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MOVEMENT BEHIND BARS: RECREATIONAL GAMES FOR HEALTHY LIFESTYLE

STEPHEN A. FADARE*

CSPEAR, Mindanao State University (Main) Marawi, Philippines. *Corresponding Author E-mail: stephen.fadare@msumain.edu.ph, ORCID ID: 0000-0002-3444-4713

TORRECAMPO MICHELLE ANN

St. Francis Xavier College, San Francisco, Agusan del Sur, Philippines. ORCID ID: 0000-0003-1284-4721

TINGSON GLISCY MAY

Kapalong National High School, Maniki, Kapalong, Davao del Norte, Philippines. ORCID ID: 0009-0007-3773-5376

PANARIGAN NORHANA M

Datu Mamintal Adiong Sr. Memorial National High School, Bubong, Lanao del Sur, Philippines. ORCID ID: 0009-0005-2624-4649

ALISON IRISH J

Cabadbaran City National High School- Senior High School, Cabadbaran City, Agusan del Norte, Philippines. ORCID ID: 0009-0009-9513-4426

SHAMSON ABANTAS

Mindanao State University Training Center Marawi, Philippine. ORCID ID: 0009-0003-2282-553X

Abstract

The criminal justice system faces challenges in promoting the physical and mental health of detainees. To promote a healthy lifestyle in correctional facilities, recreational games like basketball, soccer, volleyball, and chess can be included. These games offer opportunities for physical exercise, social connection, and personal development. Academic research, reports from correctional institutions, publications from Elsevier, Sage journals, BMC, PubMed, and several other pertinent journals were used to acquire the material. It was five months long, from February to June 2023, and it had material from 2015 to 2023. Found that these activities can have a significant positive impact on offenders' well-being. Sports help with stress management, anger control, and dispute resolution, while cooperative games strengthen social ties, improve communication, and provide a sense of purpose and belonging. Recreational games also provide opportunities for personal development, such as collaboration, discipline, perseverance, and goal-setting, which can lead to better post-release outcomes and a successful transition back into society. However, there are potential roadblocks and restrictions, such as security concerns, budget limits, and the need for qualified personnel. Policymakers and correctional facility managers should focus on providing sufficient resources and cooperative relationships with neighborhood groups to facilitate these changes.

Keywords: Behind Bars, Games, Healthy Lifestyle, Movement, Recreational, Sports

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INTRODUCTION

People are gradually making sports a part of their everyday lives as they frequently engage in them to reestablish a healthy lifestyle. These acts also apply to recreational facilities or the bars that individual prisoners are kept behind. Urban infrastructure is incomplete without recreational amenities, which give citizens a place to relax, fit in, and give back to the neighborhood. Rather than being only for fun, these activities are helpful tools for healing and reintegration (Werthmann, 2021; Anguelovski et al., 2020; Bahrini et al., 2017).

Correctional institutions are suitable for keeping ongoing control and observation over people's time and location, (Norman, 2017). Recreational activities offer a way of emancipation and an environment for establishing meaningful interactions for people who are confined and frequently experience issues related to confinement. Inmates who participate in these activities can get a variety of advantages, including as better mental health, greater social skills, higher physical fitness, and the development of critical thinking and decision-making skills (Gallant et al., 2015; Camplain et al., 2022).

Recreational activities encourage positive inmate conduct, lower stress levels, and create a supportive environment in correctional facilities. According to Jones and Smith (2018) and Lee et al., (2021) these programs are created to provide recreational activities that support the general health and effective rehabilitation of prisoners.

However, as part of their reintegration strategies, correctional facilities frequently offer leisure activities to prisoners. Sports, fitness regimens, board games, card games, and in certain situations even video games may be among these activities (Mondal, 2023). The importance of recreational games in prisons is examined in this article, as well as the effects of these activities on the rehabilitation of inmates and the typical game types used in these environments.

The Importance of Recreational Activities in Correctional Facilities

Recreational activity encourages physical fitness and aids in maintaining an inmate's overall health. Regular exercise may improve cardiovascular fitness and weight reduction, lower the likelihood of developing a variety of health issues, and is especially beneficial for female convicts. Recreation also serves as a stress release and aids in the management of mental health conditions like sadness and anxiety. It enables offenders to build coping skills and provides a helpful diversion from the difficulties of prison life (Yu et al., 2018; Physical Activity Guidelines Advisory Committee, 2018; Trotte et al., 2018).

Inmates have the chance to develop new skills and discover their hobbies through recreational activity programs (Elkhawaga, 2019). Participating in leisure pursuits can boost confidence and enhance problem-solving skills. By taking part in these activities, inmates can learn important skills that will improve their chances of a successful reintegration and give them the resources they need to lead productive lives after they are released (Ortega et al., 2020; Lucy, 2021).

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Recreation promotes imprisoned bonds and facilitates socializing. Participating in group activities fosters the development of interpersonal, conflict-resolution, and collaborative skills (Willox et al., 2023). It fosters a sense of belonging among detainees, which lowers tensions and improves the atmosphere for rehabilitation. Positive contacts when engaging in leisure activities might increase prosocial conduct and empathy, lessen violent events, and decrease recidivism (Valero-Garcés, 2022; Link & Williams, 2017; Caruso, 2017).

