



THE EFFECT OF A PERSON-CENTERED APPROACH IN THE MANAGEMENT OF ANXIETY IN SPORTS: AN EXAMINATION STUDY

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Abstract The aim of this study was to investigate the effect of a person-centered approach to managing anxiety among soccer athletes, prior to and after the application of the approach. The sample consisted of 44 participants (Control Group N=21, age 14.57±1.03 and Investigation Group, N=23, age 13.96±0.88), all soccer athletes from the Greek soccer association. The intervention program used was a person-centered approach based on a theory from Rogers. The duration of the program was 9 months, with a frequency of one time per week for 60 minutes, after training. M. R. F. (Mental Readiness Form) and CSAI-2 (Competitive State Anxiety Inventory-2) instruments were used for evaluation measures prior to and after the application of the intervention program. Statistical analysis revealed significant, observed differences in the reduction of a team's somatic anxiety in favor of post-application measures and decreased self-confidence attributed to the effect of a person-centered approach. Future research is needed to further investigate the use of person-centered approach in sport settings.

Key words: Person-centered approach, anxiety, soccer

INTRODUCTION

Anxiety management has received increased research attention in recent years. Generally, anxiety in sport settings is recognized as an internal opponent to athletes and, in particular, one of the most difficult of its kind [23], leading athletes to poor performance. Although many stress management processes have been suggested, it is not yet recognized whether effective strategies are responsible for successive athletic performance, while ineffective ones are disastrous for performance and satisfaction in competitive sports [1] expressed through high muscular intensity and a decreased level of attention [1].

Anxiety has been defined as one previously-learned reaction of an organism in a dangerous situation, a form of egocentricity that is characterized by self-observation, doubts and depreciation of its own self, one of the ten basically human sentiments that resembles instinct, and the result of non-agreement between the interior and the exterior system of values [4]. At a theoretical level, and mainly in sports, there is segregation between predisposition (trait) anxiety, state anxiety (emotional state of anxiety depending on the situation), cognitive anxiety and somatic anxiety [11]. Somatic anxiety is the name for the physical, as opposed to the "cognitive" or "mental" manifestations of anxiety. People who react to anxiety mainly in a physical manner primarily experience somatic anxiety, whereas people who mainly react to it mentally experience primarily cognitive anxiety. Cognitive anxiety disturbs performance in sports settings because an athlete uses his/her mental resources inefficiently.

According to the perceptions of athletes, uncertainty and the importance of achieving a result, and decreased self-confidence, constitute the main causes behind the building of pre-match anxiety [23]. Uncertainty depends on whether athletes judge their performance according to specific standards, appreciate their potential precisely, understand that their performance accords with their abilities, as well as a belief that their performance determines the result of a match. Decreased self-confidence relies on an athlete's doubt regarding their abilities and the result of their performance during a match, leading to vulnerability and the emergence of anxiety. As stated by Krane, Williams and Feltz [8] and Yan et al [26], bi-directional negative relations exist between self-confidence and cognitive and physical anxiety prior to matches.

Level of competitiveness, that is, the desire to achieve success in sports is also a factor related to an increased or reduced level of anxiety or self-confidence. Swain and Jones [22], examining the intensity and direction of anxiety, separated athletes according to their level of competitiveness, as high and low competitive athletes. Corresponding to intensity, individuals with low competitiveness presented higher cognitive and physical anxiety and lower self-confidence prior to matches, although athletes could not support the idea that increased physical and cognitive anxiety essentially led to a deterioration in their performance. Regarding anxiety direction, Swain and Jones [22] did not find that any important differences in existence between cognitive and physical anxiety and self-confidence for individuals with high and low competitiveness levels, recognizing match importance as a vital factor in measuring a situation.

Another decisive factor for pre-match anxiety is the category and type of sport, with contact and individual sports causing higher levels of anxiety to athletes compared with those brought about by non-contact and team sports [11]. In individual sports, attention focused on personal record improvement maximizes the threat of criticism coming from social environment [21], whereas in contact sports, the danger of natural, somatic and psychological wounds increases anxiety levels as athletes face their opponents in person and initiate natural contact.

