



RELATIONS BETWEEN BEHAVIORAL DISORDERS SELF-ASSESSMENT AND FREE TIME SPORTS' PRACTICE IN SCHOOL-AGED CHILDREN

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Abstract

Purpose. The main goal of this research study was to establish the relations between the behavioral disorders self-assessment and the free time sports' practice in school-aged children and to determine sports' preferences in the boys and the girls.

Methods. Participants' sample consisted of 242 students who assessed behavioral disorders on a questionnaire using a 5 grades scale of Likert's type.

Results. The obtained results showed that there was a statistically significant relationship between free time sports' practice and behavioral disorders self-assessment in school-aged children, but however, there was not a statistically significant difference in sports' preferences between the girls and the boys.

Conclusions. Utilizing free time on extracurricular and unscholarly sports' activities has a great influence on a proper psychophysical development of an individual, and with that, also on prevention of risk factors' emergence that influence on behavioral disorders development.

Key words: school, students, sports, behavioral disorders.

Introduction

Different types and ways of child's reactions that are not in accordance with age, situational, environmental and other demands and expectations as assessed by specific environment, can be considered as behavioral disorders (M.Radetić-Paić, I.Blažević, V.Babić, 2011). Behavioral disorders connote adjustment or no adjustment to society demands and can represent a broad behaviors' specter; from relatively meaningless behaviors (shouting, cursing, anger and etc) to the more grave and serious ones (thefts, violent behaviors, drug use and etc.). Therefore, the behavioral disorders' assessment primarily depends on the so called social criterion (cultural, moral, economical and social development) and on the subjective standpoint of the social environment (primarily parents and teachers).

Different risk factors affect the emergence and the development of behavioral disorders, whereas knowledge on the risk factors is being applied in different conceptual prevention frames and behavioral disorders treatment in children. Planning of corresponding interventions depends primarily on recognizing the risk factors, that is, on recognizing the needs that contribute or facilitate behavioral disorders development in children. Interventions affect all developmental and nurturing aspects of a young person while respecting their rights and needs; in other words, the optimal conditions for development of all of their potentials are being created. The processes of planning and programming prevention and treatment interventions begin by recognizing risk factors and the needs of the specific local community. Local community should assume the responsibility for the early identification and intervention at the risk factors emergence which will decrease the risk for behavioral

disorders apparition in children and youth.

The research studies have shown that failure in school accomplishments, poor academic achievements, discipline issues, and inadequate attachment to the school represent risk factors in behavioral disorders development in educational area (J.H.Williams, D.C.Ayers, W.M.Arthur, 1997), while more serious types of behavioral disorders in minors' felony offenders are present in an educational area, free time organization and association with delinquent individuals and groups (according to Schwalbe and assoc., 2008).

Free time activities, that is, sports, represent a very important nurturing activity and are an important factor for the proper psychophysical development of children. Engaging in sports' activities enables greater number of social contacts and contributes to the development of the social behavior in children. Lack of children's' free time activities' involvement is a risk factor for the emergence and development of behavioral disorders since it enables greater negative influence from the peers and other groups.

Research results on the relations between the organized sports' activities involvement and different aspects of the self opinion and behavioral disorders (V.Đonlić, O.Marušić-Štimac, S.Smojver-Ažić, 2005) show that successful athletes have significantly greater self-respect, perceived sports and social competency than the less successful athletes and non-athletes. Additionally, the successful athletes have significantly less pronounced internal, external and overall behavioral issues.

Ten-years long research which encompassed characteristics of school environment in children and youth such as disturbing behaviors in classrooms, disturbing behaviors in school surroundings, bad school accomplishments, peer related issues, teacher

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related issues and playing truant (M. Radetić-Paić, 2010) shows that more than the half of the participants has limited number of organized activities, that is, that they should use their free time better. More so, during the observed time period, the mentioned indicators for children and youth at risk or with already evident behavioral disorders were not changing.

Sports' activities preferences, as well as the differences between genders in sports' activities preferences have been widely investigated by many authors (M.Andrijašević, 2005; M.S.Hager, 2001; L.Myers, 1996; C.A.Oglesby, K.L.Hill, 1993; V.Petric, D.Novak, 2008; F.Prot, K.Bosnar, 2007.), who all claimed that there were sports more interesting to the male gender, sports with the equal interest of both genders, and sports more preferred by female gender; but also they claimed that there were differences in those preferences between populations.

