress, such as personal, familiar or relationship problems, serious health issues, or workplace and financial stressors (Grygorenko & Naydonova, 2023). It involves a complex interplay of biological, psychological, and environmental factors that enable individuals to overcome challenges and maintain or regain their emotional equilibrium. Resilience is not a trait that people either have or do not have; it involves behaviors, thoughts, and actions that can be learned and developed in anyone. Key components of resilience include emotional regulation, optimism, cognitive flexibility, and a strong support network (Nascimento et al., 2021; Infurna, 2020). Understanding resilience from a psychological perspective helps to frame how individuals with motor disabilities can leverage these attributes to confront and adapt to the unique challenges they face in their daily lives (Toste et al., 2021).

This study explores resilience in individuals with disabilities, investigating how this characteristic manifest in both practitioners and non-practitioners of parasports, highlighting significant nuances that can influence these individuals' quality of life (Dantas et al., 2023).

The practice of parasports offers fertile ground for examining resilience in challenging contexts. Paralympic athletes not only face the inherent physical barriers of their condition but also challenge conventional perceptions about the potential of people with motor, intellectual, or sensory disabilities. Confronting tendencies towards self-pity, victimization, and self-imposed barriers, as well as overcoming prejudices, physical barriers, and idealized misconceptions, constitute a constant struggle for individuals with disabilities seeking self-improvement (Jacinto et al., 2021).

One of the potential aids is engagement in specific sports activities aimed at self-improvement and resilience of these individuals, broadening the scientific understanding of the intersection between adaptive sports and psychosocial well-being (Mira et al., 2023).

However, resilience is not exclusive to parasport practitioners. Even among those who do not participate in these adaptive sports activities, the ability to face challenges and maintain a positive perspective is a remarkable constant. Investigating resilience in this group provides important insights into the factors influencing resilience in individuals with motor disabilities, going beyond the direct implications of sports practice (Goh et al., 2024).

By focusing on the resilience of individuals with disabilities, this study not only contributes to the field of adaptive sports research but also sheds light on the complexity and unique strength that characterize the lives of these individuals. By better understanding the determinants and manifestations of resilience in this context, it is possible to contribute to formulating more effective support strategies and promoting a more inclusive environment for people with disabilities, as well as a less prejudiced and more adaptable society (Scarvanovi et al., 2020).

Considering the above, the objective of this study is to investigate the impact of sports practice on the resilience of people with disabilities, with a special focus on parasports, in order to better understand how involvement in sports can contribute to an individual's ability to adapt and thrive in the face of adversity.

Method

Study Design

The present study is a quantitative, descriptive, and cross-sectional investigation. This type of study enables the researcher to adopt an observational approach, collecting data over a specific period. The study population consists of people with disabilities (PWD***).***

Participants

According to the Continuous National Household Sample Survey of 2022, Brazil has 18.6 million individuals with disabilities, representing 8.9% of the population aged 2 years or older (IBGE, 2023). The sample group selection will be conducted by convenience sampling, following inclusion and exclusion criteria set by the researcher. Inclusion criteria are: individuals with motor disabilities, within the young adult age range (18 to 20 years) and the mature adult age range (21 to 59 years), according to the WHO classification (WHO, 2021). Exclusion criteria include: individuals who have experienced health events, whether or not related to their disability, that could have compromised their daily activities in the last two weeks, or those who, for any reason, are unable to perform the tasks or participate in the necessary study activities.

Instruments

The Wagnild and Young resilience scale is one of the few instruments used to measure levels of positive psychosocial adaptation to significant life events. It comprises 25 positively worded items with a Likert-type response scale ranging from 1 (strongly disagree) to 7 (strongly agree). The domain of the Wagnild and Young scale variable ranges from 25 to 175 points and is subdivided into three categories: 25-75 (low), 75-125 (medium), and 125-175 (high).

Procedure

The sample size was estimated using the G*Power software, based on a finite population with a 95% confidence level and a 5% margin of error, resulting in a required sample size of 84 subjects for each sample group.

