

Stress and Sport: organizational practices to support referees for coping stress

Stress e Sport: pratiche organizzative a supporto della categoria arbitrale per affrontare lo stress

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Abstract

The purpose of the paper is to investigate the stress phenomenon within sport settings. Specifically, this conceptual study aims to evidence how stress phenomenon can affect the sport setting with focus on performance and, at the same time, if and how the same context and sport category can significantly impact on level of stress for individuals, mostly sporting referees.

The study, drawing from the literature on the topic, also provides some interesting proposals for preventing and managing stress for sport referees, for instance focusing the attention on coping styles for stress and educational and training programs through the resilience theory.

Questo articolo si propone di indagare il fenomeno dello stress all'interno dei contesti sportivi. In dettaglio, questo studio concettuale intende evidenziare come il fenomeno dello stress possa influenzare l'ambito sportivo con particolare attenzione alle prestazioni e, allo stesso tempo, se e come lo stesso contesto e la categoria sportiva possano avere un impatto significativo sul livello di stress per gli individui, in particolare la categoria degli arbitri. Lo studio, prendendo spunto dalla letteratura sull'argomento, fornisce anche alcune proposte interessanti per prevenire e gestire lo stress per gli arbitri sportivi, ad esempio focalizzando l'attenzione sugli stili per affrontare lo stress e sui programmi educativi e di formazione attraverso la teoria della resilienza.

Keywords

Sport; Stress; Management; Coping Stress; Referees.

Sport; Stress; Management; Affrontare lo stress; Arbitri.

Introduction

Stress for being referees has been found to have significant effects on referees or officials, by impacting their coordination mechanisms, organizational behaviors, mental health, performance and satisfaction. Most studies focus on athletes' stress, instead still few researches concern the frequency and intensity of the major sources of stress and coping strategies experienced by sport officials (Voight, 2009; Hanton et al., 2005). For instance, through a national soccer official organization, questionnaire packets were administered to over 200 officials. Questionnaire packets included sources of stress and ways of coping questionnaires. According to the main contributions in the literature, the top sources of stress experienced by the officials included 'conflict between officiating and family demands' (work-life imbalance), 'making a controversial call', 'conflict between officiating and work demands'. The top acute coping strategies utilized by the officials included 'thought hard about steps to manage' and 'asked fellow officials what they did' (problem-focused strategies) (Voight, 2009).

Moreover, despite of high turnover rates and a shortage of referees in many sports, still few studies examine the desocialization process, especially the role of burnout as a mediating affective response between perceived stress and dropout intentions among soccer officials over a soccer season. Taylor and colleagues (1990) mailed Ontario Soccer Officials' Survey, and included 30 stressor items, a 16 item version of the Maslach Burnout Inventory, and 5 items to assess turnover intentions. Data were collected from the 529 officials (42%) who responded at T1 (3 months into the season) and 4 months later (T2). Also, these authors conducted a cross-sectional longitudinal path analysis by showing the negative correlation between age and burnout, and suggesting indirect effects of total perceived stress and burnout on turnover intentions. Stress had a direct negative effect on burnout, while burnout appeared to have a direct positive effect on perceived stress over time. Other features, such as the fear of failure, role-culture conflict and interpersonal conflict, had only indirect effects, through burnout, on turnover intentions.

This study aims to fill the still existing gap in the literature, exploring sources and magnitude of officials' stress, coping strategies, and educational and training implications in sport settings through the lense of resilience theory, in order to highlight the importance of officials' learning and the need to implement innovative and effective stress management interventions, including time management, restructuring unproductive thoughts, physiological relaxation techniques, communication training and mental skill training techniques such as imagery, relaxation breathing and self-talk.

1. Sport officials' stress phenomenon: sources and magnitude

Stress can be defined as the sudden and short-term exposure to demanding situations that exceed individuals' resources (Anshel, 1990; Anshel & Weinberg, 1995), and work-related stress as a state of imbalance between the perceived demands of the role and the capacity of the worker to cope with those demands (Taylor, Daniel, Leith, & Burke, 1990).