Research studies on the boys and the girls show that there are differences in sports' preferences between genders (M.Cimerman, J.Cetinić, 2008). It was determined that the half of the boys is occasionally involved in some sports activity, while 38% of them are actively involved in sports' clubs even during summer holidays. In girls, 58% is occasionally involved in some sports activity, while only 25% of them is actively involved in sports' clubs. Boys are mostly (42,5%) involved in sports' games (basketball, soccer, handball, volleyball and etc.) and in individual activities (40%), but do not show interest in aesthetic activities (gymnastics, ballet, and etc.) and/or dance sports activities. Girls show the greatest interest in individual sports activities (45%) then dance and cheerleading (20%). Somewhat less interest (12,5%) girls show in aesthetic activities (gymnastics, ballet, and etc.), sports' games (7,5%) then martial arts, tennis and other sports (horse riding) (5%). Research studies' results on students' involvement in extracurricular and unscholarly activities (Ž.Šiljković, V.Rajić, D.Berić 2007) show the existence of the differences between genders. More girls than boys are involved in extracurricular and unscholarly activities, except for when it comes to sports activities.

Methods

Aim, purpose and hypothesis of the research

The aim of this research study was to establish the relations between behavioral disorders self-assessment and free time sports' practice in school-aged children and to determine sports' preferences in boys and girls.

The purpose of this research study was connected to planning of adequate interventions for elementary school children at risk for or with already evident behavioral disorders based on obtained indicators.

The following hypotheses were tested:

H1: there is a statistically significant relationship between free time sports' activities and behavioral disorders self-assessment in school-aged children,

H2: there is a statistically significant difference in sports preferences between school-aged girls and boys.

Sample of participants

Participants' sample consisted of 242 students of the 5th, the 6th, the 7th and the 8th grade from an elementary school in Pula. The participants' sample consisted of 121 girls and 121 boys.

The participants were distributed by grades:

- ✓ 54 5th graders (22,3%);
- ✓ 65 6th graders (26,9 %);
- ✓ 74 7th graders (30 6%);
- ✓ 49 8th graders (20,2%).

Sample of variables

Behavioral disorders were assessed by students on a Likert type of scale using 5 grades (1 –never, 2 – rarely, 3 – sometimes, 4 – often, 5 – very often). The students assessed if, during the last thirty days, they did actions that can be defined as behavioral disorders (problematic behavior), that is, minors' delinquency (deviant behavior). Behavioral disorders (problematic behavior) are defined on the bases of the few constructs that were shown in previous studies to be important for measurement of different ways of such behaviors. The scales were construed based on the same and/or adapted items from the similar scales) that were used in the similar investigations). In the final version based on the factorial analysis, two subscales were formed: Scale of the problematic behavior (6 items, $\alpha = .81$) and Scale of the deviant behavior (3 items, $\alpha = .76$), and two variables on students' assessment of cigarettes smoking and alcohol drinking frequency were added, which combined with the mentioned scales represents predictive group of variables.

Criterion variable refers to free time sports involvement (extracurricular activities).

Scale of the problematic behavior in school assessed:

1. Being malevolent to teacher
2. Destroying school's property
3. Teasing others
4. Mocking and pushing classmates
5. Making fun of others
6. Lying or making up to put others in trouble

Scale of the deviant behavior assessed the following variables:

1. Stealing from others
2. Shoplifting
3. Playing truant

Certain drug use experimenting was assessed by the following variables:

1. How often do you smoke?
2. How often do you consume alcoholic drinks?

Methods of data processing

Regression analysis was used to determine relations between free time sports' activities and the behavioral disorders self-assessment of school-aged children. To determine differences in sports preferences between the school-aged girl and boys, a univariate analysis of variance (ANOVA) was used.

Methods of data collection

This research study was done during 2011 in an elementary school in Pula, Croatia in a way that students filled out questionnaires independently.

Results and discussion

Regression analysis was done on a predictor group of variables consisting of the Scale of the problematic behavior and the Scale of the deviant behavior, and also of the two variables used to assess cigarette smoking and alcohol drinking frequency. Criterion variable is free time sports' activities (SPORT).