The sample was selected using a convenience sampling method. Initially, 645 individuals with disabilities (both para-athletes and non-para-athletes) were contacted. After applying the exclusion criteria, 495 participants remained (Δ% = 23.26%). Of these, 441 (Δ% = 13.90%) completed the full interview and questionnaire, forming the two study groups. The first group included 351 people with disabilities who are para-athletes (PDAP), who participated in the Caixa Lotérica Paralympic Meeting. The second group consisted of 90 people with disabilities who are non-practitioners (PDNP), members of the Association of People with Motor Disabilities of Sergipe.

The study was conducted in full compliance with Law No. 14.874 dated May 28, 2024 (Brazil, 2024), which establishes the norms for conducting research involving human participants and institutes the National System of Ethics in Human Research, as well as adhering to the Helsinki Declaration (WMA, 2013).

An Institutional Information Term (IIT) will be presented to the participating institutions. The IIT will explain the study objectives, activities to be conducted within the institutions, and the guarantees of confidentiality and privacy of the collected data.

Participants will sign the Informed Consent Form (ICF) before the study begins. The ICF will outline the study objectives, procedures, risks, benefits of participation, and the right to withdraw from the study at any time.

All collected information will be kept confidential. Participants' names will be fully preserved during the selection and participation process, in accordance with the General Data Protection Law (Brasil, 2018).

The project was previously approved by the Ethics Committee of the State University of Pará on October 1, 2021, under CAAE no. 51930821.2.0000.5174, protocol no. 5.012.266.

Participants were contacted prior to explain the study procedures. Necessary precautions for research ethics were taken before collecting individual data through a Google Form, including sociodemographic data of participants. Variables to be investigated include gender, age, self-declared ethnicity, educational level, and income (ABEP, 2024).

Next, the degree of resilience was assessed using a Google Form to collect participant data. The validated resilience scale utilized was the "Wagnild and Young Resilience Scale," an online instrument organized to map beliefs related to resilience (Cajada et al., 2023). This scale evaluates eight domains of beliefs that allow understanding an individual's or team's level of overcoming adversity and persistent stress.

The resilience scale was structured based on the theory of Cognitive Therapy (CT), underpinned by General Systems Theory (GST) and the Psychosomatic approach. Its content covers beliefs detailed in the literature on resilience, which are organized within the Resilient Approach as mental models called Determinant Belief Models (DBMs) (Simmers et al., 2023).

The instrument was developed based on five components identified as resilience factors: perseverance, self-confidence, self-sufficiency, sense of life and serenity.

Data analysis

Data analysis will be conducted using the resilience scale, based on the theoretical framework of the resilient approach. The results of the Wagnild and Young Resilience Scale, categorized accordingly, allow the researcher to structure planning strategies, select themes, thereby meeting the research objectives (Zelčāne & Pipere, 2023).

Descriptive statistics were used initially to characterize study variables, summarizing the main characteristics of the collected data through absolute and relative frequencies, or by the mean and standard deviation in quantitative variables.

20 Inferential statistics will be used to test hypotheses about the population based on sample data. To compare two sample groups, the Chi-square test was used. The acceptance criterion for the hypotheses is a p-value > 0.05.

The power of the experiment was calculated to ensure that the study has a reasonable chance of detecting a real effect, if it exists. The power of the experiment will be calculated using G*Power statistical software, considering effect size, sample size, and significance level. The desirable parameters for the experiment's power are 0.80 or higher.

Results

Initially, the socioeconomic characteristics of the sample group are presented in Table 1.

