Assessing Psychosocial Work Environments among Coaches in Spain and their Relationships with Mental Health, Behavioral Stress Symptoms, and Burnout

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Declaration of Conflicting Interests

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Abstract

The purpose of this study was to assess the psychosocial work environments (PWE) among a sample of coaches in comparison to the reference values of the Spanish general workforce, as well as to explore the relationship between PWE and mental health, behavioral stress symptoms, and burnout. A representative sample (n=1481) of Spanish coaches (18.1% women, M_{age}=32.98, SD=11.60) completed a battery of questionnaires. Results showed that, in comparison to the general workforce, coaches showed statistically significant differences in most of the PWE areas assessed. The emotional demands experienced by coaches are a risk for health, while trust regarding management and recognition are positive features in their PWE. Coaches' emotional demands were associated with low mental health scores and higher levels of behavioral stress symptoms and burnout, whereas social community at work and role clarity were protective factors for health. Practical implications to provide more favorable work environments for coaches are discussed.

Keywords: work demands, psychosocial factors, occupational health, risk factors

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The World Health Organization (WHO, 2010) defines a healthy workplace as one in which workers and managers collaborate to use a continual improvement process to protect and promote the health, safety, and well-being of all workers. Hence, a healthy workplace should be a collective concern for organizations (European Commission, 2010). In this regard, Burton (2010) pointed out that two of the main areas that organizations should focus on is health and well-being in the psychosocial work environment (PWE). As highlighted by the European Commission (2010), a healthy and safe work environment is a key factor to an individual's quality of life and can determine the health and well-being of employees (Kompier, 2002; Stansfeld & Candy, 2006). The PWE was defined by Siegrist and Marmot (2004) as a range of sociostructural opportunities that are available to an individual person to meet his or her needs of well-being, productivity, and positive self-experience. Therefore, the study of healthy workplaces implies the identification of psychosocial factors in the work environment, which encompass several aspects: individual experiences (e.g., emotional reactions to daily work experiences), aspects related to working conditions (e.g., work security and work conditions), control over work (e.g., influence on work), or internal and external social relationships (e.g., relationship with peers, work-family relationships; Hammer, Saksvik, Nytrø, Torvatn, & Bayazit, 2004).

Numerous theoretical explanations of work environments and well-being have been offered to comprehend the psychosocial factors that contribute to stress-related health problems and psychological well-being (Kompier, 2002). One of the most influential theories in occupational health psychology is the Job-Demand-Control-Support model (JDCS; Karasek, 1979). According to the JDCS model, high stress-related health problems in the work environment are associated with increased job demands and decreased job control and social

support. Therefore, to prevent health problems among their employees, organizations should focus on tackling the demands associated with the work environment and the employee's role (Karasek, 1998). Despite this model being widely accepted, it is considered by some authors to be too narrow (Hammer et al., 2004) because it focuses closely on job content and excludes relevant psychosocial factors that also need to be taken into consideration. These factors include imbalance between high effort and low reward received at work (Siegrist & Marmot, 2004), work-family conflict (Hammer et al., 2004), and organizational justice (Elovainio, Kivimäki, & Vahtera, 2002), and consideration of them contributes to a more comprehensive understanding of the whole workplace (organization) rather than just the individual's own job or department. Within the present study, the JDCS model will be complemented with the aforementioned factors that previous research has highlighted.

The importance of assessing the PWE is highlighted by strong evidence relating to a variety of consequences of exposure to psychosocial risk factors. Health consequences of risk factor exposure will have an effect on well-being, which has been defined as general life satisfaction and positive overall evaluation of life (Erikson, 1963). As stated by the WHO (2014), mental health is defined as a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community. In this regard, and as defined by Cohen, Janicki-Deverts, & Miller (2007), psychological stress occurs when an individual perceives that environmental demands tax or exceed his or her adaptive capacity. To assess the psychological outcomes of stressful workplaces, reported levels of mental health (well-being and distress) and perceived behavioral stress symptoms can capture employees' experiences. Previous research has highlighted that having high work pressures is more likely to be related to behavioral stress symptoms of workers (Nielsen, Albertsen, Brenner, Smith-Hansen, & Roepsdorff, 2009). In their meta-analytic review, Stansfeld and Candy (2016)