Types of Recreational Activities and Games

Recreational activities and games can vary widely and are often tailored to the interests and needs of the participants. Here are some common types of recreational activities and games:

Sports: Numerous interventions and therapy plans, including sports programs, have been established in prisons. To fulfill demand and promote physical, mental, and social well-being, these prison sports programs seek to promote, through the practice of sports, attitudes, skills, and behaviors that help to prevent high-risk social behavior and teamwork. Sports activities such as basketball, soccer, volleyball, tennis, and softball are popular (Gallant et al., 2015; Obadiora, 2016).

Outdoor Activities: Treating inmates humanely and imprisoning them is the penalty (Ondras & Alvero, 2022). Denying people who are being held access to natural light and fresh air is inhumane. These activities provide opportunities to connect with nature, improve physical health, and enjoy the outdoors (Pasat, 2022). The trauma of imprisonment is increased if convicts are not allowed to engage in outdoor activities (Micklethwaite & Earle, 2021). Outdoor recreational activities include hiking, camping, swimming, cycling, fishing, and nature walks (Kelman, 2020; Kevin, 2019).

Board Games and Card Games: The focus of Willian's (2020) research is the perception of individual emotional engagement in game-based learning activities. According to this study, playing cards makes people's emotional reactions less prominent, making it a nice and secure approach to start a conversation. People also feel happier as a result of it. Board games like chess, Scrabble, and Monopoly and card games such as poker, bridge, and Uno offer engaging and intellectually stimulating options for recreational play (Seaman., & Tran, 2021; Engelstein, & Shalev, 2022). They encourage strategic thinking, problem-solving, and social interaction, resulting in players engaging in computational thinking, teamwork, and creativity (Alfaro-Ponce et al., 2023; Bayeck, 2023).

Creative and Artistic Pursuits: According to a 2017 report by the National Alliance for Arts, Health, and Wellbeing (APPG), engaging in creative activities can improve our mental and emotional health and well-being (Giraldez-Hayes, 2022). These activities include leisure activities like painting, drawing, sculpture, pottery, and other forms of artistic expression. They can be therapeutic and provide a sense of accomplishment (Kim et al., 2023; Sicco, 2022; Castle et al., 2021).

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Group Fitness Classes: It is possible to research well-liked physical activities, such as group fitness courses, to discover novel tactics for promoting exercise adherence (Gjestvang et al., 2020; Thompson et al., 2020; Graupensperger et al., 2019). These leisure pursuits give possibilities for social connection, stress alleviation, and physical activity, and include aerobics, yoga, dancing courses, and fitness boot camps (Stevens et al., 2017; Ntoumanis et al., 2017).

Mind and Brain Games: Brain training games (BTG) are being studied to determine how they affect cognition and whether they may be applied to untrained activities (Zimmermann, 2023). The phrase "brain training" has come to refer to mentally challenging exercises intended to increase mental fitness (Staiano et al., 2023; Squire et al., 2023). Increased performance on cognitive tests like speed and accuracy, visuomotor coordination, attention, memory, working memory, and overall cognitive function has been shown in numerous BTG intervention trials (Gill et al., 2022). Investigating mouse motor coordination using quantitative trait locus analysis to model the genetic underpinnings of developmental coordination disorder. These activities, including puzzles, Sudoku, crosswords, trivia quizzes, and brain teasers, provide mental stimulation and challenge. They can improve cognitive skills, memory, and problem-solving abilities (McNabb, 2022; Knowles, 2020; Al-Thaqib et al., 2018).

Music and Dance: Bojner-Horwitz et al. (2022) claim that dance and music are forms of time-ordered "trans-verbal play" in the fields of sound and movement, respectively. Many academics contend that the definitions of dance and music overlap because while music can include sound, dance can also include movement (Cross & Smith, 2022). Engaging in musical activities like singing, playing musical instruments, or participating in dance classes can be recreational and provide emotional expression, stress relief, and a sense of rhythm and coordination (Adjepong, 2020; Welch et al., 2020). Furthermore, it has been shown that music that is associated with movement may increase motivation, provoke emotions, enhance active presence, support the constructive management of emotions, foster accomplishment, and help individuals synchronize their movements with one another (Blasco-Magraner, 2021; Fancourt & Finn, 2019).

Challenges and Limitations of Recreational Activities in Correction Facilities

Some factors that are worth understanding influence jail life. Many more prisoners than the number for which the prisons were designed are forced to live together; they come from different ethnic backgrounds, social classes, and genders; in this situation, rumors, suspicion, opposing factions, and conflicts abound; and this atmosphere is marked by the traditional rivalry between male and female inmates. The following are a few of the many obstacles that might prevent restrictions on leisure activities in today's correctional facilities:

Prison overcrowding: Prison overcrowding is a widespread issue that exists in many nations. The physical and emotional well-being of detainees suffers because of the current conditions in correctional facilities (Baldonado et al., 2022; Khai, 2022; Martos-Garcia et al., 2022). The goal of imprisonment is rehabilitation; nevertheless, difficulties

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like overcrowding prevent prisoners from undergoing rehabilitation and lead to fighting and other forms of violence, as mentioned by the studies of Triska et al. (2023) and Nkosi and Maweni (2020). Overcrowding or overpopulation in prisons can have an impact on inmates with increased physical contact, a lack of space and ventilation, as well as a reduction in time spent outside or engaging in social recreation activities, all of which contribute to the spread of infectious diseases. (Glade et al., 2022; Jauk et al., 2022; García-Guerrero and Marco, 2015). The same was reported in the Philippines, where it is incredibly tough to administer and maintain more than 400 jails around the country due to overcrowding. Because of this, it often takes months to obtain reliable information about the issues that each jail faces, such as water system failures and levels of overcrowding (Asis, 2022; Santos, 2016).

