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Psychological pressure and athletes' perception of motivational climate in team sports

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The differences in perception of motivational climate between athletes who differ in the feeling of pressure with regard to the sport they participate in were investigated. The sample consisted of 388 young male Croatian football and handball players. The Croatian version of the Perceived Motivational Climate Questionnaire was administered and pressure/tension subscale from the Croatian version of Intrinsic Motivation Inventory was used to evaluate a feeling of pressure during training and competition. The results showed the prevalence of mastery motivational climate. The feeling of pressure correlated positively with performance climate, and negatively with mastery motivational climate. Low-pressured athletes perceived more signs of the mastery climate in their environment than highly pressured athletes. The high-pressured athletes perceived significantly more signs of performance motivational climate in their teams in comparison to low-pressured athletes.

Key words: motivation, sport, competition, handball, football

Efficiency in team sports depends on the strength of the team's weakest link. Sport practice and a plethora of studies showed that athletes' performance often deteriorates during competition (Gaudreau & Blondin, 2004; Wilson, Raglin, & Pritchard, 2002). Regardless of whether they are good athletes, many of them are bad competitors. The main reason for this is poor psychological preparation or insufficient mental toughness (Loehr, 1995). A lack of necessary psychological skills is related to the athletes' appraisal of competitive situations and their own strengths. This results in the *negative ratio*–athlete's capacities are perceived as insufficient in comparison to tasks and demands of the competition. The negative ratio contributes to the negative emotions and feelings of pressure and tension that impair competitive performance. The fact is that emotions, regulated by the autonomous nervous system, occur rapidly, and can invade athletes' consciousness by disturbing of the normal flow of thoughts and actions during competition. Some unpleasant emotional states such as fear, uncertainty, perplexity, anxiety, etc. form the basis for experiencing stress. Moreover, each competition represents a kind of stressful event for almost all athletes and emotions can impede performance routines of even the most competent ones. The feeling of pressure during competition can be caused by different factors, internal and external alike. Internal factors can be represented by some dispositional factors like personality traits, ego strengths, personal beliefs, self-confidence, and previous experience. External factors are, for example, the athlete-coach relationship or the relationships between team-mates, the level of competition, the importance of the game, the presence of audience, and public pressure.

There may be more personal exposure associated with individual sports than team sports. It is logical to presume that the feeling of pressure is greater in individual athletes than in athletes participating in team sports. In spite of the fact that this presumption was confirmed in some previous studies (e.g. Han et al., 2006; Simon & Martens, 1979), a recent meta-analysis showed that there is no significant difference in some manifestations of anxiety between individual and team-sport athletes (Woodman & Hardy, 2003). According to these findings, the feeling of pressure can be also elevated in athletes participating in team sports mainly due to the fear of failure and betrayal of others, due to the concern about one's team-mates, as well as due to the coach's expectations. On the other hand, there are some factors that can help to lower the competitive pressure. The lower level of individual responsibility, the higher opportunity for social support, and more chance for corrections of mistakes in team sports than in an individual sport can help athletes to

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overcome pressure.

A psychosocial variable that might influence the development of psychological pressure in athletes participating in team sports is motivational climate. Motivational climate represents an achievement environment and its psychological structure, which can be fostered by the coach, the team, parents or a combination of these (Barić, 2007). Motivational climate is assumed to be a function of the goals that are to be achieved, the evaluation and reward process, and the way individuals are requested to relate to each other in a particular setting (Seifriz, Duda, & Chi, 1992). There are two motivational climate patterns that affect athletes' motivation and their achievement behaviors. *Mastery motivational climate* represents an environment in which athletes are reinforced by their coach to improve, work hard, cooperate and help others in learning. Athletes are oriented towards learning, mastering skills, or improving personal competence. Coaches who create such an environment are moderately democratic; they appreciate learning, improvement and strong effort, and are more instructive, supportive and ready to give feedback. This is considered to be a desirable motivational pattern, and it relates to adaptive behavior such as increased effort, commitment and persistence (Duda, 2001; Kavussanu & Roberts, 1999; Treasure, 2001). *Performance motivational climate* represents an environment which emphasizes the imperative of achieving the best result possible and outperforming others. Athletes perceive that poor performance or mistakes will be punished, and the high-performance athletes will receive the most attention and recognition. Additionally, competition between team members is often encouraged by a coach. In such a climate coach is less supportive, less ready to give positive feedback, and more autocratic. Performance motivational climate is associated with maladaptive motivational behavior such as low effort, lack of commitment, and insufficient persistence (Vosloo, Ostrow, & Watson, 2009). Also, it can be presumed that maladaptive motivational response may lead to increased competitive pressure. Development of competitive pressure begins during training sessions. If an athlete works in a more task-oriented than a people-oriented environment dominated by a non-emphatic, strict coach oriented predominately towards highest possible performance and results, who encourages inter-team competition (i.e., who facilitates performance motivational climate), then it is more likely that the athlete will have a feeling of pressure. Moreover, those athletes will train to be under pressure and only a few of them would be able to overcome it during a competition.