Job stress is a common phenomenon among athletes and coaches in sport competition. Several studies have examined the sources and levels of stress among athletes in a variety of sport fields (Scanlan & Passer, 1979; Gould & Weinberg, 1985; Smoll & Smith, 1990; Cohn, 1990; Dunlap, 1991), and among coaches (Parcelli, 1990; Kelley, 1994; Kellmann & Kallus, 1994). However, perceived individuals exposure to psychological stress in sport settings linked to high magnitude of stress, such as the case of sport officials, has received less attention.

Some studies have investigated both the sources and magnitude of perceived psychological job stress among sport referees in basketball (Anshel & Weinberg, 1995; Kaissidis & Anshel, 1993; Rainey & Winterich, 1995; Stewart & Ellery, 1997), baseball and softball (Rainey, 1994),

volleyball (Goldsmith & Williams, 1992; Stewart & Ellery, 1996), soccer (Taylor & Daniel, 1988; Taylor, et al., 1990), football (Goldsmith & Williams, 1992), and rugby (Rainey & Hardy, 1997).

Investigating basketball officials, Kaissidis and Anshel (1993) identified 15 sources of stress among their subjects, such as fear of physical harm, uncontrollable events, threat of evaluation, fear of appearing incompetent, and interpersonal contact, using the Basketball Sources of Stress Inventory, compared with the perceived sources of psychological stress of American and Australian basketball referees.

Taylor and colleagues (1990), in their study focused on perceived psychological stress and its relationship to burnout of soccer officials, highlighted that soccer referees experience psychological stress and identified sources of greatest relative magnitude. They found that “making a bad call” and “having a bad game” represented more potent stressors than other stressors identified in their research (Taylor et al., 1990). These factors represent elements of the “fear of failure”, which had been identified among the six scales stated by Taylor and Daniel (1988), with a pilot study through their Ontario Soccer Officials’ Survey. Other sources of stress among these soccer officials were interpersonal conflicts, fear of physical harm, time pressures, peer conflicts, and role-culture conflict.

Goldsmith and Williams (1992) administered a revised form of the Soccer Officials Stress Inventory to 99 sport officials representing intramural and interscholastic football and volleyball officials and reported three of these factors (fear of failure, fear of physical harm, and time pressures) as Taylor and Daniel (1988). Two of these three factors were similar to Kaissidis and Anshel’s (1993) factors of fear of appearing incompetent, threat of evaluation, and fear of physical harm. Furthermore, verbal abuse by players or coaches was identified as a stressor for officials in both Taylor and Daniel’s (1988) and Kaissidis and Anshel’s (1993) studies.

Rainey (1995) found the stressors of fear of failure, fear of physical harm, time pressures, and interpersonal contact among the 782 certified baseball and softball umpires in his study.

Therefore, Taylor and Daniel (1988), Goldsmith and Williams (1992), and Rainey (1995) found the stressors fear of failure, fear of physical harm and time pressures were experienced by officials in all their studies. Rainey’s (1995) interpersonal conflict stressor was a finding similar to a stress factor identified by Kaissidis and Anshel (1993). As Rainey (1995) pointed out, research indicates that there are some common sources of perceived psychological stress among officials of various sports; however, he also indicates there have been a limited number of studies conducted and those have sampled a somewhat limited number of officials as well as sport types.

Stewart and Ellery’s study (1998) sample a large number of certified high school men and women volleyball officials to identify the sources and magnitude of perceived psychological stress.

Participants were certified through the National Association of Girls and Women’s Sports as high school volleyball officials (N=349/126 men, 218 women) registered with the high school activities association of a midwestern state. Distribution of men and women was 37% and 63%, respectively. Five officials did not respond to the question asking to identify their sex. The mean age of the subjects was 37.8 years (SD=9.2 years) and the mean years of volleyball officiating experience was 9.5 years (SD=8.1 years).

Officials completed the Ontario Soccer Officials Survey (Taylor, et al., 1990). Three changes were made in the survey to make it applicable to volleyball. One item was changed from “Keeping up with play” to “Being able to get into good positions to make calls”. The two other changes were replacing the word “match” with “game” and deleting the word “soccer”. To a certain content validity, survey items were reviewed by a focus group of five volleyball officials, not included in the study sample, to verify content changes and to offer their opinions regarding vocabulary and phrases used. No changes were made.

