129 - EVALUATION OF PSICOSSOCIAL STRESS, DEPRESSION AND ANXIETY IN HANDBALL HIGH PERFORMANCE ATHLETES

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Introduction

Sports are achieving more and more remarks in the modern society, mostly due its modalities great popularity. Because of it, corporations are investing great amounts of money in this activity, with the objective of show its products and associate it to winner athletes. Thus, corporations invest in the preparation of these athletes and contract professionals in the field of sport medicine, like physicians, physical trainers, physical therapists, and dietists. In another hand, corporations exert hard pressure on the athletes, demanding them better performances.

Despite all resources employed to enhance the athletes' performance and the care with important factors, like resistance levels, fat amounts, among others, it is observed that work in other fields could contribute to this goal. As said by Marques (2003) it was the reason by which sports psychology was created, an additional resource in order the athletes go beyond their limits.

Method

Sample: The study was performed with a group of 19 female teenagers, from 16 to 24 years old from a handball team of the national league. Instruments: Three instruments of psychological evaluation were employed. All of them were approved by the Federal Psychology Board. 1. Stress Inventory of Lipp (ISSL) which has the objective to identify in an objective manner if the individual shows the stress symptoms, if these symptoms are predominantly physical or psychological. This inventory additionally establishes the stress phase in which the subject is: alert, resistance, almost exhaustion and exhaustion. The alert phase identifies the moment the organism is preparing itself to face the problem or to run, preserving its existence. In the second phase, resistance, the organism is looking for to adapt in order to survive and to reach balance, sensations of consuming and fatigue. The third phase is the almost exhaustion when the subject is no longer able to deal with the stressor element, that remains continuous and begins to become sick. When the situation becomes even worst the last phase appears: All adaptative energy of the subject was drained and, at this moment the more serious illnesses. 2. Beck's anxiety inventory (BAI) and 3. Beck's depression inventory (BDI), both are subdivided in four levels: minimum, light, moderate and serious.

Results

The data obtained by these three instruments were analyzed by the Pearson correlation test, using a significance level of = 0,05 and frequency analysis. It was these analysis were performed by the statistical software SPSS (Statistical Package for Social Sciences - v. 12.0).

The results of the correlation analysis had demonstrated as we can observe in table 1, that the increase of the anxiety level is correlated positively with the gravity in the phases of stress. We can, therefore, to understand that in the case of the studied athletes the anxiety is an important element in the triggering of psychosocial stress.

		Stress	Phase	Symptom	BDI	BAI
Stress	Pearson Correlation	1	.796(**)	.907(**)	.033	.304
	Sig. (2-tailed)	.	.000	.000	.893	.205
	N	20	20	20	19	19
Phase	Pearson Correlation	.796(**)	1	.726(**)	.182	.526(*)
	Sig. (2-tailed)	.000	.	.000	.456	.021
	N	20	20	20	19	19
Symptom	Pearson Correlation	.907(**)	.726(**)	1	.141	.196
	Sig. (2-tailed)	.000	.000	.	.565	.421
	N	20	20	20	19	19
BDI	Pearson Correlation	.033	.182	.141	1	.428
	Sig. (2-tailed)	.893	.456	.565	.	.067
	N	19	19	19	19	19
BAI	Pearson Correlation	.304	.526(*)	.196	.428	1
	Sig. (2-tailed)	.205	.021	.421	.067	.
	N	19	19	19	19	19

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

Regarding to the symptoms of psychosocial stress (table 2) evaluated through the ISSL we identify positive correlation between the increase of the generalized sickness without specific cause and the level of depression. We also identify positive correlation between the increase of the symptom of muscular tension and nightmares with the anxiety level. These elements reveal the most important factors in the analyzed group in order to identify the increase of anxiety and depression, that is, whenever symptoms of generalized discomfort without apparent cause are identified, it must be paid attention to the increase of the anxiety. In the same way, the increase of muscular tension and nightmares are indicators of the increase in the level of the depression. It is important to strengthen the idea that these indexes are specific for the studied group and perhaps cannot be expanded to other groups. However, the analysis procedure is valid for the determination of the symptoms of other teams..

