THE INFLUENCE OF MENTAL TRAINING ON THE LEVEL OF PRE-COMPETITIVE ANXIETY AND SELF-ESTEEM IN VOLLEYBALL

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- coping techniques
- somatic anxiety
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- female

Abstract:
Effective regulation of volleyball players' pre-competitive states is a fundamental process that is preceded by process of adequate coping strategies' acquisition. The aim of the study was to evaluate the influence of mental training on the level of intensity, frequency and direction of pre-competitive anxiety and self-esteem of female volleyball players. Research was applied on a sample of 25 volleyball players aged from 18 to 20 years divided into experimental and control group. For diagnosing, the level of cognitive, somatic anxiety and self-esteem standardized questionnaire CSAI-2R was used. Results indicate that players of experimental group experienced lower intensity and frequency of cognitive and somatic anxiety and higher level of self-esteem intensity and frequency after mental training sessions. Secondly, volleyball players of experimental group perceived somatic and cognitive anxiety as well as self-esteem intrusions more positively after the intervention period. Finally, players of experimental group achieved better results in all three monitored components of anxiety and self-esteem than players of control group.

INTRODUCTION

One of the most important issues which has attracted the attention of sport coaches, psychologists and athletes is to identify effective factors regulating anxiety and tension control before a competition in a way that athletes' performance can be facilitated [3, 15].

All athletes need to be ready for constant change and change management. Coping with anxiety is coping with change. Potential gain and loss are behind all stress-induced emotional experiences [9]. Athlete's skills' level is an important factor in controlling their competitive stresses. Athletes who can control their competitive anxiety through mental skills such as imagination or feeling control have good motivation, self-esteem and lower anxiety that help them to experience strong performance in competitions [3, 13]. Accordingly, two groups of coping strategies are identified. Emotion-focused coping aims to manage discrete emotions; whereas in action-focused coping, the athlete's focus is on the optimization of task execution process [5, 6, 7].

If the athlete is coping with a single emotion like anxiety, the process can be named like anxiety-centred coping one. However, inadequate coping because of experience's lack with acquiring coping strategies is more likely to be associated with destructive anxiety and low self-esteem. Nevertheless, these strategies in relation to level of performance in sports are certainly of great importance, especially in youth. Yet, they have not been addressed enough in some sport disciplines and age categories [14].

When tailoring interventions to deal with the effects of competitive stress, practitioners should consider the numerous personal and situational variables that have been identified to moderate the competitive anxiety response. Moreover, they should attempt to initiate a

cognitive strategy that restructures negative interpretations of competitive state anxiety, rather than reducing symptom of its intensity [12].

THE AIM OF THE WORK

The purpose of the paper was to evaluate the influence of mental training on the level of intensity, frequency and direction of pre-competitive anxiety and self-esteem of female volleyball players.

THE MATERIAL AND THE METHODOLOGY

The experimental (EG) and control group (CG) of volleyball players were created using purposive sampling technique. The EG consisted of 15 female volleyball players aged 18 years and CG consisted of 10 female players aged 20 years playing for the first league volleyball clubs in eastern division.

Research was organised in three phases. In the first phase, the level of pre-competitive anxiety and self-esteem of volleyball players were diagnosed using CSAI-2R questionnaire. After the processing of the first diagnostic phase, mental coach as well as volleyball coach identified the main difficulties that players have problem to overcome and areas to improve prior to matches. Intervention programme was applied by mental coach in training process for the period of 5 months focusing mainly on techniques how to reduce pre-competitive anxiety and increase self-esteem. After the intervention period, the second diagnostic phase was processed.

For diagnosing the level of pre-competitive anxiety and self-esteem, French standardized version of CSAI-2R questionnaire was used [11]. Questionnaire consists of 16 items that evaluate intensity (from 1-none up to 4-the highest), frequency (from 1-never up to 7-always) and direction (range from -3 -debilitative, 3 -facilitative, 0 – no direction) of cognitive (5 items), somatic anxiety (7 items) and self-esteem (5 items). Three qualified linguists translated the questionnaire to Slovak language and translated material was compared as well as modified [8]. For calculating the level of intensity, frequency and direction of cognitive, somatic anxiety and self-esteem, mean of central tendency measures and standard deviation of variability measures were used.

