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Abstract. In this paper, we investigate the influence of the different academic sports activities on the university student's profile, particularly on their physical and emotional status, using the Intercriteria analysis approach. Nowadays universities are in the effort to contribute to student's academic life by providing variety of sports opportunities. These sports activities, which are a part of university education, should be seen as activities that aim at develop not only the student's physical condition, but also the emotional and intellectual condition. The purpose of the present study is to evaluate the influence of four different sports on the physical and emotional status of the university students

Keywords: Intercriteria analysis, University students, Sorts activities

1 Introduction

The health and well-being of the undergraduate university students is in great importance, not only due to their potential societal influence in the future, but because many lifestyles related attitudes and habits are formed at this stage and persist across the life span [7]. Physical and athletic activity is considered an essential factor in achieving psychological and emotional balance for students by controlling and directing some behaviors through a set of exercises devoted to that, whether individual or collective [8]. At present students' physical fitness is declining and their psychological quality is getting worse and worse. Therefore, it is urgent to improve their physical and

mental health level. To improve the overall health status of the students, most of the universities in Bulgaria, promote different sports, as a compulsory discipline during the first two years of education. Many of the university's sports departments are offering to students a wide range of sport disciplines for enhancing their physical and psychological health. The most popular sports in the department of "Physical Education and Sports" of the University of Mining and Geology "St. Ivan Rilski"-Sofia are: football, table tennis, fitness and basketball. In the present study, we propose the application of the approach of InterCriteria Analysis (ICrA) to data, obtained from university students practicing four different sports activities. The data was analyzed in search of correlations between the results from the method of testing for the level of several physical and personality qualities in order to investigate the influence of these sport activities on the overall status of the students and to find the best physical and psychological tests for the test battery.

2 Presentation of the input data

The investigation and the data collection process, has been carried out in the department of "Physical Education and Sports" of the University of Mining and Geology "St. Ivan Rilski"-Sofia. The contingent of the investigation are 70, 1st year students males, attending basketball (13 students, O1-O13), table tennis (21 students, O1-O21), fitness (18 students, O1-O18) and football (17 students, O1-O17) from "Physical Culture" subject. Following [9], we have chosen a set of several parameters defining the level of physical and personality status in a test battery of 17 control tests, divided into two major groups. In order to find differences and correlations among the criteria (C1-C17) and the influence of the specific sports on the students, the tests were performed in the beginning and at the end of the educational year. In the first group is the test determining the overall physical condition of the students: General physical fitness (C1), Strength (C2), Agility (C3), Flexibility (C4) and Finger dexterity (C5). In the second group are the tests related to the personality of the students: Control of attention (C6), Stability of attention (C7), Operational thinking (C8, C9, C10), Logical thinking (C11), Memory (C12), Personal activity (C13), Willpower (C14), Communication skills (C15), Organizational skills (C16) and Emotional stability (C17). The input data for the analysis of the four different sports is shown on tables 1-8.

August and	11		11	10	24	18	111	10	10	110	125	111	171	1994	111	1 110	617
Paratesta							er.			240		2.40					
03	110.0	48	-6-683	46.7	45.8	46.67.:	0.79	82	52.24	2.10	. 8	6		23	12	13	15
02	191.23	182	10.50	25.0	71.0	32.31	0.63		3671	1.57	- 4	. 0	3	34	12	- 54.	.6.
03	137.06	-48	8.45	38.3	66.5	26.80	2.06	.85	53.42	2.18	2	32	3	22	1	333	55
64	348.45	- 23	9.80	44.0	05.5	37.16	0.97	66	44.78	1.73	15	- 50		20	34	14	33
05	221.71	- 20	9.58	29.0	64.5	24.68	1.30	- 60	34.18	1.61		-12	1.5	71	58	3.5	
06	221.08	15	30.02	10.0	72.5	2547	4.67	81	56.95	2.16			4.5	10	4	1.5	- 52
07	108.48	2.00	8.75	.42.31	76.4	10.01	0.76	20	16.42	1.04	- 0	-10		2.6	16	3.9	20.
0K	117.17	26	8.24	31.7	99.5	10.52	1.00	13	58.01	2.05	11	. 8	10	20.	21	24.	00
09	100.11	26	10.55	43.1	755	25.79	1.04	601	33.81	1.01		1.0		202	32		9.
010	242.20	-17	10.45	24.7	02.8	50.78	0.88	72	41.88	1.79	1			20	11.	52	38
011	378.65	- 72	8.50	46.0	68.2	34.30	1.40	.25	40.H ·	1.00	- 3		- 5	tit	32	11	0
012	127.55	47	7.86	43.0	55.0	. 24.82	3.03	33	47.85	1.01	1.	: 12	33	23.	7.	52	18
612	174.00	- 30	8.50	- 68.9	04.3	53.07	1.11	164	59.36	3.14	14	18	22	24	26	14	10

Table 1. The input data of the students practicing basketball in the beginning of the educational year

aniwthal.	-63	101	63	- 68	65	106	17	(8)	6.0	0.00	0.53	(32	-618	1016	101	136	017
ot.	128.10	46	0.54	48.3	61.6	34.54	1.05	TU	34.81	1.64	1		10	- 24	11	1.	17
07	101.73	11	0.84	30.3	54.1	12.35	1.12	68	29.44	1.58	- K.		.8	- 26	-15		12
03	TREAT	47	8.77		55.0	13.90	1.07	70	11.00	1.87	3	.7	. 4	70.	1.1	2.8	1.1
04	148.17	45	8.95	55.3	82.2	22.05	88.0	84	41.69	1.95			35	22	10	15	52
05	205.12	10	9.45	41.7	32.2	25.96	0.98	70	11.56	1.59		10	6	- 25	17	- 12	
295	306.38	15	8.42	54.0	63.5	21.91	0.09	70	32.57	1.00	- 6	11	7.9	25	- 15.	- 85 1	52.
07	157.00	26	7.99	39.3	342	25.34	1.01	00	28.52	1.40	- 10	10	1.1	. 10	12.	15	20
0.8	100.10	.38	3.57	54.0	80.1	86.21	LES	- 86	52.88	LBS	1.1		1.14	- 25	14	1.11	35.
00	110.10	14	8.18	11.1	76.0	28.48	0.06	-70	THM .	LOD				- 20		10	10
010	131.29	35	0.05	31.7	SAD	36.M	1.16	10	32.42	1.60	- 5	17	10	15	181		35
011	122.54	18.	1.09	41.7	59.0	31.98	1.00	04	38.28	1.46	1	11		10	- 62	1.11	
012	124.22	48	2.62	45.0	64.3	20.02	0.69	28	33.60	1.62	6	12	12	24	10	16	1.89
AND CO.	COSTAN.		0.64	64.0	63.0	100.000	4.454	24	24.66	1 105		1.4	14	1000	1000	444	