Limited resources and funding: According to Clemente-Faustino and de Guzman (2022), a problem that many government agencies are facing is the issue of funding or sourcing adequate funds needed for caring for people in need, like those kept in many correctional facilities, where inmates frequently face budget constraints that can limit the availability and quality of recreational programs. Shortage of money might result in a shortage of tools, spaces, and qualified personnel to plan and manage operations (Ebrahimi-Rigi et al., 2023; Fadare et al., 2021; Minton et al., 2016). Numerous studies have mentioned this as well; they include every institution, not only prisons. The equipment and kits required to support all the activities may be purchased with the limited resources and budget available.

Security, staffing, and supervision concerns:

Standards for safety and security must serve as the cornerstone of all correctional operations. Without continuing and efficient safety and security protocols, everyone—including PDL employees, members of the community, and prison staff—is particularly susceptible to a variety of threats. Because security-related activities and services are typically part of a jail's mission, they must exist. However, they must be constructed upon a strong basis. Recreational activities might make it difficult to maintain order and prevent incidents in correctional institutions, where security is a top priority (Asis, 2022; Mohsan et al., 2023). It can be challenging to strike a balance between the requirement for recreational possibilities and security measures, which calls for thorough planning and risk assessment. Recreational programs must be implemented successfully, which requires sufficient manpower and well-trained workers. However, there may be difficulties in providing continuous and efficient supervision in correctional institutions due to personnel shortages and high turnover rates (Minton et al., 2016).

Inmate participation and motivation: It has been proven that prison-based programs can reduce recidivism and encourage successful reentry. A decrease in prisoner misconduct has been linked to inmate involvement in prison activities, which has been pushed. However, access to programs is not always straightforward, and even then, some inmates may not be motivated or interested in participating (Wu et al., 2023; Kaiser et al., 2022). Some prisoners might not be motivated or interested in participating in leisure activities. The efficacy of these programs may be hindered by elements like

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indifference, disengagement, or a lack of knowledge about the advantages of recreation. Other important elements include social dynamics and stigma. It's possible for stigma or societal pressure to prevent inmates from participating in leisure activities. Participation rates can be affected by peer pressure, anxiety over criticism, or issues with social standing in the jail population (Cheng et al., 2019). It is urged that our various governments look at ways to motivate individuals who are jailed to engage in sports and leisure activities by providing them with enough possibilities to be interested in doing so. The most excellent inmates can get motivational rewards, both internal and external.

Best Practices for Implementing Recreational Programs.

The best practices must be followed when implementing effective recreation programs in correctional facilities. These techniques were developed as a result of research and fieldwork.

Needs assessment: Perform a thorough needs study to learn about the many hobbies and leisure demands of the jail population. Age, gender, cultural background, and personal preferences are all significant considerations in this assessment. Providing a range of programs Provide a wide choice of leisure activities to accommodate a variety of interests and skills. Sports, workout routines, arts and crafts, educational courses, music, and other recreational pursuits may fall under this category (Latessa, 2018; Halden, 2019). It is necessary to conduct an evaluation to determine how patrons at the bar react to recreational activities and how those in charge of such training pay attention to them. Given that a teacher or student will always be evaluated by their teachers or by their supervisor, evaluation must always be given a chance in all we do. This is crucial to our day-to-day operations.

Qualified staff and training: Make that the staff members in charge of developing and managing leisure programs has the necessary education. They must be individuals with the necessary leadership skills and expertise to supervise leisure activities, which may include staff with a background in physical education. The training required for leading and guiding should cover a variety of topics, including communication skills, behavior management, conflict resolution, and cultural awareness. Make a thorough schedule for your leisure pursuits to maintain regularity and predictability. Give the prisoners plenty of opportunity to engage and make sure they understand the timetable completely (Gaes & McGuire, 2018).

Incentives and rewards: To encourage inmates to participate in leisure activities, provide a system of prizes and incentives. Depending on active participation, provide prospects for growth or special treatment. Celebrate and honor accomplishments. Rewards like switching around their assignments and obtaining the possibility to improve the lives of convicts will be of enormous value to them all. (Dennard et al., 2021; Elbers et al., 2022). For many people, especially athletes or coaches who participate in sports and recreation, incentives and prizes may act as a source of inspiration. Children continue to do well when their parents or school continue to recognize their efforts.