RESULTS

Inter-group and intra-group analysis of cognitive anxiety changes

The first part of analysis is focused on inter as well as intra-group comparison of changes of three components of cognitive anxiety such as: intensity, frequency and direction (see Figure 1.).

Results indicate that female players in control group increased level of cognitive anxiety intensity (5.2%) regarding input (M = 1.93; SD = 0.87) and output (M = 2.02; SD = 0.90) measures' differences. On the other hand, volleyball players perceived lower (3.33%) level of cognitive anxiety frequency in output measures (M = 3; SD = 2.01) comparing to input ones (M = 2.90; SD = 1.65). However, considering the level of direction in input (M = -0.74; SD = 1.73) and output (M = -0.52; SD = 1.74) measures, we found decreased perception of positive direction of cognitive intrusions by players (9.73%).

Data in experimental group show decreased level of cognitive anxiety intensity (10.09%) after the intervention period (pre-test: M = 2.18; SD = 0.77; post-test: M = 1.97; SD = 0.66). The same tendency is seen in frequency component (pre-test: M = 3.63; SD = 1.38; post-test: M = 3.2; SD = 1.44) where cognitive anxiety frequency was also decreased by 11.84%. Moreover, we also found increased (15.75%) perception of positively directed cognitive anxiety intrusions by players regarding their upcoming performance (pre-test: M = -0.13; SD = 1.48; post-test: M = -0,92; SD = 1.36).

Inter-group analysis of input data revealed differences in input measures where players of experimental group experienced higher intensity (8.54%) of cognitive anxiety as well as frequency (12%) than players of control group. Moreover, volleyball players of control group perceived more positively cognitive anxiety intrusions than experimental group players (15.37%).

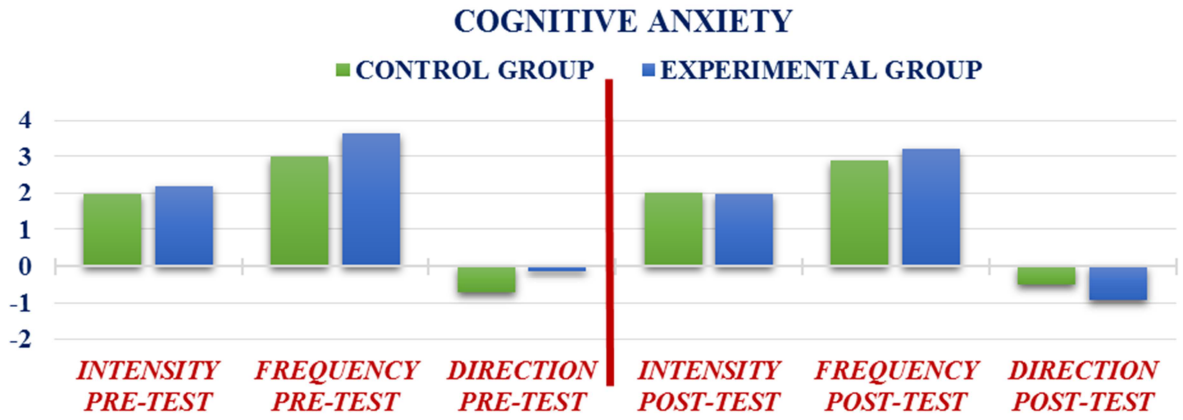

Figure 1. Inter-group and intra-group comparison of cognitive anxiety changes: intensity, frequency and direction

However, different results were found when analysing output measures, after the intervention period. Volleyball players of experimental group experienced lower level of intensity (2.97%) and frequency (10.34%) of cognitive anxiety than players in control group. Furthermore, perception of cognitive anxiety intrusions prior to upcoming performance were more positively perceived by experimental group players comparing to control group ones (8.69%).

Inter-group and intra-group analysis of somatic anxiety changes

The second part of analysis is focused on inter as well as intra-group comparison of changes of three components of somatic anxiety (see Figure 2.).