Table 2. The input data of the students practicing basketball at the end of the

e	duca	tion	ial ye	ar	
£	CT	1.0	01	-C10	1
	10 14 EV		And the second		

						, c	auci	mon	iai ye	a							
Table terms	10 1	0	11	01	10	Cê	CT	10	01	CID	CHI.	113	-010	Chi	Ct5	138	C17
üt.	176.26	-25	10.80	48.8	127.0	27.18	1.18	- 44 -	45.68	5.75	1.2	- 8		30		111	
02	184.01	18	8.65	44.0	et r	16.45		198	53.91	2.88	12	0		10		1.88	34
09	104.91	- 47	6.27	35.8	582	42.57	4:47	11	44.42	1.82	1.1	30	5.1	19	182	18	1.1
04	144.37	45	6.19	45.5	: #0.5	.45.80	8.97	2.77	40.40	1.83	1.2	1.1	- 3.	34	. 6	11	- 10 -
05	16672	0.0	7.84	42.0	78.0	45.84	145	10	97.20	2.68	1.2	14	5	10	11	10	11
00	100.01	28	8.65	44.7	86.2	.11.39.	1.00	10.0	47.97	2.08.7	1.5	1.1		LT.	38	10	1.2
07	178.30	- 30	8.25	30.T	12.4	34.82	1.00	11	47/05	1.88	128	31		10		11	P
0.0	UHAP	34	10.90	55.7	724	25.84	1100	11	34.99	3.60	128	33		11	38	10.00	19
08	133.55	24	31.10	23.7	78.0	53.92	-8.94	10	5431	2.11		b.	1.00	24	18	17	10
055	181.48	26	5.87	47.8	98.7	25.78	0.18	130	75.20	1.01	1.4	33		18	6	3.87	34
001	156.82	34	6.60	49.3	81.4	18.84	0.62	20	34.62	1.65	1.8	32	1.2	18	18	185	11
052	186.15	- 15	3.07	15.1	50.7	38.75	1.85	24.1	36.32	1.60	1.1	15		- 23	11	1.4	0.1
013	427.37	n	7.82	\$7.3	46.0	38.23	1.06	111	103.415	2.80	1.1	.0	11	26	11		- 17
014	1093.43	.43	8.31	\$2.1	101	44.75	1.65	#1	45.21	1.96	1.2		100	10	145.		11.
013	170.10	36	10.05	41.7	96.3	31.45	1.00	. 85	5534	2.23				18	17		1.8-
096	18528	39	18.81	31.1	62.1	25.75	-0.05	10	49.78	2.18	1.4	- 10	1.1	17	1.1	1.16	
017	200.76	22	8.53	42.0	83.4	36.12	0.87	- 01	82.47	2.73	1.1	2	. 9	Df.	34	10	7
054	199.66	- 29	8.50	42.8	34.8	32.92	129	95	195.25	2.82		-11	14	22	39	32	18.1
019	189.44	33	7.45	21.5	10.5	18.02	3.33	11	38.75	3.73	3	30	- 5	23	- 99	15	÷.
0.00	107.03	31	9.85	23.0	1.16	41.84	111	80	44.30	1.91	1.6	- 9		15	38	15	
071	190.03	.42	6.72	19.7	HILY	11.63	1.68	94	38.77	1.38		- 85		16	35		11

Table 3. The input data of the students practicing table tennis in the beginning of the educational year

educational	ye	ai	
47 18	(A. C.	1.24	

Table Trees					1.0			1.85		1,04	- 6.64	- 642		1.19	1.11		
01	token.	-35	5.54	42.7	73.0	:00.05	10.00	100	48.52	1.24				34	19	10	- 34 -
102	139.30	20	4.25	45.2	61.5	.35.79	1.45	11	17.59	1.59	- 0	1.8		18.		18.	5.38
01	144.61	44	2.09	39.0	36.0	41.79	1.22	78	31.14	1.71	1.4	12	2.8	30		10	58
04	344.15	36	7.90	42.5	14.7	47.20	18.83	78	42.61	1.81			5	32.			. 24
05	115.89	-54	1.44	58.0	573	36.32	1.24	.64	30.97	1.48			3.1	38		33	6
016	1.111.54	13.9	2.2%	38.2	164	341.00	1.01	1.14.1	15.48	1.71	1.5		10.400	12	17.	14	5.1
07	165.01	48	8.36	15.2	54.7	21.00	1.22	1.0	21.01	4.35	1.4	19		28	54	10	8
OK.	162.60	38	111-05	18.1	185	25.04	1.57	84	3135	1.89	- 5	100		34	15	16	37 -
09.	171.01	1.0	10.99	29.3	64.0	-36.70	1.29	42	18.98	2.05	1.0	-30	1.8	11	86	19	11
059	183.11	17	8.66	45.7	64.2	27.45	1.12	68	30.86	1.54	1.8			12	11	9.	39
051	151.47	38	4.32	49.3	53.3	20.63	0.95	55	31.50	1.52	- 6	. 82	1	28	16	16	15
012	190.18	14	7.67	47.3	5604	10.19	1.55	7.78	33.60	1.73	1.35	10		21-	17.	12	5
013	ARLAS.	54	8.72	56.7	.45.1	21.01	1.67	12	26.10	1.01	28		. 11	24	18	LA.	
024	177.01	- 65	8.54	36.2	81.6	40.64	16.85	15	22.35	1.68	1.3		1.08	18	15	13	1.85
003	149.59	38	- 2.46	47.7	854	3238	10.00	76.	42.98	1.00	14	1.0	0.0	24	10	16	
036	167.67	138	8.70	35.3	14.3	23.73	10.00	100	39.24	3.68	1.0	30		17		10	
017	196.17	:35	7.51	35.0	. 05.1	31.25	0.85	100	54.09	245	10.0	-11	1.0	18	12	9.5	18.
058	101.40	.10	8.85	44.0	65.4	20.66	1.12	16	33.12	1.88	1.10	11	34	22	11	14	5
059	169.04	38	6.65	32.7	62.5	. 28.22	1.01	- 64	52.95	1.51	3.2	2.8		19	12	16	6.1
028	155.19	-47	8.42	37.0	13.2	30.01	0.54	. 66.	35.81	1.59	0	1.6	6	24	12	15	5.
673	157.49	- 12	4.00	44.2	.90.3	25.65	1.30		36.05	1.0				16	15		11