		BDI	BAI	Muscular tension	Generalized discomfort without specific cause	Nightmares
BDI	Pearson Correlation	1	.428	-.119	.602(**)	.400
	Sig. (2-tailed)	.	.067	.628	.006	.090
	N	19	19	19	19	19
BAI	Pearson Correlation	.428	1	-.480(*)	.196	.514(*)
	Sig. (2-tailed)	.067	.	.037	.421	.024
	N	19	19	19	19	19
Muscular tension	Pearson Correlation	-.119	-.480(*)	1	-.043	-.236
	Sig. (2-tailed)	.628	.037	.	.858	.317
	N	19	19	20	20	20
Generalized discomfort without specific cause	Pearson Correlation	.602(**)	.196	-.043	1	.303
	Sig. (2-tailed)	.006	.421	.858	.	.195
	N	19	19	20	20	20
Nigthmares	Pearson Correlation	.400	.514(*)	-.236	.303	1
	Sig. (2-tailed)	.090	.024	.317	.195	.
	N	19	19	20	20	20

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

The data raised through the ISSL, by the analysis of frequency, had shown that 80% of the players present psychosocial stress, 20% of them present stress in the alert phase, 60% of the in the resistance phase and 10% of them in exhaustion. Regarding to the type of symptoms showed 7% of them had been identified as physical, 80% psychological 80% and 13% mixed. Among the symptoms that had appeared more frequently remarkably : to think constantly about an only subject (this symptom occurred in 90% of the subjects), anguish and daily anxiety (79%), constant fatigue (74%), sudden will to initiate new projects (58%), muscular tension (58%), sudden enthusiasm (53%) and extreme emotive sensitivity (53%).

Based on these results, we can perceive that the majority of the athletes is in the resistance phase. As the activity is developed in an environment that favors the appearance of stress, the athletes would have to show a bigger adaptation to the stressor events. We can identify an important difficulty in the strategies that they are using to adapt themselves or to decide the stressor events.

Based on this study it was possible to evidence the importance that stress has in the sportive life, influencing not only athletes as well as coaches, families and referees, being the sports psychologist to be very helpful in the handling of the feelings that stress unchains, in order to not harm the sportive practice. However it is also important to remark as cited by Rosnet (1999) that the studies on the presence of stress and the sportists' income are not yet conclusive. in order to clarify if it is necessary or hinders a better general performance.

In the studied case we can identify a difficulty of female athletes in order to deal with the stressing situations, coming to present in extreme cases the exhaustion phase. Of course it is important to consider the age of the athletes taking in to account they live a development phase full of personal and professional doubts as well as contradictions. Being this a crisis moment also will define many of the established strategies to face the stressor events. Spielberger (1981) affirms that the confrontation of the tension and the anxiety is one of the essential elements in our daily life and requested elements for our development and growth. However, according to this author, exists positive and negative aspects in the tension, being these last ones the most related by directly affecting the physical health and emotional well-being. Since the more frequent type of symptom psychological origin, it is necessary to pay special attention to is appearance, not considering it as a fragility of the female athlete, but as an important symptom for the prevention of the mental health.

Considering these data regarding to the psychological symptoms psychosocial stress, we performed the evaluation of anxiety and depression, because these are important symptoms and because they can cause bigger difficulties with its aggravation. Regarding to the anxiety evaluation, (BAI): 31% are in the minimum phase of anxiety, 37% are concentrated in light phase, and 26% in the moderate phase. The same sample had as resulted in the depression test (BDI): minimum 31%, has taken 58%, moderate 11%.

The results for both anxiety and depression did not showed serious cases in the team. However we identified 63% of the athletes as having emotional discomfort with presence of anxiety and 69% with depression. These data indicate that it is necessary to have a bigger concern with anxiety, since as remarked by literature; this is an important element of emotional suffering for the athletes. With regard to depression it is important to consider that, although only two players presented the moderate level, due the age of the searched group, this can be a reason of great psychic suffering and it needs to be observed with much attention.

As much as moderate depression, a big number of athletes shows light levels. The main focus of sport psychology's literature is anxiety. However, we observed that depression is directly associated to anxiety, showing so important than this.

