SOCIAL CLOSENESS, SALIVARY HORMONES AND PHYSICAL EXERCISES

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Introduction: Saliva collection and analysis is quickly becoming a useful and non-invasive tool for the evaluation of sport biomarkers. The aim of this study is to create a multidisciplinary assessment model, which can help to provide psychological and physiological responses, related to sport performances, social closeness and performance anxiety management in team sports.

Materials and methods: We enrolled in our research 26 female volleyball players aged 13 ± 1 years old of three different teams (T_1: 12 players; T_2: 9 players; T_3: 5 players).

Saliva collection was carried out before and after the match for every team.

Then we analyzed cortisol and progesterone concentrations through Elisa standard kits.

Results: The results of the T-test performed on the total results showed a statistically significant relationship ($p < 0.05$) in cortisol levels pre and post match: in fact, it has been shown a statistical significant decrease ($p < 0.001$).

The analysis performed using just samples post match shows a negative correlation between social closeness, cortisol and progesterone levels, with $p < 0.010$ for progesterone vs social closeness and $p < 0.012$ for cortisol vs social closeness, which indicates that increasing of one of the two hormones it reduces relationship.

About the winner teams and the looser teams, there is a negative correlation between pre match cortisol levels and performance anxiety ($p < 0.042$).