Table 4. The input data of the students practicing table tennis at the end of the

						e	duca	ation	al ye	ar							
210000	- (1	- (2	111	- 64	0	0.04	101	68	00	CIN	133	1.12	63	CH	C15	1006	- (1)
01	186.72	50	8.41	48.2	12.4	1645	0.81	38.	52.40	3.02		10.	11	16	- 18	18	
02	258.83	37	7.80	30.7	55.8	41.11	1.06	82	40.98	1.92	1		0.	21	11	13	1.4
00	175.36	33	8.04	37.3	10.0	25.08	0.70	33	40.76	1.76	2.1			.15	11	11	
04	\$47.74	20	0.34	38.7	62.0	27.11	1.14	6.8	:#5.51	1.77	1			34	1	115	0
05	1833	111	.0.11	45.0	82.7	44.53	1.02		0.0.50	72.38	1.1	1		19	.85	-11	. 36
06	178.05	37	7.37	40.3	93.2	42.85	1.24		5748	2.24		6.1	1	194	10	9	37
07	178.37	. 34	8.02	51.7	67.6	44.34	0.86	30	60.57	2.04	5	1.5	- 10	34		10	.25
ÓK .	192.63	10	9.39	20.3	85.3	32.58	0.93	70	45.60	1.81	1.	5	9	47	16	19	. 34
09	172.09	32	9.72	25.8	- 93.0	48.17	0.98	85:	68(16	2.88	- 51	1.8.5	8	19	13	34	- 32
010	104.83	41	7.71	35.7	: 95.2	20.85	0.76	30	38.09	1.09	5	11	30	- 36	34	26	
011	157.43	-45	8.55	30.3	81.4	14.05	1.17	80	50.05	3.22	4	4	6	19	26	15	
012	115.03	40	8.30	43.0	76.5	14.88	0.00		AT.AS	2.01				26	11	15	
610	157.63	37	0.52	43.0	21.1	34.41	0.82	0.68	84.82	2.00	5.1		- 2	12	34	11	.8
054	165.13	.83	8.18	45.2	38.7	12.30	0.80	68	58.61	1.89	8.1	11	8	32		. 8	38
015	185.32	- 10	0.51	.37.0	1143	13.08	1.1.1	10	42.66	1.04	2.1		30		11	12	
096	368.52	- 38	0.64	36.7	118.0	42.81	0.88	31	50.17	1.99	5	1.0	¥	25	10	10	
1980	375.74	- 10	.9.57	36.7	135.0	18.17	1.03	62	35.11	1.38		11	13	70	34	16	. 30
658	\$24.06	- 36	1857	30.0	100.0	11.41	0.00		12.45	1.35		111		-25	10	-15	-11

Table 5. The input data of the students practicing fitness in the beginning of the educational year