The purpose of the current research was to examine the differences in perception of motivational climate between athletes who differ according to the feeling of pressure with regard to their sport practice and competition. It could be presumed that athletes who perceive performance motivational climate in their teams would also have a stronger feeling of pressure, i.e., the positive correlation of psychological pressure with performance motivational climate and negative correlation with mastery motivational climate is expected.

METHODS

The sample was comprised of 388 young male Croatian athletes (M = 15.6 years, SD = 1.23 years), football and handball players from 34 clubs, from 9 Croatian counties, 17 from each sport (N = 386; n_{football} = 206, n_{handball} = 182).

The subject matter of the study was motivational climate; the inclusion criterion for the selection of participants was training experience within the same team under the leadership of the same coach. Each coach has been leading his team for at least six months, and each player included in this investigation has trained in his team for at least six months.

Instruments and variables

The level of athletes' training and competitive pressure was assessed by the Pressure/tension subscale (PT) from Intrinsic motivation inventory (Barić, Cecić Erpič, & Babić, 2002; McAuley, Duncan, & Tammen, 1989). The pressure/tension, a negative indicator of intrinsic motivation, was evaluated on a 5-point Likert-type scale, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*) (4 items, e.g. "I feel pressured while playing football").

The perceived motivational climate was assessed by the Croatian version of PMCSQ (Barić, 2007; Seifriz, Duda, & Chi, 1992).When completing the PMCSQ, the participants were asked to think about what the environment in their team was like in general. The stem that preceded each item was "On this team…". PMCSQ consisted of two factors: *Mastery motivational climate* (9 items, e.g. "Players try to learn new skills") and *Performance motivational climate* (12 items, e.g., "Players feel good when they do better than teammates"). Responses were recorded on the 5-point Likert type scale (1 [*strongly disagree*], 5 [*strongly agree*]). The PMCSQ and PT were scored by calculating a mean score for each subscale. Higher scores on either of PMCSQ subscales represented a greater perception of that climate within a team, while a higher score on PT subscale represented a higher pressure.

Procedure

The study was conducted over a year-long period, from September 2002 to November 2003. Before the measurement, an informed consent was obtained from parents and club management and the measurement was announced to the athletes and their parents in advance. The principal researcher and two trained assistants administered the ques-

tionnaires; the anonymity and confidentiality were guaranteed. Data collection was carried out in a club meeting room, in a locker room or in a gymnasium, in a group setting. It took approximately 25 minutes to complete all the questionnaires.

RESULTS

For the purpose of this study all athletes were divided into two groups, according to their level of pressure/tension. Prior to that, differences between motivational climates with regard to sport were tested and no significant differences were obtained either for mastery or for performance motivational climate. Athletes whose result on the pressure/tension scale was 2.00 or lower (range: 1.00-200) were regarded as a low-pressured group of athletes, while all others whose result was higher than 2.00 were regarded as high-pressured athletes (range: 2.01-5.00). Such a criterion was chosen because only a few athletes experienced a high pressure (4.00 and higher), i.e., the group of highly pressured athletes was the group of those who experienced middle pressure, but higher than the other ones. Descriptive parameters are presented in Table 1.

The results obtained showed that mastery motivational climate prevailed within the sample. Mean values showed that the feeling of pressure/tension reported by these athletes was rather low; however, there were some athletes who reported a high feeling of pressure (range of evaluations: 1.00-5.00).

The difference in perception of motivational climate between two groups was tested by a one-way ANOVA. The results showed that low and highly pressured athletes perceived motivational climate in their teams significantly different. Low-pressured athletes perceived more signs of mastery motivational climate in their environment than highly pressured athletes (F (386, 2) = 9.159, $p < .003$), while highly pressured athletes perceived significantly more signs of performance motivational climate in their teams in comparison to low-pressured athletes (F (386, 2) = 7.084, $p < .008$). Also, the correlation coefficients between pressure/tension and motivational climate variables, despite low values, were statistically significant. The results showed a significant positive correlation between pressure/tension and performance motivational climate ($r = .157$, $p < .001$), and a negative correlation between pressure/tension and perception of mastery motivational climate ($r = -.129$, $p < .005$) which is consistent with initial presumptions.

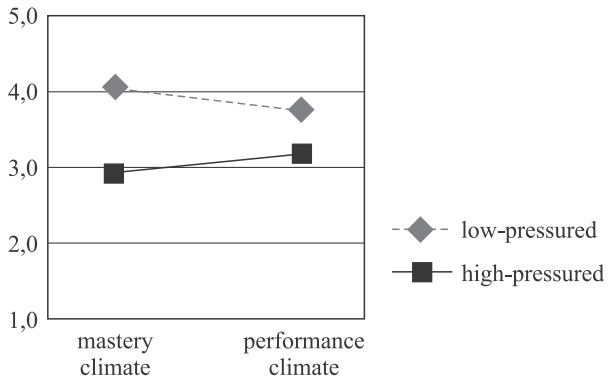

Figure 1. Mean values of mastery and performance motivational climate evaluations by athletes who differ on pressure/tension level.