Cerin et al [3] conceive match anxiety as a possessed, altered process between the athlete and the competitive environment. According to the influence, by-affective model of competitive pressure [3] requirements and occasions are imposed by the competition and are presented as demands in order to influence the sentimental answers of athletes through the cognitive evaluation process [9].

PSYCHOTHERAPY AND SPORTS

The researchers agree that anxiety management is something owed, in terms of the personal and casual characteristics of athletes [5]. Personal characteristics involve the way each athlete responds and evaluates the significance of various situations that cause anxiety [2], while casual characteristics refer to the sources that cause anxiety [14] and the perceptive competence that an athlete has for each event [10].

To date, most research has focused on psychotherapeutic methods, while the use of psychotherapy in sport settings has a supplementary character aimed at the re-establishment of individuals with disabilities or health problems [12]. As far as the use of psychotherapeutic methods in sports is concerned, this issue has not been examined thus far in a Greek settings [15]. Particularly regarding the application of a person-centered method, a lack of relative research is noticeable [15], while little inquiring data from track and field, volleyball or Tae Kwon Do exists [16].

The initial stages of person-centered intervention in sports are based on the theoretical principles of Rogers [19]. A person-centered approach views human nature as a composition, a single organizational unit that tends towards survival, differentiation, improvement, and complete growth in terms of its possibilities, while the main objective is helping the individual to seek and conquer complete autonomy of self and to reach self-realization.

Three basic conditions are the means for successful intervention, that is, genuineness (authenticity), sentimentality and "warmth" - acceptance and empathy [19, 20]. Genuineness refers to the authenticity of the coach's behavior toward the athlete without masks, where the better depiction of incidents on a verbal level from both sides is essential [13]. Sentimental "warmth" includes a coach's acceptance of an athlete's emotions (even negative ones) without terms, the recognition of an athlete's individual system of values, attitudes and biases and the acceptance of his/her own self, both from the point of view of a coach and an athlete. Finally, empathy is defined as a coach's comprehension of the athlete's internal world, a type of identification on a sentimental level, growth in terms of intuition and the perception of a running situation. In other words, seeing the world through the other person's eyes and at the same time understanding the perception of things. The present study based its intervention on these three conditions. Thus, the aim of this study was to investigate the effect of a person-centered approach on the anxiety control of soccer athletes prior to and after the application of the approach. In particular, through its design the study seeks to answer the following research hypotheses:

1. following the use of a person-centered method for a duration of 9 months (36 weeks), statistically significant differences would be observed in terms of somatic and/or cognitive anxiety reduction in favor of intervention for group athletes;
2. state and trait anxiety is also expected to be reduced for the intervention group due to the application of the person-centered program;
3. self-confidence is more likely to increase to a statistical significant level supporting intervention group participants.

METHODS AND MATERIALS

PARTICIPANTS

The sample consisted of 44 male soccer athletes aged 13-15 years (C.G. N = 21, Mean = 14.57±1.03, and I.G. N = 23, Mean = 13.96±0.88) all participating in the local soccer championship. All athletes had a mean of training experience M = 4.39±1.85 years ensuring in this way an essential treaty of the research, that is, the three years time stipulation for training with the same coach, so that no changes or differences could exist in the behaviour of participants in the case of having a new coach, who would probably behave and react differently toward the athletes.

Furthermore, the three-year duration brings about the possibility of favorable acquaintance on the part of a coach with his players, knowledge of virtues and faults in terms of their character, and perception of players' capabilities. In this way, coaches could give, as external observers, objective explanations, in so far as that is possible, for potential changes in the behavior of players, along with their professional opinion regarding method application for soccer teams.