Table 1. Distribution of Sociodemographic Variables

Variables	PDAP	PDNP	Total	Sig. p
Sample size	79.6% (351)	20.4% (90)	(100%) 441	-
Sex				
Female	20.5% (72)	50% (45)	26.5% (117)	0.060
Male	79.5% (279)	50% (45)	73.5% (324)	
Age (years)				
	$\bar{X}$ = 30.9±11.7	$\bar{X}$ = 31.6 ± 9.3	$\bar{X}$ = 31.0 ±11.1	0.856
Ethnicity				
White	15.4% (54)	40% (36)	20.4% (90)	
Indigenous	0% (0)	10% (9)	2% (9)	
Black	35.9% (126)	20% (18)	32.7% (144)	0.107
Mixed	46.2% (162)	30% (27)	42.9% (189)	
Not Informed	2.6% (9)	0% (0)	2% (9)	
Marital Status				
Married	35.9% (126)	10% (9)	30.6% (135)	
Single	56.4% (198)	90% (81)	63.3% (279)	0.140
Other	7.7% (27)	0% (0)	6.1% (27)	
Educational Level				
Never Studied	7.7% (27)	0% (0)	6.1% (27)	
Incomplete Elementary	5.1% (18)	20% (18)	8.2% (36)	
Complete Elementary	17.9% (63)	0% (0)	14.3% (63)	
Incomplete High School	33.3% (117)	40% (36)	34.7% (153)	0.282
Complete High School	28.2% (99)	20% (18)	26.5% (117)	
Incomplete Higher Education	5.1% (18)	20% (18)	8.2% (36)	
Complete Higher Education	2.6% (9)	0% (0)	2% (9)	
Reason for Physical Disability				
Birth	48.7% (171)	20% (18)	42.9% (189)	
Spastic Paraplegia	7.7% (27)	20% (18)	10.2% (45)	0.153
Disease Sequela	15.4% (54)	40% (36)	20.4% (90)	
Trauma Sequela	28.2% (99)	20% (18)	26.5% (117)	

Source: Research data (2022).

It can be observed in Table 1 that both sample groups, people with disabilities who are athletes (PDAP) and people with disabilities who are non-athletes (PDNP), are homogeneous (without statistically significant differences) in all research parameters. Regarding gender distribution, there was a prevalence (79.5%) of male para-athletes; in terms of ethnicity, non-athlete whites prevail (40.0%). Regarding marital status, single non-athletes prevail (90.0%). Concerning the reason for the disability, there is a predominance of birth-related issues for the para-athletes (48.7%) and disease sequelae for non-athletes (40%). In terms of education level, most of the sample group had incomplete high school, with an advantage for the para-athletes (Δ% = 40.1%).
Continuing the socioeconomic analysis of the research participants, Table 2 presents the labor activities performed by them.

Table 2. Labor Activities Undertaken by the Sample Groups

Variables	PDAP	PDNP	Total
Studies and takes care of family members	2.6% (9)	0.0% (0)	2.0% (9)
Studies and works	5.1% (18)	20.0% (18)	8.2% (36)
Studies, takes care and works	17.9% (63)	10.0% (9)	16.3% (72)
Only studies	10.3% (36)	10.0% (9)	10.2% (45)
Works and takes care of family members	38.5% (135)	40.0% (36)	38.8% (171)
Only works	25.6% (90)	20.0% (18)	24.5% (108)
Total	100% (351)	100% (90)	100% (441)

Source: Research data (2022).

The most prevalent category in both groups is "Works and takes care of family members," with 38.8%. It is observed that PDNP have an advantage in this aspect (Δ% = 3.9%), possibly due to more available time, as they do not train. Secondly, the category "Only works" also shows prevalence of 24.5%, with an advantage for para-athletes (Δ% = 21.9%), which may indicate the influence of sports practice on the autonomy of PWDs.

The PDAP reported training for more than nine years ($\bar{X}$ = 10.5 ± 1.9 years) with a weekly frequency of $\bar{X}$ = 3.1 ± 0.2 days. The Wagnild and Young's Resilience Scale enables the assessment of the five components identified as resilience factors: perseverance, self-confidence, self-sufficiency, sense of purpose, and serenity. These findings are presented in Table 3.

