

Contribution of Stress Level and Motivation Level, to the Physical Condition Level of Police Officers in the Police Academy

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Abstract: Police officers must always be ready to face tough physical challenges in carrying out their daily police duties. The purpose of this study was to analyze the contribution of stress levels, motivation to exercise positively correlated with the level of physical condition of police officers. The research methods used are correlation research and cross sectional design. The subjects of the study were 785 police officers whose data included stress levels, motivation to exercise and physical condition. The data analysis used was a correlation test and a determinant coefficient test. The results showed that stress levels contributed 60% to the level of physical condition, motivation to exercise contributed by 30% to the level of physical condition. It was concluded that together stress levels, motivation to exercise, and sports infrastructure contributed 83% to the level of physical condition.

Keywords: physical condition, motivation, police, stress level, infrastructure

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INTRODUCTION

Police officers who are full of dynamics and challenges when carrying out their duties demand that police personnel have a healthy physical and spiritual condition. Police personnel are a difficult and dangerous job, they are considered to have a higher standard of work compared to ordinary citizens. Police officers are a job full of high stress and traumatic events because they are often faced with physical danger. Therefore, it can be concluded that police officers are jobs that have great potential for work accidents. Work accidents can be avoided in one way by increasing the body's physical capacity or what is commonly called a physical condition. (Valmari et al., 2023) (Correia et al., 2023) (Montano, 2023)

According to previous research, it is stated that the physical capacity of the body is the basis for encouraging physical, mental and emotional recovery so that the body can focus on doing its job well. Good physical condition is obtained from the development of physical conditions that require awareness, willingness and motivation from each police personnel. The problem is that police officers have a heavy workload, including requiring police officers to be actively on duty even during break hours. Facts found in the field state that the average police personnel have poor sleep quality as a result of high work pressure. Based on this, it triggers an increase in the level of stress experienced by police officers. The level of stress has an important role in the level of physical condition of police officers. Previous research has stated that there is a positive correlation between optimal thought levels and good quality performance in someone who has good physical fitness and stress management. Based on previous research, it is stated that to maintain health we must exercise, good exercise will increase endorphins and reduce cortisol, which has an impact on a person's stress level, good exercise habits will reduce a person's stress level. High stress levels can affect the motivation of police officers to conduct training. The motivation that the police unit has for fitness has an important role because it can affect the performance of each individual. Previous research has stated that there is a positive correlation between motivation levels and physical activity practices. (Rodríguez et al., 2024) (Wilski et al., 2024) (Filippou et al., 2024) (Olsen et al., 2023) (Binsaeed dkk., 2023)

Therefore, high levels of stress, low levels of motivation, are potential barriers to training for police officers. Based on previous research, it was only limited to analyzing the correlation between stress levels, motivation levels, and physical condition levels without analyzing in more depth how much these aspects contribute to affecting physical activity levels. Therefore, the novelty of this study is aimed at analyzing the contribution of stress levels, motivation levels, to the level of physical condition of police officers in police academies. This research can be used as a basis for academics and practitioners in the field of sports to create innovative and appropriate training programs, especially for police officers which is one of the priorities in improving the level of physical condition.

METHOD

This study uses a correlation method with a cross sectional design. The population used is police officers who are actively working in the police academy education and training center. The research subjects were sampled based on a simple random sampling technique so that as many as 785 police officers were involved as research subjects. The research was conducted for seven days with the data collection procedure carried out using the measurement instrument Reporting Questionnaire 29 (SRQ 29) is a questionnaire developed by the World Health Organization (WHO) as a measuring tool for mental problems/disorders whose

validity and reliability have been tested. The Sport Motivation Scale measures the level of motivation to practice exercises whose validity and reliability have been tested.