In the same way, we observed that the situational anxiety caused by the training stimulus and competitions did not appeared as a concern. However, the anxiety and depressive trait are identified as important elements to the teams' performance. These elements are reinforced by individual features of personality and equally by the pressure suffered by the female athletes in the point of view of coach, family and the team itself. Thus, to help this group, the fear of external criticism and, specially, the self criticism must be worked, since it reduces the ability of initiative and increase the feeling of incapacity. These elements hinder the development of group cohesion and victory.

Conclusion

Based on the present results, we can perceive that most of the female athletes is in the resistance phase. Since the activity is developed in environment that favors the appearance of stress, the athletes should present a bigger adaptation to stressor events. It is verified that higher levels of anxiety and depression are associated in stress cases. The data showed in this group of athletes the elements that identify the need of stress monitoring are in the phases of resistance, almost-exhaustion and exhaustion and in the evaluation of anxiety and depression in the light, moderate and serious phases.

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EVALUATION OF PSICOSSOCIAL STRESS, DEPRESSION AND ANXIETY IN HANDBALL HIGH PERFORMANCE ATHLETES

Abstract

The present work evaluates the relation between psychosocial stress, anxiety and the depression in the income of athlete of high performance. The study it was elaborated with a group of 20 female, with average age of 17 years, practitioners of the modality handball of high performance level. We use as instruments: Inventory of Stress de Lipp (ISSL) that presents 4 scales - alert, resistance, almost-exhaustion and exhaustion; Inventory Beck of anxiety (BAI) and Depression (BDI) that it is subdivided in minimum, moderate and serious. Results: The raised data had shown that 80% of the players present psychosocial stress. 20% of them presented stress in the alert phase, 60% of resistance and 10% of exhaustion. Regarding to the anxiety evaluation (BAI): 31% are presented in minimum phase of anxiety, 37% are concentrated in light phase and 26% in moderate phase. The

same sample had as resulted in the depression test (BDI): minimum phase of anxiety 31%, light 58%, moderate 11%. Based on the results we can perceive that the most of the athletes are in the resistance phase. Being the activity developed in an environment that favors the appearance of stress, the athletes would have to present a bigger adaptation to the stressor events. It is verified that the higher levels of anxiety and depression are associated in the cases of stress. The data showed that, for this group of athletes, the elements that identify the necessity of accompaniment of stress are in the phases of resistance, almost-exhaustion and exhaustion and in the anxiety evaluation and depression in the phases moderate and serious.

Key-Words: psychosocial stress, handball, psychological evaluation

ÉVALUATION DU STRESS PSYCHOSOCIAL, DE LA DÉPRESSION ET DE L'ANXIÉTÉ CHEZ LES ATHLÈTES DE RENDEMENT ÉLEVÉ AU HANDBALL

Résumé

Le présent travail évalue la relation entre le stress psychosocial, l'anxiété et la dépression au rendement d'athlètes de haute efficience. L'étude a été élaboré avec un groupe de 20 adolescentes du sexe féminin, à l'âge moyen de 17 ans, pratiquantes de la modalité handball de haut niveau. Nous avons utilisé comme instruments : l'Inventaire de Stress de Lipp (ISSL) qui présente 4 échelles - alerte, résistance, presque-exhaustivité, et exhaustivité ; l'Inventaire Beck d'Anxiété (BAI) et Dépression (BDI) subdivisé en minimum, léger, modéré et grave. Résultats : Les données levées ont montré que 80% des joueuses présentent du stress psychosocial, desquelles 20% présentaient du stress dans la phase d'alerte, 60% de résistance et 10% d'exhaustivité. En relation à l'évaluation de l'anxiété (BAI) : 31% se présentent en phase minimale d'anxiété, 37% se concentrent à la phase légère et 26% en phase modérée. Le même échantillon a eu comme résultat au test de dépression (BDI) : minimum 31%, léger 58%, modéré 11%. À partir des résultats nous pouvons apercevoir que la majorité des athlètes sont à la phase de résistance. L'activité étant développée dans une ambiance qui favorise la manifestation du stress, les athlètes devraient présenter une plus grande adaptation aux évènements stressants. On vérifie que les niveaux les plus élevés d'anxiété et dépresssion sont associés aux cas de stress. Les données démontrent que, pour ce groupe d'athlètes, les éléments qui identifient la nécessité d'accompagnement du stress sont aux phases de résistance, presque-exhaustivité et exhaustivité, et dans l'évaluation de l'anxiété et dépression, aux phases modérée et grave.