Athletes' participation in the research was voluntary and all athletes were assured that the questionnaires were anonymous and confidential. All participants were given a short description of the research and they were informed regarding the purpose of the study and the ethical aspects linked to the voluntary nature of their involvement. Following that, the participants were put into two groups (control and experiment) randomly. Next to random formulation of groups, initial statistical analysis concerning the levels of anxiety and self-confidence revealed no differences between the control and intervention group prior to the application of the program so as to ensure that both groups started the research from the same reference point (Table 1). Both groups, and for the same amount of time (9 months), received different treatments.

Control group (C.G.) participants were trained with a traditional goal-setting approach as posed by the coach, who set the targeted level of performance and monitored progress in an evaluative manner in relation with the targeted goal in each training session. Treatment conditions included assigned goals given by the coach for improving basic technical soccer skills throughout the study, whereas the only guideline (verbal prompt) given to the participants was "do your best". Although no psychological treatment was applied to control group participants, it was expected that improvement of performance would beneficially affect, in an indirect way, the levels of self-confidence and anxiety of control group athletes.

Regarding the intervention group, the PCA expert applied the person-centered approach at the end of every training session throughout the study, without the coach been present, so as to avoid the possibility of the coach instinctively adopting some of the person-centered procedures applied (bias). However, in each meeting (training session) there was always a developed discussion between the PCA expert and the coach of each group concerning players' observed levels of anxiety and self-confidence, so as to determine whether an observer agreement of at least 80 per cent, which had been considered acceptable [6], was achieved regarding the key research issues.

The questionnaires used were the Greek versions of the Mental Readiness Form (MRF) [7, 24], and the Competitive State Anxiety Inventory-2 (CSAI-2), used and applied in relative research in Greek settings [23, 25]. Athletes completed the questionnaires on four different occasions /September, November, March and May/ 10-15 minutes prior the beginning of a training session (CSAI-2) or match (MRF) without the coach being present, in order to avoid distortions in the opinions of athletes. Each time, it took 15-20 minutes for participants to complete the questionnaires.

Rogers' person-centered method was applied by a PCA expert to the intervention group for a period of nine months, /from September to May/ at a frequency of one session per week for 50 minutes after training without the presence of a coach. Athletes were informed that the issues discussed could not be reported to the coach, to the sports club or elsewhere.

During each session, further significance was introduced through the utilization and growth of authenticity and warmth (acceptance) among athletes, while the researcher-psychotherapist used empathy in focusing each meeting towards aiding the personal growth of athletes, through paraphrasing statements they'd made (e.g. athlete: This week I've been pretty anxious during training. Sunday's match is important if we're to improve our position in the league. Psychotherapist: You feel that that you've been anxious over the last week because you have a difficult match on Sunday). Each issue discussed was always determined by the perception of athletes concerning training, match moments, certain behaviors they observed on the part of their coach or other athletes and, a few times, a report in certain situations was conducted prior to matches. In this way, simultaneous coexistence of the aforementioned conditions (genuineness, acceptance, empathy) during the intervention was achieved, as is considered essential for success and effectiveness [19, 20].

INSTRUMENTS

The first questionnaire used was the short scale of anxiety evaluation (state-trait anxiety) named the Mental Readiness Form (MRF) [7, 24], previously used and applied in relative researches in Greek settings [23].

The reliability of the questionnaire (Cronbach's α) according to Theodorakis et al [23] ranges between $\alpha = 0.68$ (state anxiety) and $\alpha = 0.89$ (trait anxiety).

The second questionnaire applied in this study was the Greek modified version of Competitive State Anxiety Inventory - 2 (CSAI-2) used for competitive situations. Previous factor analyses confirmed that the Greek version of the questionnaire demonstrates psychometric characteristics very well, regarding cognitive and somatic anxiety in sports [25].

STATISTICAL ANALYSIS

An examination of the ANOVA results with repeated measurements (2 x 4, Group x Time) for each factor and a paired sample t – test between 1st (start the intervention) and 4th (end of the research) measurement was used with the help of statistical software SPSS 15.0.

