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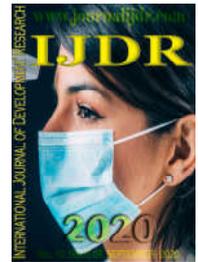
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RESEARCH ARTICLE

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AGGRESSION MANAGEMENT STRATEGIES: INMATES RESPOND POSITIVELY TO THE USE OF SOCCER AS A RESOCIALIZATION PROGRAM

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ABSTRACT

Background: Penal institutions have the rehabilitation and resocialization of criminals as their primary aim, transforming and reintegrating them back into society as productive citizens. One possible way of accomplishing this is through the practice of sports, which may be beneficial for the reintegration of these detainees into society. **Objective:** To investigate the effect of playing soccer on the aggression of inmates at a maximum-security prison. **Methods:** This was a descriptive and quantitative cross-sectional study to characterize the rate of aggression among those who practice soccer and those who do not, and to assess if the mean aggression score of detainees is affected by interference from playing soccer. The study population consisted of inmates at a maximum-security prison. Participants were divided in two groups: those who practiced soccer (n=100) and those who did not (n=100) from a population of 523 inmates. The Buss & Perry Aggression Questionnaire was used to quantify aggression, and the student t test was used for all comparisons. **Results:** Mean aggression score was 2.07 ± 0.30 for those who played soccer and 3.55 ± 0.37 for those who did not, $p < 0.0001$. For the specific components of aggression, physical and verbal aggression, anger, and hostility, we also identified statistically significant differences ($p < 0.0001$) between groups. **Conclusions:** Detainees who play soccer present less overall aggression, as well as in each of the aggression components. From our study, it was possible to conclude that there is a positive relationship between playing soccer and a lower level of aggression among detainees.

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INTRODUCTION

Penal institutions have the rehabilitation and resocialization of criminals as their primary aim; this result is pursued through a mean to repair the harm they caused with the application of a prison term, thereby preventing new offences through the fear of what new punishment will potentially cause the offenders, in addition to providing regeneration, in which they should be transformed and thus reintegrated into society as productive citizens (Figueiredo Neto *et al.*, 2009). These institutions have historically constituted a locus in which the nature of the internal environment favors aggression. The detainee's own vital and legal status stimulates aggressive behavior. It is observed that no matter how fair detention is and carried out

while respecting the dignity and human rights of detainees it causes a radical change in their lives. Amongst these we highlight: restrictions of movement, food, sleeping and waking times, hygiene and toilet use, and others. In addition to these restrictions, which are considered of biological nature, there are those of psychological and social order, such as having to adjust to other detainees, staff, overcrowding, etc. Such restrictions require considerable physical and mental effort, which contribute to the production of emotional tension, constituting elements that sum up to trauma and shape a scenario of stress (Miotto, 1980). For which prisons, despite operating from ancient times up to the present day as the main means of repression against crime, hold a key role for the reintegration of inmates into society. From this perspective, the

practice of sports in prison may be beneficial for the reintegration of these detainees into society (Moraes, 2012). Seeking the rehabilitation of people, who have committed crimes is a challenging feat; in sport and more specifically in playing soccer the individual begins to worry more about health, collective work, morality, autonomy, respect for others and sociability. The addition of features like quick thinking, spatial sense, concentration, development of critical thinking and controlling emotions favors the belief that effort has its rewards and it also directs them on a more productive path (Scaglia, 2003). In considering that aggression is characterized by behavior with the purpose of causing injury or harm to other people, not just through physical aggression, but also through intimidation (verbal or nonverbal), and considering characteristics such as mutual respect and control of emotions. We seek, in this study, to assess whether the mean level of aggression of inmates in the prison system is affected through the intervention of playing soccer (Bartholomeu & Machado, 2008). The idealization of this study resulted from empirical observation that the inmates who participated in sports activities were calmer and more adaptable regarding rules in the prison unit, while those who did not practice were more restless. The intention to establish the relationship between soccer practice, as a sports activity, and aggression in detainees at a maximum security prison aims to contribute to actions focused on social and educational rehabilitation, and consequent transformation in the conduct of these to avoid possible relapses, and the breach of existing laws. In this context, this study had as objective to investigate the effect of soccer practice on the aggression of inmates at a maximum-security prison