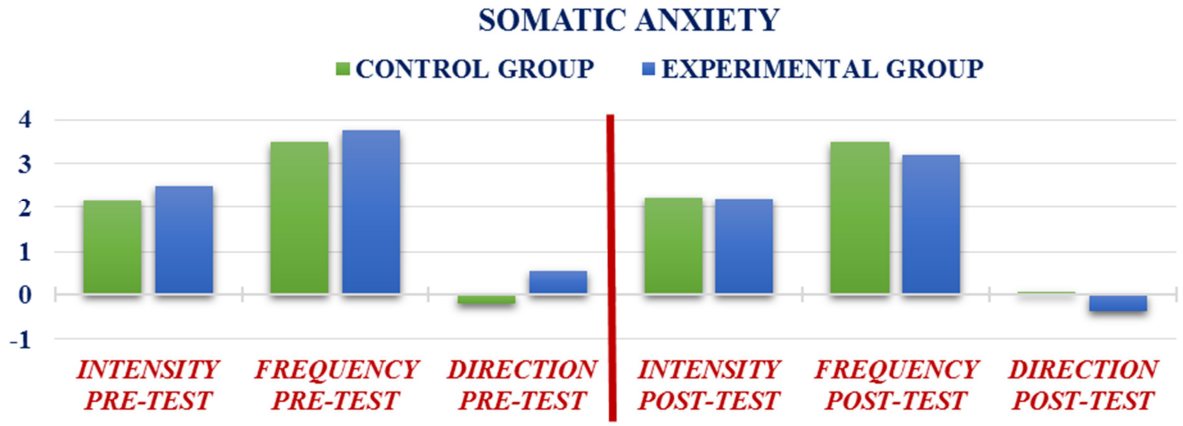

Figure 2. Inter-group and intra-group comparison of somatic anxiety changes: intensity, frequency and direction

Comparing input (M = 2.17; SD = 0.86) and output (M = 2.23; SD = 0.88) results, players of control group increased somatic anxiety intensity (2.76%). Simultaneously, they experienced approximately the same level of somatic anxiety frequency (pre-test: M = 3.49; SD = 1.63; post-test: M = 3.49; SD = 1.42). Considering direction of somatic anxiety,

volleyball players perceived somatic anxiety intrusions more negatively (4.5%) in output measures (pre-test: M = -0.2; SD = 1.61; post-test: M = 0.06; SD = 1.66).

On the other hand, in experimental group were found different results. After the intervention period, players of experimental group experienced decreased (11.29%) level of somatic anxiety intensity (pre-test: M = 2.48; SD = 0.76; post-test: M = 2.2; SD = 0.70). The decrease (15.42%) was also monitored in somatic anxiety frequency (pre-test: M = 3.76; SD = 1.04; post-test: M = 3.18; SD = 0.85). In addition, the perception of somatic anxiety intrusions was more positive (7.07%) after the intervention (pre-test: M = 0.58; SD = 1.31; post-test: M = -0.36; SD = 1.12).

Results of inter-group analysis of input data indicated that players in experimental group experienced higher intensity (6.28%) and frequency (8.04%) of somatic anxiety than players of control group. Furthermore, intrusions of somatic anxiety were more positively experienced by players of control group than in experimental group (10.50%). Players of experimental group perceived those intrusions negatively prior to upcoming performance.

Like in the first part of analysis, there were found obvious changes comparing output data between control and experimental group. Players of experimental group experienced lower intensity (0.90%) and frequency of somatic anxiety (8.6%) than players of control group. Moreover, they perceived intrusions of somatic anxiety more positively (12.58%) than players of control group after the intervention period.

Inter-group and intra-group analysis of self-esteem changes

The third part of analysis is focused on inter as well as intra-group comparison of changes of three components of self-esteem (see Figure 3.).