The sports infrastructure availability instrument was used to obtain data on the availability of sports infrastructure in the respondents' environment, both at home and at work. The instrument grid was adopted from Government Regulation Number 16 of 2007 concerning the Implementation of Sports Article 89 paragraphs 2 and 3. The basic physical condition instrument for its implementation is guided by the Decree of the Chief of the National Police of the Republic of Indonesia No. Pol: Kep/698/XII/2011 dated December 28, 2011 concerning administrative guidelines for physical ability tests and anthropometric examinations for the recruitment of civil servants to the National Police as well as the Decree of the Chief of the National Police of the Republic of Indonesia Pol No: Kep/1352/VI/2020 dated June 30, 2020 concerning changes in the procedures for assessment and weighting of physical ability tests and anthropometric examinations. The order of physical condition implementation is a series of tests that are carried out including fitness test a with a 12-minute run and a fitness test with pull-ups, sit-ups, and push-ups, the duration of the time is one for each test and shuttle run or running to form the number 8 (eight). Everything should be done in sequence and sequentially.

The data analysis techniques used include normality test, linearity regression test, and product moment correlation hypothesis test, determinant coefficient test. The data obtained was calculated and data processed using SPSS 25.

RESULTS

Based on a motivation test of 785 police officers in the Semarang Police Academy, data on the level of motivation to exercise among police officers is explained in table 1. It was stated that as many as 63.58% of police officers had high motivation to exercise. Meanwhile, as many as 6.32% of police officers have low motivation to exercise, so it can be said that motivation can be a potential obstacle in doing physical activity as shown by more than thirty percent of officers having medium and low motivation to exercise.

Table 1. Prevalence of Exercise Motivation

Group	Frequency	Prevalence percentage
Low	12	6,32%
Keep	57	30%
Tall	121	63,68%

Table 2 . Stress Level Frequency

Group	Frequency	Prevalence percentage
Low	0	0%
Keep	91	47,89%
Tall	99	52,11%

Based on table 2 above, the frequency of stress levels in police officers is explained. It was stated that as many as 52.11% of police officers had a high level of stress. Based on in-depth observations and interviews to support the test, some cases of high stress levels are caused by heavy workloads. High work pressure and random changes in work shifts can have an impact on increased work stress.

Table 3 . Frequency level of physical condition of police personnel

Group	Frequency	Prevalence percentage
Enough	38	20%
Good	53	27,89%
Excellent	99	52,11%

Based on the results of the Integrity test, the physical nature of the police officer is described in table 3. It is known that as many as 52.11% of police officers are in good physical condition. Police officers are demanded and required to have a high physical condition because they are required to be ready to carry out sudden assignment orders and are ready to carry out tasks with a high workload. A high level of good physical condition is needed so that police officers can carry out their duties smoothly and avoid work accidents and physical disturbances.

Table 4.. Test the correlation between stress level, motivation, physical condition level.

Dependent Variable (x)		Independent Variable (y1)
		Physical Condition (y1)
Stress level (x1)	Pearson Correlation	0,944
	Sig.	0,000
Motivation (x2)	Pearson Correlation	0,877

	Siq.	0,000
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Table 5. Summary Contribution of stress levels, motivation to physical condition levels

Independent Variable (x)	Physical condition (y1)		
	R square	Adjusted R square	Siq. F Change
Stress level (x1)	0,621	0,605	0,000
Motivation level (x2)	0,313	0,301	0,000
Stress level (x1), motivation (x2)	0,844	0,831	0,000

Based on table 4 above, the correlation between each of the variables studied is explained. It is known that there is a very strong and positive correlation between stress levels and physical condition levels. It is known that there is a very strong and positive correlation between the level of motivation to exercise and the level of physical condition of Police Academy officers. Table 6 shows a summary of the contribution of the relationship between stress level and physical condition level by 60%. The aspect of motivation level to exercise contributes to the level of physical activity by 30%. It was concluded that together the aspect of stress level, motivation to exercise, contributed 83% to the level of physical condition.