		- C.I		1.04	13	- 18.	97.	- 14.	CR.	CIB.	C CIL	CL		1.14	CIS-	CHE	
93	146.06	115	8.43	- 45.0		41.71	8.71	76	114000	5.83		37	11	11.	- 19 -	11.	18
1	118.10	1997	6.79	86.7	59.0	10.70	0.11	1.0	10.00	225					11	38	
10	1/0.77	.35	7.93	38.7	31.0	14.40	-0.72	- 25	16.61	1.14	- 2			11	11	11	0.6
4	147.01	34	7.82	-10.0	\$2.0	28.81	0.88	20	3928	1.82			1.5	38		380	. 9
6	157.28	48	7.92	46.12	81.0	54.75	6.32	55	31.98	5.53	6	6	6	20.	35	35	38
	156.10	50	7.85	48.0	04.0	55.62	1.00	68	57.58	1.62	3	3		1.11	1.0	111	- 30.
ŵ.	170.01	31	7.67	144.1	111	45.90	3.85	28	89.3.8	\$71			1.8	11	31	1000	14
8	10000	11	8.77	38.0	78.3	10.00	1.00	22:	41.45	8.22			1.1	18.	18.	18	6
	107.17	10	0.00	30.0	87.0	16.67	1.36	18	82,99	1.18				11	11	34	11
10.	142.34		6.37	46.0	1944	18.23	1.02	84	15.45	1.18			10	34	14	36	
14.5	104.42	40.1	6.45	40.3	43.8	104.00	8.34	74	33.05	6.75	100	100		11	10.	11	
19.2	152.16	60	2.42	88.0	24.0	30.79	1.11	64	36.45	5.46	- 5	-		33		13	1.2
10	150.05		8.95	45.10	20.8	13.34	10.02	- 12	16.75	5.52		44	14	11		- 11	
	141.25	100	7.04	45.0	214	11.11	1.00	14	40.41	1.64	1.1	- 2	14	18	- 10	- 10	20
AV.	174.77	10	0.04	10.1	101.2	41.70	1.15		44.79	1.14			10	11	12		
2.5	100.00	1.1				40.02											
441	100.00	100	0.00	42.2	1000	10.07	1.14	12	40.00	1.4.4.		12	144	1.10			
	200.10		1.42		100.0	10.00	1.16	- 14	10,000								
100	100.10	. 74	Contract,	100.00				14	and the second	1.04							
	Tabl	e 6.	The	input	data	of th	e stu	dent	s pra	ctici	ng fi	tness	at th	e eno	d of t	the	
						e	ducs	ation	al ve	ar							
An other states		100		14	23	- 14	auce	uion	ui ye		1.014	1.00	1994	114	111	124	111
Country of	400.000		1.11	10.0	100.0	10.07	1.0.0		1110	1.43							
	100.00		1.00	10.0		10.07	1.00		11.1	1.00		- 21		1.1	1.1	11	1.1
	110.00		10.000	11.11		14.44		10		1.00				122		1.1	1.20
	175.00	100	10.00		22.0	100.00		12		112		10			12		1.4
	1.10.00	2.1			100		1.2.5		40.04	1.1.17							
2	\$162,008	- 10	6.94	42.0	44.5	43.55	1.11	16	40.54	1.45		2		12	11	19	1.1
	108.10	- 14 -	0.40	48.7	94.5	37.03	5.98	-	35,00	1.64	- 5	10		1.00	100	- 14	- 27
14	U.D.M.F	100	-8.47	44.7	- 65.6	10.00	1.01		45.05	4.91			. n	1.00			1.2.1
	194.51	49	8,99	47.0	14.1	10.04	1.41	47	34.00	1.00				1.04	- 49-		
•	107.83	- 14	8.10	40.0	11.4	49.05	1.47		18.40	0.05				10	10		
100	TATIN.	- 14	1.00	14.0	101.4	45,64	11.64	100	37.06	2.49	- 8	- N -		- 11	18	- 14	- 1
4.0	101.54	10	8.93	40.0	196.8	18,14	0.65	11	49.79	4.84				1.94		1.94	19
197	229.21	- 4	1.0%	11.0	47.4	31.09	0.81		18.44	2.24				34	38	.88	31.
194	216.56	10	1.11	38.7		46.03	11.8.8	- 73	49.53	1.91	1.		18	- 57	58.	- 58	- 21
BR	152(10)		36.09	38.8	- 73.6	35.18	1.14	- 74 -	11.65	5,86	- X.	- A.		18.	1.88	- 14 -	1.84
185	162.45	- 20 -	6.15		- 64.7	16.76	1.84	7.0		1.04		- N.			1.11	1.18	
198.	\$25.88	16	. 9.22	- 22.8	101.4	10.05		14.	44.26	1.85	1.1		40	1.860	48.	48	49
117	157.77	46	8.96	18.5	- 64.1	14.14	0.89	- 96	44.20	- 2.29		4		18	11	- 14	17
-	ble 7	Th		t data	C (1	o at	1 4										-
`I`al			e innii		OT II	есп	iaeni	c nr	actici	no f	ooth	all in	the ł	hegin	mino	r of t	he
Tal	oic 7.	In	e mpu	it uata	OT U	ie su		ts pr		ng f	ootb	all in	the t	begin	ning	; of t	he
Ta	oic 7.	1 11	e mpu	it uata	OI U	ie sti e	duca	ts pration	actici al ye	ng f ar	ootb	all in	the t	begin	ning	g of t	he
Tal		e e	e inpu		ortr	e su	duca	ts pration	actici al ye	ng f ar	ootb	all in	the t	begin	ining	g of t	he
Tal						e su	duca	ts pration	actici al ye	ng f ar	ootb	all in	the t	begin	ming	g of t	he
Tal		1 11 11 10		11 Uata		e su	duca	tion	actici	ng f ar	ootb	all in	the t	begin	ining		he
Tal	(1 1)1.00 1)1.00 1)11.00 1)10.16	(3) 40 41		11 Uata	01 tr	e stu	duca	ts pration	actici al ye	ng f ar	ootb	all in	the t	begin	ming		he
Tal	4 111.00 111.00 110.00	1 10 (1) 40 (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)		11 Uata	43 472 773 946 645	e stu e	duca	tion	actici al ye	ng f ar	ootb	all in	the t	begin	ining		he
Tal	64 101.03 101.10 100.10 100.10	G M 40 H 11 H	11100 171 171 171 171 171 171 171 171 17	11 Uata 180 180 180 180 180	OF U	6 54,43 50,45 51,4	duca	ts pration	actici al ye	ng f ar	ootb	all in	the t	begin			he
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Tal	01C 7.	1100000000000	1000 1000 1000 1000 1000 1000 1000 100	14 10 10 10 10 10 10 10 10 10 10 10 10 10	OF U	(* ***** ***** ***** *****	duca	ts pration	actici al ye	ng f ar	ootb	all in	the t	begin	ining	g of t	he
Tal	CI UILIN UILIN UILIN UILIN 110.16 110.16 110.16 110.16 110.16 110.16 110.16 110.16	(2)240月11年第46日	E INDU 1.71 7.03 8.10 8.44 1.66 1.66 1.66 1.77	14 Uata 160 160 160 160 160 400 400 400 400 400 400 400 400 400 4	OF U	(* 68 10.75 10.75 10.75 10.75 10.75 10.75 10.75 10.75	duca	ts pration	acticital ye	ng f ar	ootb	all in	the t	begin			he
Tal	Ci UIL10 UIL10 UIL10 110.16 110.16 100.95 10	02404115884520	11111111111111111111111111111111111111	11 Uata 160 160 160 160 160 473 473 477	OF U	(k 64,43) 10,10 11,40 15,40 15,40 11,40	duca	ts pration	acticities all ye	ng f ar	ootb		the t	begin	ning	g of t	he
Tal	G ULL0 ULL0 ULL0 ULL0 ULL0 ULL0 ULL0 ULL	0224041156865201	11111111111111111111111111111111111111	11 Uata 190 190 190 190 190 190 190 190 190 190	43 977 773 986 985 985 985 985 985 985 985 985 985 985	(k (k) (k) (k) (k) (k) (k) (k) (k) (k) (duca	ts pration	acticities all ye	ng f ar	ootb	all in	the t	begin	ining	g of t	he
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Tal	01 11.11 11.11 11.11 11.11 11.11 11.11 11.11 10.15 11.11 10.15 11.11 10.15	0245588498545	171 171 171 171 171 171 171 171 171 171	14 140 140 140 140 140 141 141 1	(1) (1) (1) (1) (1) (1) (1) (1)		duca	ts pration	actici al ye	ng f ar	ootb		411 611 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	begin		g of t	he
Tal	4 111.05 110.16 110.16 110.16 110.00 100.05 100.41 110.00 110.00 110.00 110.00 110.00 110.00 110.00 110.00 110.00 110.00 100000000	02451584001420	13 5.74 7.43 8.10 8.49 9.000 1.77 8.00 8.00 8.00 8.00 8.00 8.00 8.00 8	04 040 040 040 040 040 040 040 040 040	(1) (1) (1) (1) (1) (1) (1) (1)		duca	ts pration	acticities all ye	ng f ar	ootb	all in	1 the t	begin			he
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Tal	11.11 11.111	(1):40 年日 新聞 新聞 新聞 日本 日本	133 3.71 7.03 8.02 8.10 8.00 8.00 8.00 8.00 8.00 8.00 8.00	14 10 10 10 10 10 10 10 10 10 10	(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	e stu e ***********************************	duca	ts pration	action	ng f	ootb	all in		begin			he

 Table 8. The input data of the students practicing football at the end of the educational year.