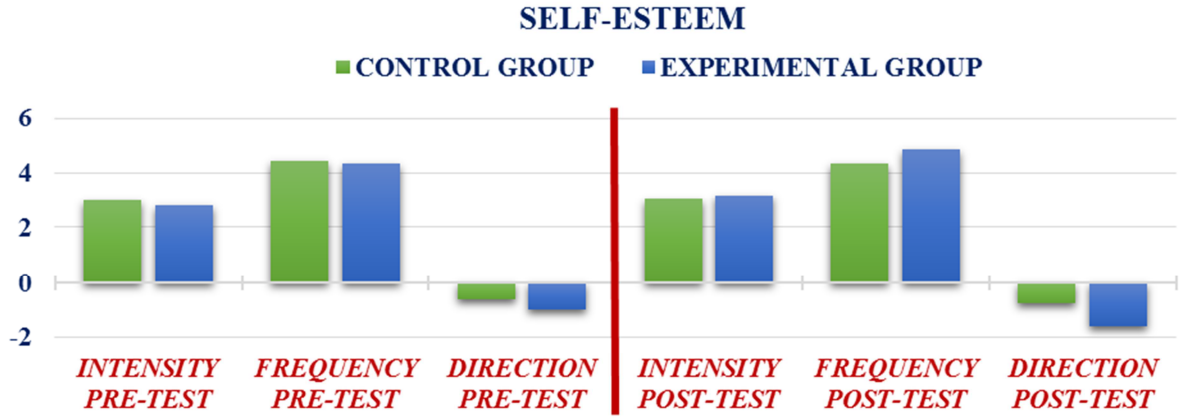

Figure 3. Inter-group and intra-group comparison of self-esteem changes: intensity, frequency and direction

Analysis of input and output data showed that self-esteem intensity of players in control group (pre-test: M = 2.97; SD = 0.66; post-test: M = 3.03; SD = 0.79) slightly increased (1.68%). On the contrary, self-esteem frequency decreased (1.36%) during monitored period (pre-test: M = 4.4; SD = 1.29; post-test: M = 4.34; SD = 1.11). Positive result was found in direction component where players experienced self-esteem intrusions more positively (8.3%) in output measures (pre-test: M = -0.6; SD = 1.94; post-test: M = -0.77; SD = 1.61).

On the contrary, players in experimental group experienced higher self-esteem intensity (14.38%) after the intervention period (pre-test: M = 2.78; SD = 0.68; post-test: M = 3.18; SD = 0.66). The same tendency was seen in self-esteem frequency (12.04%) after the intervention period (pre-test: M = 4.32; SD = 1.04; post-test: M = 4.84; SD = 1.04). Moreover, players perceived intrusions of self-esteem more positively (6.6%) than before intervention (pre-test: M = -0.98; SD = 1.02; post-test: M = -1.6; SD = 0.90).

Inter-group analysis of input data showed that volleyball players of control group experienced higher intensity (6.39%) and frequency (1.81%) of self-esteem before the intervention than players of experimental group. Nevertheless, players of experimental group perceived intrusions of self-esteem more positively than players of control group (6.66%).

Analysis of output data revealed positive results. Players of experimental group experienced higher intensity (5.29%) and frequency (11.52%) of self-esteem in comparison to control group players. The same result was achieved in direction component where players of experimental group perceived intrusions of self-esteem more positively (15.58%) prior to upcoming performance than control group players.

DISCUSSION

Based on our findings, we can conclude that volleyball players experienced lower level of anxiety and higher level of self-esteem after acquiring specific coping strategies in the intervention period. It is congruent with other research studies in which mental skill package combination was applied. Their results showed increases in facilitating interpretations of symptoms, self-confidence and performance in an experimental versus control group [10]. Moreover, facilitating interpretations of symptoms by players appears to be a representation that effective coping is taking place [2]. Another research results pointed out that athletes who interpret anxiety symptoms as facilitative report greater levels of self-confidence than those who interpret symptoms as debilitative [4]. What is also important is the fact that players of experimental and control group perceived higher level of self-esteem than the level of anxiety whether cognitive or somatic one. This result is supported by research studies where authors reported that self-esteem displays the strongest and most consistent relationship with performance when it is on higher intensity level than the intensity of competitive anxiety experienced by athletes [1, 16].

CONCLUSIONS

In conclusion, research study findings revealed that players of experimental group decreased level of intensity and frequency of cognitive and somatic anxiety and increased level of self-esteem intensity and frequency after mental training sessions. On the other hand, players of control group experienced increased intensity and frequency of cognitive and somatic anxiety and decreased intensity and frequency of self-esteem. Moreover, volleyball players of experimental group perceived somatic and cognitive anxiety as well as self-esteem intrusions more positively after the intervention period. Finally, players of experimental group achieved better results in all three monitored components of anxiety and self-esteem than players of control group. Based on the results, it is inevitable to point out the importance of acquiring various coping strategies to regulate effectively pre-competitive states of players regardless age, gender or type of sport.

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