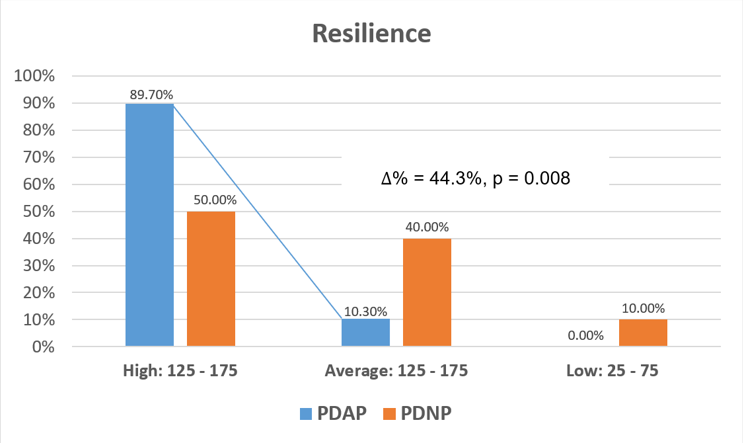
Table 3. Assessment of the Five Components of Resilience Factors

Variables	PDAP	PDNP	Sig. p	Total
		Perseverance		
High	82.1%	30.0%		71.4%
Average	17.9%	60.0%	0.125	26.50%
Low	0.0%	10.0%		2.0%
		Self-confidence		
High	94.9%	80%		91.8%
Average	5.1%	20%	0,125	8.2%
Low	0%	0%		0%
		Self-sufficiency		
High	89.7%	70%		85.7%
Average	10.3%	20%	0,037*	12.2%
Low	0%	10%		2%
		Sense of life		
High	89.7%	70%		85.7%
Average	10.3%	30%	0,111	14.3%
Low	0%	0%		0%
		Serenity		
High	61.5%	30%	0,025*	55.1%
Average	35.9%	50%		38.8%

Source: Research data (2022).

PDAP showed an advantage in the components of Self-sufficiency (Δ% = 22.0%, p = 0.037) and Serenity (Δ% = 51.2%, p = 0.025), with more participants presenting a high degree when compared to the results of PDNP. This finding reinforces the role of sports for these two components.
For the evaluation of behaviors related to the degree of resilience, the data collected from the sample groups were subdivided into three categories: low, average, and high. The distribution of the studied sample in these categories can be seen in Figure 1.

Figure 1. Levels of Resilience Degree in the Sample Groups.



Source: Research data (2022).

Although physical disability is a factor that daily demands a lot of resilience from PWDs, as demonstrated by the 81.6% of the general sample group presenting a high degree of resilience (indexes of 125 to 175), it can be observed that sports practice made the PDAP group show a higher frequency in the high category (Δ% = 44.3%, p = 0.008) compared to the PDNP group.

Discussion

This study provides significant insights into the demographic, socioeconomic, and resilience profiles of individuals with motor disabilities, specifically comparing those who engage in para-sports (PDAP) with those who do not (PDNP). The data revealed several noteworthy findings that contribute to the existing literature on the role of sports in enhancing resilience among people with disabilities (PWD).

The sample of 441 individuals included 351 para-athletes and 90 non-athletes, with both groups displaying homogeneous characteristics across most parameters. The high prevalence of male participants (79.5% in PDAP and 50% in PDNP) aligns closely with the findings of Bogado (2023), whose sample consisted of 64.5% male para-athletes and the findings of Romero et al (2021). This gender disparity may reflect broader social and cultural factors influencing sports participation (Dean et al, 2022).

Ethnicity distribution showed a significant presence of white non-athletes (40%) and black para-athletes (35.9%), suggesting that ethnic background might influence engagement in sports. These findings echo the warning of Cottingham et al. (2023), who highlighted that ethnic minorities are often underrepresented in both able-bodied and para-sports.

Most participants had not completed high school, with a notable proportion of para-athletes having an incomplete high school education (40.1%). This trend is consistent with Cheatham & Randolph (2020), who reported that educational attainment among PWDs often lags behind the general population, impacting their socioeconomic status and access to opportunities.

The most common labor activity was "Works and takes care of family," prevalent in both groups (38.8%). This dual responsibility highlights the need for supportive measures that enable PWDs to balance work and family care, as suggested by Carmichael & Clarke (2020). Interestingly, a higher percentage of PDAP reported "Only works" (25.6%), indicating that sports participation may be associated with increased access to employment opportunities and greater autonomy.

