

Diseño y evaluación de la eficacia de un programa basado en la actividad deportiva para disminuir la sintomatología impulsiva en adolescentes con trastorno mental grave ingresados en el Hospital de Día Infanto-Juvenil de Castellón: un estudio piloto

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La impulsividad es un síntoma característico de adolescentes con trastorno mental grave y se ha relacionado con dificultades en la regulación emocional, déficits de habilidades sociales y pobre manejo del estrés. Los objetivos del estudio fueron: evaluar los niveles de impulsividad, diseñar una intervención psicológica basada en la actividad deportiva para disminuir la impulsividad y evaluar la eficacia a corto plazo. Se administró la Escala de Impulsividad de Barratt (Barratt, 1959), el Cuestionario de Regulación Emocional (Gross y John, 2003), la Subescala manejo del estrés del Inventory de Cociente Emocional de Bar-On (Bar-On y Parker, 2000), la Subescala solución de problemas/toma de decisiones de la Escala de Desarrollo de Habilidades para la Vida (Darden et al., 1996) y la Escala de Habilidades Sociales (Oliva Delgado et al., 2011), a los adolescentes ingresados en el Hospital de Día Infanto-Juvenil de Castellón (HDIJ). La evaluación se realizó en dos momentos: pre-test y post-test (una semana después de la intervención). Los participantes se aleatorizaron en dos grupos: GE1 (n=6), que recibió el tratamiento diseñado, y el GE2 (n=5), que siguió recibiendo el tratamiento del HDIJ. Los análisis mostraron una mejora clínica en los niveles de impulsividad, principalmente en la no planificada, y la solución de problemas en ambos grupos. Se encontraron diferencias estadísticamente significativas en el post-test en las habilidades sociales de ambos grupos (GE1: $p=0,027$; GE2: $p=0,043$), y solo en el grupo que recibió el tratamiento diseñado, en las habilidades comunicativas ($p=0,043$) y el manejo del estrés ($p=0,043$). Tanto el tratamiento del hospital de día como la intervención psicológica basada en el desarrollo positivo del adolescente mejoran a corto plazo la impulsividad y otras variables asociadas. Dadas las limitaciones que presenta el estudio, estos resultados deben ser considerados con cautela. No obstante, resulta necesario seguir investigando en tratamientos basados en la evidencia.

Palabras clave

adolescentes, trastorno mental grave, impulsividad, eficacia tratamiento, actividad deportiva

Design and evaluation of the effectiveness of a sport-based intervention to reduce impulsive symptoms in an adolescents with severe mental disorder admitted to the Child and Adolescent Day Hospital of Castellón: a pilot study

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Impulsivity is a characteristic symptom of adolescents with severe mental disorder and it has been related to difficulties in emotion regulation, social skills deficits and poor stress management. The aims were: to evaluate the levels of impulsivity, to design a sport-based psychological intervention based on sports activity to reduce impulsivity and to evaluate the effectiveness of short term. The Barratt Impulsiveness Scale (Barratt, 1959), Emotion Regulation Questionnaire (Gross & John, 2003), Stress Management Subscale of the Bar-On Emotional Quotient Inventory (Bar-On & Parker, 2000), Problem-Solving/ Decision-Making Subscale of the Life Skills Development Scale (Darden et al., 1996) and Social Skills Scale (Oliva Delgado et al., 2011) were administered to the patients of the Child and Adolescent Day Hospital of Castellón (HDIJ). The evaluation was carried out in two moments: pre-test and post-test (one week after the intervention). Participants were randomized into two groups: GE1 (n=6), who received the designed treatment, and GE2 (n=5), who continued to receive the hospital treatment. The analysis showed a clinical improvement in the levels of impulsivity, mainly in the unplanned, and the problems solving in both groups. Statistically significant differences were found in the post-test in the social skills of both groups (GE1: p=0,027; GE2: p=0,043), and only in the group that received the designed treatment, in the communication skills (p=0,043) and stress management (p=0,043). Both the treatment of the day hospital and the psychological intervention based on the positive development of the adolescent improve impulsivity and other associated variables in the short term. Due to the limitations of the study, these results should be considered with caution. However, it is necessary to continue investigating evidence-based treatments.

Keywords

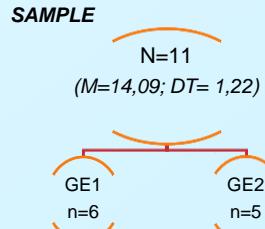
adolescents, severe mental disorder, impulsivity, treatment efficacy, sport activity

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Introduction

Adolescents with severe mental disorder are usually characterized by high levels of impulsivity (Chutko et al., 2018) which produces negative personal consequences in this population (Garofalo, Velotti, & Zavattini, 2018). Impulsivity is associated with emotional regulation, stress management, problem solving and social skills (González, & Neander, 2018). Actually, interventions based on adolescent's positive development are emerging (Catalano, Berglund, Ryan, Lonczak, & Hawkins, 2002).



