EFFECT OF A PROGRAM OF SPORT-RECREATIONAL ACTIVITIES ON AGGRESSION AND PROSOCIAL VALUES AMONG YOUTH LIVING IN SOCIAL RISK

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ABSTRACT

Purpose: This research is intended to analyze the effect of a sports and recreational activities program on aggression and prosocial values among youth living under conditions of social risk.

Methods: The study included 28 young males (12.75 ± 1.40 years), from the Guararí community in Heredia, Costa Rica. An intervention consisting of 25 sessions of sports and recreational activities was carried out, and aggressive behaviors and prosocial values were recorded.

Results: The results showed a decreasing tendency in verbal, physical, reactive and proactive aggression, and a linearly increasing tendency in prosocial values: respect, cooperation, and self-control.

Conclusion: The data reported are in line with those found in the scientific literature. Sports and recreational activities have a positive impact through reducing aggressive behaviors and fostering prosocial values. Supporting training programs in which human movement contributes to the development of favorable behavioral changes can improve the life quality of adolescents and their insertion in society, leading to reduction in social risk indices.

Key words: sports-recreational activities, aggression, youth at-risk, cooperation

EFECTO DE UN PROGRAMA DE ACTIVIDADES DEPORTIVO-RECREATIVAS SOBRE LA AGRESIÓN Y VALORES PROSOCIALES EN JÓVENES EN RIESGO SOCIAL

RESUMEN

Propósito: Determinar el efecto de un programa de actividades deportivo-recreativas sobre la agresión y valores prosociales en jóvenes en condición de riesgo social.

Metodología: Se evaluaron 28 jóvenes de sexo masculino (12.75 ± 1.40 años), de la comunidad de Guararí de Heredia. Se realizó una intervención de 25 sesiones de actividades deportivo-recreativas; mediante una hoja de registro se anotaron las conductas agresivas y valores prosociales.

Resultados: Los resultados evidenciaron una tendencia a la disminución de la agresión verbal, física, reactiva y proactiva, y un aumento de los valores prosociales: respeto, cooperación y autocontrol. Se mostró una tendencia lineal al aumento de los valores prosociales. Conclusión: Los datos registrados son consistentes con lo reportado en la literatura científica. Las actividades deportivas-recreativas presentan un impacto positivo sobre las conductas agresivas y valores prosociales. Apostar por programas formativos en las que por medio del movimiento humano se logren modificaciones conductuales favorables, mejora la calidad de vida de los adolescentes, así como su inserción y disminución de índices de acciones de riesgo social.

Palabras clave: actividades deportivo-recreativas, agresión, riesgo social, cooperación

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INTRODUCTION

Adolescence is a phase during which distinct types of changes and developments in biological, psychological, and social areas take place (Escartí, Gutiérrez, Pascual, Martínez and Chacón, 2006). Among the elements promoting these changes, the social environment plays an important role in the development of such personal features as leadership, seeking acceptance by others, autonomy, and independence from parents (Buelga, Musitu, and Murgi, 2009; Escartí et al., 2006).

The maturation and learning process experienced by adolescents allows them to acquire their own knowledge, attitudes and values, behaviors, perspectives, and beliefs (Casas et al., 2004). Adolescents are exposed to the risk of developing inappropriate social behaviors, non-observance of rules, low self-esteem, low tolerance to frustration, lack of expectations, and reduction of learning abilities, leading them to maladaptive behaviors (Manzano, 2005). This cognitive and socio-emotional development is at the same time influenced by socioeconomic factors related to living under conditions of social risk (González and Guimeno, 2013).

Adolescence is characterized by vulnerability to situations in which the lack of values and the emergence of aggressiveness are common (Odgers and Russell, 2009; Hunhn, 2008; UNICEF-CEDAL, 2010). In the United States, for instance, some studies reported that approximately 20% of adolescents were exposed to aggressive behaviors, leading them to suffer anxiety, depression, and social problems as a consequence of living in a violent environment (Odgers and Russell, 2009).