RESULTS

Cronbach's α ranged from $\alpha = 0.694$ for state anxiety for the first measurement to $\alpha = 0.814$ cognitive anxiety (start of the intervention) to $\alpha = 0.643$ for the self-confidence and $\alpha = 0.820$ for the cognitive anxiety at the end of the research (4th measurement).

In terms of state anxiety, statistically important differences were observed in the I. G. (Table 2). In particular, statistically significant differences were noticed between the 1st and 4th measurement (Table 3) and between 3rd and 4th measurement (Table 2). No statistically significant differences were observed for the C.G. for the same factor (Table 2). The interaction between the two factors (Groups and state anxiety) in relation to time was not statistically significant ($F_{1,42} = 1.334$, $p > 0.05$, $\eta^2 = 0.031$).

Table 1. Mean and SD of all variables in the research

Variable	Groups	N	September		November		March		May	
			M	SD	M	SD	M	SD	M	SD
Somatic Anxiety	Control	21	2.43 ± 2.16		2.24 ± 1.58		2.43 ± 1.50		2.42 ± 1.57	
	Intervention	23	3.26 ± 1.82		2.65 ± 1.34		3.22 ± 1.93		2.00 ± 1.24	
Cognitive Anxiety	Control	21	2.67 ± 2.33		2.19 ± 1.50		2.90 ± 1.05		2.71 ± 1.93	
	Intervention	23	2.91 ± 1.88		2.57 ± 1.50		2.52 ± 1.56		2.13 ± 1.82	
Self-confidence	Control	21	2.05 ± 2.11		2.19 ± 1.40		2.62 ± 1.75		2.57 ± 1.50	
	Intervention	23	3.30 ± 2.01		2.96 ± 1.80		2.17 ± 1.40		1.91 ± 1.47	
State Anxiety	Control	21	20.33 ± 7.32		22 ± 4.98		19.90 ± 5.69		19.05 ± 4.54	
	Intervention	23	20.57 ± 7.76		16.57 ± 5.51		16.74 ± 6.95		14.87 ± 6.15	
Trait Anxiety	Control	21	16.43 ± 6.45		17.76 ± 3.73		18.57 ± 4.79		17.19 ± 4.25	
	Intervention	23	20.35 ± 6.59		17.48 ± 7.20		14.87 ± 6.24		13.30 ± 5.57	

The interaction between the two factors (Groups and trait anxiety) in relation to time was not statistically significant ($F_{1,42} = 0.055$, $p > 0.05$, $\eta^2 = 0.001$). No differences were realized regarding trait anxiety prior to or after the application of person-centered method in the I.G. or in the C.G. (Table 1). In addition, none of the four phases of research differ from the other in terms of trait anxiety for both groups (Table 2, 3).

The interaction between the two factors (groups and self-confidence) in relation to time was not statistically significant ($F_{1,42} = 0.488$, $p > 0.05$, $\eta^2 = 0.011$). Regarding the self-confidence factor, statistically important differences were also observed (Table 2). Statistically significant differences were observed between the 2nd and the 3rd measurement (Table 2) and between the 1st and the 4th measurement (table 3) concerning self-confidence.

The interaction between the two factors (Groups and somatic anxiety) in relation to time was statistically significant ($F_{1,42} = 4.684$, $p = 0.036$, $\eta^2 = 0.100$). Regarding somatic anxiety (CSAI-2) statistically important differences were also noticed (table 2) between the 1st and 2nd measurement, 3rd and 4th measurement (Table 2) and 1st and 4th measurement in the I.G (Table 3).

The interaction between the two factors (Groups and cognitive anxiety) in relation to time was not statistically significant ($F_{1,42} = 0.124$, $p > 0.05$, $\eta^2 = 0.003$). As for cognitive anxiety, statistically important differences were observed between the 1st and 2nd measurement, 3rd and 4th measurement (table 2) and between the 1st and 4th measurement (table3). No statistically important differences were observed for the cognitive anxiety factor for the C.G. (table 2) (table 3).