Mots-clés : Stress psychosocial - Handball - Évaluation psychologique

Evaluación del estrés psicosocial, depresión y ansiedad en atletas de alto rendimiento de balonmano

Resumen

El presente trabajo evalúa la relación entre el estrés psicosocial, la ansiedad y la depresión en el desempeño de atletas de alto rendimento. El estudio fue elaborado con un grupo de 20 adolescentes del sexo femenino, con una edad media de 17 años, practicantes de la modalidad deportiva de balonmano de alto nivel. Utilizamos como instrumentos: Inventario de *Stress* de Lipp (ISSL) que presenta 4 escalas - alerta, resistencia, casi exahusto y exhausto; Inventario Beck de Ansiedad (BAI) y Depresión (BDI) que se subdivide en: mínimo, leve, moderado y grave. Resultados: los datos levantados mostraron que 80% de las jugadoras presentan estrés psicosocial, de éstas 20% presentaban estrés en la fase de alerta, 60% de resistencia y 10% de exhausto. En relación a la evaluación de ansiedad (BAI): 31% se presentan en fase mínima de ansiedad, 37% se concentran en la fase leve y 26% en fase moderada. La misma muestra tuvo como resultados en el test de depresión (BDI): mínimo 31%, leve 58%, moderado 11%. A partir de los resultados podemos percibir que la mayoría de las atletas se encuentran en la fase de resistencia. Siendo la actividad desarrollada en un ambiente que favorece el aparecimiento del estrés, las atletas deberían presentar una adaptación mayor a los eventos estresantes. Se verifica que los niveles más elevados de ansiedad y depresión están asociados a los casos de estrés. Los datos demuestran que, para este grupo de atletas, los elementos que identifican la necesidad de acompañamiento del estrés están en las fases de resistencia, casi exhausto y exhausto y en la evaluación de ansiedad y depresión, en las fases moderada y grave.

Palabras clave: estrés psicosocial, balonmano, evaluación psicológica

Avaliação do estresse psicossocial, depressão e ansiedade em atletas de alto rendimento do handebol

Resumo

O presente trabalho avalia a relação entre o estresse psicossocial, a ansiedade e a depressão no rendimento de atletas de alto rendimento. O estudo foi elaborado com um grupo de 20 adolescentes do sexo feminino, com idade média de 17 anos, praticantes da modalidade handebol de alto nível. Utilizamos como instrumentos: Inventário de Stress de Lipp (ISSL) que apresenta 4 escalas - alerta, resistência, quase-exaustão e exaustão; Inventário Beck de Ansiedade (BAI) e Depressão (BDI) que se subdivide em mínimo, leve, moderado e grave. Resultados: Os dados levantados mostraram que 80% das jogadoras apresentam estresse psicossocial, destas 20% apresentavam estresse na fase de alerta, 60% de resistência e 10% de exaustão. Em relação à avaliação de ansiedade (BAI): 31% apresentam-se em fase mínima de ansiedade, 37% concentram-se na fase leve e 26% em fase moderada. A mesma amostra teve como resultados no teste de depressão (BDI): mínimo 31%, leve 58%, moderado 11%. A partir dos resultados podemos perceber que a maioria das atletas encontra-se na fase de resistência. Sendo a atividade desenvolvida em um ambiente que favorece o aparecimento do estresse, as atletas deveriam apresentar uma adaptação maior aos eventos estressores. Verifica-se que os níveis mais elevados de ansiedade e depressão estão associados nos casos de estresse. Os dados demonstram que, para este grupo de atletas, os elementos que identificam a necessidade de acompanhamento do estresse estão nas fases de resistência, quase-exaustão e exaustão e na avaliação de ansiedade e depressão nas fases moderada e grave.

Palavras-chave: estresse psicossocial, handebol, avaliação psicológica.