Aggression is a hostile behavior that is coupled with low capacity to control emotional responses (Odgers and Russell, 2009). Recent investigations have searched for causes of adolescents becoming involved in violent activities, drug consumption, and criminal actions; possible causes may include a lack of social abilities, responsibility, and self-control, as well as belonging to certain groups, or living in a certain family environment (Escartí et al., 2006).

In Bandura’s theory, (2001), aggression is seen as a behavior acquired through reinforcers, affecting physical, cognitive, and emotional aspects that make up an individual. According to a review of concepts and classifications of aggression by Carrasco and González (2006), aggression has an intentional nature, negative consequences, and is expressed through multiple behaviors.

Authors describe a clinical typology of aggression, classifying it as proactive or reactive. Proactive aggression is controlled behavior without the mediation of emotions (Carrasco and González 2006); it is motivated in an instrumental and planned way (Andreu, Peña and Larroy, 2010). On the other hand, reactive aggression occurs as a response to a threatening stimulus, either physical or verbal, and the situation is not cognitively evaluated (Carrasco and González...
negative affective conditions such as anger, frustration and provocation also mediate in reactive aggression behaviors (Andreu, et al., 2010). Aggression is also classified according to its nature, as verbal or physical. Verbal aggression consists of an oral response resulting from a threat or offense towards another person; on the other hand, physical aggression consists of an attack of one organism on another with weapons or body parts, involving motor activity (Carrasco and González, 2006).

It has been said that all human beings have a set of negative emotional experiences (Bynum, et al., 2010), and that contexts of poverty and social inequality have negative effects on psychological health among socially disadvantaged youth (Molnar, Cerda, Roberts and Buka, 2008). Additionally, situations of dysfunctional families make it difficult for adolescents to cope (Persike and Krenke, 2011), and increase their vulnerability when exposed to dangerous situations (Powell et al., 2011).

The issue of aggression in the population at social risk has been addressed by some authors who have proposed sports as a way to control aggressive behaviors (Sokol-Katz, Kelly, Basinger-Fleishman, Henry, 2010; Gaines and Barry, 2008). However, the proposal of intervention strategies based on theoretical-practical concepts does not solve the lack of values and high levels of aggression among youth (Churruca, 2014; Ziccardi et al., 2001), while blaming the social context is not a convincing solution (López, Cruces, Lach and Ortiz-Juaréz, 2014).

Quantitative studies regarding aggressive behaviors and indicators of physical activity are scarce (Nicolás and Libia, 2011; Mutz and Baur, 2009). On the other hand, some studies indicate that sports are a social outlet that help people cope with aggressive situations (Harati, Nasiri and Salehian, 2011), gain higher levels of self-esteem and efficacy, improve their emotional well-being (Donaldson and Ronan, 2006), and lower their levels of aggression in marginal urban populations (Fite and Vitulano, 2011).

Implementing sports activities as part of educational plans among adolescents who live in conditions of socioeconomic disadvantage has an effect on the reduction of their social vulnerability through improving self-esteem, development of initiative and autonomy, and decision-making abilities, among others (Manzano 2005; González and Gimeno, 2013). Other studies indicate that these types of programs allow working on rules, communication abilities, team work, better control of violent reactions, acceptance of mistakes without suffering frustration, and tolerance regarding others’ abilities (Vásquez and Díaz-Aberasturi, 2005).

Some studies focus on physical exercise as a way to control levels of aggressiveness in populations at social risk (Knorth, Klomp, Van Den Bergh and Noom, 2007). Implementation of positive sports training programs using
strategies to cope with aggression has a considerable impact on reducing aggressive behaviors (Taliaferro, Rienzo, and Donovan, 2010). Other benefits gained through sports practices for reducing aggressiveness levels are increasing social insertion, and helping to control aggressive behaviors (Burt and Butler, 2011; United Nations, 2003; Wells and Banning, 2008; Willemse, Smith and Van Wyk, 2011).

