



STRESS COPING MECHANISMS LINKED TO THE TEST SITUATION AND ITS IMPACT ON THE MOTOR ADAPTATION AT YOUNG FOOTBALL PLAYERS

Mourad Ait Lounis¹ⁱ,
Swanilda Mekioussa Izri¹,
Fatih Yesguer²

¹University of Boumerdes, Algeria

²University of Algiers, Algeria

Abstract:

This study aims at showing whether the relation between the stress coping mechanisms and the motor performance varies significantly according to the nature of stressful circumstances linked to the test situation. 20 young football players between 10 and 12 years old were submitted to two modalities of evaluation (the one with the usual educator and the other one with the outside participant). The statistical analysis of the data shows a close relationship between the independent variable (modalities of evaluation) and the dependent variable (motor performances).

Keywords: stress, coping, adaptation capacity, motor performance, evaluation modalities

1. Introduction

The success of the motor learning cannot conceive, without taking into account the importance of the relation between the motivational state and the motor performance, (Schmidt, R.A., 1999).

During the learning process, the relationship between the level of motivation and learning could be, influenced, by certain stress factors whose consequences are different and specific to the nature of each stress agent (Selye, in Perreaut, on 1997). These factors could generate psychic tensions whose intensity is determined by the way in which each person perceives the stress situation, But, Sometimes, the personal psychological capacities are insufficient to cope with the excessive or repeated demand of the environment, as it could be the case in certain situations of motor learning, generating therefore, a certain psychological tensions (Thomas, 1991).

ⁱ Correspondence: email maitlounis69@gmail.com

In response to a state of tension induced by aggressive agents, the ego of individual psycho-affective put into play the mechanisms of psychic regulation (Le Scanff, C, & Bertsch, J., 1995). On the psychological plan, the cognitive processes related to coping with stressful situations often have the effect of causing maladjustment in the choice of decisions and execution of tasks, (Lazarus, R.S., 1976; Lindsay and Norman, 1980; Thomas, 1991).

Based on these different scientific data which postulate that the stress factors lead to different cognitive reactions and, also, considering the characteristics related to the emotional state of young soccer players, we established the problem of this study on the following questioning: Do the cognitive reactions generated by the variation of the evaluation modalities have a significant influence on the motor adaptation capacity of young footballers?

2. Methods and tools

This study aims at verifying whether the relation between the stress coping mechanisms and the motor performance at young football players, varies significantly according to the nature of stressful circumstances linked to the test situation (evaluation modalities). 20 players between 10 and 12 years old participated in this study; this choice is motivated by the fact that this age category coincides directly with the first phase of detection. The procedure of the study consists in submitting the players to two evaluation modalities (one with a usual educator and the other one with an outside educator); three evaluations spaced one week apart from each other were realized; the evaluation test consists of realizing the maximum juggling possible before the ball touches the ground, either with the same foot or both; in each evaluation test the player must perform three trials in each evaluation modality, then the average of the three trials is counted. In order to minimize the effect of partner observation on individual performance during test execution by some players, the others are grouped together in technical workshops. The evaluation of the differences between the results of the evaluation modalities, the Student t-test statistical analysis was applied for the variables under consideration.

3. Results

Table 1: Means value and standard deviations of the first evaluation

Statistical parameters Evaluation	(N)	Means (M)	SD	T- STUDENT
Usual Educator	20	35.55	08,30	$T_{\text{é}v1} = 22.38^{**}$ $\alpha = (0.05)$
Outside Educator	20	23.8	10,65	

The analyses of results showed that there are significant statistical differences between the performances obtained with the usual educator (35,55) compared to those obtained

with the outside educator (23,8); the Student t-test calculated (22.38) is significant at ($\alpha = 0.05$) (table 1).

Table 2: Means value and standard deviations of the second evaluation

Statistical parameters Evaluation	(N)	Means (M)	SD	T- STUDENT
Usual Educator	20	30.15	8.78	$T_{\text{év}2} = 32.76^{**}$ $\alpha = (0.05)$
Outside Educator	20	25.4	9.43	

The statistical data presented in the table 2 shows a significant differences between the performances obtained with the usual educator (30,15) compared to those obtained with the outside educator (25,4); the Student t-test calculated (32,76) is significant at ($\alpha = 0.05$).