A crucial aspect of this study was the investigation into resilience factors using Wagnild and Young's Resilience Scale. PDAP participants displayed significantly higher levels of self-sufficiency (p = 0.037) and serenity (p = 0.025) compared to PDNP. These findings align with those of Mira et al. (2023), who conducted a systematic review including twenty-seven studies and concluded that athletes with

disabilities who play sports exhibit high levels of resilience qualities such as life satisfaction, optimism, resilience, and social focus.

The overall high resilience in the sample (81.6%) suggests a strong intrinsic coping capability among PWDs, with para-athletes showing a particularly robust resilience (Δ% = 44.3%, p = 0.008). Similar results were reported by Rodríguez-Macías et al (2023), who found that engagement in sports activities bolsters resilience by providing social support, boosting self-esteem, and offering a sense of achievement.

However, it is important to highlight that the greater resilience observed in individuals with disabilities who engage in sports mirrors the same behavior seen in non-disabled athletes who also exhibit higher resilience (Serrano-Nortes et al., 2021).

However, it's essential to acknowledge that individuals with health complications affecting daily activities were excluded from this study. This limitation suggests that the results may not fully represent the broader PWD population, particularly those with more severe impairments. Future research should aim to include a more diverse range of health conditions to comprehensively understand the impact of sports on resilience across different disability spectra.

The implications of this study are significant for healthcare professionals and policymakers. Integrating sports into rehabilitation programs can substantially enhance the psychological and physical well-being of PWDs. Public policies should aim to increase access to sports facilities and programs for PWDs, recognizing that such interventions can promote inclusion, autonomy, and resilience (Dantas et al, 2024).

This study reinforces the positive impact of para-sports on resilience among PWDs and underscores the need for continued advocacy and resource allocation to support sports participation as a therapeutic and empowering strategy. As the power of this experiment indicates an 88% possibility of extrapolation to other sample groups, these findings provide a robust foundation for future research and intervention programs aimed at improving the lives of PWDs through sports.

Conclusions

The findings of this study underscore the significant role that para-sports play in improving resilience among individuals with motor disabilities (PWD). The higher levels of self-sufficiency and serenity observed in para-athletes suggest that involvement in sports not only fosters physical health but also enhances psychological well-being. This insight is crucial for health professionals who work with PWD, as it highlights the need to incorporate sports activities into rehabilitation and wellness programs.

Moreover, the study's results have important implications for the formulation of public policies. Governments and relevant institutions should consider facilitating greater access to sports programs for PWD, recognizing the multifaceted benefits such engagement brings. Such policies would not only promote inclusivity but also support the overall development and empowerment of individuals with disabilities.

The high rate of high resilience (81.6%) observed in the study sample, with a significant advantage for para-athletes in the high resilience category (Δ% = 44.3%, p = 0.008), indicates the profound impact of sports on PWD. Given that the calculated power of this experiment indicates an 88% possibility of extrapolation to other sample groups (with a beta error rate of 12%), these findings are robust and highly generalizable. This strong evidence base provides a compelling justification for investing in and expanding access to sports activities for PWD at both the community and policy levels.

However, it is important to note that individuals with health complications that could compromise their daily activities were excluded from this study. This suggests that further research is necessary to fully understand the impact of sports participation on the resilience of these individuals.

In conclusion, this study advocates for a strategic emphasis on sports as a therapeutic and empowering tool for PWD, urging health professionals and policymakers alike to collaborate in effecting positive change through sports engagement.

References

ABEP - Brazilian Association of Research Companies (2024). Brazil Criteria. Available at: https://www.abep.org/criterio-brasil . Accessed on: July 27, 2024.

Bogado, D., & Villalba, F. J. (2023). Perfil psicosocial y deportivo en deportistas argentinos de alto rendimiento con discapacidad motora e intención de continuar la práctica deportiva en el futuro. *Retos,* 50, 1204-1213. https://doi.org/10.47197/retos.v50.100328

Brasil. Lei nº 13.709, de 14 de agosto de 2018. Dispõe sobre a proteção de dados pessoais e altera a Lei nº 12.965, de 23 de abril de 2014 (Marco Civil da Internet). *Diário Oficial da União*: seção 1, Brasília, DF, 15 ago. 2018. Available at: https://www.planalto.gov.br/ccivil_03/_ato2015-2018/2018/lei/l13709.htm. Accessed on: July 27, 2024.

