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Sport Emotions Profiles: Relationships with Burnout and Coping Skills among Competitive Athletes

Abstract

The aims of the study were to identify naturally-occurring competitive emotional profiles and examine whether participants from several profiles significantly differed on burnout and coping. A sample of 424 competitive athletes (M_{age} = 32.38; SD = 13.16), completed a series of self-report questionnaires. Comparing the sample as a whole, cluster analyses revealed two emotional profiles: (a) High unpleasant emotions and low pleasant emotions; and (b) moderately high pleasant emotions and low unpleasant emotions. Results of MANOVAs showed significant differences across emotional profiles on burnout (emotional/physical exhaustion, reduced accomplishment, sport devaluation) and coping (resignation, distancing, venting emotions and mental distraction). Therefore, results suggested that an emotion profile approach offered a robust heuristic for examining emotions in a more holistic method to unpack their complex associations with key outcomes (coping, burnout) and they have implications for intervention.

Keywords: Burnout, Cluster analysis, Coping, Emotion profiles, Sport competition.

Introduction

Emotions are central in sport settings because of their significant influence on a wide variety of parameters related to sport performance such as coping, burnout, concentration, activation, decision-making, motor-control, etc.[1,2,3,4] Moreover, this literature showed that pleasant discrete emotions (PE) are related to challenge appraisal whereas unpleasant discrete emotions (UE) are related to both threat and challenge appraisals depending on the situation, the individual and/or the transaction between the individual and the situation.[5,6,7,8] In other words, a challenge appraisal means that the athlete will solve competition demands as if they were a way to self-growth, meanwhile, a threat appraisal will force athlete to face competition demands with the feeling that competition exceeds their skills and the athlete feels overwhelmed.[5,6,7,8] Concerning appraisal theory, it reveals that the emotions experienced by a person involve evaluating and judging events and situations.[5,6] Also, in this theory environment plays a key role, because it depends on the evaluation of expecting and experienced environmental conditions.[7,8] Therefore, the athlete's appraisal attributes can shed light by showing the meaning and the combination of the different emotions (PE or UE) experienced in the sporting context.

The definition of emotion has been subject to many controversies and debates within scientific community and many terms (affect, emotion, mood) have been used in the emotion literature.[6,9] Whereas affect refers to the experiential component of all valence responses, emotions are discrete reaction related to specific stimuli (events).[6] Moreover, emotions are more intense and of a shorter duration in comparison to moods.[9,10] Athletes experience a wide range of PE and UE while competing.[6,10,11] Although a predominant line of research focused on UE and especially anxiety[10,12], recent studies provided evidence for the prevalence of two PE (happiness and excitement) as well as three UE (anger, anxiety and dejection) in sport settings.[13] Thus, a comprehensive examination of emotion in sport settings should simultaneously consider PE and UE. [14]

In order to capture the multivariate nature of emotions, previous studies suggested using a person-centered approach.[15] Such a methodological approach allows identifying subgroups of athletes who experience similar emotions (emotion profiles; [16,17]). Indeed, emotion profiles can provide insights on the different combinations of a wide range of PE and UE experienced by athletes in sport competition.[14,18] For instance, Martinent and colleagues [14] have identified four profiles of emotion states before and during sport competition: High positive emotional facilitators, facilitators, low emotional debilitators, and high negative emotional debilitators. However, a main limitation of the Martinent and colleagues[14] study was

that the emotion profiles were based on the core (general) dimensions of positive and negative affects rather than on a wide range of discrete emotions. Despite the fact that there are limitations, the study reveals the way in that emotions can be combined in intensive training settings, which is important in the present study to remark the multivariate combination of emotions that can be assessed by a person-centered approach methodology. In order to provide a more finely grained portrait of emotion profiles, Martinent and colleagues[16] recently examined emotion profiles based on a wide range of PE (happiness, confidence, love, harmony, and vitality) and UE (sadness, anxiety, anger) with a sample of adolescent elite athletes involved in intensive training centres. Results of latent profile transition analyses revealed four emotion profiles through the competitive season: High PE and low UE, moderately high PE and low UE, moderately high PE and UE, and moderate PE and UE. A limitation of the Martinent and colleagues[16] study was that they examined everyday emotions experienced by athletes during the training process. Moreover, their study focused on adolescent athletes involved in intensive training centers. Therefore, it is not necessarily possible to generalize the emerging emotion profiles to sport competition and with adult competitive athletes. Thus, the aim of the present study was to further develop this line of research by examining whether several subgroups of adult athletes can be identified based on their scores of a wide range of UE (anxiety, anger, and dejection) and PE (happiness, excitement) in sport competition. Moreover, some studies reveal the prevalence of PE emotions in winning and UE emotions in loss matches. Wilson and Kerr[19] revealed that winning produced a range of pleasant emotional outcomes and reductions in arousal and stress, meanwhile, losing produced strong unpleasant emotional changes, a reduction in arousal but no reduction in stress. In that way, Baker-Ward, Eaton and Banks[20] revealed that children who played on winning teams experienced "the thrill of victory," whereas their defeated opponents described their reactions as sadness, disappointment, and anger. Regarding emotions in sport fans, Kerr, Wilson, Nakamura and Sudo[21] discovered that losing fans scored significantly higher than winning fans on boredom, anger, sullenness, humiliation and resentment, and lower on relaxation.