suggested that the PWE is important for mental health because it can predict the presence of common mental health disorders, such as those related to mood or anxiety. Moreover, a systematic review from Nieuwenhuijsen, Bruinvels, and Frings-Dresen (2010), which focused on prospective studies, suggested that the best way to prevent stress-related disorders is by addressing the psychosocial risk factors in the workplace. As stated by these authors, stress-related disorders are the expression of high levels of psychological distress, which can reach clinical relevance as in the case of burnout (Van Der Klink & Van Dijk, 2003). Burnout was first defined by Maslach in 1976 and has been widely documented within the organizational literature (Maslach, Jackson, Leiter, Schaufeli, & Schwab, 1986; Maslach, Schaufeli, & Leiter, 2001). Burnout was defined as a syndrome of emotional exhaustion, depersonalisation, and reduced personal accomplishment that can occur among individuals in the working place. More recently, Kristensen, Borritz, Villadsen, and Christensen (2005) proposed a wider concept of burnout, introducing the notion of personal burnout, which is the degree of physical and psychological fatigue and exhaustion that any individual can experience, regardless of their working conditions. There is evidence that psychosocial work factors are directly related to high levels of burnout (Lindblom, Linton, Fedeli, & Bryngelsson, 2006), which suggests the importance of PWE for workers' well-being.

The relationship between psychosocial factors and workers' health and well-being has been studied in several settings, mainly among health professionals (Aust, Rugulies, Skakon, Scherzer, & Jensen, 2007; Escribà-Agüir & Tenías-Burillo, 2004; Fernandes & Pereira, 2016). However, there is a lack of research assessing the relationship between PWE and psychological well-being in sport coaching settings, despite evidence of psychological stress within this population (e.g., Didymus, 2017). It has been suggested that this is due to the specific working conditions of the profession, such as fulfilling multiple roles and coping with a range of stressors (Didymus, 2017; Fletcher & Scott, 2010; Norris, Didymus, & Kaiseler, 2017;

Olusoga, Butt, Hays, & Maynard, 2009). Indeed, in a recent systematic review, Norris et al. (2017) highlighted the organizational (e.g., overload, leadership, finances), performance (e.g., athlete injury, own performance of coaches), contextual (e.g., schedule, job security), interpersonal (e.g., athletes, expectation of others), and intrapersonal (e.g., performance outcome, lack of control) stressors that coaches may experience during their careers. Other research has identified the negative influence of organizational stressors on coaches' health and well-being (see e.g., Larner, Wagstaff, Thelwell, & Corbett, 2017; Lundkvist, Gustafsson, Davis, & Hassmén, 2016; Wagstaff, Hings, Larner, & Fletcher, 2018). Moreover, coaches' experiences of burnout have been widely studied in different sports and across different performance levels (Altfeld & Kellmann, 2015; Bentzen, Lemyre, & Kenttä, 2016; Goodger, Gorely, Lavallee, & Harwood, 2007; Lundkvist, Gustafsson, Hjälm, & Hassmén, 2012; Malinauskas, Malinauskiene, & Dumciene, 2010). The findings of this literature show that burnout contributes to turnover intentions among coaches, which is problematic for sport organizations who require a stable and committed workforce (cf. Kilo & Hassmén, 2016; Larner et al., 2017).

The consequences of exposure to psychosocial risk factors together with the specific features of sport coaching work environments and the evidence that coaching is a potentially stressful profession, suggests the need to assess the PWE in this specific population. This is needed to identify strengths and limitations in the specific work context of coaches with the purpose of promoting healthier workplaces and preventing health risks in this population. The aim of the present study was to assess the PWE in a large and representative sample of coaches. The specific objectives were: to assess the psychosocial risk factors experienced in the coaching work environment; to compare the PWE of coaches with general workforce reference values; and to explore the relationship between PWE and mental health, behavioral stress symptoms, and burnout in the coaching setting.

Method

Participants

An intentional sample of 1685 coaches was invited to participate in the present study. A total of 1481 (87.89% participation rate, M_{age}=32.98 years, *SD*=11.60, range=18-74 years) coaches fully completed the required battery of questionnaires. Of the sample of coaches, 81.9% were male and 18.1% were female. The sample comprised coaches representing 27 different individual and team sports (e.g., soccer, basketball, gymnastics, volleyball, athletics, swimming, cycling) and different sport levels (i.e., from recreational to international). The majority of coaches worked at local (48%) and regional performance levels (32%), while 11% and 4% coached at national and international levels respectively. The remain 5% coached at recreational level. With reference to coach certification, 15% had achieved a level three qualification (national coach), 24% held a level two certification, 33% held level one, 24% were sport instructors (i.e., recreational level), and 4% had no coach qualification. Participants reported occupying a variety of coaching positions: technical director (13%), head coach (73%), assistant coach (12%), and strength and conditioning coach (2%). The family situation of coaches was that 47% were cohabiting with a partner and 66% had no children. Their experience as coaches ranged from one to 30 years, and 40% of the coaches reported 10 years or more of coaching experience.

Measures

A battery of self-report questionnaires was used to assess sociodemographic characteristics of participants, their PWE, and several health indicators.