DISCUSSION

The purpose of this study was to examine the differences in perception of motivational climate between athletes who differ according to the feeling of pressure with regard to their sport practice and competition. According to the self-determination theory, an autonomy-supportive motivational climate, which accentuates personal development, cooperation and learning, produces a high level of self-determination and intrinsic motivation in athletes (Deci & Ryan, 1985; Treasure & Roberts, 2001). On the contrary, a controlling motivational climate is defined as a set of practices that puts pressure on athletes thus trying to make them act in a specific way (Deci & Ryan, 1987), i.e., to compete with each other and ultimatively to achieve results. Previous studies showed that teachers who set up a controlling motivational climate pay little attention to their students' needs and in-

Table 1

Descriptive parameters and Cronbach alpha internal consistency coefficients

	All athletes			Low-pressured athletes (n = 260)		High-pressured athletes (n = 128)	
	M	*SD*	α	*M*	*SD*	*M*	*SD*
Pressure/tension	1.96	0.71	.65	1.55	0.32	2.80	0.52
Mastery climate	3.97	0.57	.76	4.03	0.57	3.84	0.56
Performance climate	2.99	0.70	.83	2.92	0.73	3.12	0.64

ner motivational resources (Reeve & Jang, 2006). They use a more commanding style of discourse and encourage students to adopt expected behaviors by using rewards and incentives, and are much more critical and show more disapproval than autonomy-supportive teachers (Reeve & Jang, 2006). Newton, Duda and Yin (2000) showed that in a sport context mastery motivational climate correlates positively to intrinsic motivation variables and negatively to pressure/tension, which correlates positively to performance motivational climate. The results obtained in this study confirmed the previous findings. Athletes who perceive more signs of performance motivational climate in their sport environment also experience a higher pressure while practicing and competing. Previous investigations showed negative effects of performance motivational climate on athletes' responses. When practicing in performance motivational climate environment, athletes feel more pressured (Walling, Duda & Chi, 1993); insecure, anxious (El-Alayli & Baumgardner, 2003; Voight, Callaghan, & Ryska, 2000), and some report that sport practice is boring (Treasure & Roberts, 1994). The performance motivational climate negatively affects athletes' cognition and affect; hence their motivation is lower because they have lower control of achievement striving. On the contrary, mastery motivational climate induces positive emotions and more adaptive achievement-related cognition (Ames, 1992; Ommundsen, Roberts, & Kavussanu, 1998). Different patterns of motivational climate as a part of objective environment, together with personality, self-confidence, and athlete's defense mechanisms contribute differently to cognitive appraisal. Once the athlete makes an appraisal, she/he experiences an emotional response which can lead to adaptive or maladaptive behaviors. When emotions are interpreted as pleasant, they may facilitate performance, but when experienced as unpleasant they may interfere (Hanin, 2000). Everyday sport practice has shown that athletes who practice in performance motivational climate environment feel more anxious. For instance, they are more aroused even during practice, not only during competition, which disturbs their attention and causes them to make more mistakes. Such an environment also affects the development of athletes' metacognition. Athletes in competitive climate are continuously more anxious and feel tenser during practice, they permanently struggle for precedence and their perceived competence is at risk. Because of that they are conditioned to perceive high-aroused state as threatening and hence feel more anxious. Such metacognitive components must be considered, especially when performing under additional psychological pressure such as participating in an important competition. The regulation system of athletes from performance climate environment might be more vulnerable 'to choke' under pressure and/or uncertainty. This can be supported by previous investigations. On a sample of sport dancers Carr and Wyon (2003) established that performance motivational climate predicts cognitive and trait anxiety and concentration disruption. On the sample of high-school swimmers, Vosloo et al. (2009) obtained significant correlation between performance climate and cognitive and somatic anxiety, and low correlation between those variables and mastery motivational climate.

Results obtained in this study are consistent to many previous findings. These studies support the benefits of emphasizing learning, improvement and cooperation, i.e., the mastery motivational climate in sport. On the other hand, the fact that competition is the biggest challenge that basically defines sport cannot be ignored. Considerable pressure is put on coaches to 'win' and to nurture 'winners', and the recommendations many sport psychologists make about the desirable motivational climate may seem in conflict with the goal of everyday sport practice. No sport psychologist will recommend that competition be forgotten. The competition is the 'finest spice' of sport. But, there are two things that are very important. First, competition must be kept for real opponents, not for team-mates. Secondly, every athlete, especially when competing, must be oriented toward process, not towards the result. Thinking about what to do or how to perform is more beneficial than thinking about scoring goals, points, or the final result of the competition. Moreover, directing one's mind towards the results during competition leads to alienation of the final achievement. If a coach helps athletes to focus on self-improvement, they should induce all benefits associated with self-determined motivation (greater persistence and enjoyment, better learning, less anxiety and less risk to drop out) (Vallerand & Losier, 1994). This path may seem longer and slower, but this approach in turn can lead to the common goal, sport achievement and successful result. Such strategy that includes facilitating mastery motivational climate and self-determined motivation is a very effective way to maximize success. An athlete who wants to win has to forget about winning and about the results during competition, and focus on performance. Simultaneously, the feeling of pressure and tension lowers and the athlete is more prone 'to dive' into the process.

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