As it was pointed out in previous works[14,15,18], emotions can be analysed with multivariate profiles, which mean that the multivariate examination can reveal the way in that various emotions can co-occur in competition. Multivariate emotion profiles could offer a promising platform to re-examine, not only the different combinations of discrete emotions that athletes experience in sport competition, but also their complex interplay with key athletic outcomes, such as burnout and coping. We selected these two variables because they seem particularly salient for a sample of competitive athletes. Coping refers to the set of cognitive

and behavioural efforts developed by individuals to control the several internal and/or external demands evaluated as exceeding their perceived resources.[22] Coping has been one of the most investigated issues in sport context due to its strong influence on athletes' emotional experience and performance.[20] Indeed, achievement of optimal performance can only be fulfilled if athletes are able to cope with the various demands encountered in sport competition.[18,24] As athletes are using a wide variety of coping strategies, some authors proposed regrouping coping strategies into a parsimonious and meaningful set of coping dimensions.[25] However, although several classifications resulting from many empirical findings have been proposed in the last three decades, a general agreement about how to classify all the coping strategies is still lacking. [25,26] In addition, the fact that a single coping strategy may serve multiple macro-level functions highlighted difficulties in classifying specific coping strategies by the macro-level function they are intended to serve.[6] Thus, in the present study, we examined a wide variety of coping strategies used by athletes to cope with sport competition, including resignation, relaxation, distancing, logical analysis, seeking support, mental imagery/thought control, venting emotions and mental distraction.[27,28] Mental imagery/thought control and logical analysis have typically been related to desirable outcomes such as increased performance, subjective well-being and/or PE whereas resignation and distancing have typically been related to negative consequences such as decreased performance, ill-being and UE.[27,29]

We also assessed athlete burnout which refers to a syndrome characterised by emotional and physical exhaustion, sport devaluation, and a reduced sense of accomplishment.[30,31] Whereas reduced accomplishment is due to the lack of success feeling and self-growth in sport context, sport devaluation is considered as the loss of interest in the activity and a progressive increase in the withdrawal desire.[30] Furthermore, physical and emotional exhaustion can come from high demands in the competitive environment and low personal accomplishment.[31] Sport burnout may lead to several detrimental consequences such as drop out, decreased performance, lack of enthusiasm, loss of social cohesion or depressive symptoms.[5,29] Of remarkable importance in the context of the present study, previous research has provided strong evidence that burnout is positively related to UE and, to a lesser extent, negatively related to PE.[30,31,33,34] In particular, UE were linked with emotional exhaustion which is the burnout factor related with the feeling of mental tiredness.[31] Nevertheless, the trigger of UE emotions is when the athlete is competing which is when we measured emotions in this study.[14,15,18] Otherwise, the cause of emotional exhaustion is due to the continuous exposition to a stress that overcome athlete's resources.[30,31] Therefore, the cause of the experience of UE/physical exhaustion is different although they are similar factors.

To sum up, further examination of emotion profiles among athletes involved in sport competition seems relevant and important. Understanding how different emotion profiles may operate is a critical issue not only for theorists but also for practitioners who work with the complexities associated with athletes. In particular, it can be useful to implement interventions for athletes who could benefit the most from changing their pattern of emotions and can allow adapting intervention according to the needs of specific groups of athletes.[16] Thus, the aims of the study were to identify naturally-occurring emotion profiles and examine whether participants from several profiles significantly differed on burnout and coping. Given that few studies examined emotion profiles related to sport competition using a wide variety of discrete emotions, no specific hypotheses were advanced regarding the number of profiles or their characteristics (scores of the several discrete emotions). Concerning the relationships between emotion profiles, burnout and coping, in line with empirical research.[8,27,31,32,34], we hypothesized that: (a) athletes belonging to the emotion profile characterised by high scores of PE and low scores of UE will report low scores of burnout, resignation and distancing and high scores of mental imagery/thought control and logical analysis.