3 Results and discussion

The method of InterCriteria Analysis (ICA) is based on intuitionistic fuzzy sets, thus rendering account of the effects of uncertainty. Originally, ICA was being proposed in [1], and various aspects of its application over different data an its theoretical investigation are given [2, 3, 5, 6]. Following [4] in order to categorize all the values of the resultant n (n – 1)/2 pairs of criteria, we need to define two thresholds, α and β , for the positive and for the negative consonance, respectively. The threshold values α and β are values on the [0; 1]- scale, changing with a precision step of 0.1. In our case the respective values, connected with the consonance/dissonance scale are as follows: strong positive consonance (0.95; 1), positive consonance (0.85; 0.95), weak positive

consonance (0.75; 0.85), dissonance (0.55; 0.75), strong negative consonance (0.05; 0.00), negative consonance (0.5; 0.15) and week negative consonance (0.15; 0.25). When interpreting the results, the values of $\mu_{C1, C1}$ and $\nu_{C1, C1}$, respectively $\pi_{Ck, Cl}$ should be considered. The ICA method is applied over the data in the above presented tables (1-8). As a result, eight tables for membership part and non-membership part of the intuitionistic fuzzy pairs, that represent an intuitionistic fuzzy evaluation of the relations between every pair of criteria in the beginning of the educational year and at the end of the educational year of the students practicing four different sports (C1-C17) were obtained (tables 1-8).



Table 9. Results of the application of the InterCriteria Analysis on the aggregated data of the of the students practicing basketball in the beginning of the educational year (A- the membership parts of the Intuitionistic fuzzy pairs, B- the non- membership parts of the Intuitionistic fuzzy pairs)



Table 10. Results of the application of the InterCriteria Analysis on the aggregated data of the of the students practicing basketball at the end of the educational year (**A**-the membership parts of the Intuitionistic fuzzy pairs, **B**- the non- membership parts of the Intuitionistic fuzzy pairs)

				JI 1			****	om	oure	10.		Pu	mo,	<i>'</i>			
A	a	CZ 1	Ξ.	C4	6	06	a l	03	Cl	cia.	cii 🦷	C12	CE3	C14	CB)	tia (110
<u>а</u>	1	0.4143	1.929	0.4667	0.50%	0.4571	0.405	115048	0.9048	0.4805	04333	0.933	0.4857	0.31	03762	0.484	0.457
2	0,4343	1	0.391	05333	0.405	05333	0.468	114048	0.3905	8-4048	93524	0.461	0.4286	0.452	0481	115552	0542
G	0.929	0.3571	1	0.4762	0.64%	0.4667	8.462	05476	0.9905	0.571	0.4095	0.4048	0.5571	0.4%2	0.4429	0.457	8442
CA	0.467	0.5333	0.452	1	0.44%	0.5	0.453	05714	0.5286	0.50%	92575	0.481	0581	0.404	0.4429	0.382	0.628
6	0.505	0.4095	0.64%	0.4476	1	0.4381	11.5572	0.4571	0.5476	05	0.4571	6419	0.4381	0.29	0.3762	6,252	8414
6	0.471	115333	11.467	0.5	0.432	1	11.538	11581	0.619	1619	42574	11 2795	84905	1.41	IL43EL	0.567	1455
57	0.4293	0.4619	1.467	0.4524	8.557	0.5381		114905	0.5762	0.538	03897	0.367	114143	1.714	0.5524	0.4905	6,285
08	0.588	0.4048	11.54%	0.5724	0.452	0.581	0.455	1 1	0.8738	0.9048	04667	0.262	0.5762	0.4048	04048	0.429	0.528
69	0.5068	0.3905	11.5905	0.9286	0.54%	1619	0.572	118238	1	0.9295	14524	0.267	11.5952	0.305	03714	05	0476
C10	0.4905	0.4048	0.591	0.5476	85	11619	0.578	119048	0.909G	1	04333	0.2935	0581	0.4348	8.3857	0.487	0514
10	0.425	03524	1.425	0.2571	0.4570	0.2524	1.387	0.4667	0.4524	11.4233	1	0.536	0.3429	0.3	0.4095	0.4348	0.244
C12	0.583	0.4762	0.408	04381	0.49	12095	1.397	0,2952	0.2667	11.2905	05285	1	0.3967	0.452	0.3524	0.3754	8457.
C13	0.457	0.4285	0.591	11581	0.438	0,4905	E 414	0.5762	0.5952	11581	13429	EL 3667	1	0.467	0.3905	0.4714	051
C14	1.31	114952	11452	64524	11 2 29	8.481	11.5734	114048	1.3905	1.4048	13	11.4852	0.4667	4	05238	0.929	1431
CLS	0.3752	0.481	1.449	0.4429	8.3712	0,4381	0.9534	114143	0.3714	E.第57	04095	0.3124	0.3975	123	1	0.4752	DITA
Ċ16	0.4764	0.5957	1.467	03762	0.292	115667	0.455	0.4519	0.5	0.4857	04045	0.3714	0.4714	0.5519	0.4762	1	11405
C17	0.491	0.5429	1.449	0.6296	0.4148	0.4857	0.287	115786	0.4762	0.5143	0.2952	0.4571	0519	0.481	03762	0.435	
#1	CI	C7 (Ξ.	C4	G	05	G	08	C9	C10	cu	CIZ	ĊI3	C14	CE I	26	C17
10	G	05714	1421	0.519	11.481	0.5429	11.5734	0.481	11.4952	20	03857	11.3557	0.3957	1.971	05571	1474	LASE
12	0.554	a	1.626	GA3RI	1.567	0,4524	0.508	115667	0.9952	0.9714	0.4524	0.436	114(381	0.49	04381	0.3253	0.392
G	0.481	0.6286		0.5095	8.3429	815333	11514	114381	0.4095	0.4033	04095	0.545	0.3238	0.429	0.4905	0.4762	0.504
64	1.99	0.4381	1505	0	0.52%	0.4857	0.514	04	0.4571	0.4285	05476	1.457	11.2952	0.404	0.4857	0.524	0.304
cs	0.40	0.5667	0.349	0.5286	-0	85524	84148	0519	0.4429	6.481	03524	0.405	0.4333	0.905	11.547/G	0.621	0.523
65	0.549	0.4524	11121	0.4857	0.5528	0	8.443	0.4048	0.381	0.3714	115667	11.195	0.3975	0.481	0.4952	0.382	0461
0	0.584	0.9048	0.582	0.5143	0.4148	0.4429	1	0.4762	0.4048	0.40%	04143	11.933	0.4571	0.3286	0.3714	0.459	1642
CR	0.481	0.5667	0.431	0.4	ESB	04048	E 476	ď	0.1619	0.0934	03476	0.695	0.2935	05	0.5048	0.467	8404
69	11.4957	0.5957	1.435	04571	0.4429	1351	11.404	01619	/0	UCRI	(13mm)	11.05.24	82857	1.500	0.9619	1449	E475
C10	05	65714	11.4283	0.4286	日4年	83714	E475	10714	0.081	-0	03762	0619	0.2975	1.1148	05381	0.446	6473
113	U.357	114524	1.485	0.5476	8.352	815667	11.414	113476	0.3657	0.3%2		11 2571	113957	0.4667	0.3714	0.367	0.48
C12	0.387	0.4286	11.5343	0.4857	0.493	0.7095	0.533	0.6795	11.6524	0.619	0.2571	9	0,4619	0.319	0.5	0.5	0.407
C13	0.352	04381	0.328	0.2952	0.433	113905	8457	0.2905	0.2857	0.2905	0.3952	0.4619		0.3714	64524	0.329	0238
C14	0.581	0419	8.429	64524	0.5265	04381	0.328	45	0 5296	0.5048	04667	0.313	8.3714		0.5381	0.29	6428
CIS.	0.991	0.4381	0.490	0.4857	0.54%	0.4952	0.3734	0.5048	0.5619	0,981	03714	05	0.4524	0.381		0.49	0.528
CIG	0.424	0.3333	0.482	0.5524	0.638	03767	8.4429	0.4667	0.4429	0.4076	03857	05	0.3619	0.29	1419		0.48
	12 0000	11 1000	-	0.000	10.000	11.8010	BATH	21.01102	3 2715	1.0722	11.001	11.5125	11 2 2 2 1	2	115722		