DISCUSSION

The level of physical condition of police officers has a positive and very strong correlation with stress levels. Physical and mental conditions are very important in carrying out police duties which often require optimal performance and responsiveness to various situations. Stress is a physiological and psychological response to the stress or challenge that a person faces . This condition can trigger body reactions, such as increased heart rate, increased blood pressure, and the release of stress hormones such as cortisol. Police officers often face high pressure in carrying out their duties, such as law enforcement, responding to emergencies, and being involved in situations that require a quick and appropriate response. As a result, their stress levels may increase.. When a person experiences high levels of stress continuously, this can harm both physical and mental health. One of the aspects of health that is affected is physical condition. Chronic stress can lead to decreased energy, sleep disturbances, and a tendency to neglect physical activity. Therefore, police personnel who are constantly experiencing high levels of stress can have an impact on decreasing levels of physical condition. The impact of high stress levels can affect healthy diets and living habits. Based on previous research, it was stated that people tend to respond to stress with an unhealthy diet, eating fast

food or high sugar levels as a form of self-defense. Based on this phenomenon, an unbalanced diet can lead to weight gain and a decrease in physical condition. In the context of police personnel, the need for excellent physical condition is essential, and uncontrollable stress can hamper their efforts to maintain their physical condition. (Campos et al., 2024), (For, 2023); (Andriana et al., 2022); (Eikenberry et al., 2023); (Ashadi et al., 2020) (Gaş et al., 2023); (Olsen et al., 2023); (Adflare dkk., 2023)

Exercise and physical activity have an important role in managing stress. Regular physical activity can help reduce stress levels and improve mental well-being. However, high levels of stress can hinder a person's ability to perform physical activity consistently. This is a dilemma faced by police officers because the high demands of their duties can be an obstacle to engaging in a regular exercise routine. (Rosenkranz et al., 2023) (Silva et al., 2020) (Rini et al., 2023)

High stress levels can be an obstacle for police officers to practice sports activities. High levels of stress can have an impact on the motivation level of police officers to exercise because it has a very important role in improving the physical condition of police personnel. Optimal physical condition is an essential prerequisite for successful police duties that often require strength, endurance, and agility. Motivation to exercise not only has an impact on physical health but also has a direct impact on the ability of police personnel to carry out their duties properly. (Pedersen et al., 2021); (Figueroa et al., 2021)

Exercise has a close relationship with improved fitness and health levels. Police officers are required to have optimal physical condition to carry out their duties effectively. Through exercise motivation, they can improve physical endurance, muscle strength and body flexibility. Regular exercise can help reduce the risk of various health problems, including heart disease, diabetes and obesity. A healthy body condition can be beneficial for police officers so that they can ensure that they are always ready to face the physical challenges that may arise in carrying out their daily police duties. (Manoharan, 2021); (Bantham et al., 2020)

Motivation to exercise also has a positive impact on the mental and emotional aspects of police officers. Regular physical exercise can increase the production of endorphins, hormones that can improve mood and reduce stress. In a work environment that is often fraught with stress and challenges, having good mental health is essential. Exercise motivation can be a conduit to release tension and improve the mental well-being of police officers, which can positively impact their performance in police duties. (Healy et al., 2021); (Manaf et al., 2021)

The importance of motivation to exercise is also reflected in the increased discipline and dedication of police officers to their work. A consistent training process requires commitment and perseverance, and this can be transferred to discipline in carrying out police duties. Previous research has shown that a person who is highly motivated to exercise tends to have an orderly and responsible

mindset, which is indispensable in carrying out police duties that require careful planning and adherence to the rules.(Truong et al., 2020) ;(Sutcliffe & Greenberger, 2020) .

Motivation to exercise can also help in improving the specific skills required for police duties. Skills such as agility, speed, and coordination can be improved through sports-specific training. For example, sprint training can improve speed, while swimming training can improve endurance and muscle strength. Therefore, motivation to exercise not only improves overall physical fitness but also enhances the specific abilities required to carry out police duties. (Manoharan, 2021) ‘(Blynova et al., 2020).