Psychosocial work environment

Coaches completed the 69-item Copenhagen Psychosocial Questionnaire II (COPSOQ II) in its Spanish version (Pejtersen, Kristensen, Borg, & Bjorner, 2010; adapted to Spanish by Moncada et al., 2014) to gather information about their PWE. The COPSOQ II has been

widely utilized in a number of professions and contexts (e.g., Aust et al., 2007; Ghaddar, Mateo, & Sanchez, 2008; Holst, Paarup, & Baelum, 2012; Nübling, Vomstein, Haug, Nübling, & Adiwidjaja, 2011) but has not yet been used within a sports coaching setting. The questionnaire consists of six dimensions: 1) demands at work, which includes questions about quantitative demands, work pace, emotional demands, and demands for hiding emotions (e.g., "Does your work put you in emotionally disturbing situations?"); 2) work-family conflict, which pertains to double presence (e.g., "Do you often feel a conflict between your work and your private life, making you want to be in both places at the same time?"); 3) influence and possibilities for development, which includes questions about the meaning of work (e.g., "Do you have the possibility of learning new things through your work?"); 4) social relations and leadership, which includes questions about predictability, role clarity, role conflicts, quality of leadership, social support from colleagues, social support from supervisors, and the coaches' social community at work (e.g., "How often do you get help and support from your nearest superior?"; 5) work compensations, which pertains to recognition, insecurity over employment, and insecurity over working conditions (e.g., "Are you worried about becoming unemployed?"); and 6) social capital, which relates to trust regarding management and justice (e.g., "Are conflicts resolved in a fair way?"). Each dimension of the questionnaire is made up of between two and four items and the items are rated on a five-point Likert-type scale, which is anchored at 0 (very seldom) and 100 (very often). Several of the subscales are positively scored with high mean scores indicating high exposure while other subscales are reverse scored whereby lower scores indicate higher risk. The exposure of coaches to workplace psychosocial risk factors was calculated by transforming the scores of each scale into categorical values according to the Spanish workforce-based reference values reported by Moncada, Llorens, Font, Galtés, and Navarro (2008). According to these authors, participants can be classified, according to their

categorical values, as one of three groups of exposure ("favorable exposure for health," "intermediate," and "exposure presenting risk for health").

The 20-factor structure of the COPSOQ 11 is supported by confirmatory factor analysis (Moncada et al., 2014). In the present study, adequate omega reliability coefficients (McDonald, 1999) were reported for 14 of the 20 subscales of the questionnaire. Satisfactory omega reliability coefficients were reported for the following subscales: emotional demands ($\Omega = .76$), double presence ($\Omega = .82$), influence ($\Omega = .84$), possibilities for development ($\Omega = .79$), , role clarity ($\Omega = .81$), role conflicts ($\Omega = .70$), quality of leadership ($\Omega = .92$), social support from colleagues ($\Omega = .77$), social support from supervisors ($\Omega = .85$), social community at work ($\Omega = .85$), recognition ($\Omega = .87$), insecurity over working conditions ($\Omega = .86$), trust regarding management ($\Omega = .82$), and justice ($\Omega = .85$). The following subscales obtained low levels of reliability according to their omega coefficient: quantitative demands, pace of work, demands for hiding emotions, meaning of work, predictability, and insecurity over employment. Taking into consideration the low reliability ($\Omega < .70$) showed by these subscales as well as their poor application to the coaching context when considering their specific content, these subscales were not included in further analyses. A CFA was conducted with data obtained from the present study to test the internal structure of the COPSOQ, as detailed by Moncada et al. (2014). As shown in Table 1, the data fit to the model proposed in the original validation of the questionnaire was acceptable.

[Insert Table 1 near here]

Mental health

A five-item subscale from the Short Form 36 Health Survey SF-36; Ware & Sherbourne, 1992; adapted to Spanish by Vilagut et al., 2005) was used to assess mental health. Items from this subscale measured feelings of distress and well-being during the preceding four weeks (e.g., "How much of the time during the past four weeks have you been

a very nervous person?"). The items were measured using a five-point Likert-type scale that was anchored at 0 (always) and 100 (never) with higher scores indicating more favorable mental health. In the present study, the internal consistency of the subscale was acceptable (Ω = .83).

Behavioral stress symptoms

The behavioral stress symptoms subscale (four items) from the Stress Profile (Setterlind & Larsson, 1995; adapted to Spanish by Moncada et al., 2014) was applied to assess the behavioral responses of participants to psychological stress (e.g., "How much of the time during the past four weeks have you been stressed?"). Items were measured using a five-point Likert-type scale that was anchored at 0 (never) and 100 (always). Data showed that the internal consistency of this scale was acceptable (Ω = .88) in the present study.