Method

Participants

A sample of 424 athletes (M_{age} = 32.38; *SD* = 13.16; 330 men and 94 women) voluntarily participated in the study. Most of the sample was comprised of athletes who were not professional (*n* = 364). Regarding the time of sport practice, 115 athletes practiced less than 5 hours per week, 160 athletes practiced between 5 and 10 hours per week, 84 athletes practiced between 10 and 15 hours per week and 47 athletes practiced more than 15 hours per week. The sample was selected through a non-random sampling, trying to collect participants from the greatest diversity of areas of Spain. In particular, athletes practiced a variety of sports, including both team sports (e.g., handball, rugby, volleyball, basketball, football, etc; *n* = 87; 20.51%) and individual sports (e.g., tennis, table tennis, boxing, cycling, CrossFit, Rowing, Baseball, etc; *n* = 355; 79.49%). As an inclusion criterion, it was selected only athletes, which means that physical activity practitioners and sedentary people were not allowed to participate in the study. A heterogeneous sample was selected from various individual and team sports, male and female athletes as well as elite and nonelite athletes, to maximize the external validity and generalizability of the emotion profiles.[14]

Measures

A Spanish translation of the Sports Emotion Questionnaire (SEQ)[13] was used to measure emotions experienced in competition. Standardized back-translation procedures were used to

develop a Spanish version of the SEQ using three independent bilingual translators.[35] The SEQ contains 22 items measuring happiness (4 items, α = .91), excitement (4 items, α = .77), dejection (5 items, α = .91), anxiety (5 items, α = .79), and anger (4 items, α = .88). Participants completed the SEQ using a 5-point Likert-type scale ranging from 0 (not at all) to 4 (extremely). Previously to respond SEQ, it was pointed out in the questionnaire that they have to answer about the emotions that they felt in their last competition. A confirmatory factor analysis was performed with a robust maximum likelihood estimation procedure. Fit indices indicate that the measurement model is acceptable ($\chi^2 = 2720.15$, $p < .001$, CFI = .90, RMSEA = .05).

A Spanish version[28] of the Coping Inventory for Competitive Sport (CICS)[27] was used to assess coping strategies in sport competition. It contains 31 items measuring resignation (4 items, α = .74), relaxation (4 items, α = .77), distancing (3 items, α = .45), logical analysis (7 items, α = .61), seeking support (2 items, α = .81), mental imagery/thought control (5 items, α = .62), venting emotions (3 items, α = .80) and mental distraction (3 items, α = .75). Other researchers prefer the use of the raw mean inter-item correlation as a statistical marker of internal consistency. As a rule of thumb, Clark and Watson[36] recommended that the average inter-item correlation fall in the range of .15 to .50. The mean inter-item Pearson correlations were: distancing (r = .22), logical analysis (r = .20), mental imagery/thought control (r = .25), resignation (r = .43), seeking for support (r = .45), relaxation (r = .46), venting emotions (r = .48) and mental distraction (r = .39). Participants responded to the CICS items using on a 5-point Likert scale ranging from 1 (does not correspond at all) to 5 (corresponds very strongly).

The Spanish version[37] of the Athlete Burnout Questionnaire (ABQ)[31] was used to assess athlete burnout. This questionnaire contains three 5-item subscales measuring emotional/ physical exhaustion (α = .86), sport devaluation (α = .74), and reduced accomplishment (α = .67). Participants responded to the ABQ items using on a 5-point Likert scale ranging from 1 (almost never) to 5 (most of the time).

The Oviedo scale of infrequency response was used (INF-OV)[38] to assess acquiescence and dishonest participants. This is a 12-item self-report measure with a 5-point Likert-type rating scale ranging from 1 (totally disagree) to 5 (totally agree). For instance, *"I know people who wear glasses"* (totally disagree, disagree, neither agree nor disagree, agree, totally agree), *"I have never been to the cinema"* (totally disagree, disagree, neither agree nor disagree, agree, totally agree). This questionnaire helps to detect participants who respond randomly, pseudo-randomly or dishonestly on self-reports. Following authors recommendation[38], the participants with more than 4 incorrect answers were deleted from the sample. In this study, 10 participants were taken out in the sample.