Table 11. Results of the application of the InterCriteria Analysis on the aggregated data of the of the students practicing table tennis in the beginning of the educational year (A- the membership parts of the intuitionistic fuzzy pairs, B- the non-membership parts of the intuitionistic fuzzy pairs)

A	a	12 I	a	C4	6	06	C7	08	Ci i	C10	c11	CI2	C13	C14	CB	cla (C17
a 🛛	1	03333	0.5905	0.4381	0.5048	0.4333	0.392	85	0.5952	0.5%2	0.3952	8	115143	0.4286	0,4524	1.49	045
a	0.383	1	0.90	0.4952	0.4429	0,4952	0.457	0.4286	0.4238	84	14296	0.9048	0419	0.976	0481	0.469	0
G	0.905	0381	1	03915	0.672	0.5286	0.387	0.5571	0.6619	0.967	13295	0.381	0.4975	0.4714	0.4048	0.5788	045
CA .	0.481	0.4952	0.3905	1	1.35	0.4429	11.5536	0.3857	0.3857	6.2754	03288	0.2%3	0.476Z	0.1148	0.5714	0.5088	845
Ġ.	0.5088	0.4429	0.672	0.381	1	85476		0.4381	0.6048	6.5476	03571	0.3095	112381	0.307	03952	0.4143	845
Gi l	0.4311	114952	0.526	0.4429	0.54%	1	131	0.5296	11.9524	0.9714	4257	11 22.08	83957	0.467	0.2952	14143	ILSZ
7	0.352	0.4571	0.357	0.5524	ED	0.381	1	0.481	0.3143	8.4295	0 3381	0.4833	0.481	1.23	0.5952	0.5088	1139
08	85	0.4286	115371	0.3857	0.435	0.5286	0.40	1	0.5762	0.371	8 281	11.457	6519	0.571	0.4571	0.428	0.55
09	0.987	84238	1.629	03897	0.6048	0.5524	11314	115762	1	0.8	04143	0.4714	0.4667	B 9233	0.4857	0.452	0.45
C10	0.5%2	0.4	11.987	03714	0.54%	85714	0.4095	117571	0.8	1	-0.319	0.4857	0.5286	0.5076	14619	0.454	0SL
ά1	0.352	0.4286	11 12 11	0.5255	0.355	0.2412	11 1100	0.281	11 4143	0.319	- 1	0.481	122905	0.24	0.0728	0.426	0.57
C12	0.5	0.5048	6.31	0.2762	0.325	0.3268	0.433	0.4857	0.4714	0.4857	04381	1	0.4571	0.29	0.3905	0.435	0.35
G3	USME	0.419	0.485	0.4762	9.738	03952	0.45	0519	0.4667	0.5286	02905	11.4571	1	0.714	64238	0.471	04
C14	0.426	05476	11.471.4	0.5048	0.397	LLAND?	11.522	85571	1.5333	0.5476	0.315	2519	85714	1	0.9619	0.574	11.32
C1S	0.4524	0.481	11.4382	0.5714	0.392	0.2932	0.592	114571	D.4857	0.4619	0 3258	0.305	114238	10.0619	1	0.524	1132
C16	11.419	84429	11.5288	0.5048	0.458	0.4143	0.5048	114738	0.4952	0.4524	0.4285	0.455	0.4571	0.714	85524	1	034
C17	0.471	85	1.454	0.4524	0.4524	0.5238	0.397	115571	0.4524	0.1243	0.3714	0.3257	0.481	1.238	0.3238	0.349	
	0	17		C4	G	05	C7	08	9	CIO	CII	CIZ	C13	C14	CE	C16	110
8	q	166429	1.495	03571	11 492	U.Sent	158	0.4286	0.4048	11 4048	13007	11 3524	11.5286	05	11481	0.457	149
a –	0.649	a	11.5957	04762	0.538	11481	0.495	114762	0.5524	0.5572	0.3095	0.3238	11.4	1.571	64286	0.456	
8	0.435	0.5957		04048	8 328	0.4714	11.590	113714	0 3381	0.243	0.4524	0.414	113524	0.4571	05226	64	847.
G4	0.1971	84762	1.000	1	0.6148	0.5524	0.43	115476	0.6095	1.9148	04429	0.714	113619	0.49	03571	0.352	047
cs	0.4952	05133	0.328	06143	-0	0.4524	1675	114905	0.3957	0.4833	0.4048	U 929	06048	0.1619	19250	0.4805	847
G	0.5%67	0481	1.4754	0.3524	0.452	C	11 997	04	0.4476	0.4095	14007	0.5%	8.4476	0.4619	0.6381	0.4805	
0	0.31	0.4952	0.985	0.419	0.672	115952	-	0.4238	0.6619	0.5476	04095	0 352	03381	0.305	0.3238	0.3%2	0.92
CR	0.4286	0.4762	0.374	05476	0.495	0.4	8428	d	0 2524	0.1524	04571	0.333	0.2714	0.3095	0.4048	0.495	032
3	0.498	0.5524	1331	United	295.0	114476	11052	02524		IL LANS	03476	0.381	0.3762	0.957	0.4476	1495	847.
C10	14748	0.5571	IL SME	04048	0.438	0,4095	0.546	0.1524	0.181	-0	0.4238	0.371	62952	0.419	0.4524	0.449	0.39
ai	U.BE7	0.3095	11.454	0.4429	0.4048	0.4667	0.405	114571	0.3476	8.4238		0.250	1381	0.905	0.4	0.2%2	0.35
C12	0.354	03738	1.47.4	09714	0.5429	0.5286	0.392	11.3333	0.381	0.571	0.7738		112857	0.2714	0.4048	0.3762	0.42
C13	0.3295	0.4	0.324	0.3619	E.6048	0.4476	11 330	02714	0.3762	0.2957	0.381	0.2657	1	0.29	0.3714	U.E.SS	035
C14	115	83571	1.491	0419	0.968	04619	0.395	0.3795	0.3952	6.3619	03935	0.7714	11219		0.3	0.284	1152
CIS .	0.481	0.4286	0536	0.3571	0.538	06381	0.378	0.4048	0.4476	0.4524	0.4	0.4348	03714	03	1	0.287	0.55
CDG	0.457	0.4476	04	0.3952	0.495	0.4935	11 230	0.000	0.0005	11.4030	-0.750	0 2001	0.3786	C PORT	111951		IISI
								0.000		- LL - LL -	14.4.7 10.4	10.16.00	the set at the set	- 14 AL 14	Magness of	And and the second second	