There were two parts to the survey. The first part dealt with information pertaining to sex, age, years of officiating experience, and average number of games officiated per week. The

second part addressed sources and magnitude of stress. The part of the survey dealing with the sources of stress used a 4-point format anchored by (0) 'not at all' and (3) 'strongly' for 29 items. The part dealing with the magnitude of stress asked the question "Overall, how much pressure do you think you were under while officiating volleyball games this season?": response to this item of the survey was based on a format anchored by (1) 'none' and (5) a 'great deal'.

In terms of procedure, the survey was sent to all high school certified volleyball officials (N=470) who were registered with the high school activities association one week following the high school state volleyball tournament. Participants completed the survey anonymously and returned it within one week. Two weeks later, a follow-up survey was sent to those officials who had not yet responded.

Results showed that, with regard to the sources of stress, items in 'Fear of Failure' were rated highest. This is consistent with other studies (Goldsmith & Wiham, 1992; Taylor & Daniel, 1988) in which factor analysis produced 'Fear of Failure', 'Fear of Physical Harm', and 'Time Pressures' as main officials' stressors. 'Fear of Failure' was reported as the leading source of psychological stress in this study as well as in the Taylor and Daniel (1988) and Goldsmith and Williams' studies (1992) in which they studied soccer and women volleyball referees, respectively.

The high expectations of coaches, players, and fans may probably affect that some officials reported a fear of failure. Kaissidis-Rodafinos, Anshel, and Porter's study (1997), investigating coping strategies among highly level Australian basketball referees, indicated that 'making a mistake' rated highly among stressors for their participants. Considerable responsibility is placed upon high level officials to perform well and coaches, players, and fans have increasingly higher expectations for high level officials to make correct decisions in judgment and interpretation of the rules.

This was stressed in Goldsmith and Williams' study (1992), where women volleyball referees officiating varsity matches had a greater fear of failure than did not certified women referees officiating intramural games. Moreover, it is not surprising that officials in this study rated 'Fear of Failure' higher than other stressors, because volleyball officials are physically located close to fans, players' benches, and coaches in an environment which is conducive to close scrutiny by all three groups.

'Fear of Physical Harm' had the lowest mean score which, again, is consistent with both the Taylor and Daniel (1988) and Goldsmith and Williams (1992) studies. On the other hand, Kaissidis-Rodafinos, and colleagues (1997) reported 'aggressive reactions by coaches or players' as the most stressful event in their study. However, Kaissidis-Rodafinos, and colleagues' study (1997) was with basketball referees and basketball is considered an aggressive contact sport, whereas volleyball is neither aggressive toward opponents nor a contact sport. Also, given the fact that no official in this volleyball study had been assaulted by a player, coach, or fan, the results are not surprising. Officials, however, probably still recognize the potential for physical harm in a society in which people take such actions to settle differences of opinion.

With regard to the magnitude of perceived stress of individual questions, as in Rainey's self-reported perceived stress study with baseball and softball umpires (1994), volleyball officials don't perceive themselves as under a great deal of stress. In fact, it appears that these volleyball officials were under somewhat less stress than the baseball and softball umpires in the Rainey's study. Whereas Rainey (1994) reported 4.5% of officials in his study reporting high stress, only 2% of the volleyball officials reported such a level. Rainey (1994) suggested that perhaps the umpires in his study who reported high stress umpired in leagues or locations that were 'unusually stressful'. As with the Rainey study, this study didn't ask the officials whether their games were in 'normal' or 'unusually stressful' situations so it would be presumptuous to suggest that one situation might be more stressful than another. However, intuitively, one would suggest that each officiating environment could range from little to great stress based upon different contributing factors.

Rainey, Schweickert, Grito, and Pullella (1990) suggested that the culture of softball and

baseball fans, coaches, and players includes displaying abuse and hostility toward umpires. Volleyball fans, coaches and players, however, may perceive acceptable behavior differently than those of softball and baseball fans, spectators, and players. Therefore, the perceived stress reported by volleyball officials might be explained in this context. It may be that the hostility and verbal abuse of baseball umpires which Rainey, and colleagues (1990) described as becoming increasingly acceptable, has not become as acceptable in volleyball.