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Collaborative partnerships: Since so many people must be involved, including people from different professions, governmental agencies, and non-profit organizations, to engage and provide care, collaborations among prisoners and the development of cooperation are crucial. The difficulty is that because the majority of these people are arranged according to their functions, the prisoners can see where these functional seams are. Encouragement of inmate engagement in leisure activities is crucial to achieving the goal of this partnership. Encourage cooperation with other organizations, neighborhood associations, or volunteers to expand the scope and quality of recreational programs. These partnerships could give the institution access to more materials, information, and help (Barker et al., 2022; Bennett & Holloway, 2018; National Institute of Corrections, 2020).

Evaluation and feedback: Regularly evaluate the effectiveness of recreational programs through feedback from both staff and inmates. Use this feedback to make improvements, address any concerns, and ensure ongoing program relevance (Sanchez-Lastra et al., 2019; Pérez-Ordás et al., 2021).

Future of Recreation Activities and Games in Correctional Facilities Centre.

Virtual reality (VR) and augmented reality (AR): In the future, many correctional facilities will benefit more from VR and AR in this new century. Recreational activities and games in prisons might be completely changed by integrating VR and AR technologies. Inmates can participate in a variety of leisure pursuits, sports, or instructional games using these immersive technologies, which can provide virtual settings and interactive experiences (Ranasinghe et al., 2017).

Gamification of rehabilitation: It is becoming more popular to apply gamification techniques in correctional environments. Recreational games may be created to encourage pro-social behaviors, skill development, and rehabilitation objectives by adding game features including challenges, prizes, and progress monitoring (Faiella & Ricciardi, 2015; Buckley & Doyle, 2017).

Mobile gaming and apps: Within prisons, tailored and accessible recreational gaming experiences are possible thanks to mobile devices and applications. Using smartphones or tablets, inmates might play games that promote physical fitness, emotional wellness, cognitive development, or skill-building (Hedman et al., 2016).

Serious games for reentry preparation: Serious games, created with specific educational goals in mind, can be used to help convicts become ready for their reintroduction into society. These games can concentrate on enhancing decision-making skills, financial literacy, work preparedness, and fundamental life skills (Ortiz et al., 2018).

Collaborative and competitive gaming: Gaming with many players or a team might encourage convicts to cooperate and engage in constructive competition. Such games can promote good social dynamics and personal development by encouraging collaboration, communication, and conflict resolution abilities (Mace et al., 2017).

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CONCLUSION

Along with other evidence-based correctional activities including education, vocational training, counseling, and drug abuse treatment, recreation should be made available. Correctional institutions may optimize the influence on inmate rehabilitation and raise the possibilities of a successful reintegration into society by combining a wide range of services. Finally, every government should back this position by a sufficient statute or Republic Act. Inmates can form sports teams since exercise is important for them.

Declaration of Conflict

The authors declared no conflict of interest.

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References

- 1) Adjepong, B. (2020). The Value and Importance of Music to Children's Growth and Development. *IOSR Journal of Humanities and Social Science*, *25*(4), 1-9.
- 2) Alfaro-Ponce, B., Patiño, A., & Sanabria-Z, J. (2023). Components of computational thinking in citizen science games and its contribution to reasoning for complexity through digital game-based learning: A framework proposal. *Cogent Education*, 10(1), 2191751.
- 3) Al-Thaqib, A., Al-Sultan, F., Al-Zahrani, A., Al-Kahtani, F., Al-Regaiey, K., Iqbal, M., & Bashir, S. (2018). Brain Training Games Enhance Cognitive Function in Healthy Subjects. Med Sci Monit Basic Res, 24, 63-69.
- 4) Anguelovski, I., Brand, A. L., Connolly, J. J., Corbera, E., Kotsila, P., Steil, J., ... & Argüelles Ramos, L. (2020). Expanding the boundaries of justice in urban greening scholarship: toward an emancipatory, antisubordination, intersectional, and relational approach. *Annals of the American Association of Geographers*, 110(6), 1743-1769.
- 5) Asis, J. M. A. (2022). Managing life behind the bars: A phenomenological inquiry. *Managing life behind the bars: A phenomenological inquiry*, 114(1), 11-11.
- 6) Baldonado, N. N., Demot, A. M. L., Villaflores, P. J. A., Dayag, G. G., Buado, E. L., Ramos, C. V., ... & Martinez, R. G. (2022). Physical Activity Participation of Persons Deprived of Liberty in Santiago City District Jail, Philippines. *Physical Education and Sports: Studies and Research*, 1(2), 91-106.
- 7) Bahrini, F., Bell, S., & Mokhtarzadeh, S. (2017). The relationship between the distribution and use patterns of parks and their. Urban Forestry & Urban Greening, 27, 332-342. https://doi.org/10.1016/j.ufug.2017.05.018
- 8) Barker Scott, B. A., & Manning, M. R. (2022). Designing the Collaborative Organization: A Framework for how Collaborative Work, Relationships, and Behaviors Generate Collaborative Capacity. *The Journal of Applied Behavioral Science*, 00218863221106245.
- 9) Bayeck, R. Y. (2023). Understanding computational thinking in the gameplay of the African Songo board game. *British Journal of Educational Technology*.