The fundamental objective of these programs in populations at social risk is to offer activities that allow youth to successfully overcome different day-to-day situations that they are exposed to in their environments, in which they are victimized, leading them to a predisposition towards aggressive behavior and the justification of violence (Orue, 2012). It is known that children who perceive violent behavior in their surroundings display aggressive behaviors themselves, and have a high probability of becoming violent persons. There are also comparative studies between boys and girls in different social contexts, which show that those living under conditions of social risk are more prone to display aggressive behavior, compared to children living in non-violent contexts (Chaux, 2003).

Implementing sports programs whose objective is the formation of values leads to the promotion of positive attitudes and behaviors, and the reduction of levels of aggression (Sáenz, Gimeno, Gutiérrez and Garay, 2012). The environments of urban-marginal populations are characterized as having negative influences as the result of drug consumption, criminal activities, and perceived aggression or violence (Briceño-León et al., 2005, Cerbino, 2006). Therefore, an appropriate pedagogical program may contribute to the development of strategies for improving positive attributes of reality, especially among youth (Jiménez and Durán, 2005). The development of positive attitudes translates into prosocial behaviors that contribute in social, academic, cognitive and vocational areas, as well as to having a positive outlook, and the creation of positive relationships with persons, including helping others, sharing with others, collaborating with or supporting others, developing a sense of right and wrong, and a sense of sympathy and empathy (Mestre, Samper, Tur, Cortés and Nácher, 2006; Serrano, 2014). Some authors indicate that adolescents are exposed to social variables such as low levels of self-control and respect towards others (Mestre, Samper, Tur, Cortés and Nácher, 2006; Peregrín, Garcés de Los Fayos and Cantón, 2010).

Using sports to assist in the development of values has been recently used under the concept of Positive Youth Development (PYD) sport programs, which operate from a perspective of positive psychology, seeking to improve development of intrinsic skills among youth, such as critical evaluation, tolerance, and autonomy, and including the promotion of strategies for increased efficacy of individuals in their local and more global contexts (Escarti, European Journal of Human Movement, 2016: 37, 143-162).
Buelga, Gutiérrez and Pascual, 2009; Escartí et al., 2006; Pascal, Escartí, Llopis and Gutiérrez, 2011; Wright and Li, 2009).

Different studies based on the effects of sports practices, have reported evidence and support their results on the physical, psychological, and social effects on human beings (Forneris, Camiré and Trudel, 2012, Fraser, Côté and Deakin, 2005; Van Rheenen, 2011; Wells and Banning, 2008; Wright and Li, 2009). There is also evidence that sports practices contribute to promote integral development in the learning process in different age groups, under specific conditions such as those found in Positive Youth Development sports programs (Acuña and Acuña, 2011; Acuña and Acuña, 2011; Garaigordobil, 2012), including personality changes as sports practices promote values and virtues (Donaldson and Ronan, 2006; Powell et al., 2011). Sports practices also contribute to promote solidarity and prosperity among youth (Jones, Dunn, Holt, Sullivan and Bloom, 2011; Wells and Banning, 2008), providing adolescents with the tools for practicing prosocial attitudes and values, and increasing analytical capacity, reflection, and insight about their behavior (Pelegrín, Garcés de los Fayos and Cantón, 2010).

Positive sport activities have been implemented among adolescents at social risk, under social and personal responsibility programs, resulting in improvements in their perceptions of well-being, positive attitudes, and values as a result of the integration of sport activities into their lives (Forneris, et al., 2012; Wright and Li, 2009; Duran, Gómez, Rodríguez and Jiménez, 2000; Escartí et al., 2006).

These sports programs allow adolescents at social risk the opportunity to develop mechanisms to cope successfully with the challenges they face in their day-to-day lives through competitive transference from sports (Jiménez and Durán, 2005), and prevent their exposure to negative effects of situations in their neighborhood environments (Acuña and Acuña, 2011; Araya, Arce, Arroyo, Cabezas, and Curcó, 2011; Bereguí, Garcés de los Fayos, 2007; Cecchini, Fernández, González and Arruza, 2008; Gil, 2006; Roque, 2009; Vila and Martín, 2012). Additionally, impacts of these programs on adolescent values have been reported (Cecchini et al., 2011; Donaldson and Ronan, 2006), such as improved self-control, self-esteem, empathy, effort, autonomy, cooperation and leadership, along with positive behavior changes in problem students (Pardo, 2008). It is important to emphasize that adequate structuring of the implementation of these programs avoids weakening of their positive effects (Mutz and Baur, 2009).