Another reason for low ratings of the amount of stress may be due to the fact that surveys were conducted at the end of the season rather than during the season or better yet, immediately following a contest. Although all surveys were returned within three weeks after the season ended, officials' perceptions of their perceived stress during the season may not reflect their actual stress from contest to contest. As Rainey (1994) points out, the proximity of the contest to the administration of the survey may well be related to ratings. Another explanation for low stress may be that the officials in this study simply have the basis in coping with stress. Although coping with stress was not within the scope of this study, Kaissidis-Rodafinos and colleagues (1997) found that basketball officials not only use a variety of coping strategies to deal with stress, they are consistent with using coping responses.

Further studies might investigate whether coping strategies are used by volleyball officials. Also, studies might investigate the amount of perceived stress following each contest as compared to an over-all perception at the end of the season. Other areas of inquiry would be to extend these questions into several other sporting arenas to assess whether perceived stress of officials, umpires, and judges is affected by the number of spectators at the contest, the presence of important others: friends, family, evaluators, medal, the importance of a particular episode within a game, the importance of the over-all outcome of the contest, the physiological condition of the official, and the level of play (Stewart et al., 2004).

2. Sport officials' resilience: successful strategy to cope with stress

Resilience is the more effective strategy to cope with stress, originally proposed by the approach of positive psychology, and successively tested in a multidisciplinary set of studies in different settings, such as sport fields.

Resilience was originally defined as the dynamic process of positive adaptiveness with horrible experiences, producing positive and preservative affects in successful resistant and encounter with stressing situations (Luthar, Cicchetti, & Masten, 2000; Masten, 2001). Resilience represent a continuum with different degrees of resistance versus psychological pathologies. To be resilient produce positive development; adaptiveness and reaching the status of equilibrium after developing disorder.

Primary theories about resilience were focused on the characteristics related with positive results in encountering with disasters. Then, they focused on external protective factors. Today's theories know resilience as a multidimensional factor include constitutional variables, like temperament and personality, with special skills, such as problem solving skill.

Hosseini and Besharat (2010) investigated the relation of sport resilience with sport achievement and mental health of athletes and referees.

Performance and sport achievement are affected by usual stressor factors like perpetration a psychological and bodily errors, endurance of pain and disease, viewing the fraud or rivals achievement, receiving admonitions from arbiter and punishment from mentor; inability to effectively encountering to sport stress is harmful for performance and personal pleasant also to referees.

Their study tested three hypothesis: the positive association between resilience and sport-achievement of athletes/referees; the positive association between resilience and psychological well-being of athletes/referees; the negative association between resilience and distress psychological of athletes/referees.

From a methodological perspective, the Authors (Hosseini & Besharat, 2010) used the following instruments:

- Connor-Davidson Resilience Scale (CD-RISC)(Connor & Davidson, 2003; Besharat, 2007), which consists of 25 items designed to measure resilience. Responses are reported on a 5-point Likert scale that ranged from 0 to 4;
- Mental Health Inventory (MHI)(Besharat, 2006), constituted by 34 items designed to measure a psychological well-being and psychological distress on a 5-point Likert scale that ranged from 1 to 5.
- Sport Achievement Scale (SAS) (Besharat, Abbasi, & Shojaeddin, 2002), that is a 16-item self-report measure which is answered by coaches/supervisors and provides a score that reveals athletes/referees' sport achievements. Scores were recorded on a fivepoint Likert scale from "very low" to "very high".

The reliability and validity of the three scales was verified in patient and normal samples, before thier submission.

The results of this research pointed that resilience has positive correlation with sport achievement and psychological well-being, and negative correlation with psychological distress. The research outputs showed that resilience can predict the changes of sport achievement, psychological well-being and psychological distress of athletes/referees. The direction of the correlation of variables suggests that with increase in measure of resilience, the measure of sport achievement and athlete/referee's psychological well-being level increases, while the level of psychological distress decreases. The results supported the three hypothesis of research, and may be explained as follows. High levels of resilience help the individual to use the positive emotions for passing the unfavourable experiences and returning to the normal status. Positive psychological characteristics simultaneously influence the indicators related to the mental health. This phenomenon, in this article, demonstrated with increasing the psychological well-being level and decreasing the psychological distress level. Adequacy and personal consistency is one of the resilience components. Resilience is related to the sport achievement and mental health indicators by reinforcement adequacy and personal consistency. Increasing the levels of resilience is related to the increasing the level of personal consistency and reinforcement of personal consistency is related to the increasing the probability of sport achievement and mental health improvement. Moreover the resilience has some other components such as negative emotions endurance, control and spirituality that each of them can increase the sport achievement and mental health with several ways.