Table 12. Results of the application of the InterCriteria Analysis on the aggregated data of the of the students practicing table tennis at the end of the educational year (**A**-the membership parts of the intuitionistic fuzzy pairs, **B**- the non- membership parts

			(of t	he i	intu	iitio	oni	stic	fu	7.7.V	, pa	irs))			
a l	a i	a i	a 1	14	5	G 1	70.0	128	CI	cia	an j	m	C13	C14	CB	čis -	C17
a	1	0.4902	1.524	0 3007	0.572	0.5882	11.5712	0.451	0.4575	0.475	0.7941	0.307	0.9098	1.879	0.4544	0.487	0.46
a	0.4902	1	0.3987	05621	0.5556	85254	0.562	05621	0.4248	0.263	14440	0.4814	0.6667	0.82	0.0001	0.623	0.37
G	0.524	0,3987	1	(LSUIT	0.645	04706	0.528	0.3957	0.4537	0.444	13399	1.364	0.4748	0.406	0.5817	0.539	843
CA	0.387	05621	10.3017	1	0.4248	0.5229	0.418	0.5098	0.6013	0.7817	04771	0.529	0.4902	0.418	0.4932	0.25%	0.514
6	0.5752	0.5556	0.645	0.4248	1	0.7124	0.00	0.9948	0.6732	0.001	0.4052	0.384	0549	0.471	0.6209	0.4706	0.57
6	115972	115294	0.476	05229	0.712	1	11.647	06279	0.7255	0.7516	114771	11 384	0.4837	0.411	05425	0.365	1158
57	0.3752	05671	11.5088	04183	0.63	0.6471	1	116405	1.9686	0.634	0.2876	0.276	0.4379	0.4079	0.4771	0.503	I 46
CE	0.451	05671	0.3967	0.5098	8,65.0	0.6209	0.645	1 1	0.5817	0.7647	05163	11.237	04118	0.4771	85817	0.444	842
69	0.4575	0.4248	0.457	0.9013	0.672	0.7255	11.56H	115817	1	0.3205	05163	0.4752	115359	0.387	64118	0.3725	1176
C10	0.4995	05163	11 539.8	0.5817	0.660	0,7516	0.63	117647	0.8105	1	85752	0.299	114641	0.4879	0.4837	0.4283	0.61
Ġ1	0.2911	0.5555	10.2344	04771	0.412	04771	11.75%	05163	0.5163	0.5752	1	0.4575	94118	0.406	04248	0.3464	1.39
C12	0.387	0.4314	0.3454	0.5229	0.2436	12484	0.28%	0.3137	0.4052	0.3899	04575	1	0.4314	0.4902	0.3372	0.352	844
C13	0.528	0.6667	0.438	0.4902	11.549	114837	114378	04118	0.5359	6.4641	0.4118	11.4814	1	0.64	0549	0.623	0.52
C14	0.43%	0732	0.4706	04118	U 4771	8451	1438	84771	0.2987	1.4279	U4706	11.4802	0634	1	0.6425	11.624	1133
C1S	0.484	10001	11.5817	0.4902	0.6209	85425	E 477	115817	0.4118	8,437	0.4248	0.1072	0549	1905	Ţ	0.6344	1135
C16	日4四7	0.6013	11.53的	0.2876	0.4706	11366	0.503	114444	0.3725	0.483	03464	0.3722	0.6013	0.64	06144		03
C17	0.4941	03791	11.4248	05163	0.57%	0.5887	0.464	EA183	0.7647	1944	0.3987	II.4844	115794	0.000	0.2529	1.36	1000
	1	C7 (a j	24	G	06	67	08	09	C10	C11 (CLIZ	CI3	C14	CIS	C16	CIT
12	4	1145917	0.476	(LEAKER	0.4248	HALLE	1.478	0.5798	0.5425	0.935	04907	11 3943	0.4183	1 113	0.50KE	11.451	ILST
2	E 4902	a	1.587	0.4052	0,4248	11451	日43章	113791	0.5396	8.475	0.3595	0.4944	82418	0.2006	9,2745	0.357	057
8	11.4706	05817		0.6263	6.35%	85794	11.451	05621	0.5163	0.549	04464	0.549	115033	0.4706	83725	0.39E7	0.5
64	C (SEE	0.4057	11.5861		0.562	0.4641	0.964	114379	0.3856	0.387	0.7941	0.395	11.42,48	0.263	0451	1.64	0.44
cs	0.4348	04248	0.395	03621	-0	0.2876	0.36	0.396	0.3268	11 2033	0.3791	1671	03791	0.4641	83333	0.491	0.39
65	0.408	0451	11.5254	0.4541	0.28%	6	0.358	0.2399	9.2745	0.318	0.3072	1.971	IL ADDE	0.4812	04118	0.586	0.32
9	0.438	0.4183	0.4902	0.5686	0.366	8.3529	0	0.3208	0.4314	0.395	0.4967	EL-1178	0.4902	0.1133	0.4771	0.434	0.50
CR	0.528	03791	0.921	0.4379	0.36	03399	EL 322B	q	1676.0	0.2895	12549	1925	0.4902	0.4248	0.33333	0.451	1151
3	11545	119996	0.5161	03856	C HAR	82745	11.431	03791	.0	11,083	0.268	1.402	8.3922	1.505	05425	0.921	0.22
C10	0.528	14575	8.58	0.3987	0.338	02418	0.395	01895	0.183	1	9,2026	0549	114575	0.4967	0.4641	0.5288	035
aı	11.4912	0.3595	11.4444	02941	8.37%	113072	11.497	02549	0.268	0.200		11 2745	03137	0.28	0.3268	0.3987	0.39
C12	0.5948	0.4444	0.989	03595	0.6471	06471	1 (II) B	115425	0.4902	0.549	0.2745		0.4052	0.364	0.5425	0.491	043
613	0.4283	02418	IL SER	0.4248	0.37%	0.4666	8.490	114902	0.3922	0.4575	0.3137	0.4052	1	0.3684	83333	0.224	0.37
C14	0.585	0.2025	0.4706	0.5163	0,464	0.4902	11.513	0.4748	0.5425	0.4867	0.268	1354	02484	1	0.2549	9.248	1158
CIS.	0.938	0.2745	0.3725	0,451	0.333	04118	0.475	03333	0.5425	0.4541	0.3268	1975	03333	0.249		0.307	0.57
CIG	0.451	03137	0.39E7	0634	0.464	115686	EL 4314	0.451	0.9621	0.998	0.3987	0.4641	02614	6 3818	0.3007		IIS.
127	11 5 98	115757	0.39	Q.4444	0.397	03896	11.9798	115161	17 70772	0.575	03995	1.443	03725	1.317	115752	0.545	