ISSN (Online):0493-2137

E-Publication: Online Open Access

Vol: 56 Issue: 11:2023

- 10) Braxton-Mintz, R. (2009). Inmate Programs: A Tool for Managing Behavior. Corrections Today, 71(6), 100-101.
- 11) Blasco-Magraner, J. S., Bernabe-Valero, G., Marín-Liébana, P., & Moret-Tatay, C. (2021). Effects of the educational use of music on 3-to 12-year-old children's emotional development: a systematic review. *International journal of environmental research and public health*, *18*(7), 3668.
- 12) Bennett, L. A., & Holloway, K. R. (2018). Implementing effective leisure programs in correction facilities: A practitioner's guide. In T. R. Smith & P. A. Kelly (Eds.), Correctional Recreation and Reentry Programming: Creative Alternatives to Institutional Misconduct, 53-68. Routledge.
- 13) Buckley, P & Doyle, E. (2017). Individualizing gamification: An investigation of the impact of learning styles and personality traits on the efficacy of gamification using a prediction market computers & Education, 10(6), 43-55
- 14) Bradway, K. P., & Sawyer, A. M. (2016). Revisiting therapeutic recreation practices in corrections: A brief historical overview and literature review. Therapeutic Recreation Journal, 50(4), 311-328. doi: 10.18666/TRJ-2016-V50-I4-7373
- 15) Bojner-Horwitz, E., Korošec, K., & Theorell, T. (2022). Can Dance and Music Make the Transition to a Sustainable Society More Feasible? Behavioral Science, 12(1),11. doi 10.3390/bs12010011.
- 16) Bojner-Horwitz, E., Grape, V. C., Rydwik, E., & Huss, E. (2017). Arts as an ecological method to enhance the quality of work experience of healthcare staff: A phenomenological-hermeneutic study. Int. J. Qual. Stud. Health Well-Being, 12(13), 38-98. doi 10.1080/17482631.2017.1333898.
- 17) Camplain, R, Pinn, T.A., Becenti, L., Williamson, H. J., Pro, G., & Luna, C. (2022). Patterns of physical activity among women incarcerated in jail. J Correct Health Care.
- 18) Castle, C. L., Engward, H., & Kersey, T. (2021). Arts activity and well-being for visually impaired military veterans: a narrative discussion of current knowledge. *Public Health*, 194, 232-237.
- 19) Champlain, R., Williamson, H.J., Pinn, T.A. (2022). Barriers and facilitators to attending and being physically active during recreation time among women incarcerated. BMC Women's Health 22, 239. https://doi.org/10.1186/s12905-022-01831-w
- 20) Clemente-Faustino, J. A. R., & de Guzman, A. B. (2022). A narrative synthesis of qualitative studies on self-harming behavior in the correctional setting. *The Prison Journal*, 102(6), 718-744.
- 21) Cross, E. S., & Smith, R. (2022). The embodied neuroaesthetics of watching dance. In *Dance data, cognition, and multimodal communication* (pp. 163-181). Routledge.
- 22) Ebrahimi-Rigi, Z., Namjoo, Z., Jabarpour, M., Ahmadinejad, M., Ahmadipour, M., Mangolian Shahrbabaki, P., & Dehghan, M. (2023). Hospital challenges and managerial approaches to combat COVID-19 outbreak: a qualitative study in southeastern Iran. *BMC Health Services Research*, 23(1), 690.
- 23) Elkhawaga, M. M., Mohamed, A., El-Moaez, A., & Safety, M. E (2019). A Recreational Games Program for the Development of Some Sensory and Motor Skills for the Blind. Dept. Faculty of Physical Education –Tanta University.
- 24) Elbers, J. M., van Ginneken, E. F., Nieuwbeerta, P., Boone, M., & Palmen, H. (2022). The effects of reward systems in prison: A systematic review. *International Journal of Law, Crime and Justice*, *71*, 100556.
- 25) Engelstein, G., & Shalev, I. (2022). Building Blocks of tabletop game design: An encyclopedia of mechanisms. CRC Press.
- 26) Caruso, G. (2017). Public Health and Safety: The Social Determinants of Health and Criminal Behavior. UK, Researchers Links Books.