The purpose of the present study is to measure the effect of a recreational activities program on aggression and values among youth at social risk, seeking to provide relevant data for implementing different coping strategies for them.
Therefore, the hypothesis of this present study refers to the fact that young people at social risk improve their aggressive behavior and prosocial values through physical-recreational activities.

**Method**

The methodology developed was descriptive and observational, which consists on an observation and recording normal situations of a certain fact without interfering with them (Manterola and Olzan, 2014).

**Participants**

Twenty-eight male adolescents participated, with an average age of 12.75 ± 1.40 years, from the socially disadvantaged “Cuenca-Norte” sector of the community of Guararí, in the province of Heredia. An observation sheet was prepared for recording behavioral data associated with aggression in each session, and for the analysis of the sessions conducted.

**Measurement**

The structure of the observation sheet was designed using the *reactive proactive aggression questionnaire (RPQ)* of Raine et al., (2006), where gestures observed are classified as: *verbal aggression gestures* (discussions, shouts and screaming, threats, insults and disparagement), *physical aggression gestures* (attacks and use of weapons), *proactive aggression gestures* (hostile reaction, anger, explosiveness and impulsiveness), and *reactive aggression gestures* (premeditation and instrumental behavior). An observation sheet was also prepared for recording data related to values expressed through behaviors such as cooperation, self-control, and respect in each session, and for the analysis of the sessions. These measurements were conducted through participant observation techniques that devise a strategy for the analysis of sessions performed in the group that is under investigation. The type of conducted observation is known as selective-type, which sets out to find additional data during the research process (Flick, 2004). Likewise, the content analysis technique was used. It is a technique and/or a group of procedures that interpret communication products such as texts, talks, and discussions, among others. Qualitative research applies this technique with the purpose of revealing the hidden content of the communication product by counting units, codes, and categories to process relevant data of the information (Piñuel, 2002).

The application and training protocol for the observation technique and content analysis of the aggression variables and prosocial values was conducted by a professional in psychology where it was previously explained through an open lecture with the four dimensions of aggression and the most common examples along with the relevant attitudes towards prosocial values.
once the lecture ended. We proceeded to assign one person who acted as an assessor of gestures and actions of prosocial values, whereby throughout the sessions, she was taking notes in a sheet where the type of gesture is divided by two columns (verbal aggression, physical aggression, proactive aggression y reactive aggression gestures).

**Procedure**

Professors of Human Movement Sciences and Life Quality of the Universidad Nacional assisted in this investigation. Leaders of the Development Association of the community of Guararí in Heredia, families of the community, and professors and students of the Universidad Nacional were contacted personally and by telephone, and meetings were held with those contacted.

A 25-session program of sport-recreational activities was designed and implemented twice a week in one-hour sessions. Each session was led by a professional of Human Sciences Movement, recreational, Physical Education and Physical Health Promotion. The session was divided into an initial phase consisted of welcome protocol and background of each session. Main phase consisted of the development of sport-recreational activities based on pre-sport football, basketball, athletics, wrestling and volleyball. And finally, a final phase based on a social activity and closure (each session was planned, see the example in Annex 1). Aggressive behaviors and values observed during development of the sessions were recorded in each session, using the instruments mentioned previously. Each observation and registry of objects was made by session, with an initial corresponding session 1 and a final session related to session 25.

**Data analysis**

All activities in each session were systematically recorded, and actions related to the aggressive behaviors and values being studied were categorized based on analysis of the content of the recordings. The different types of aggressive behaviors were accounted in terms of observed gestures of the corresponding categories and then a descriptive analysis of the amount of actions from session 1 to session 25. This analysis methodology was used for the values observed in the participating population were then quantified. Microsoft Office Excel 2010 was used for processing the data with the relevant interpretation of the information.
RESULTS

The following figures show the data obtained through the evaluation of aggressive behaviors, and values observed during the sessions implemented.