A large and complete sports field is an important part of the development of physical condition. This field can be used for different types of sports such as running, football, badminton and other field sports. The existence of adequate fields allows police personnel to train various aspects of fitness, from cardiorespiratory endurance to muscle strength. Sports fields also allow for the conduct of fitness tests that cover a wide range of sports disciplines, which are an integral part of assessing the physical readiness of prospective police officers. In addition, an athletic field with a running track is an integral part of the sports facilities at the Police Department. The track is designed to train the endurance and speed of personnel. With this facility in place, personnel can engage in running training, which is an important part of cardiorespiratory fitness development. In addition, running tracks are also used to measure and monitor progress in periodic physical tests, ensuring that each individual is reaching the specified physical condition standards. (Salvo et al., 2023) ;(Rui & Othengrafen , 2023) ; (Morán- Gámez et al ., 2024) (Abidin et al., 2023) .

The importance of providing adequate sports facilities and infrastructure for police officers is not only related to the development of physical conditions but also to the formation of character and mentality. Through regular and intense physical training, police personnel are taught values such as discipline, perseverance, and teamwork. Therefore, sports facilities for police officers are not only a place to train the body but also a place to form attitudes and mentalities that are in line with the demands of the police profession. Sports facilities in the police force are not only limited to physical facilities but also include the assignment of qualified sports coaches. Experienced sports coaches can provide appropriate guidance and direction to personnel in implementing training programs that suit their needs and goals. Coaches also have an important role in providing motivation and psychological support to personnel, helping them overcome obstacles and reach their maximum physical potential. (Breitbarth et al., 2023) ; (Amalia et al., 2023) (García-Pascual et al., 2023) ;(Hansen et al., 2021) .

In the context of the Police Academy, it is also important to note that physical training is an integral part of the curriculum . Health and physical condition are the

determining factors for the success of a policeman. Therefore, high levels of stress, low levels of motivation and the availability of sports infrastructure among police officers can have a direct impact on their ability to successfully participate in and complete physical training programs. (Rini et al., 2023) ; (Lautenbach et al., 2021).

To address the relationship between stress levels, motivation levels, and the availability of police officers' infrastructure and physical condition, a holistic approach that includes stress management, psychological support, and the promotion of healthy lifestyles is needed. Physical training programs can be designed with the stresses that police officers may face, not only providing physical benefits but also helping to manage stress. In addition, this approach can be strengthened by efforts to increase awareness of the importance of physical and mental health and positive coping strategies. (Rosenkranz et al., 2023) ; (For, 2023).

CONCLUSION

The conclusion of this study is that the aspect of stress level, motivation to exercise, together contributes to the level of physical condition by 83%. The study hopes that this research can be used as a basis for academics and practitioners in the field of sports to create innovative and appropriate training programs, especially for police officers which is one of the priorities in improving the level of physical condition.

Conflict of Interest

The researcher stated that there was no conflict over this study at the Police Academy

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REFERENCES

- Abidin, Z., Nor, M., Sustainable, X., Zheng, L.-H., Eeza Zainal Abidin, N., Nazri Mohd Nor, M., Xu, Y.-Y., & Feng, X.-W. (2023). *Citation: Clutch Coordination and Factors Influencing the Construction of Sports Facilities and Socio-Economic Development in China. Continuous clutch coordination and factors affecting the construction of sports facilities and socio-economic development in China.* <https://doi.org/10.3390/su15032832>
- Adsuar, J. C., Paola, R., Cartagena, P., Arroyo, C. G., Mendoza-Muñoz, M., Belén, A., Martín, B., Simón-Chico, L., González-Peño, A., Hernández-Cuadrado, E., & Franco, E. (2023). *The Impact of Challenge-Based Learning Experiences in*