ISSN (Online):0493-2137

E-Publication: Online Open Access

Vol: 56 Issue: 11:2023

- 27) Cheng, A. L., Htut, Y., McDougall, K. H., & Marzano, L. (2019). Factors influencing inmate participation in prison-based programs: A systematic review of the literature. Journal of Correctional Health Care, 25(1), 33-49. doi: 10.1177/1078345818816897
- 28) Dennard, S., Tracy, D. K., Beeney, A., Craster, L., Bailey, F., Baureek, A., ... & Kothari, R. (2021). Working in a prison: Challenges, rewards, and the impact on mental health and well-being. *The Journal of Forensic Practice*, 23(2), 132-149.
- 29) Fadare, A.S., Paguia, B.D., Fadare, C.M. (2021). Challenges, Coping Mechanisms, and Success Stories of Neophyte Principals: Impact on School Leadership and Management. *International Journal of Science and Management Studies*. *4*(5); 182 194. http://dx.doi.org/10.51386/25815946/ijsms-v4i5p115
- 30) Fancourt, D., & Finn, S. (2019). What is the evidence on the role of the arts in improving health and well-being? A scoping review. World Health Organization. Regional Office for Europe.
- 31) Fang, W. T, Ng, E., & Chang MC. (2017). Physical Outdoor Activity versus Indoor Activity: Their Influence on Environmental Behaviors. Int J Environ Res Public Health, 14(7), 797. doi 10.3390/ijerph14070797.
- 32) Faiella, F., & Ricciardi, M. (2015). Gamification and learning: A review of issues and research journal of e-Learning and Knowledge Society11 (3): 13-21
- 33) Graupensperger, S., Gottschall, J. S., Benson, A. J., Eys, M., Hastings, B., Evans, M. B. (2015). Perceptions of groupness during fitness classes positively predict recalled perceptions of exertion, enjoyment, and affective valence: An intensive longitudinal investigation. Sport Exerc Perform Psychol, 8(3), 290-304. doi 10.1037/spy0000157. http://www.interior.gob.es/documents/642317/1202140/Informe_General_IIPP_2017_12615039X.pdf /9a3e9ad4-933d-422b-9992-3a0d3686102d [Ref list]
- 34) Gallant, D., Sherry, E., & Nicholson, M. (2015). Recreation or rehabilitation? Managing sport for development programs with prison populations. Sport Manag. Rev, 18, 45–56. doi: 10.1016/j.smr.2014.07.005.
- 35) García-Guerrero J., & Marco, A. (2015). Overcrowding in prisons and its impact on health. Revista Espanola de Sanidad Penitenciaria, 14(3), 106–113.
- 36) Gaes, G. G., & McGuire, T. P. (2018). Evidence-based practices in correctional settings: Examples of successful implementation and outcomes. Journal of Crime and Justice, 41(2), 172-187. doi: 10.1080/0735648X.2018.1429980
- 37) Gill, K., Rajan, J. R. S., Chow, E., Ashbrook, D., Williams, R. W., Zwicker, J., & Goldowitz, D. (2022). Investigating mouse motor coordination using quantitative trait locus analysis to model the genetic underpinnings of developmental coordination disorder. *bioRxiv*, 2022-06.
- 38) Giraldez-Hayes, A. (2022). 12 Arts and well-being. Applied Positive School Psychology.
- 39) Glade, S., Niles, S., Roudbari, S., Pezzullo, P. C., Dashti, S., Liel, A. B., & Miller, S. L. (2022). Disaster resilience and sustainability of incarceration infrastructures: A review of the literature. *International Journal of Disaster Risk Reduction*, 103190.
- 40) Gjestvang, C., Abrahamsen, F., Stensrud, T., & Haakstad, L. A. (2020). Motives and barriers to initiation and sustained exercise adherence in a fitness club setting—A one-year follow-up study. *Scandinavian journal of medicine & science in sports*, 30(9), 1796-1805.
- 41) Halden, K. (2019). Improving mental health outcomes through recreation programs in prisons. Current Opinion in Psychology, 30, 129-133. doi: 10.1016/j.copsyc.2019.01.016
- 42) Harandi, T. F., Taghinasab, M. M., & Nayeri, T. D. (2017). The correlation of social support with mental health: a meta-analysis. Electron Physician, 9(9), 5212–22.