Burnout

The personal burnout subscale from the Copenhagen Burnout Inventory (Kristensen et al., 2005; adapted to Spanish by Molinero, Basart, & Moncada, 2013) was used. This scale comprised four items (e.g., "How often have you felt worn out?) and was utilized to compare individuals regardless of occupational status. Each of these items was measured using a five-point Likert-type scale that was anchored at 0 (never) and 100 (always). The internal consistency of this scale was acceptable (Ω = .92) in the current study.

Procedure

The study received approval from the Ethics Committee of the Sport Administration of Catalonia. Participants were recruited through the Catalan sports federation and the national agency for sport coach education in Catalonia. Active coaches were sent an e-mail that contained a full description of the study and an invitation to volunteer to participate. Those coaches who chose to participate did so in their own time by responding to the battery of online questionnaires, which took between 20 and 45 minutes to complete. Written

informed consent was obtained from each participant prior to their participation.

Data analyses

Data were analyzed using SPSS and AMOS v.22. Descriptive statistics (means, standard deviations, and percentages) were calculated to assess the PWE dimensions. Comparison of PWE quantitative scores obtained by the sample of coaches and those reference values obtained by the Spanish workforce was carried out by means of a Wilcoxon signed-rank test. To determine differences among the PWE scales among the five groups according to their weekly workload, analyses of variance (ANOVA) were used. Non-parametric Spearman's correlations coefficients were calculated to examine possible relationships between indicators of the PWE and mental health, behavioral stress symptoms, and burnout. The contribution of the specific PWE dimensions to coaches' mental health, behavioral stress symptoms, and burnout were assessed via multiple regressions. Finally, structural equation modelling (SEM) was used to assess the causal effect of PWE dimensions on health outcomes. The following fit indices are reported: chi-square, Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), and the Root mean square error of approximation (RMSEA). The cut-off values to determine a good fit were equal to or higher than 0.90 for CFI and TLI, and equal to or lower than 0.08 for RMSEA (Byrne, 2001; Hu & Bentler, 1999).

Results

Exposure of coaches to psychosocial risk factors

Descriptive analyses of the different psychosocial risk factor dimensions are shown in Figure 1. Normative data from the Spanish workforce were taken as reference to categorize the risk of exposure of coaches in their workplace. Results showed that "risk exposure for health" was shown by 80% of coaches for emotional demands, while 60% reported insecurity over working conditions and 42% of the sample showed high scores regarding double

presence. Results also revealed the presence of several protective factors since several subscales demonstrated "favorable exposure for health." Indeed, most of coaches (91%) reported feeling trust regarding management, 90% reported recognition for their position, and 83% said they had possibilities of development.

[Insert Figure 1 near here]

As shown in Table 2, scores within the five different groups were, in general, similar in terms of weekly workload. However, there were five out the 14 PWE factors that presented significant differences between the five occupational groups regarding their weekly workload. The weekly workload was determinant for the following subscales: emotional demands, double presence, influence, possibilities of development, and role conflict. In all of these scales, as the weekly workload increased the scores of these factors also increased significantly.

[Insert Table 2 near here]

The results presented in Table 3 show significant differences between the coaches and the Spanish workforce population in most of the PWE dimensions assessed via the COPSOQ II. Specifically, the sample of coaches reported significantly higher recognition and trust regarding management than the Spanish workforce. Moreover, the sample of coaches reported significantly higher emotional demands and higher work-family conflict than those reported among the Spanish workforce. Regarding social relations and leadership, coaches reported significantly lower role clarity and quality of leadership and significantly higher levels of insecurity over working conditions when compared to the Spanish workforce. Non-significant differences were found relating to social support from supervisors.

[Insert Table 3 near here]

Relationship between psychosocial work environment and mental health, behavioral stress symptoms, and burnout

The results show relationships between the PWE and the scores obtained for several mental health indicators (see Table 4). Specifically, higher emotional demands and double presence were associated with lower mental health scores and higher levels of behavioral stress symptoms and burnout. Social community at work was positively related to mental health ($r = .31$, $p < .01$) and negatively correlated to behavioral stress symptoms ($\rho = -.22$, $p < .01$) and burnout ($r = -.17$, $p < .01$). Role conflict was strongly related to lower mental health ($\rho = -.29$, $p < .01$) and higher scores for behavioral stress symptoms ($\rho = .29$, $p < .01$) and burnout ($\rho = .29$, $p < .01$). Similar results were found with the role clarity subscale whereby higher scores were positively associated with mental health ($\rho = .29$, $p < .01$) but negatively associated with behavioral stress symptoms ($\rho = -.21$, $p < .01$) and burnout ($\rho = -.17$, $p < .01$).