Table 1. Basic statistical values of the observed items

VARIABLE	MEAN	MINIMUM	MAXIMUM	SD
SPORT	4,01	1,00	5,00	0,96
MALEVOLENCE	1,74	1,00	3,00	1,10
DESTROYED	1,38	1,00	5,00	0,80
TEASING	2,01	1,00	5,00	1,10
BEAT/PUSHED	2,07	1,00	5,00	1,07
MOCKED	2,04	1,00	5,00	1,06

LIED	1,47	1,00	5,00	0,92
STOLE-PEOPLE	1,19	1,00	5,00	0,58
SHOPLIFTE D	1,19	1,00	5,00	0,61
PLAYED TRUANT	1,33	1,00	5,00	0,75
SMOKE	1,17	1,00	5,00	0,62
ALCOHOL	1,38	1,00	5,00	0,78

Table 1. shows basic descriptive parameters of the analyzed variables. From the obtained values it can be noted that the average values in analyzed variables were different with specific deviation in a positive way in variable SPORT and BEAT/PUSHED, MOCKED AND TEASING as the negative forms of behavior.

Table 2. Multiple regression coefficients of the predictor group of variables and criterion variable (SPORT)

	VALUE
MULTIPLE R	0,310
MULTIPLE R2	0,097
ADJUSTED R2	0,053
F (11,227)	2,229
P-LEVEL	0,000

Multiple regression analysis results (Table 2.) show statistically significant relations between predictor and criterion variables. Multiple correlation (R=0, 31) is statistically significant with the conclusion error of 0, 05, but however, only 10% of criterion variable variance is possible to explain by the applied group of predictor variables.

Table 3. Multiple regression analysis for criterion free time sports' activities (SPORT)

VARIABLE	Beta	St.Err. of Beta	B	Std.Err. of B	t(219)	p-level
Intercept			4,311	0,192	22,397	0,000
MALEVOLENCE	0,074	0,088	0,064	0,076	0,847	0,398
DESTROYED	-0,036	0,092	-0,043	0,109	-0,392	0,695
TEASING	0,186	0,115	0,161	0,099	1,621	0,107
BEAT/PUSHED	-0,173	0,090	-0,155	0,081	-1,917	0,057
MOCKED	0,019	0,095	0,017	0,086	0,203	0,839
LIED	-0,046	0,080	-0,047	0,083	-0,575	0,566
STOLE-PEOPLE	0,102	0,078	0,168	0,130	1,298	0,196
SHOPLIFTED	0,037	0,075	0,058	0,117	0,497	0,620



PLAYED TRUANT	-0,049	0,086	-0,062	0,109	-0,569	0,570
SMOKE	-0,200	0,081	-0,309	0,125	-2,471	0,014
ALCOHOL	-0,087	0,079	-0,107	0,098	-1,099	0,273

Standard regression coefficient is the highest and statistically significant in the SMOKE variable. Other predictor's items contribute to criterion definition but are not statistically significant for the prediction of the criterion variable. The negative algebraic sign of the standardized regression coefficient denotes negative influence of an individual predictor on a criterion variable. All in all, variable SMOKE contributes, in the negative meaning, the most with its' projections to the criterion variable SPORT, whereas other individual items do not significantly predict criterion of the free time sports' practice.

This means that children who consume cigarettes spend less time in free time sports' activities.

Considering the obtained results of the multiple regression analysis, H1 hypothesis on the existence of the statistically significant relation between free time sports' activities and behavioral disorders self-assessment can be accepted.

Table 4. Boys' and girls' involvement in extracurricular sports' activities

BOYS (14%)	
SPORT-SCHOOL	%
SOCCER	4,96
BASKETBALL	5,79
HANDBALL	3,31
GIRLS (38%)	
SPORT-SCHOOL	%
DANCE	9,92
VOLLEYBALL	25,62
BASKETBALL	1,65

According to the percentages' results of extracurricular sports' activities it can be concluded that girls are involved in extracurricular sports' activities in greater number (38%) than the boys are (14%). The greatest interest in the girls was volleyball (25, 62%), dance (9,91%) and basketball (1,65%). Boys prefer basketball (5,79%), soccer (4,96%) and handball (3,31%).