ISSN (Online):0493-2137

E-Publication: Online Open Access

Vol: 56 Issue: 11:2023

- 43) Hedman, L., Wennberg, P., Lindqvist, A., & Lexén, A. (2016). Pervasive educational games: Lessons from the e-Adventure platform. International Journal of Game-Based Learning, 6(4), 18-34. doi: 10.4018/IJGBL.2016100102
- 44) Jauk, D., Gill, B., Caruana, C., & Everhardt, S. (2022). Systemic Inequality, Sustainability and COVID-19 in US Prisons: A Sociological Exploration of Women's Prison Gardens in Pandemic Times. In Systemic Inequality, Sustainability and COVID-19. 29, 185-209. Emerald Publishing Limited.
- 45) Jones, L., & Smith, T. (2018). The Benefits of Recreational Games in Correctional Facilities. Journal of Correctional Education, 69(3), 45-60.
- 46) Kaiser, K. A., Piquero, A., Keena, L., & Howley, C. (2022). Assessing the Institutional Barriers and Individual Motivational Factors to Participation in Prison-Based Programs. *Crime & Delinquency*, 00111287221114804.
- 47) Karageorghi, C.I. (2016). Sport and Exercise Psychology: The scientific application of music in sport and exercise: Towards a new theoretical model, 276–322.
- 48) Kelman, I. (2020). Disaster by choice: How our actions turn natural hazards into catastrophes. Oxford University Press.
- Kevin, W. B. (2019). Lack of Outdoor Recreation for D.C. Jail Prisoners. Published in Prison Legal, 45. https://www.prisonlegalnews.org/news/2019/may/3/lack-outdoor-recreation-dc-jail-prisoners-dehumanizing/
- 50) Kim, K. S., Lor, M., & Rakel, B. (2023). Evaluation of art making activity as a pain management strategy for older adults and their experience using an art making intervention. *Geriatric Nursing*, *50*, 109-116.
- 51) Khai, T. S. (2022). Social determinants of health and well-being among irregular migrant workers in Malaysia: A case study of Chin people from Myanmar.
- 52) Knowles, S. (2020). How to be Insightful: Unlocking the Superpower that Drives Innovation. Routledge.
- 53) Latessa, E. J., Cullen, F. T., & Gendreau, P. (2018). Beyond correctional quackery: Professionalism and the possibility of effective treatment. Federal Probation, 78(1), 7-15. https://www.uscourts.gov/sites/default/files/fedprob/2014-03-beyond-correctional-quackery.pdf
- 54) Lee, A. Y., Kim, S. Y., Kwon, H. J., & Park, S. A. (2021). Horticultural therapy program for mental health of prisoners: Case report. *Integrative medicine research*, *10*(2), 100495.
- 55) Link, A. J., & Williams, D. J. (2017). Leisure Functioning and Offender Rehabilitation. International Journal of Offender Ther Comp Criminology, 61(2), 150-170. doi: 10.1177/0306624X15600695. Epub 2016 Jul 28. PMID: 26449773.
- 56) Mace, M., Kinany, N., Rinne, P., Rayner, A., Bentley, P., & Burdet, E. (2017). Balancing the playing field: collaborative gaming for physical training. J Neuro Engineering Rehabil, 14, 116 https://doi.org/10.1186/s12984-017-0319-x
- 57) Martos-Garcia, D., Devis-Devis, J., & Sparkes, C.A. (2022). Volunteering for Research in Prison: Issues of Access, Rapport and Ethics and Emotions during Ethnography. International Journal of Qualitative Methods.21: 1–12. dOI: 10.1177/16094069221086096
- 58) McNabb, E. (2022). *Development of a Physical Movement Program for Older Adults* (Doctoral dissertation, California State University, Long Beach).
- 59) Mondal, M. (2023). The Impact of Recreational Games in our Society. Indian Journal of Yoga Exercise & Sport Science and Physical Education, 7(1), 16–19. https://doi.org/10.58914/ijyesspe.2022-7.1-2.4
- 60) Mohsan, S. A. H., Othman, N. Q. H., Li, Y., Alsharif, M. H., & Khan, M. A. (2023). Unmanned aerial vehicles (UAVs): Practical aspects, applications, open challenges, security issues, and future trends. *Intelligent Service Robotics*, *16*(1), 109-137

ISSN (Online):0493-2137

E-Publication: Online Open Access

Vol: 56 Issue: 11:2023

- 61) Micklethwaite, D., & Earle, R. (2021). A Voice Within: An Autoethnographic Account of Moving from Closed to Open Prison Conditions by a Life-Sentenced Prisoner. *The Howard Journal of Crime and Justice*, *60*(4), 529-545.
- 62) Miller, W. T., Burton, A. L., Jonson, C. L., & Burton, V. S. (2022). The creation of a correctional officer trainee self-efficacy index: An application of item response theory. *Journal of Forensic Psychology Research and Practice*. 22(3), 285-306.
- 63) Minton, T. D., Zeng, Z., & BJS Statisticians. (2016). Jail Inmates in 2015. Bureau of Justice Statistics. https://www.bjs.gov/content/pub/pdf/ji15.pdf
- 64) National Alliance for Arts, Health, and Wellbeing (APPG). (2017). https://www.culturehealthandwellbeing.org.uk/appginquiry/Publications/Creative_Health_Inquiry_Report_2017_-_Second_Edition.pdf
- 65) Nkosi, N., & Maweni, V. (2020). The Effects of Overcrowding on the Rehabilitation of Offenders: A Case Study of a Correctional Center, Durban (Westville), KwaZulu Natal. The Oriental Anthropologist, 20(2), 332–346. https://doi.org/10.1177/0972558X20952971
- 66) Ntoumanis, N., ThØgersen-Ntoumani, C., Quested, E., & Hancox, J. (2017). The effects of training group exercise class instructors to adopt a motivationally adaptive communication style. Scandinavian Journal of Medicine and Science in Sports, 27, 1026–1034.
- 67) Norman, M, (2017). Sport in the underline of a total institution: Social control and resistance in Canadian prisons", International Review for the Sociology of Sport, 52, 611.
- 68) Obadiora, A.H. (2016). The influence of sport participation on quality-of-life perceptions among inmates in Nigerian prisons. Journal of Sport for Development, 4(6), 36-43.
- 69) Ondras, M.B., & Alvero, J.R. (2022). Senior High Program in Prison Culture: Its Rehabilitative effect during and after Incarceration. THE American Journal of Humanities and Social Sciences Research. 05(01), 21-30.
- 70) Ortega, V. G., Abad-Robles, M. T., Robles, R. J., Durán, G. L. J., Franco, M. J., Jiménez, S. A., & Fuentes-Guerra, F. J. (2020). Analysis of a Sports-Educational Program in Prisons. Int J Environ Res Public Health, 17(10):3467. doi 10.3390/ijerph17103467. PMID: 32429234; PMCID: PMC7277715.
- 71) Ortiz, M., Bullen, M., Bekhet, A., & Alvarez, C. (2018). An exploratory study on serious games for inmates' reentry preparation. Journal of Correctional Education, 69(1), 43-63.
- 72) Pasat, A. O. (2022). Detention Conditions Reflected in the Jurisprudence of Article 3 of the European Convention on Human Rights. *Persp. L. Pub. Admin.*, *11*, 189.
- 73) Pérez-Ordás, R., Nuviala, A., Grao-Cruces, A., & Fernández-Martínez, A. (2021). Implementing service-learning programs in physical education; teacher education as teaching and learning models for all the agents involved: A systematic review. *International Journal of Environmental Research and Public Health*, 18(2), 669.
- 74) Physical Activity Guidelines Advisory Committee (2018). Physical activity guidelines advisory committee scientific report. Washington: US Department of Health and Human Services.
- 75) Ranasinghe, N., Do, E. Y., Karunanayaka, K., & Falk, T. H. (2017). Effects of gameplay on spatial visualization skills using consumer-grade virtual reality.
- 76) Sanchez-Lastra, M. A., de Dios Álvarez, V., & Pérez, C. A. (2019). Effectiveness of prison-based exercise training programs: a systematic review. *Journal of Physical Activity and Health*, *16*(12), 1196-1209.
- 77) Santos, A. (2016). Overcrowding in PH Prisons: Is Tech the Solution? retrieved from https://www.rappler.com/move-ph/130525-overcrowding-philippines- prisons-technology
- 78) Seaman, C. B., & Tran, T. (2021). Intellectual Property and Tabletop Games. *Iowa L. Rev.*, 107, 1615.
- 79) Sicco, B. (2022). The Value of Craft Art in Exploring Identity, A Critical Review of the Literature.