Table 2. Repeated ANOVA (2 x 4, Group x Measurement) of all variables in the research

Source	Dependent variables														
	Somatic anxiety			Cognitive anxiety			Self-confidence			State anxiety			Trait anxiety		
	df	F	η^2	Df	F	η^2	df	F	η^2	df	F	η^2	df	F	η^2
	Between groups														
	1	1.33	.031	1	.055	.001	1	.49	.011	1	4.68*	.100	1	.123	.003
Error	42	(1.33)		42	(1.49)		42	(1.19)		42	(23.06)		42	(19.47)	
	Within subjects														
Measurement	3	2.14 *	.049	2.43	.74 ^a	.017	2.58	.713 ^a	.017	2.29	4.58**	.098	3	6.60**	.136
Group x	3	1.95	.044	2.43	.96 ^a	.022	2.58	4.18**	.090	2.29	3.09**	0.69	3	5.73**	.120
Group errors	126	(1.92)		102.04	(3.10)		108.54	(2.63)		96.16	(27.48)		126	(20.65)	
	Within subjects contrasts														
	Level 1 vs Level 2														
Measurement	1	1.21	.028	1	1.03	.024	1	.074	.002	1	.95	.022	1	1.26	.029
Group x	1	.332	.008	1	.025	.001	1	.424	.010	1	5.62*	.118	1	9.84**	.190
	Level 2 vs Level 3														
Measurement	1	1.68	.038	1	.98	.023	1	.338	.008	1	1.22	.028	1	3.37	.074
Group x	1	.413	.010	1	1.25	.029	1	3.95*	.086	1	1.69	.039	1	.49	.012
	Level 3 vs Level 4														
Measurement	1	7.95 *	.159	1	1.65	.038	1	.480	.011	1	6.20*	.129	1	6.92**	.141
Group x	1	7.95 *	.159	1	.196	.005	1	.230	.005	1	.854	.020	1	3.99*	.087

* <0.05 , ** <0.001 , a. The Mauchly's Test of Sphericity was statistically important, therefore, the factor was evaluated according to the results of Greenhouse - Geisser test

Table 3. Paired t-test between the 1st measurement (starting the Intervention) and the 4th (end of the Intervention) of all variables in the research in C. G and I. G

Variables Pairs (1 st -4 th Measurement)	Control Group (N=21)					Intervention Group (N=23)				
	M	SD	df	t	p	M	SD	df	t	p
Somatic Anxiety	0.00	2.24	20	0.00	1.00	1.26	1.60	22	3.78	0.001
Cognitive Anxiety	-0.05	2.54	20	-0.86	.93	0.78	2.59	22	1.45	0.162
Self-confidence	-0.52	1.81	20	-1.33	.20	1.39	2.48	22	2.69	0.013
State Anxiety	1.29	8.16	20	0.72	.48	5.70	6.13	22	4.46	0.000
Trait Anxiety	-0.76	8.69	20	-0.52	.61	7.04	6.75	22	5.00	0.000

DISCUSSION

Following the initial stages of the person-centered approach, the coach's basic objective was to provide participants with the opportunity to make decisions and lead themselves to solutions that they considered right, instead of trying to resolve their issues by presenting ready-made solutions, with the aim of reducing overall state and trait anxiety.

The statistically important reduction of somatic and state anxiety in the I.G. is attributed to the beneficial effect of the person-centered approach, which helped soccer players to manage and reduce their levels of somatic anxiety related to the possibility of injuries or physical damage during training or matches. This result agrees with those of previous studies exhibiting sports' type importance (individual versus team sport, contact versus non-contact sport) [18]. Interestingly enough, a temporary increase in somatic and state anxiety was noticed in the 3rd measurement (occurring in the sixth month of person-centered application) due to a serious car accident that happened to one of the intervention group participants, and which caused a sudden and statistically significant increase of overall somatic and state anxiety levels. It can be said that such disturbing experiences are very difficult for anyone who is immediately affected to control, since a person cannot be expected to get over such an experience in a short period of time.