- Physical Education on Student Motivation and Engagement.*
<https://doi.org/10.3390/ejihpe13040052>
- Amalia, I. G., Nasrulloh, A., Amajida, A., Delano, E. H., & Shafi, S. H. A. (2023). Policy analysis of the National Sports Committee of the Republic of Indonesia in Sleman Regency in the preparation of the Regional Sports Week (PORDA), Special Region of Yogyakarta. *International Journal of Physical Education, Sport and Health*, 10(2), 223–226.
<https://doi.org/10.22271/kheljournal.2023.v10.i2d.2857>
- Andriana, L. M., Ratna Sundari, L. P., Muliarta, I. M., Ashadi, K., & Nurdianto, A. R. (2022). Active recovery is better than passive recovery to optimize the body's recovery post-workout. *SPORTIF Journal : Journal of Learning Research*, 8(1), 59–80. https://doi.org/10.29407/js_unpgri.v8i1.17685
- Ashadi, K., Andriana, L. M., & Pramono, A. (2020). *Patterns of sports activities before and during the covid-19 pandemic in students of the faculty of sports and non-sports faculties* *INTRODUCTION C*. 6(3), 713–728.
- Ashadi, K., Purnomo, M., Haryudo, S. I., Wibowo, S., Wiriawan, O., Setijono, H., Soegiyanto, Sugiharto, Rustiadi, T., Handayani, O. W. K., & Shah, S. A. (2022). Wheelchair User Barriers in Physical Activity: Rural vs. Urban Areas. *International Journal of Human Movement and Sport Science*, 10(3), 534–539.
<https://doi.org/10.13189/saj.2022.100321>
- Bantham, A., Taverno, S. E., Sebastião, E., & Hall, G. (2020). Advances in Cardiovascular Disease Addressing physical activity barriers in underserved populations. *Advances in Cardiovascular Diseases*.
<https://doi.org/10.1016/j.pcad.2020.11.002>
- Battaglia, G., Guidotti, F., Demarie, S., Ciaccioni, S., & Capranica, L. (2023). *Knowledge, Competencies, and Skills for Sustainable Sports Management Growth: A Systematic Review*. <https://doi.org/10.3390/su15097061>
- Binsaeed, B., Aljohani, F. G., Alsobiai, F. F., Alraddadi, M., Alrehaili, A. A., Alnahdi, B. S., Almotairi, F. S., Jumah, M. A., & Alrehaili, A. T. (2023). Inhibitors and motivators for weight loss in people with obesity. *Cureus*.
<https://doi.org/10.7759/cureus.49040>
- Blynova, O., Kruglov, K., Semenov, O., Los, O., & Popovych, I. (2020). The psychological safety of the learning environment in sports schools is a factor in the development of motivation for achievement in young athletes. *Journal of Physical Education and Sports*, 20(1), 14–23.
<https://doi.org/10.7752/jpes.2020.01002>
- Breitbarth, T., McCullough, B. P., Collins, A., Gerke, A., & Herold, D. M. (2023). Environmental issues in sport: ongoing research in academia. In *the European Quarterly of Sport Management* (Vol. 23, Edition 1, pp. 5–12). Routledge.