ISSN (Online):0493-2137

E-Publication: Online Open Access

Vol: 56 Issue: 11:2023

- 80) Staiano, W., Marcora, S., Romagnoli, M., Kirk, U., & Ring, C. (2023). Brain Endurance Training improves endurance and cognitive performance in road cyclists. *Journal of science and medicine in sport*.
- 81) Stevens, M., Rees, T., Coffee, P., Steffens, N. K., Haslam, S. A., & Polman, R. (2017). A social identity approach to understanding and promoting physical activity. Sports Medicine, 47, 1911–191810.12659/msmbr.909022. PMID: 29674605; PMCID: PMC5930973.
- 82) Squire, K., Wells, G., Anderson-Coto, M. J., & Steinkuehler, C. (2023). Casual Games, Cognition, and Play across the Lifespan: A Critical Synthesis. *ACM Games: Research and Practice*.
- 83) Thompson, W. R., Sallis, R., Joy, E., Jaworski, C. A., Stuhr, R. M., & Trilk, J. L. (2020). Exercise is medicine. *American journal of lifestyle medicine*, *14*(5), 511-523.
- 84) Triska, A., Dzulfikar, M. H., & Supriatna, A. K. (2023). The dynamics of prisoner population model in Indonesia with a rehabilitation regulation for drug users to overcome prison overcapacity issue. *Jambura Journal of Biomathematics (JJBM)*, *4*(1), 55-62.
- 85) Trotter, R., Lininger, M., Camplain, R., Fofanov, V., Camplain, C., & Baldwin, J. (2018). A survey of health disparities, social determinants of health, and converging morbidities in a county jail: a cultural-ecological assessment of health conditions in jail populations. Int J Environ Res Public Health, 15(11), 2500.
- 86) Valero-Garcés, C. (2022). Prisons as communities of practice: An example of situated and collaborative learning in translation and interpreting. *The Journal of Specialised Translation*, 37, 99-115.
- 87) Vieira, A. A., Ribeiro, S. A., de-Siqueira, A. M., Galesi, V. M., dos-Santos, L. A., & Golub, J. E. (2015). Prevalence of patients with respiratory symptoms through active case finding and diagnosis of pulmonary tuberculosis among prisoners and related predictors in a jail in the city of Carapicuíba, Brazil. Rev Bras Epidemiol, 13, 641-50.
- 88) Welch, G. F., Biasutti, M., MacRitchie, J., McPherson, G. E., & Himonides, E. (2020). The impact of music on human development and well-being. *Frontiers in psychology*, *11*, 1246.
- 89) Werthmann, C. (2021). *Informal urbanization in latin america: collaborative transformations of public spaces.* Routledge.
- 90) Wilain, X. (2022). Card Games or Board Games? Published by Ludology https://ludogogy.co.uk/card-games-or-board-games/
- 91) Willox, S., Morin, J., & Avila, S. (2023). Benefits of individual preparation for team success: planning for virtual team communication, conflict resolution and belonging. *Team Performance Management: An International Journal*, 29(1/2), 1-14.
- 92) Wu, L., Sheehan, R., & da Costa, M. P. (2023). Volunteering in prisons: a systematic review and narrative synthesis. *Public Health*, 220, 155-164.
- 93) Zimmermann, S. (2023). The refugee in contemporary german-language literature: mobility, personhood, place (Doctoral dissertation, University of British Columbia).