No statistically significant differences were observed in the I.G. or in C.G. regarding trait anxiety between measurements. As regards the I.G., this result is considered quite unexpected as, according to theory, athletes had enough time to deal and reduce their cognitive anxiety. On the other hand, athletes were adequately trained to control their trait anxiety levels or, as is likely, the results could not provide any differences due to the small sample featured in this study, which itself constituted a limitation.

An interesting finding is that self-confidence among athletes decreased considerably after the application of the method, as compared to initial measurements. The result is considered sudden and unexpected and, according to the theory from Patsiaouras [16], can be attributed to the fact that anxiety has both a negative (destructive) and a positive (constructive) character, thus, anxiety reduction causes the degradation of both of its aspects respectively. Consequently, reduction of positive anxiety leads to the reduction of self-confidence, because an athlete cannot use imagination or find proper solutions to achieve better performance. Similar results were also observed in the research of Patsiaouras et al [17] concerning track and field athletes using a person-centered method, with a possible reason for self-confidence reduction attributed to gradual realization of athletes' personal errors with the use of person-centered method.

Decreasing somatic anxiety without doing the same to sustaining self-confidence is a complicated and serious issue regarding person-centered value in sport settings. Self-confidence in sports depends on two dimensions, that is to say level of ability and knowledge of self [25]. In terms of ability for this sample group of adolescents, it can be said that poor technique, as perceived by young athletes, probably resulted in the reduction of self-confidence. However, it cannot be perceived whether the reduction of self-confidence is related to the knowledge of a sensitive adolescent self. This raises a number of issues regarding sport environment conditions that outline the person-centered approach as a motivating or de-motivating force. Competitiveness level, the necessity of winning, age and the gender of participants, team sport classification, coach and team objectives are all factors that could potentially judge whether the person-centered approach has a place in sport settings or not. Decreased self-confidence could be thought of as a negative outcome when examined as an isolated event. However, in cases where decreasing self-confidence is perceived as a harmful but valuable process that reinforces an individual's efforts toward self-actualization, then it is not necessarily considered negative. This can only be seen on an individual basis, according to personal inner feelings regarding competition and self that could determine whether the person-centered approach is worthy of application in sports settings. By any means, the fact that the person-centered approach introduces humanistic values to a highly competitive sport environment in and of itself constitutes progress toward human improvement regardless of a sporting outcome.

Regarding somatic anxiety, the results of CSAI-2 (state) agree with those for state anxiety from questionnaire MRF, a fact which means that these two scales measure the same factor ranges between $r = 0.40$ in the 1st phase to $r = 0.60$ in the 4th phase (Pearson correlation). As for cognitive anxiety, the results of CSAI-2 (trait) do not agree with the results concerning trait anxiety from questionnaire MRF, a finding that shows these two scales do not measure the same factor.

CONCLUSION & PRACTICAL APPLICATIONS

Despite the relative absence of research encouraging samples for the utilization of psychotherapeutic methods in sports, a few new items of research have shown that the utilization of a systematic family approach could improve cohesion between players in soccer teams [15]. Differentiations were also presented for team sports, where a reduction of state and trait anxiety was noticed in volleyball athletes after an 8-month intervention [16].

A small reduction was also observed in corresponding research for track and field athletes concerning trait anxiety and self-confidence after an 8-week intervention [17]. Individual sports such as track and field events, and contact sports such as Tae kwon do, give rise to high levels of anxiety, as the athlete is the person in charge of the record and the result of the match [11]. Applying a person-centered approach did not, however, lead to noticeable, statistically important differences in somatic anxiety levels.

Limitations to this research included the small sample of participants and the administration of treatment by one PCA expert that led to difficulties in ascertaining whether results could be attributed to treatment or the therapeutic effect. Thus, future research should involve an additional PCA expert as an inter-observer, present throughout the study. Research applying a psychological treatment to the control group could be useful in comparing PCA application as opposed to other psychological approaches. Finally, research should investigate ways of dealing with the reduction of athletes' self-confidence after the implementing of a person-centered intervention in athletic programs, with the help of techniques such as self-talk or the effect of task versus ego orientation.

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