Table 13. Results of the application of the InterCriteria Analysis on the aggregated data of the of the students practicing fitness in the beginning of the educational year (A- the membership parts of the intuitionistic fuzzy pairs, B- the non- membership parts of the intuitionistic fuzzy pairs)

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Table 14. Results of the application of the InterCriteria Analysis on the aggregated data of the of the students practicing fitness at the end of the educational year (**A**- the membership parts of the intuitionistic fuzzy pairs, **B**- the non- membership parts of the intuitionistic fuzzy pairs)



Table 15. Results of the application of the InterCriteria Analysis on the aggregated data of the of the students practicing football in the beginning of the educational year (A- the membership parts of the intuitionistic fuzzy pairs, B- the non- membership parts of the intuitionistic fuzzy pairs)

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0 10.00 0.0	i I	0.900	18480	Concession of	0.400	0.493	0.5300	8.578	0.4833	0.954	0.976	10.25	0.071	0.5254	0.500	0.9345	0.479	0.51
S L 100 C-CO. C-RE	à i	11.6.24	114925	11.440	1.000	th middle	04858	0.200	115294	0.1971	11.4617	11500	1.027	114417	0.905	050062	0.264	ILS4
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5 4 1 4 1	8	0.224	theorem	15.580	(LARL)	11-412	1 1	1.414	11550	10.0324	0.000	1000	1.00	. 11/1	1.410	ILINIPA	6.435	5.44
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5 1 (27) 1 (28) (13) (12) <th(12)< th=""> (12) (12) <th< td=""><td>ž –</td><td>0.420</td><td>114118</td><td>0.453</td><td>01244</td><td>11.164</td><td>0.000</td><td>11.445</td><td>1</td><td>1.012</td><td>0.625</td><td>1440</td><td>0.410</td><td>1112294</td><td>1.0.304</td><td>IIIIA?</td><td>11-44422</td><td>6.41</td></th<></th(12)<>	ž –	0.420	114118	0.453	01244	11.164	0.000	11.445	1	1.012	0.625	1440	0.410	1112294	1.0.304	IIIIA?	11-44422	6.41
Bit Law Alv Law Alv Alv <td>ŝ.</td> <td>11.3083</td> <td>IL BALL</td> <td>8.5.00</td> <td>0.0073</td> <td>0.5930</td> <td>116424</td> <td>ILA/M</td> <td>(inest)</td> <td></td> <td>R HOLD</td> <td>6.0</td> <td>0.3171</td> <td>D-MAL</td> <td>STR. BIT</td> <td>UNSER</td> <td>(LAR)</td> <td>(C) BA</td>	ŝ.	11.3083	IL BALL	8.5.00	0.0073	0.5930	116424	ILA/M	(inest)		R HOLD	6.0	0.3171	D-MAL	STR. BIT	UNSER	(LAR)	(C) BA
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12 6 wes 6	11	11.4.428	0.550	11.0%	0.1.400	0.10020	I ALL	11.412	1. CLANES	0.2	11.3479		11.42.91	0.2167	0.400	BABS	0.091	100
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Table 16. Results of the application of the InterCriteria Analysis on the aggregated data of the of the students practicing football at the end of the educational year (**A**- the membership parts of the intuitionistic fuzzy pairs, **B**- the non- membership parts of the intuitionistic fuzzy pairs)

From the results of the application of the ICra, we see that the pairs with the strongest positive consonance, i.e. those with smallest distance from the intuitionistic fuzzy truth (0,1), in the beginning of the educational year are those detected between the:

- C8 C10 (basketball, table tennis and football)
- C8-C9-C10 (basketball, table tennis)

The pairs with the strongest negative consonance, i.e. those with smallest distance from the intuitionistic fuzzy truth (0,1), in the beginning of the educational year are those detected between the:

- C1 C2 (basketball)
- C2 C13 (football)
- C6 C12 (fitness)

There is also a correlation between the criteria Logical thinking (C11) and Memory (C12) with the criteria General physical fitness (C1) (fitness) and the criteria Control of attention (C6) (table tennis). At the end of the educational year all of the pairs in all of the investigated sport activities are in dissonance, and some of the strong correlations between the above mentioned criteria are missing. One possible reason for this phenomenon is that students practicing sport activities on academic level regardless of the sport they practice, develop and improve all of the locomotor skills and mental condition.

4 Conclusions

Based on our findings, we can conclude that in general the relations among the investigated criteria describing the physical and personality status of the students are much stronger in the beginning of the educational year compared to the relations at the end of the educational year. Some of the criteria in the test battery formed between logically related indicators can be easily excluded from the test battery in order to achieve efficiency while keeping the precision of the evaluating process.

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