[Insert Table 4 near here]

Multiple regressions (see Table 5) were carried out to assess how the different PWE scores predicted coaches' mental health, behavioral stress symptoms, and burnout. Analyses revealed that double presence strongly predicted mental health ($\beta = -.29$), behavioral stress symptoms ($\beta = .45$), and burnout ($\beta = .47$). High emotional demands predicted lower levels of mental health ($\beta = -.17$) and higher scores for behavioral stress symptoms and burnout ($\beta = .26$ and $\beta = .27$ respectively). High levels of role conflict were positively associated with behavioral stress symptoms ($\beta = .26$) and burnout ($\beta = .30$), and negatively associated with mental health ($\beta = -.16$). As expected, role clarity was positively associated with mental health ($\beta = .10$) and negatively associated with behavioral stress symptoms ($\beta = -.12$). Higher scores for social community at work predicted higher scores of mental health ($\beta = .19$) and lower scores for behavioral stress symptoms and burnout ($\beta = -.17$ and $\beta = -.14$ respectively).

[Insert Table 5 near here]

Taking into consideration those PWE dimensions that were identified as predictors of

health outcomes according to the previous analyses, SEM was conducted. Data showed good fit to the proposed model ($\chi^2_{(13)} = 91.54$, $p < .001$; CFI = .972; TLI = .955; and RMSEA = 0.071). Figure 2 shows the relationship between latent and observed variables, including regression weights.

[Insert Figure 2 near here]

Discussion

The current study has provided valuable insights to PWEs in a large and representative sample of Spanish sports coaches. Several factors within the specific PWE of coaches have been identified as protective or risk factors for coaches' health and well-being. Results from the present study showed that coaches reported more recognition and trust regarding management than the general workforce, which appears to be more favorable for health. This could be explained by the hiring practices of the sport sector because previous literature has highlighted that sport club positions are rarely publicly advertised and appointments are awarded to personal contacts and often without formal interview (Waddington, Roderick, & Naik, 2001). Within the Spanish coaching system, most coaches are personally approached and directly hired by managers in sport organizations. This may mean that recognition and trust regarding management is built from the outset based on a personal relationship between a coach and his or her superiors, which is different to the way in which many other sectors recruit employees (i.e., via impersonal advertisement and formal recruitment methods).

Coaches in this study also reported higher levels of influence and possibilities of development in their work when compared to the general workforce. The results of the present study show that, within the coaching context, control and influence over the job is strong, which is notable because previous literature (Kompier, 2004; Larner et al., 2017) indicates that having a higher level of influence over work is more favorable for health.

While the results from the coaches in our sample demonstrated some favorable areas in coaches' PWE when compared to the Spanish workforce, participants also reported less favorable scores regarding emotional demands and insecurity over working conditions. Previous studies (e.g., Bentzen et al., 2016; Fletcher & Scott, 2010; Knight, Rodgers, Reade, Mrak, & Hall, 2015) have identified workload and high emotional demands as factors that influence coaches' job transitions and have highlighted that these workload and emotional factors affect coaches' decisions to leave the profession.

The impact that the PWE has on employees' health and well-being has been widely discussed elsewhere. Our findings highlight that work-family conflict, high emotional demands, and low social community at work have a significant effect on mental health. These results are in line with findings from other occupational domains (e.g., hospital employees), which suggest that low social support and high psychological demands are associated with poor mental health (Escribà-Agüir & Tenías-Burillo, 2004). The JDCS model can be used to explain the findings of the current study because it assumes that a combination of high psychological demands, low decision making abilities, and low support opportunities characterize high stress and strain at work (Karasek, 1979). Therefore, results from the present study support the assumptions of this model in that high scores for demands at work (e.g., emotional demands) and low decision-making abilities (e.g., influence and role clarity) among coaches predicted higher levels of stress.

Our findings also demonstrate that work-family conflict was a predictor of lower mental health scores, higher stress, and higher burnout symptoms. This type of conflict has been the subject of previous research within Dixon and Bruening's multilevel framework of work-family conflict that has been applied specifically to mother and father coaches (Bruening, Dixon, & Eason, 2016; Dixon & Bruening, 2005; Graham & Dixon, 2017). Moreover, work-family conflict has been considered to have consequences for work-related

outcomes (e.g., job satisfaction, job performance, intention to turnover) and non-work-related outcomes (e.g., life satisfaction, family satisfaction; Allen, Herst, Bruck, & Sutton, 2000). For instance, researchers have highlighted the negative impact that work-family conflict has on coaches' intention to leave the profession (Ryan & Sagas, 2009) and, for those coaches who are parents, the impact on their relationship with their children (Bruening et al., 2016; Graham & Dixon, 2017). In a study of German coaches (Altfeld & Kellmann, 2015), it was found that those who reported higher levels of family support also reported lower levels of exhaustion but that those coaches who had family conflicts reported higher levels of stress and had an increased risk of burnout. Thus, our findings extend previous research in different contexts and reflect a need to center attention on promoting balance between work and family among sports coaches.