Figure 1: Aggressive behaviors of youths, by classification and session.

Figure 1 shows the frequency of different levels of aggressive behavior. It is evident that the frequencies of verbal, physical, reactive and proactive aggression show a linearly decreasing tendency through the sessions, and that control, rather than cessation of aggressive behaviors, occurs during implementation of sport-recreational activities. It is important to emphasize that the reduction of aggressive behaviors is observed beginning in the second work session.
DISCUSSION

Based on these results, sport-recreational activities appear to bring about a decreasing tendency in aggressive verbal, physical, reactive and proactive behaviors; these results are similar to those reported in other investigations in which the use of programs with sport and recreational activities have had a positive effect on controlling aggressive or violent behaviors, and contribute to increasing levels of prosocial values among adolescents (Marques, Sousa and Feliu, 2013; Garaigordobil, 2012; Flores and Zamora, 2009; Sokol, 2010, Harati et al., 2011, Escarti et al., 2006).

The general results of the present study, and those of other studies, demonstrate that when aggressive behaviors improve and prosocial values increase, adolescents will have the tools needed to cope with day-to-day situations, to improve academic performance, and to decrease criminal activities and drug consumption (Jiménez and Durán, 2005; Acuña and Acuña, 2011; Araya et al., 2011; Bereguí, 2007; Cecchini et al., 2008; Gil, 2006; Roque, 2009; Vila and Martín, 2012). Other programs implemented by modules and with control groups have shown homogeneity with respect to the experimental group; i.e., prosocial behaviors, such as acquiring respect for other peers, improving friendly and prosocial relationships within the group, and reducing anti-social behaviors, have positive effects on adolescent socio-emotional
development factors, which supports implementation of positive youth programs as a strategy for preventing anti-social behavior during personality development (Garaigordobil, 2012; Garaogordobil, 2010).

Most studies on interventions have been carried out using methodologies of educational or positive sports programs. The changes observed that are generated in values such as teamwork (cooperation), handling of impulsiveness (self-control), and respect for others (Donalson and Ronan, 2006; Manzano 2005; González and Gimeno, 2013; Vásquez and Díaz-Aberasturi, 2005; Sáenz, 2012), along with others analyzed in this study, represent benefits in terms of emotional well-being and psychological health of youths, and also facilitate personality development (Donalson and Ronan, 2006; Jiménez and Durán, 2005; Garaigordobil, 2012).

Results in terms of increased self-control, as proposed by Escartí et al., 2006 and Arruza et al., 2008, are explained through the psychological benefits of physical activities, such as stress and anxiety reduction – factors that mostly have an impact on the process of becoming aware, having the capacity to take action, and, therefore, the capacity to react to and cope with day-to-day situations.

According to some studies, it is evident that physical activity and cooperative games help modulate aspects of the personality such as self-regulation and control of impulses (Beltrán, 2007; Donaldson and Ronan, 2006), based on fact that reactive and proactive aggression are caused by impulsiveness (Andreu, Peña and Penado, 2012).

Another aspect, such as the value of respect, ensures a capacity for tolerance of the behavior of other persons in youths’ surroundings, as well as of the natural environment in which they live (Garaigordobil, 2004). On the other hand, Escartí et al., 2006, mention that observing an improvement in youths’ behavior during intervention, shows that the implementation of the sessions was successful, which is in line with the results obtained throughout the investigation.

Results show a tendency towards increased cooperation, which according to De la Fuente et al., 2006 is a value that responds to strategies that activate improvements in relationships with other persons, and is part of diagnostic psycho-pedagogical strategies for detecting possible deviant behaviors.

Investigations associated with sport-recreational activities to decrease aggressive behavior, and in which social values are present, continue to be scarce. Therefore, implementing programs by which human movement results in favorable changes and results is an issue that, in conjunction with other disciplines, organizations and even educational centers, may produce not only improvements in the quality of life of treated populations, but also improved social insertion and reductions in social risk actions.
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Examining the relationship between interscholastic sport participation and