MATERIALS AND METHODS

This study was conducted at the Regional Industrial Penitentiary of Sobral, a maximum-security prison, located in the municipality of Sobral – Ceará, in the northeast of Brazil. This public institution is managed by the state and holds up to 500 male inmates sentenced to a maximum-security regime. Participants were selected using non-probabilistic sampling of quotas, who were chosen proportionally regarding their playing or not of soccer within the prison. Thus, the sample consisted of two groups: those who practiced soccer (n=100) and those who did not practice soccer (n=100), totaling 200 participants from 523 inmates serving sentences at the time of the study. In this study, we used the Buss & Perry Aggression Questionnaire (BPAQ), proposed by Buss & Perry (1992), and adapted to the Portuguese language by Gouveia *et al* (2008). The Aggression Questionnaire according to the Buss & Perry (1992) Scale, adapted to the Brazilian context by Gouveia *et al* (2008) consists of 26 items, three items had to be discarded since they could be interpreted ambiguously by the participants; despite the fact that, it is appropriate to retain the original size of this instrument, there was no agreement among the translators on the best manner to adapt them to Brazilian culture. Therefore, the Portuguese version of the object of this study consists of 26 items, adopting the same instructions and original response format, in which the participant answers on a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree).

The questionnaire has four subscales: Physical Aggression (8 items), Verbal Aggression (4 items), Anger (6 items) and Hostility (8 items), representing four factors, which comprise the aggression components. The first two factors (physical and

verbal aggression) represent the instrumental component; anger is the emotional component; and hostility represents the cognitive component. This was a descriptive and quantitative cross-sectional study, to characterize the rate of aggression among those who practice soccer and those who do not, to assess if the mean score of aggression of detainees is affected by interference from playing soccer. Microsoft Office Excel 2007 and the statistical software package SPSS for Windows, version 17.0, were used to build the databases and perform statistical analysis. Continuous variables were expressed through means and standard deviation. The Student t test was used for analysis between mean aggression scores. Limit for statistical significance was set at $p < 0.05$. This study was conducted after approval by the Directory at the Regional Industrial Penitentiary of Sobral and approved by the Ethics Committee for Research at the State University Vale do Acaraú under protocol number 869,063.

RESULTS

Table 1 presents the mean aggression scores of detainees for those who practice soccer and those who do not, as well as the instrumental (physical and verbal aggression), emotional (anger) and cognitive (hostility) components.

Table 1. Mean aggression scores according to the Buss & Perry Aggression Questionnaire (BPAQ), adapted to the Brazilian context by Gouveia *et al.*, Sobral, Ceará, 2014

Variables	Play soccer (n = 100)	Do not play soccer (n = 100)	p-value ^a
Aggression (total)	2.07±0.30	3.55±0.37	<0.0001
Physical aggression	2.05±0.33	3.58±0.38	<0.0001
Verbal aggression	2.12±0.43	3.55±0.45	<0.0001
Anger	2.05±0.37	3.55±0.42	<0.0001
Hostility	2.09±0.34	3.51±0.39	<0.0001

± Standard deviation; ^a analyzed using Student t test.

The mean aggression score for those who play soccer was 2.07 (±0.30) and 3.55 (±0.37) for those who do not, $p < 0.0001$, respectively. For the specific components of aggression – physical and verbal aggression, anger, and hostility, we also identified significant statistical difference between the groups, $p < 0.0001$ (Table 1).

DISCUSSION

This study had as objective to investigate the effect of playing soccer on the aggression of detainees, for which we investigated two key questions: a) is the mean level of aggression of detainees within the prison system affected by interference from soccer practice; b) is there difference between those who play soccer and those who do not regarding the aggression components analyzed in this study: instrumental (physical aggression and verbal aggression), emotional (anger) and cognitive (hostility). The results show that both aggression in general as in each of the components investigated: instrumental, emotional and cognitive present lower meanscores in the group where the detainees play soccer when compared to the group of those who do not. Considering these results, this study endorses the perspective on the explanation of human aggression as a learned phenomenon; it is the result of social and cultural norms and experiences of socialization, as we witnessed a positive relationship between the variable of playing soccer and the level of aggression among detainees. In this sense, our study corroborates with the assertion that when

dealing with problematic aggression we should consider the socio-psychological explanations, which defend that social factors are capable of controlling and maintaining aggressive behavior, in such manner that if there are appropriate interventions in the environment, such as, for instance, playing soccer in prison, which we investigated in this study, aggressive behavior such as physical aggression, verbal aggression, anger and hostility, tend to be reduced (Korsakas & de Rose Junior, 2002).