Table 5. Boys' involvement in unscholarly sports' activities

BOYS (75%)	
SPORT-CLUB	%
TRACK AND FIELD	0,83
SOCCER	23,14
DANCE	4,13
BASKETBALL	7,44
SWIMMING	3,31
HANDBALL	4,96
TABLE TENNIS	3,31
TENNIS	6,61
MARTIAL ARTS	6,61
SAILING	1,65
ROWING	5,79
CARTING	0,83
CYCLING	0,83
HORSE RIDING	1,65
WATERPOLO	4,13

Obtained results on boys' involvement in unscholarly sports' activities show that great number of boys (75%) is practicing some of the mentioned unscholarly activities in free time. The greatest interest in boys is directed towards soccer (23,14%), basketball (7,44%), tennis and martial arts (6,61%), while the boys show the least interest in track and field, cycling and carting (0,83%).

Table 6. Girls' involvement in unscholarly sports' activities

GIRLS (55,4%)	
SPORT-CLUB	%
TRACK AND FIELD	5,79
DANCE	14,88
VOLLEYBALL	9,09
BASKETBALL	1,65
SWIMMING	3,31



HANDBALL	3,31
TENNIS	1,65
MARTIAL ARTS	4,13
ROLLER SKATING	4,13
SAILING	0,83
ROWING	0,83
GYMNASTICS	4,13
HORSE RIDING	1,65

According to the obtained results of girls' involvement in unscholarly sports' activities it can be concluded that less number of girls (55,4%) is practicing some of the unscholarly activities in free time compared to the boys (75%). The greatest interest in girls is directed on dance (14,88%) and volleyball (9,09%), while girls show the least interest in sailing and rowing (0,83%).

Table 7. Differences between the boys and the girls in the variables free time sports' practice (SPORT), participating in extracurricular (SPORT-SCHOOL) and unscholarly sports' activities (SPORT-CLUB)

VARIABLES	SS Effect	df Effect	MS Effect	SS Error	df Error	MS Error	F	p
SPORT-SCHOOL	32,128	1	32,128	609,275	65	9,373	3,428	0,069
SPORT-CLUB	8,270	1	8,270	7149,351	167	42,810	0,193	0,661
SPORT	3,251	1	3,251	216,732	239	0,907	3,585	0,060



According to the results of the univariate analysis of the variance it can be stated that the girls and the boys are not statistically significant different in practicing free time sports' activities, as well as in the extracurricular and unscholarly sports' activities.

The results on the percentages of children's involvement in extracurricular and unscholarly activities show that the girls are more involved in offered extracurricular activities (38%) compared to the boys (14%), while the situation is reversed for the unscholarly activities. Relatively greater number of boys (75%) is involved in some form of extracurricular sports' activities compared to the girls (55,4%). Boys mostly prefer soccer, basketball, tennis, and martial arts while the girls prefer volleyball and dance. Obtained results confirm the findings of the previous investigations according to which there are differences among genders, but however, in this research study, those differences did not show to be statistically significant. Therefore, the H2 hypothesis on the existence of the statistically significant differences in sports' preferences between school-aged boys and girls can be rejected.

Conclusions

Organized free time sports' practicing through extracurricular and unscholarly activities has a great influence on the proper psychophysical development of an individual, as well as on the prevention of the emergence of the risk factors that influence on the behavioral disorders development. Involvement in sports' activities enables for greater number of social contacts and contributes to the development of the social behavior in children. The lack of children's involvement in free time sports' activities is a risk factor for emergence and development of behavioral disorders since it enables greater negative peers' and other groups' influence on a child.

This research was conducted with the goal to determine if there was a relation between free time sports' activities involvement and the behavioral disorders self-assessments of 242 school-aged participants, as well as with the goal to determine sports' activities preferences in the boys and the girls. The obtained results show that there was a statistically significant relation between free time sports' activities involvement and the behavioral disorders self-assessments of school-aged children, but however, there was not a statistically significant difference in sports' activities preferences between the girls and the boys. The greatest interest of boys was directed towards soccer (23,14%), basketball (7,44%), tennis and

martial arts (6,61%), while the least interest was directed towards track and field, cycling and carting (0,83%). The girls' greatest interest was directed towards dance (14,88%) and volleyball (9,09%), while the girls showed the least interest in sailing and rowing (0,83%).

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