Brasil. Lei nº 14.874, de 28 de maio de 2024. Dispõe sobre a pesquisa com seres humanos e institui o Sistema Nacional de Ética em Pesquisa com Seres Humanos. *Diário Oficial da União* [Internet]. 28 maio 2024 [citado em 31 de maio de 2024]. Available at: https://legislacao.presidencia.gov.br/atos/?tipo=LEI&numero=14874&ano=2024&ato=677Izaq1ENZpWT381 Accessed on: July 27, 2024.

Cajada, L., Stephenson, Z., & Bishopp, D. (2023). Exploring the psychometric properties of the resilience scale. *Adversity and Resilience Science, 4*(3), 245-257. https://doi.org/10.1007/s42844-023-00102-3

Carmichael, F., & Clarke, H. (2020). Why work? Disability, family care and employment. *Disability & Society, 37*(5), 765–786. https://doi.org/10.1080/09687599.2020.1848802

Cheatham, L. P., & Randolph, K. (2020). Education and Employment Transitions among Young Adults with Disabilities: Comparisons by Disability Status, Type and Severity. *International Journal of Disability, Development and Education, 69*(2), 467–490. https://doi.org/10.1080/1034912X.2020.1722073

Cottingham, M., Richard, H., Hu, T., Biskynis, S., Sunku, R., Walters, G., & Okanlami, O. (2023). Adapting to sport and country: Immigrant athletes with disabilities. *International Review for the Sociology of Sport*, *58*(4), 685-702. https://doi.org/10.1177/10126902231156275

Dantas, K. B. A., Figueiredo, T. D. A. D., Reis, F. P., Miranda, F. B., & Dantas, E. H. M. (2023). Níveis de estresse apresentados por pessoas com deficiência motora, praticantes ou não de paradesporto. *Motricidade, 19*(3) :233-238 https://doi.org/10.6063/motricidade.30737

Dantas, K. B., Gastélum-Cuadras, G., Fernández, D. A. G., Morais, R. P., & Dantas, E. H. M. (2024). Quality of Life of People with Motor Disabilities, Involved or not in Parasports. *Retos*, *57*, 581-588. https://doi.org/10.47197/retos.v57.103939

Dean, N. A., Bundon, A., Howe, P. D., & Abele, N. (2021). Gender parity, false starts, and promising practices in the Paralympic movement. *Sociology of Sport Journal*, *39*(3), 221-230. https://doi.org/10.1123/ssj.2021-0030

Flaskerud, J. H. (2022). Resilience: Cultural Values and Support Resources. *Issues in Mental Health Nursing, 43*(8), 784–788. https://doi.org/10.1080/01612840.2021.2018896

Goh, S. L., Wong, N. L., Lau, P. L., Kuan, G., Chongwei, L., & Ling Lau, E. K. (2024). Athlete identity, resilience, satisfaction with life and well-being of Para badminton players: a multinational survey. *The Malaysian Journal of Medical Sciences, 31*(3), 173-184. https://doi.org/10.21315/mjms2024.31.3.13

Grygorenko, Z., & Naydonova, G. (2023). The concept of "resilience": history of formation and approaches to definition. *Public administration and law review*, (2), 76-88. https://doi.org/10.36690/2674-5216-2023-2-76-88

IBGE - Brazilian Institute of Geography and Statistics (2023). People with disabilities have less access to education, work, and income. *Brazilian Institute of Geography and Statistics*. Available at: https://agenciadenoticias.ibge.gov.br/agencia-noticias/2012-agencia-de-noticias/noticias/37317-pessoas-com-deficiencia-tem-menor-acesso-a-educacao-ao-trabalho-e-a-renda . Accessed on: July 27, 2024.