Psychosocial risk factors in the workplace can lead to stress and burnout symptoms, as has been reported in previous literature (Fernandes & Pereira, 2016). Results from the present study showed that double presence, emotional demands, and role conflict predicted higher levels of stress and burnout and, therefore, can be considered risk factors in the coaching workplace setting. Previous studies focusing on coaches (e.g., Knight et al., 2015; Larner et al., 2017; Norris et al., 2017) have also reported that balancing multiple simultaneous tasks (i.e., work demands) can have a negative influence on coaches' experiences and that coaches may retire from the profession if they are required to cope with numerous demands in all aspects of their life. Regarding high scores for emotional demands, this has been identified as a stressor for coaches that has the potential to contribute to burnout (Lee, Chelladurai, & Kim, 2015; Lundkvist et al., 2012; Lundkvist et al., 2016;). With reference to role conflict, the results of the present study are in line with Goodger et al. (2007) who revealed that role conflict in coaching was strongly and positively associated with burnout. The present study extends previous work by demonstrating the relationships

between PWE, mental health, behavioral stress symptoms, and burnout. In addition, this study highlights the psychosocial risk factors that predict lower mental health, higher perceived stress, and increased symptoms of burnout. Those risk factors belong to different domains such as demands of work, the conflict between work and family, and social relations and leadership. The identification of these risks is the starting point to understand coaches' work environments and to design and implement interventions that can be used to optimize them.

Limitations of this study relate to the instruments used to assess the target constructs as well as the research design. First, in the absence of sport specific measures for assessing PWE and mental health in coaches, the COPSOQ II and the mental health subscale of the SF-36 were applied, as they had been already validated for Spanish workforces and widely used in previous literature. Moreover, the use of the specific scales used in the present study allowed us to compare our results to that reported by other researchers (Moncada et al., 2014, Vilagut et al., 2005). Nevertheless, the uniqueness of the demographics of sport coaches became a limitation when comparing to the general workforce since there are important differences between the two that make comparison and interpretation difficult. For instance, when comparing the general workforce with the coaching sample, the differences regarding sex and age distribution need to be considered. Women were less represented in our coaching sample and coaches were, on average, younger than those in the general workforce. In addition, the cross-sectional nature of our data does not allow conclusions to be drawn regarding cause and effect. Even more importantly, some of the regression weights were low. Conclusions regarding the predictive value of the measures used should, therefore, be considered in light of this limitation. Further research could supplement quantitative data obtained in the present study with qualitative insights to contribute to more in-depth understanding of coaches' perceptions of their PWE and how this affects their mental health,

behavioral stress symptoms, and burnout.

Finally, the findings highlight that there is a need for researchers and practitioners to develop interventions that minimize mental health issues and episodes of stress and burnout by addressing work-family conflict, emotional demands at work, role conflicts, and insecurity over working conditions among coaches. By identifying psychosocial risk factors for coaches, preventative measures that aim to improve mental health, stress, and burnout among these professionals can be developed and tested. Traditionally, interventions have focused on the individual's ability to cope with stressors but there is a need to focus also on structural characteristics of the work environment (e.g., psychosocial factors) and their interplay between the sport organization and coaches (Maslach et al., 2001). The number of coaches has increased globally in recent years and coaching is a developing and popular employment area that has made significant advances toward professionalization (Lyle, 2005). Coaches play an important role in the Spanish sport system and in athletes' career development and, thus, optimizing their PWEs is important to maintain their own and others' health, well-being, and performance. Nevertheless, in the Spanish context, the coaching labor market is characterized by short-term employment contracts and there is a scarcity of full-time positions and stable coaching jobs (Viñas & Pérez, 2014). Consequently, coaches require favorable work environments to continue their professional development and to attract under-represented social groups to the profession. There is a need to examine the regulation and quality of coaches' working conditions by incorporating more family-friendly cultures in sports clubs and organizations that provide appropriate levels of support and flexibility. To address the high levels of emotional demands at work and work-family conflict, sport organizations should address expectations of their coaches. For example, clubs and governing bodies could promote the regulation of working conditions for coaches (e.g., type of contracts, working hours) and support coaches to draw greater boundaries and balance

between their work and personal lives.