- <https://doi.org/10.1080/16184742.2022.2159482>
- Campos, A. P. R., Santana, M. G., de Oliveira, D. M., Youngstedt, S. D., Linares, F. D. C., & Passos, G.S. (2024). Sleep, psychological health, and physical activity levels in patients with hypertension. *Journal of Bodywork and Movement Therapy*, 39, 343–349. <https://doi.org/10.1016/J.JBMT.2024.03.016>
- Cho, CC (2023). A cross-level study of the consequences of work stress on police officers: using transformational leadership and group member interaction as examples. *Research in Psychology and Behavior Management*, 16, 1845–1860. <https://doi.org/10.2147/PRBM.S413075>
- Correia, I., Romao, Â., Andreia, Almeida, E., & Ramos, S. (2023). Protecting Police Officers from Burnout: Tackling Fragmented Research Fields. *Journal of Police and Criminal Psychology*, 38, 622–638. <https://doi.org/10.1007/s11896-023-09584-4>
- Eikenberry, J., Mancini, M., Linhorst, D. M., Schafer, J. A., & Brown, J. (2023). Stress and trauma among police officers: Implications for social work research and practice. *Qualitative Social Work*. <https://doi.org/10.1177/14733250231214512>
- Figueroa, C., Aguilera, A., Hoffmann, T., & Fukuoka, Y. (2021). The association between perceived barriers to physical activity and depression in women living in low-activity communities. *Preprint*, 1–17. <https://doi.org/10.21203/rs.3.rs-135211/v1>
- Filippou, K., Knappe, F., Hatzigeorgiadis, A., Morres, I. D., Tzormpatzakis, E., Havas, E., Pühse, A. S., Theodorakis, Y., & Gerber, M. (2024). Self-reported physical activity and mental health among asylum seekers in a refugee camp. *Journal of Physical Activity and Health*, 1–11. <https://doi.org/10.1123/jpah.2023-0325>
- García-Pascual, F., Ballester-Esteve, I., & Calabuig, F. (2023). *The effect of sports participation on the behavior of sports service customers: linear and qualitative comparative analysis models*. <https://doi.org/10.3390/healthcare11091320>
- Gaş, S., Ekşi Özsoy, H., & Cesur Aydın, K. (2023). The association between sleep quality, depression, anxiety and stress levels, and temporomandibular joint disorders among Turkish dental students during the COVID-19 pandemic. *Cranio - Journal of Craniomandibular and Sleep Practices*, 41(6), 550–555. <https://doi.org/10.1080/08869634.2021.1883364>
- Granhölm Valmari, E., Ghazinour, M., Nygren, A.S., & Gilenstam, K. (2023). A systematic review of lifestyle and health among patrolling police officers. In the *Scandinavian Journal of Occupational Therapy* (Vol. 30, Issue 5, pp. 721–744). Taylor and Francis Ltd. <https://doi.org/10.1080/11038128.2022.2083013>
- Hansen, R. K., Samani, A., Laessoe, A. S., Larsen, R. G., & Cowan, R. E. (2021). Sociodemographic characteristics are related to the perception of physical activity barriers among manual wheelchair users. *Journal of Disability and Health*, 14(4), 101119. <https://doi.org/10.1016/j.dhjo.2021.101119>

- Healy, S., Brewer, B., Laxton, P., Powers, B., Daly, J., McGuire, J., & Patterson, F. (2021). Brief Report: Perceived barriers to physical activity among a national sample of autistic adults. *Journal of Autism and Developmental Disorders*, 0123456789. <https://doi.org/10.1007/s10803-021-05319-8>
- Koontz, A. M., Bass, S. R., & Kulich, H. R. (2021). Accessibility facilitators and barriers affecting independent wheelchair transfers in the community. *Disability and Rehabilitation: Assistive Technology*, 16(7), 741–748. <https://doi.org/10.1080/17483107.2019.1710771>
- Lautenbach, F., Leisterer, S., Walter, N., Kronenberg, L., Manges, T., Leis, O., Pelikan, V., Gebhardt, S., & Elbe, A.M. (2021). Motivation of amateur and recreational athletes to exercise, stress and cope during the corona crisis. *Frontiers in Psychology*, 11 (January), 1–18. <https://doi.org/10.3389/fpsyg.2020.611658>
- Manaf, H., Shaid, A., Justine, M., Hisyam, H., Hasnan, N., Mohd Asmawi, U. M., & Mustapa, A. (2021). Barriers to physical activity and exercise among people with physical disabilities at the government-funded teaching hospital, Kuala Lumpur. *Malaysian Journal of Medicine and Health Sciences*, 17(2), 34–39.
- Manoharan, B. (2021). *Effects of obesity yoga therapy on psychological determinants and heart rate variability in obese individuals*. <http://www.theyogicjournal.com>
- Martín-Rodríguez, A., Gostian-Ropotin, L. A., Beltrán-Velasco, A. I., Belando-Pedreño, N., Simón, J. A., López-Mora, C., Navarro-Jiménez, E., Tornero-Aguilera, J. F., & Clemente-Suárez, V. J. (2024). Sports Minds: The Interaction of Physical Activity and Psychological Health. In *Sports* (Vol. 12, Edition 1). Multidisciplinary Digital Publishing Institute (MDPI). <https://doi.org/10.3390/sports12010037>
- Morán-Gámez, G., Fernández-Martínez, A., Biscaia, R., & Nuviala, R. (2024). *Measuring Green Practices in Sport: Scale Development and Validation*. <https://doi.org/10.3390/su16020494>
- Olsen, S.H., Aparicio, E.M., Jaeger, P.T., & Howard, D.E. (2023). Exploring motivation to be active among amputees: a phenomenological approach to leisure physical activity. *International Journal of Qualitative Studies on Health and Well-being*, 18(1). <https://doi.org/10.1080/17482631.2022.2143053>
- Pedersen, M. R. L., Hansen, A. F., & Elmoose-østerlund, K. (2021). Motives and barriers associated with physical activity and sport across social backgrounds: Implications for health promotion. *International Journal of Environmental Research and Public Health*, 18(11). <https://doi.org/10.3390/ijerph18115810>
- Rini, W. N. E., Halim, Rd., & Sarah, U. (2023). Factors associated with work burnout among traffic police. *Poltekita : Journal of Health Sciences*, 16(4), 429–435. <https://doi.org/10.33860/jik.v16i4.1740>
- Rosenkranz, R. R., Ridley, K., Guagliano, J. M., & Rosenkranz, S. K. (2023). Physical activity abilities, opportunities, motivation and behaviour in youth settings: a theoretical framework to guide the intervention of physical activity leaders. In *International Review of the Psychology of Sport and Exercise* (Vol. 16, Edition 1,