Infurna, Frank J. (2020). What Does Resilience Signify? An Evaluation of Concepts and Directions for Future Research. *Gerontology; 66* (4): 323–331. https://doi.org/10.1159/000507365

Jacinto, M., Vitorino, A. S., Palmeira, D., Antunes, R., Matos, R., Ferreira, J. P., & Bento, T. (2021). Perceived Barriers of Physical Activity Participation in Individuals with Intellectual Disability - A Systematic Review. *Healthcare, 9*(11), 1521. https://doi.org/10.3390/healthcare9111521

Mira, T., Costa, A. M., Jacinto, M., Diz, S., Monteiro, D., Rodrigues, F., ... & Antunes, R. (2023). Well-being, resilience and social support of athletes with disabilities: a systematic review. *Behavioral Sciences, 13*(5), 389. https://doi.org/10.3390/bs13050389

Nascimento Junior, R.A.; Freire, G.L.M.; Granja, C.T.L.; Barros, N.P.; Oliveira, D.V.; Trevisan, L.G. (201). The role of resilience on motivation among Brazilian athletics and swimming parathletes. *Journal of Physical Education. 32*(1):1-10. https://doi.org/10.4025/jphyseduc.v32i1.3201

Rodríguez-Macías, M., Javier, F., & Abad Robles, M. T. (2022). The Sport Training Process of Para-Athletes: A Systematic Review. *International Journal of Environmental Research and Public Health, 19*(12), 7242. https://doi.org/10.3390/ijerph19127242

Romero, M.T.O., Garrido Guzmán, M., Vázquez, C.C., (2021). Autoeficacia y resiliencia: diferencias entre deportistas practicantes de fitness/culturismo y no deportistas. *Retos, 44*, 232-241. https://doi.org/10.47197/retos.v44i0.88937

Scarvanovi, B. W., Syifa, L., Agustina, S., & Hidayati, F. (2020). Hope and Resilience among Pre-Championship Athletes with Disabilities. *Journal of ICSAR ISSN, 4*(1), 22-26. https://journal2.um.ac.id/index.php/icsar/article/view/11082

Serrano-Nortes, E., Díaz, M. G., & Reche García, C. (2021). Resiliencia y optimismo en gimnasia rítmica (Resilience and optimism in rhythmic gymnastics). *Retos, 41*, 581–588. https://doi.org/10.47197/retos.v0i41.83086

Simmers, K., Batchelor, D., Nelson, A. D., & Borja, C. (2023). A Theory of Mental Frameworks. *Frontiers in Psychology, 14*, 1220664. https://doi.org/10.3389/fpsyg.2023.1220664

Toste, J. R., Raley, S. K., Gross Toews, S., Shogren, K. A., & Coelho, G. (2021). "Eye Opening and Chaotic": Resilience and Self-Determination of Secondary Students with Disabilities Amidst the COVID-19 Pandemic. *Journal of Education for Students Placed at Risk. 26*(2), 157–183. https://doi.org/10.1080/10824669.2021.1906248

WMA - World Medical Association. Declaration of Helsinki – Ethical Principles for Medical Research Involving Human Subjects. In: Relatory of 64th WMA General Assembly, Fortaleza, Brazil, October 2013. *World Medical Association*. Available at: https://www.wma.net/policiespost/wma-declaration-of-helsinki-ethical-principles-for-medical-research-involving-humansubjects/

World Health Organization. (2021). Global report on ageism. Geneva: World Health Organization; 2021. *World Medical Association* Available at: https://iris.who.int/bitstream/handle/10665/340208/9789240016866-eng.pdf Accessed on: July 27, 2024.

Zelčāne, E., & Pipere, A. (2023). Finding a path in a methodological jungle: a qualitative research of resilience. *International Journal of Qualitative Studies on Health and Well-being*, *18*(1), 2164948. https://doi.org/10.1080/17482631.2023.2164948

Authors' details:

Karollyni Bastos Andrade Dantas	karollbdantas@gmail.com	Main author
Gabriel Gastélum-Cuadras	gastelum@uach.mx	Author
David Arnoldo García Fernández	dgarcia@uach.mx	Corresponding author
Francisco Prado Reis	franciscopradoreis@gmail.com	Author
Estélio Henrique Martin Dantas	esteliodantas@gmail.com	Translator-author