Procedure

The research was conducted in accordance with international ethical guidelines and anonymity was preserved. The Spanish federations (e.g., Table tennis, Tennis, Basketball, CrossFit, Paddle, Football, Volleyball, Cycling, etc) announced on their website the conditions to participate in the study. Then, the athletes who were interested in participating completed the online survey. Before the participants accessed the survey link, they fulfilled an informed consent form that was separated in another google form. Furthermore, the only way to fill out the survey was trough the federations announce.

Data Analyses

All the analyses were conducted using the statistics package SPSS 20 version software. After the data was screened for multivariate outliers and multicollinearity of scales, hierarchical and non-hierarchical cluster analyses were conducted in order to increase the confidence in the stability of the cluster solution.[39] Cluster analyses were conducted using standardized SEQ scores.[14] In particular, a hierarchical cluster analysis (Ward's linkage with squared Euclidian distance) was first conducted in order to identify the number of clusters (emotion profiles). Secondly, a *k* means cluster analysis was performed, specifying which is the most appropriate cluster solution from stage one. Thirdly, a MANOVA with psychological variables (coping and burnout), entered as the dependent variables, was conducted to examine cluster group differences on burnout and coping variables. In the analyses, a significant multivariate effect ($p < .05$) was followed up with subsequent ANOVAs using Bonferroni adjustment ($p < .0045$ for psychological variables) in order to prevent Type I error. The Partial eta squared (η^2) was assessed for providing an index of effect size. Fourthly, to explore potential demographic confounds of the clusters, a series of chi-square was conducted: Gender, level of competition (international, national, regional and local), coach versus no coach, professional versus no professional athletes. Moreover, a MANOVA with quantitative demographic variables (age, hours of practice) entered as the dependent variables was conducted to examine cluster group differences on such demographic variables.

Results

Emotion Profiles

Based on the agglomeration schedule coefficient and the dendrogram, the results of hierarchical cluster analysis suggested that a two-cluster was the most suitable solution. Non-hierarchical cluster analysis provided support for the hierarchical one because similar clusters were obtained for the two clustering methods. In these analyses the clusters must be chosen to maximize the

differences between participants, in order to classify the sample in different groups. Even though, MANOVA detected significant multivariate effect of cluster membership on the emotions (Wilk's Lambda = .28; $F\ (5.41)$ = 212.36; $p < .001$; $\eta^2 = .71$). Follow-up analyses of variance (ANOVAs) showed that the two clusters were significantly different ($p < .001$) on all emotions, which provided an excellent indicator of tenability for the cluster solution (Table 1). Understanding sample characteristics, descriptive labels for clusters are: (a) High UE and low PE profile (n = 115) comprising athletes reporting very high scores on dejection and anger, high score on anxiety and low scores on excitement and happiness; (b) moderately high PE and low UE profile (n = 309) comprising athletes reporting moderately high scores on excitement and happiness and low scores on anxiety, dejection and anger.

Cluster Group Differences on Burnout and Coping Variables

Results of MANOVA showed significant differences across the cluster on burnout and coping variables as a whole (Wilk's Lambda = .74; $F\ (11.41)$ = 12.86; $p < .001$; $\eta^2 = .26$). After Bonferroni correction ($p < .0045$), the follow-up ANOVAs reported significant differences on emotional/physical exhaustion, reduced accomplishment, sport devaluation, resignation, coping distancing, venting emotions and mental distraction. In particular, athletes from the high UE and low PE profile reported significantly higher scores of emotional and physical exhaustions, reduced accomplishment, sport devaluation, resignation, distancing, venting emotions and mental imagery than athletes from the moderately high PE and low UE. On the other hand, there were not found differences among clusters on relaxation, logical analysis, seeking support and mental imagery/thought control (Table 2).

Cluster Group Differences on Demographic Variables

Results of chi square tests showed no significant difference in clusters across gender ($\chi^2\ (1) = .02$; $p > .05$), level of competition ($\chi^2\ (4) = 2.29$; $p > .05$), coach versus no coach ($\chi^2\ (1) = 2.29$; $p > .05$), and professional versus no professional athletes ($\chi^2\ (1) = 2.19$; $p > .05$). Moreover, results of MANOVA (Wilk's Lambda = .99, $F\ (2.42) = 1.20$, $p > .05$; $\eta^2 = .006$) showed no significant differences on age and hours of practice across the two clusters.