Conclusions

The examination of risk factors related to the PWE (e.g., work-family conflict, demands at work, role conflict) that negatively impact coaches' mental health, behavioral stress symptoms, and burnout allow researchers to gain more comprehensive insights that can be used to develop workplace interventions. It is also important to highlight that our findings indicate some structural advantages of the coaching profession when compared to other professions. Such advantages include coaches' recognition and trust by superiors, influence over their job and other people, and strong perceptions relating to possibilities of development in their current positions. Workplace interventions could focus on strengthening career development programs and on building trust among employees to enhance PWEs for coaches. Favorable work environments are key for reducing and or preventing exposure to psychosocial risks factors at work and for promoting coaches' mental health.

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Table 1.

Goodness-of-fit indices obtained in the confirmatory factor analyses.

	χ^2	d.f.	npar	GFI	AGFI	NFI	SRMR
Demands at work	214992763,87	86	34	0,976	0,967	0,944	0,0581
Conflict work-family	6162949,91	2	8	0,998	0,989	0,995	0,0291
Influence and possibilities for development	69083140,11	42	24	0,985	0,976	0,971	0,0763
Social relations and leadership	470107354,92	223	53	0,975	0,969	0,965	0,0652
Compensations of work	133021048,66	24	21	0,993	0,987	0,988	0,0377
Social capital	7936614,96	13	15	0,999	0,997	0,998	0,0229

Note. χ^2= Chi-square test; d.f. = degrees of freedom; npar = number of parameters; GFI = goodness of-fit index; AGFI = adjusted goodness-of-fit index; NFI = normed fit index; SRMR = standardised root mean square residual.

Table 2

Psychosocial work environments of coaches according to their weekly workload.

	< 5 hours (N = 199)		5-10 hours (N = 815)		11-20 hours (N = 376)		21-34 hours (N = 18)		>35 hours (N = 73)			
	M	*(SD)*	*M*	*(SD)*	*M*	*(SD)*	*M*	*(SD)*	*M*	*(SD)*	*F*	*p*
Demands at work												
Emotional demands	49.93	(20.54)	57.63	(20.34)	63.68	(18.91)	65.23	(18.25)	69.20	(19.37)	19.93	<.001
Conflict work-family												
Double presence	27.54	(19.03)	35.72	(21.12)	39.25	(21.17)	46.53	(20.81)	46.15	(21.54)	15.89	<.001
Influence and possibilities for development												
Influence	64.10	(22.89)	68.17	(23.08)	71.19	(20.70)	68.06	(23.86)	73.89	(18.59)	4.41	<.01
Possibilities of development	83.76	(18.08)	83.62	(16.48)	86.92	(14.58)	82.81	(16.85)	88.75	(13.86)	3.82	<.01
Social relations and leadership												
Role clarity	76.06	(18.45)	75.57	(17.85)	75.83	(19.54)	71.67	(29.96)	77.90	(20.61)	0.44	.78
Role conflicts	41.08	(20.35)	45.29	(20.72)	43.07	(19.91)	49.17	(31.15)	48.55	(21.41)	2.70	<.05
Quality of leadership	64.16	(26.13)	59.73	(25.76)	58.66	(24.93)	58.33	(31.84)	58.85	(31.25)	1.30	.27
Social support from colleagues	63.94	(19.61)	61.96	(19.81)	63.09	(19.34)	61.11	(21.75)	66.28	(22.62)	0.99	.41
Social support from supervisors	67.53	(24.70)	65.57	(24.24)	67.30	(23.40)	62.78	(23.96)	65.66	(29.07)	0.49	.74
Social community at work	80.05	(20.20)	77.69	(19.06)	77.87	(19.63)	68.33	(23.40)	77.02	(23.98)	1.43	.22
Compensations of work												
Recognition	71.99	(21.58)	69.99	(22.54)	70.78	(22.04)	69.44	(26.29)	70.51	(26.64)	0.28	.89
Insecurity over working conditions	45.95	(29.92)	48.48	(30.36)	50.88	(30.83)	53.33	(39.31)	47.73	(32.40)	0.87	.48
Social Capital												
Trust regarding management	71.68	(21.16)	67.58	(20.95)	69.33	(21.59)	61.67	(30.50)	65.77	(26.93)	1.90	.11
Justice	64.08	(21.38)	59.47	(22.86)	59.75	(22.04)	52.92	(30.33)	57.98	(26.51)	1.86	.12

Table 3

Psychosocial work environments in Spanish coaches and a sample of the Spanish workforce.