72,7% externalizing symptoms
36,3% Parents with mental disorder
63,6% Middle socioeconomic status
45,5% with separated parents
27,3% autolytic attempts

INSTRUMENTS

- Barratt Impulsiveness Scale (Barratt, 1959)
- Emotion regulation Questionnaire (Gross & John, 2003)
- Stress Management Subscale of Emotional Quotient Inventory (Bar-On & Parker, 2000)
- Decision Making / Problem Solving Subscale of Life Skills Development Scale (Darden et al., 1996)
- Social Skills Scale (Oliva Delgado et al., 2011)

Method

PROCEDURE

Quasi-Experimental design
Establishment of the confidentiality agreement
Pre-test → Intervention → Post-test
GE1: Sport-Based intervention Cognitive Behavioral Therapy Techniques.
GE2: Children's Day Hospital life skills intervention

INTERVENTION

Three main components: cognitive impulsivity, motor impulsivity and planning in decision-making process.
Five 90-minute weekly sessions based on the cooperative game (Garaigordobil, 1994).
Structure: 1. Reminder of previous session, 2. Explanation of the current session, 3. Two activities that work the main components, 4. Free game (reward), 5. Summary of the session and 6. Final reflexion

Results

Figure 1. Impulsivity level of adolescents with severe mental disorder

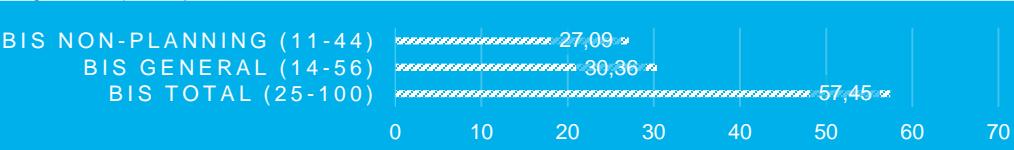


Table 1. Correlation between impulsivity and the rest of variables

	SMS Tot.	PS/DM Tot.	EHS Tot.	EHS C.Sk	EHS Asert.	EHS P.S	ERQ Reas.	ERQ Supr.
BIS Tot.	r -0,875**	-0,676*	-0,360	0,239	-0,665*	-0,444	-0,595	0,639*
BIS Gen.	r -0,970**	-0,418	-0,266	0,177	-0,516	-0,307	-0,534	0,789**
BIS No Plan.	r -0,535	-0,872**	-0,403	0,268	-0,712*	-0,528	-0,537	0,227

Table 2. Differences between pre-treatment and post-treatment evaluation

	GE1_pre	GE1_post	GE2_pre (con)	GE2_post (con)
BIS	M 51,50	DT 14,04	M 50,00	DT 18,50
Tot	Z=-0,677; p=0,498		M 64,6	DT 12,09
Bis			Z=-0,948; p=0,343	
Gen.	25,50	7,18	25,17	9,37
Bis	Z=-0,211; p=0,833		36,2	8,37
N.P			Z=-0,736; p=0,461	37,2
SMS	26,00	7,67	24,83	9,58
	Z=-0,843; p=0,399		28,4	5,77
			Z=-1,761; p=0,078	24,2
	34,17	5,27	30,83	6,55
	Z=-2,023; p=0,043		23,2	7,12
			Z=-0,849; p=0,396	21,60
DM/P	38,00	16,60	43,50	16,42
S	Z=-1,472; p=0,141		41,00	9,90
			Z=-0,736; p=0,461	44,60
HHSS	57,00	9,55	61,83	10,27
Tot	Z=-2,207; p=0,027		46,40	7,93
			Z=-2,023; p=0,043	53,20
				12,62
HHSS	21,67	9,09	24,83	8,42
Com	Z=-2,023; p=0,043		14,60	7,23
HHSS	16,17	6,77	17,17	4,26
As	Z=0,000; p=1,000		16,60	1,14
HHSS	19,17	5,12	19,83	4,75
Solv	Z=-1,089; p=0,276		15,20	5,89
ERQ	24,33	5,68	21,67	4,80
Re	Z=-1,116; p=0,244		17,40	8,68
ERQ	8,33	3,83	8,33	5,09
Sup	Z=0,000; p=1,000		13,00	4,24
			Z=-1,084; p=0,279	13,80
			Z=-1,084; p=0,279	3,03
			Z=-0,730; p=0,465	

Discussion and conclusions

The impulsive features are characteristic of the type of disorders that these adolescents have. Impulsive behavior affects other life skills such as worse stress management and emotional regulation, deficient social skills and deficits in problem solving and decision making, which harms adolescent functioning. Scores on stress management (in GE1) and cognitive reassessment (in both groups) decreased, while emotional suppression score increased (in GE2), possibly because adolescents are more aware of their problems in both areas now. In both groups, impulsivity decreased and social skills and problem solving skills improved, maybe because impulsivity and planning, which is directly related to problem solving, were the main component worked through group interventions that favored interpersonal relationships. In addition, adolescents of GE1 improved their communicative skills, probably because activities of intervention were based on teamwork. Both treatments improve impulsivity and other variables in the short term. Despite the limitations of this study, these results point to the need to continue researching evidence-based treatments.

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