- pp. 529–553). Routledge. <https://doi.org/10.1080/1750984X.2021.1904434>
- Rui, J., & Othengrafen, F. (2023). *Examining the Role of Innovative Roads in Improving Urban Mobility and Livability for Sustainable Urban Transitions: A Review*. <https://doi.org/10.3390/su15075709>
- Salvo, D., Jáuregui, A., Adlakha, D., Sarmiento, O. L., & Reis, R. S. (2023). When moving is the only option: the role of needs versus the choice to understand and promote physical activity in low- and middle-income countries. *Rev. Public Health*, 44, 2022. <https://doi.org/10.1146/annurev-publhealth>
- Silva, L.R.B., Seguro, C.S., de Oliveira, CGA, Santos, P.O.S., de Oliveira, J.C.M., DE Souza Filho, L.F.M., DE Paula Júnior, C.A., Gentil, P., & Rebelo, ACS (2020). Physical inactivity is associated with increased levels of anxiety, depression and stress in Brazilians during the COVID-19 pandemic: a cross-sectional study. *Frontiers in Psychiatry*, 11(November), 1–7. <https://doi.org/10.3389/fpsyt.2020.565291>
- Sutcliffe, J. H., & Greenberger, P.A. (2020). Identify psychological difficulties in college athletes. *Journal of Allergy and Clinical Immunology: In Practice*, 8(7), 2216–2219. <https://doi.org/10.1016/j.jaip.2020.03.006>
- Truong, L. K., Mosewich, A. D., Holt, C. J., Le, C. Y., Miciak, M., & Whittaker, J. L. (2020). Psychological, social and contextual factors throughout the recovery stages after a sport-related knee injury: a scaping review. *Br J Sports Med*, 0, 1–11. <https://doi.org/10.1136/bjsports-2019-101206>
- Veloz Montano, M. de las N. (2023). A comprehensive approach to the impact of work stress on women in the teaching profession. *Interdisciplinary Rehabilitation / Interdisciplinary Rehabilitation*, 3, 56. <https://doi.org/10.56294/ri202356>
- Wilski, M., Broła, W., Koper, M., Gabryelski, J., Łuniewska, M., Fudala, M., & Tomczak, M. (2024). The association between physical activity and coping with stress in people with multiple sclerosis: A moderate mediation model with self-efficacy and disability level as variables. *International Journal of Clinical and Health Psychology*, 24(1). <https://doi.org/10.1016/j.ijchp.2023.100415>