Discussion

The aims of this study were to identify naturally-occurring emotion profiles and examine whether participants from several profiles significantly differed on burnout and coping. Results of the present study advanced knowledge base regarding the emotions in sport competition in two ways. Firstly, the cluster analytic approach provided a parsimonious and meaningful way

to summarize athletes' discrete emotions experienced in sport competition (rather than to individually consider the wide range of discrete emotions experienced during competition). Secondly, not only has the cluster analytic approach offered a holistic representation of the concept of emotion but has also allowed highlighting the relationships with key athletic covariates such as athlete burnout and coping. To date, most of the previous sport emotion studies explored bivariate relationships between discrete emotions and some other variables[37], neglecting the multivariate nature of the emotion construct.

Two emotional profiles not confounded by demographic variables emerged from the cluster analyses: A high UE and low PE profile and a moderately high PE and low UE profile. The moderately high PE and low UE profile also emerged in a previous study conducted with a sample of adolescent athletes involved in intensive training centers.[16] However, the second profile identified in the present study was not observed in the Martinent and colleagues[16] study whereas 3 emotion profiles (high PE and low UE, moderately high PE and UE, and moderate PE and UE) identified in the Martinent and colleagues[16] study did not emerge in the present study. These results provided evidence for the contextual variability of emotion profiles. Indeed, Martinent and colleagues[16] examined the emotion profiles that are prevalent within the training process in athletes' everyday life whereas the present study focused on emotion profiles in sport competition. Thus, the data timing collection strongly impacted the emotion profiles that are prevalent in particular settings (everyday training process versus sport competition). Moreover, although several scholars have described sport competition as inherently stressful[10,11,37], in the present study, only 27% of athletes have experienced high levels of anxiety, anger and dejection (high UE and low PE profile). In contrast, 73% of athletes experienced rather low levels of such UE (moderately high PE and low UE). Thus, although athletes' emotional experience in demanding sport settings was generally described in terms of UE, our results suggested that PE tend to co-occur with UE in the context of sport competition. This seems particularly salient given that PE are not an absence of UE and vice versa.[18] However, the moderately high PE and low UE could be explained by temporal emotion bias, because the more immediate the stimulus is, the higher the arousal and the emotions perceptions are. Therefore, temporally bias should be taken in consideration in the intensity of the emotional experience.[40]

Apart from offering a description of natural-occurring combinations of the different discrete emotions experienced by athletes during competition, this study also examined the relationships between emotion profiles, athlete burnout and coping strategies. Results showed that athletes from the high UE and low PE reported significantly higher scores on the three

dimensions of athlete burnout (emotional and physical exhaustion, reduced accomplishment, sport devaluation) than athletes from the moderately high PE and low UE. Besides, a big effect size was found for reduced accomplishment and sport devaluation, meanwhile, and a medium effect size was reported in emotional and physical exhaustion. Albeit using a different methodology (cluster analytic approach), these results are consistent with previous studies showing strong positive relationships between UE and burnout in sport and other domains.[31,32,34,41]

Similarly, supporting the hypotheses and previous sport studies[29], athletes from the high UE and low PE reported significantly higher scores on resignation, distancing, and venting emotions than athletes from the moderately high PE and low UE. Also, a large effect size was found for resignation, and a medium effect for distancing and venting emotions. Indeed, using avoidance- or disengagement-oriented coping strategies is related to the experience of high UE and low PE.[27] However, contrary to the hypotheses and previous sport studies[14,43], no significant difference was found across emotion profiles regarding the coping strategies of relaxation, logical analysis, seeking support and mental imagery/thought control. At first glance, this result is rather surprising as literature provided evidence that such task- and problem-oriented coping strategies were associated with a wide range of positive outcomes such as PE.[27] These surprising results can be explained by the manner in which coping has been defined within the literature.[6,22] In particular, the conceptualization of the construct of coping involves a fundamental distinction between the use of coping strategies and the effectiveness of coping strategies.[43] Even though an athlete may use a coping strategy, it does not automatically imply that the strategy is effective. Thus, future studies should simultaneously assess the use and effectiveness of coping strategies to clearly disentangle the effects of the use versus effectiveness of a wide variety of coping strategies.[43]

As a whole, results of the present study could be used to help coaches and sport psychologists working with athletes involved in sport competition. The methodological approach used in this study could be useful for identifying dysfunctional emotional profiles and ultimately helping coaches and sport psychologists developing interventions adapted to subgroups of competitive athletes experiencing similar combinations of UE and PE. Moreover, knowing which coping strategy and burnout dimension is related to which emotional profile could further inform coaches and sport psychologists on the (dys)functional nature of emotional profiles. Based on the premise that emotional profiles can be seen as a nomothetic-idiographic process characterised by both change and stability across time[16], sport psychologists could try to develop empirically-proven interventions to help competitive athletes change their

dysfunctional emotional profiles (high UE and low PE) and/or stabilize their functional emotional profiles (moderately high PE and low UE) in order to maximize their psychological adjustment to the high demands inherent to sport competition.