Aggression is a phenomenon that is present in the daily routine of the criminal justice system, and it is up to us to understand it, seeking to comprehend the positive as well as the negative aspects. In this context, sport provides the individual with the opportunity to have joyful moments and experience diverse positive effects such as social interactions, overcoming challenges in a healthy manner, increasing skills and physical development. A safe and positive atmosphere denotes that individual skills and understood competence are suitable for the challenge that sport offers. From this point of view, sport is considered as a resource that can contribute to the development of the individual and reducing aggressive behavior and its effects. For which, it is essential that the methodology used is appropriate, in other words, that the resources and techniques are compatible with the objectives for full physical and mental development. Modern sport, as described by Bracht (1997) may be considered as a disciplinary institution for the body, which enables us to think that soccer is also a disciplinary institution for the body.

In absolute numbers, Brazil has the fourth largest prison population in the world, behind only the United States, China, and Russia. There has been a disproportionate increase in the prison population in Brazil in relation to the availability of penal institutions. Between 2000 and 2014, the incarceration rate increased 119%, which complies with the estimate that by 2075, if we maintain this rate of incarceration, one in ten people will be deprived of liberty (Brazil, 2014). With the consequent increase in conflicts caused by poor living conditions in overcrowded prisons, it has become relevant to establish programs that can productively direct the strength of these men towards their development as citizens (Mameluque, 2006). Sport supports self-awareness and helps digest and compensate our everyday failures. Acting, in this light, as an outlet for aggression, reducing the feeling of inferiority, since everyone is equal, generating discipline and satisfaction, transforming 'animalism' in humanity; it is order in chaos, made from the lack, the need for freedom, and for momentum from the obstacle (Coelho, 2008). From this perspective, the pedagogy of sport deals with the relationship between the sports environment, the sport practiced and the purpose of educational practice. An innovative view of sport pedagogy is defined by two benchmarks: technical-tactical and socio-educational (Paes, 1996).

From analysis, it was identified that through the interaction of rules in sport and games, in which some consent certain forms of aggression, some people are able to put up with more aggression than others and distribute the best of their attitudes, assessing the seriousness of their acts (Balbino *et al*, 1997). Peres (2005) points out that sport, for those who practice it, transforms hostile feelings into something useful (sublimation) to protect the life instinct, the ego and the mechanisms of defense, in which the individual gets rid of his aggressive impulses and is launched into the environment in a

constructive manner, accepted and valued by society. Sport may help, and the results of our study point in that direction, in the field of aggression, avoiding real manifestations. Activities should be promoted, including sports, in which the individual in a symbolic context, may exercise aggression (Balbino *et al*, 1997). In the sports context, in the so-called 'contact sports', as well as building a favorable environment for natural physical contact between participants and opponents, there are often contains rules and principles, implicit or explicit, which provide legitimacy and promote aggressive behavior, not merely violent acts. The data from our study collaborate with those presented by Cruz (1996), Kavussanu *et al* (2009); and Rutten *et al* (2008) in identifying more prosocial than antisocial behavior between soccer players. It is worth noting the similarities between the data from our study and the study by Chow *et al* (2009). regarding the instrumental dimension of aggression (physical aggression and verbal aggression), in which the authors analyzed the predictive potential of socio-environmental factors on the probability of aggression between young soccer players.

From the ramifications of our study, it is also worth highlighting that the components of emotional (anger) and cognitive (hostility) aggression are similar, in the sports context, in one study Bolgar *et al* (2008). concluded that athletes with higher levels of anger control demonstrated greater self-control, ability to change the situation and more problem and emotion focused coping when compared to those who presented lower levels. Our study investigated the feasibility of soccer as a tool to minimize aggression among inmates at a prison. Sport in general, and soccer, is recommended as a public policy to be adopted in the penitentiary system. Since, soccer seems to be a suitable sport to channel and reduce the mean level of aggression among detainees in the different dimensions - cognitive (hostility), emotional (anger), instrumental (physical and verbal aggression); a basic requirement for the engagement of the detainee in the rehabilitation process. This is possible if the individual is offered the chance to be independent and an atmosphere of emotional control is provided. Under such circumstances, sport may broaden the initiative and independence of the individual, as well as their identity and self-esteem. Furthermore, our findings may be used as a basis for public policies focused on the resocialization process within the prison system with the participation of sport as a tool capable of contributing to the control of emotions and reducing the aggressive impulses of detainees, improving their internal socialization and making them more apt to live peacefully with others.

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