Subscale	Coaches population (N=1481)		Spanish workforce (N=5110)		Difference between coaches and Spanish workers
Demands at work	*M*	*SD*	*M*	*SD*	
Emotional demands	58.89	20.48	33.21	23.43	**25.68**
Conflict work-family					
Double presence	36.16	21.30	29.02	24.45	**7.14**
Influence and possibilities for development					
Influence*	68.67	22.38	52.04	24.75	**16.63**
Possibilities of development*	84.76	16.17	56.31	25.13	**28.45**
Social relations and leadership					
Role clarity*	75.78	18.69	77.31	18.68	**-1.53**
Role conflicts	44.36	20.69	32.69	22.62	**11.67**
Quality of leadership*	59.94	26.00	62.26	24.40	**-2.32**
Social support from colleagues*	62.74	19.84	62.15	24.81	**.59**
Social support from supervisors*	66.26	24.33	64.13	25.91	2.13
Social community at work*	77.90	19.71	70.16	24.31	**7.74**
Compensations of work					
Recognition*	70.48	22.54	31.23	22.23	**39.25**
Insecurity over working conditions	48.81	30.64	29.75	24.64	**19.06**
Social Capital					
Trust regarding management*	68.41	21.66	33.71	21.50	**34.70**
Justice*	59.98	22.80	37.99	21.78	**21.99**

Note. Differences between coaches and Spanish workforce (Moncada et al., 2014) are based on Wilcoxon Signed Ranks Test. Values in bold denote statistical significance at at $p < .01$.
*Reversed scored subscale

Table 4

Spearman's correlations for psychosocial work environment and mental health, behavioral stress, and burnout in the workplace.

Subscale	Mental health	Behavioral Stress	Burnout
Demands at work			
Emotional demands	-.32*	.37*	.35*
Conflict work-family			
Double presence	-.36*	.43*	.42*
Influence and possibilities for development			
Influence	.13*	-.08*	-.08*
Possibilities of development	.15*	-.03	-.03
Social relations and leadership			
Role clarity	.29*	-.21*	-.17*
Role conflicts	-.29*	.29*	.29*
Quality of leadership	.21*	-.14*	-.12*
Social support from colleagues	.16*	-.10*	-.08*
Social support from supervisors	.20*	-.14*	-.12*
Social community at work	.31*	-.22*	-.17*
Compensations of work			
Recognition	.25*	-.18*	-.15*
Insecurity over working conditions	-.10*	.10*	.10*
Social Capital			
Trust regarding management	.24*	-.16*	-.13*
Justice	.24*	-.17*	-.15*

Note. *$p<.01$.

Table 5

Multiple regression analyses for psychosocial work environment and mental health, behavioral stress, and burnout.

	Mental health		**Behavioral Stress**		**Burnout**	
Subscale	Coeff. (95% CI)		Coeff. (95% CI)		Coeff. (95% CI)	
Demands at work						
Emotional demands	**-.17**	**(-.23, -.11)**	**.26**	**(.20, .33)**	**.27**	**(.19, .35)**
Conflict work-family						
Double presence	**-.29**	**(-.34, -.25)**	**.45**	**(.40, .49)**	**.47**	**(.41, .52)**
Influence and possibilities for development						
Influence	.03	(-.02, .08)	-.01	(-.06, .05)	-.04	(-.10, .03)
Possibilities of development	.05	(-.03, .15)	.02	(-.08, .12)	.03	(-.07, .13)
Social relations and leadership						
Role clarity	**.10**	**(.03, .17)**	**-.12**	**(-.20, -.05)**	-.06	(-.15, .02)
Role conflicts	**-.16**	**(-.21, -.11)**	**.26**	**(.20, .32)**	**.30**	**(.23, .36)**
Quality of leadership	.02	(-.04, .07)	.01	(-.05, .09)	.02	(-.06, .10)
Social support from colleagues	-.06	(-.12, .00)	.06	(-.02, .15)	.03	(-.07, .13)
Social support from supervisors	.00	(-.05, .07)	.00	(-.06, .07)	-.01	(-.08, .07)
Social community at work	**.19**	**(.11, .25)**	**-.17**	**(-.25, -.09)**	**-.14**	**(-.24, -.04)**
Compensations of work						
Recognition	**-.16**	**(-.21, -.10)**	**-.16**	**(-.21, -.11)**	**-.15**	**(-.21, -.09)**
Insecurity over working conditions	**.06**	**(.00, .11)**	**.06**	**(.00, .11)**	.02	(-.04, .08)
Social Capital						
Trust regarding management	**.12**	**(.03, .20)**	-.07	(-.17, .05)	-.02	(-.14, .09)
Justice	**.09**	**(.01, .18)**	**-.12**	**(-.22, -.02)**	**-.15**	**(-.25, -.04)**

Note. Bold denotes statistical significance at $p < .05$.