Table 3: Means value and standard deviations of the third evaluation

Statistical parameters Evaluation	(N)	Means (M)	SD	T- STUDENT
Usual Educator	20	33.1	9.78	$T_{\text{év}3} = 25.48^{***}$ $\alpha = (0.05)$
Outside Educator	20	26.55	10.97	

The statistical data reported on the table 3 shows a significant difference between the performances obtained with the usual educator (33,1) compared to those obtained with the outside educator (26,55); the value of T-Student calculated (25,48) is significant at ($\alpha = 0.05$).

4. Discussion

This study aims at verifying whether the relation between the stress coping mechanisms and the motor performance at young football players, varies significantly according to the nature of stressful circumstances linked to the test situation (evaluation modalities). Taking into consideration the different scientific conclusions which admit that stress factors induce different cognitive reactions, we have formulated the following hypothesis: "the cognitive reactions generated by the variation of the modality of evaluation influence, significantly, the capacity of motor adaptation at the young football players".

The statistical analysis (Tables 1, 2 and 3) shows that the variation of the evaluation modality (usual educator, external educator) has a significant influence on the performance of young football players. In fact, the values of STUDENT t-test calculated respectively in first, second and third evaluation ($T_{\text{év}1} = 22.38$; $T_{\text{év}2} = 32.76$; $T_{\text{év}3} = 25.48$) are significant at ($p < 0.05$).

These results make it possible, to confirm that the variation of the state of psychological tension, has a significant influence on the cognitive processes which are at the basis of all motor skills in young football players. These results are in agreement with the claims of some researchers who, support, the idea that cognitive reactions

generated by stress could affect the performance of subjects (Thomas, 1994; Lindsay and Norman, 1980).

Taking into account the results of this study, we can affirm that the young football players are very attentive to the stressful circumstances that can generate psychological tensions which, according to Lazarus (1976), Famose and Scanff (1999), Thomas, Missoum and Rivolier (1987), could influence the cognitive processes related to the design and execution of motor programs that are fundamentally related to the motor skills. Finally, it is necessary to indicate that the nature of the task performed can also, as explained by Famose (1990), constitute another source of stress that could, interfering with the cognitive processes linked to the execution of the task which could explain, therefore, the variation in performances observed among young football players. This result could, also, be explained by the fact that the maturity of affective components in young football players is not yet fully achieved.

5. Conclusion

The results of this study show that, the state of psychological tension generated by the variation of evaluation modalities, has a significant impact on the motor adaptation capacity of young football players. It is, therefore, important to consider this dimension of personality in the planning of youth motor learning programs, regardless of the nature of the sport discipline practiced.

Bibliography

1. Schmidt, R.A. (1999): Learning sport skills and performance. Ed. Vigot.
2. Perreaut, E-P. (1997): Sophrology and Sports performance. Ed., Amphora.
3. Thomas, R. (1991): The psychological preparation of the athlete. First edition. Ed. Vigot.
4. Le scanff, C., Bertsch, J. (1995): Stress and performance. Ed. PUF., Paris.
5. Lazarus, R.S., (1976): Psychological stress and the coping process (NY, MC. Graw-Hill).
6. Lindsay, P.H., Norman, D.A. (1980): Information processing and human behavior. Ed, Vigot.
7. Thomas, R. (1994): The psychological preparation of the athlete. 2nd edition. Ed. Vigot
8. Famose, J.P., LeScanff, C. (1999): Stress coping. Ed. EPS journal. Paris.
9. Thomas, R., Missoum, G. & Rivolier, J. (1987): The psychology of high level sport. Ed. PUF.
10. Famose, J.P. (1990): Motor learning and difficulty of the task. INSEP- Publication.

Creative Commons licensing terms

Authors will retain the copyright of their published articles agreeing that a Creative Commons Attribution 4.0 International License (CC BY 4.0) terms will be applied to their work. Under the terms of this license, no permission is required from the author(s) or publisher for members of the community to copy, distribute, transmit or adapt the article content, providing a proper, prominent and unambiguous attribution to the authors in a manner that makes clear that the materials are being reused under permission of a Creative Commons License. Views, opinions and conclusions expressed in this research article are views, opinions and conclusions of the author(s). Open Access Publishing Group and European Journal of Physical Education and Sport Science shall not be responsible or answerable for any loss, damage or liability caused in relation to/arising out of conflict of interests, copyright violations and inappropriate or inaccurate use of any kind content related or integrated on the research work. All the published works are meeting the Open Access Publishing requirements and can be freely accessed, shared, modified, distributed and used in educational, commercial and non-commercial purposes under a [Creative Commons attribution 4.0 International License \(CC BY 4.0\)](#).