In cluster analytic studies, the emotion profiles are data driven and sample specific. Even if a heterogeneous sample was selected in the present study to maximize the external validity and generalizability of the emotion profiles, future research is needed to replicate the present findings with athletes of different ages or practice levels. Moreover, all the variables of the present study were measured using self-report questionnaires (i.e., a single source of data). Thus, in order to minimize common method bias, future research could complement self-reported questionnaires with informant ratings (coach) and objective indicators of performance (race time, ranking score). Finally, although emotion profiles were the focus of the present study, it could be useful to examine emotion profiles experienced by athletes across several competitions to shed light on the issue of stability and changes of emotion profiles in sport competition across the competitive season.

Conclusion

The results of this study highlighted an alternative person-centered approach that may provide practitioners and researchers with a useful way to examine naturally occurring combinations of a wide variety of discrete emotions experienced by athletes in sport competition. Because the cluster analytic methodology used in the present study may be useful in identifying athletes' emotion profiles in need of specific intervention, results of the present study could assist practitioners tailoring program to groups of athletes with particular emotion profiles. Moreover, results of cluster analyses showed that emotion profiles were significantly related to coping strategies and athlete burnout. These findings are interesting for sport psychology because they help to target particular athletes at risk developing dysfunctional emotional profiles in sport competition.

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485 Tables

486 *Table 1. Standardized Emotion Scores Across the Clusters.*

	High unpleasant emotions and low pleasant emotions (n = 115)	Moderately high pleasant emotions and low unpleasant emotions (n = 309)	F	p	Eta^2	Cronbach a
	M (SD)	M (SD)				
Anxiety	.61 (.77)	-.22 (.97)	68.47	< .001*	.14	.79
Dejection	1.32 (.83)	-.49 (.46)	796.93	< .001*	.65	.91
Excitement	-.36 (1.05)	.13 (.94)	21.72	< .001*	.05	.77
Happiness	-.56 (1.15)	.20 (.84)	55.93	< .001*	.12	.91
Anger	1.30 (.95)	-.48 (.40)	720.86	< .001*	.63	.88

487 *Note*. * $p < .01$.

Table 2. Cluster Differences on Burnout and Coping Variables.

	High unpleasant emotions and low pleasant emotions (*n*=115)	Moderately high pleasant emotions and low unpleasant emotions (*n*=309)	*F* (11.41)	Eta^2	Cronbach *a*
	M (*SD*)	M (*SD*)			
Emotional/Physical Exhaustion	13.06 (3.97)	10.78 (3.89)	28.30*	.06	.86
Reduced Accomplishment	14.20 (3.54)	11.33 (3.18)	64.02*	.13	.67
Sport Devaluation	12.39 (4.30)	9.32 (3.62)	54.11*	.11	.74
Resignation	9.93 (3.43)	7.12 (2.57)	82.00*	.16	.74
Relaxation	13.02 (3.27)	13.57 (3.09)	2.53	.01	.77
Distancing	7.66 (2.20)	6.58 (2.17)	20.39*	.05	.45
Logical Analysis	24.60 (3.97)	24.91 (4.11)	.50	.00	.61
Seeking Support	6.71 (2.11)	6.99 (2.15)	1.46	.00	.81
Mental Imagery/Thought Control	17.95 (2.96)	18.55 (3.41)	2.73	.01	.62
Venting Emotions	9.27 (2.72)	7.27 (2.89)	41.22*	.09	.80
Mental Distraction	7.50 (2.52)	6.26 (2.61)	19.08*	.04	.75

Note. *$p < .0045$ (after Bonferroni adjustment); *MANOVA* detected significant multivariate effect of cluster membership on the dependent variables (coping and burnout dimensions): Wilk's Lambda = .74; F (11.41) = 12.86; $p < .001$; $\eta 2 = .26$.