3. Educational and training implications in sport officials' settings

In general, resilience theory should be a part of the educational content in a way that promotes reflection and application in order to give individuals strength, focus and endurance in the workplace. Resilience and similar qualities are emphasized in clinical experience courses, internships, work integrated learning and other work experience courses (McAllister & McKinnon, 2008). In studies about resilience we can see that low heart rate is a marker of resilience to the effect of environmental challenges (Oldehinkel et al., 2007). Resilience is fostered by high levels of social support existing before exposure to adversity (Netuveliet al., 2008).

In sport settings, coaches and trainers could produce benefits to athletes and referees sharing resilience training, with programs that include educational strategies to increase the level of resilience of workers unavoidably exposed, in terms of psychological well-being, to psychological adversities.

Mental toughness (MT) predict resilience individual levels, and it is a personality trait that doesn't vary from situation. It is an important phenomenon in psychology, and it behaves in similar ways as other personality traits and has a strong genetic component. Results revealed a significant relationship between MT with gender, age, and sport experience (Nichollset al.,

2009). MT is associated with stress intensity and control appraisal. MT can predict coping and coping effectiveness in relation to the self-selected stressor. Higher levels of MT are associated with more problem-focused coping, but less emotion-focused and avoidance coping. Coping effectiveness is positively influenced by MT and resilience, and could be higher for athletes/referees in reason of their training to sport exercise (Kaiseler et al., 2009). Furthermore, competitive experience is a crucial factor in the development of MT among athletes/referees, and, consequently, of employment of successful coping strategy (Nicholls et al., 2009).

Sport has a lot of benefits for physical and mental life. Sport participation is the only type of physical activity inversely associated with both stress and distress. Sport participation related to less distress in unemployed mid-aged adults, and to less stress in unemployed women, unemployed young adults, and young adults with blue-collar jobs (Asztalos et al., 2008). The lack of regular physical activity is linked to an increased rate of obesity, development of chronic diseases, and an overall decline in health (Diehl & Choi, 2008). Sport can help men with serious mental illness by providing resources which enable participants to re-story aspects of their lives through creating and sharing personal stories by which they rebuilt or maintained a positive sense of self and identity (Carless & Douglas, 2007). Master athletes enjoyed their participation were committed, had high perceptions of ability and belonging, and were predominantly intrinsically motivated (Hodge et al., 2008).

Personal characteristics are related to the sport achievement for athletes and referees in terms of successful coping strategies with stress. Striving for perfection in athletes/referees is associated with an adaptive pattern of achievement goals, whereas negative reactions to imperfection are associated with a maladaptive pattern. Thus, striving for perfectionism in sport may be adaptive in athletes/referees; who don't experience strong negative reactions when performance is less than perfect.

Mastery oriented climates should be established in sport, family, and peer contexts because all social contexts seem responsible for the formation of athletes/referees' achievement goals, emotions, and behaviours (Papaioannou et al., 2008). Defining success or competence in terms of social relationships positively affects coping strategies with stress, and motivational benefits in sport (Stuntz & Weiss, 2009).

4. Conclusions

This paper is focused on stress within the sport setting by providing interesting organizational proposals for supporting officials in any sport disciplines to cope with stress.

We have briefly summarized and described the main studies on the topic in the literature by evidencing the still existing gap in investigating the stress sources, effects and coping solutions for sport officials. Although in the recent years we observe an increasing attention paid by scholars to this phenomenon, especially after some relevant episodes regarding referees' behaviors in specific sport disciplines such as football and tennis competitions, the existing contributions in the literature are still scarce and they do not give specific suggestions or proposals for supporting the sport officials to cope and effectively manage the stress related to their role and function.

This conceptual study, conducting a deep review of the literature on the topic and reading the phenomenon through the resilience theory, provides possible solutions for managing stress for officials through the identification and analysis of organizational practices, such as training and educational programs developed according to the resilience theory, where sport officials' resilience can be suggested and applied as effective strategy to cope with the stress, taking into account the significant implications in terms of educational and training programs.

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