



Work Demands, Responses, and Coping Strategies for Staff in High-Performance Sport: A Scoping Review

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Abstract

Background Understanding the work demands and psychobiological responses of high-performance sport practitioners is important for informing strategies that support and improve staff health, well-being, and performance. Although research in this area has grown, previous reviews have focused on specific aspects of well-being and particular practitioner populations. Currently, no comprehensive reviews summarize all research relating to high-performance sport practitioners. A broad overview could help clarify the work demands and responses of staff in this field.

Objectives This scoping review aims to provide an overview of the literature on staff working in high-performance sport with roles and responsibilities related to athlete operations and/or performance. Using theoretical frameworks to operationally define key concepts, the review maps relevant studies and summarizes findings on work demands, resources, coping strategies, and responses in high-performance sport.

Methods A scoping review was conducted and reported in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR). Searches were performed across three electronic databases, PubMed, PsycINFO, and SPORTDiscus, to identify relevant studies published up to 1 August 2024. The search strategy employed terms related to working in high-performance sport and was structured using the population, exposure, and outcome framework. Studies examining staff working full-time in high-performance sport and assessing work demands, responses, resources, or coping strategies were included. This review was registered with the Open Science Framework (osf.io/br9hm/).

Results Electronic and manual searches identified 124 studies meeting the inclusion criteria. These studies spanned various levels of sport: collegiate ($n=53$), professional ($n=24$), national/international ($n=13$), Olympic/Paralympic ($n=10$), mixed levels ($n=14$), and “high-performance” or “elite” sport ($n=10$). The studies examined coaches ($n=79$), medical and performance staff ($n=41$), and mixed practitioners ($n=4$). Data on countries, competitions, study designs, measurement tools, and theoretical frameworks were reported for each study. Outcomes assessed included responses ($n=24$), demands ($n=12$), resources and coping ($n=12$), and mixed combinations ($n=76$), with the most common combinations being “demands, responses, and resources and coping” ($n=23$) and “demands and resources and coping” ($n=21$).

Conclusions Practitioners in high-performance sport encounter a diverse array of demands, including workload challenges, organizational and structural factors, athlete- and performance-related pressures, and sociocultural factors. These challenges often elicit a range of emotional, psychological, physical, and physiological responses, contributing to persistent issues such as burnout and difficulties in achieving work–life balance. To navigate these challenges, practitioners employ a variety of coping strategies and leverage both personal and organizational resources, highlighting the multifaceted nature of their experiences in these environments. These findings enhance our understanding of how occupational demands and stress affect individuals working in sport and can inform evidence-based strategies to improve coping, organizational support, and overall health, well-being, and performance.

Key Points

The demands and occupational challenges in high-performance sport can be significant, including heavy workloads, organizational and structural factors, athlete- and performance-related pressures, and sociocultural influences. These challenges can elicit a range of emotional, psychological, physical, and physiological responses, often contributing to issues such as burnout and struggles with work–life balance.

Individual responses are shaped by cognitive appraisals of stressors and the availability of coping resources. Negative appraisals and insufficient resources may lead to stress, while positive appraisals, supported by adequate resources, foster adaptive responses. These can include increased motivation and preparedness, high work engagement, and opportunities for personal growth, learning, and development.

Practitioners rely on diverse coping strategies, as well as personal and organizational resources, to manage the demands of working in high-performance sport. This underscores the important role of targeted support strategies, at both the individual and organizational levels, in fostering staff health, well-being, and performance.

1 Introduction

High-performance sport environments can be physically and mentally demanding [1], and a significant body of research has described the physical demands [2–5], responses [6, 7], and coping strategies of high-performance athletes. In contrast, comparatively less attention has been given to the demands faced by non-athlete personnel working within the high-performance sport ecosystem, such as coaches and medical and performance staff. Given the inherently demanding nature of these environments, it is likely that staff also encounter considerable stressors (e.g., congested schedules, irregular work hours [8]). Research has begun to examine the challenges faced by staff in these roles, as well as the strategies they use to cope with such demands [9–13].

While the literature exploring job demands among individuals working in sport is relatively limited, such research is far more extensive in other high-stress occupational fields, such as shift work [14–16]. Owing to the complexity and variability in demands and responses found throughout this literature, defining terms and establishing theoretical frameworks to steer the discussion and interpretation of research

results can serve to create shared understanding and provide clear recommendations for staff. One prominent example in organizational psychology is the Job Demands–Resources (JD–R) model, which proposes that, while each occupation has its own specific risk factors associated with job stress, these factors can broadly be categorized into job demands and resources [17]. In the JD–R model, job demands are defined as “physical, psychological, social, or organizational aspects of a job that require sustained physical and/or psychological effort or skills and are associated with certain physiological and/or psychological costs” [17]. In contrast, job resources are the physical, psychological, social, or organizational aspects of a job “that help achieve work goals, reduce job demands and the associated physiological and psychological costs, or stimulate personal growth, learning, and development” [17]. Ultimately, the interaction between job demands and resources determines the level of strain, with strain arising when there is an imbalance between demands placed on an individual and the resources (both personal and in the workplace) available to cope with these demands [17, 18].

While the JD–R model [17] offers a structured approach focused on job-specific demands and resources, it tends to oversimplify the stress process by not adequately accounting for individual differences in stress perception and coping mechanisms. In contrast, the Transactional Theory of Stress [19] offers a more dynamic and individualized perspective on stress. This theory emphasizes the cognitive appraisal process, whereby individuals assess the personal significance of an event [19]. During the primary appraisal, individuals evaluate whether a situation is irrelevant (no implication for well-being and no potential for loss or gain), benign-positive (the situation has potential to enhance the individual’s well-being), or stressful (the situation is evaluated as being significant to the individual’s well-being). If appraised as stressful, it may be further interpreted as a harm/loss (damage has already occurred), threat (potential for harm), challenge (potential for growth or gain), or benefit (perceived enhancement of well-being) [20]. The secondary appraisal then involves evaluating one’s perceived ability to manage or cope with the situation, including available resources and options for action [20]. This dynamic process, through which individuals evaluate the significance of an event and their capacity to respond, shapes whether they experience distress or eustress [21, 22]. While acute distress may result in transient negative responses (e.g., anxiety, emotional exhaustion, and elevated heart rate), prolonged stress exposure without adequate coping can lead to strain, increasing the risk of adverse health outcomes (e.g., burnout and cardiovascular issues) and impaired performance [19].

When trying to understand job demands and resources in high-performance sport, one challenge is the wide range of environments that exist within the sporting landscape.

High-performance sport has previously been described as uncontrollable, unpredictable, and complex owing to challenging competition and travel schedules, dynamic organizational structures, and various internal and external stressors [1]. Research into coaching in high-performance sport has found that coaches face a range of stressors, such as time and resource constraints, job security concerns, pressure and responsibility for team performance, and external scrutiny from media and fans [10]. These stressors can lead to imbalances between recovery and stress [23, 24] and potentially result in fatigue over the course of a season [25–28]. Similarly, a smaller body of research examining the broader group of support staff (e.g., assistant coaches, sport scientists, and physiotherapists) indicates that the wide-ranging demands of working in high-performance sport, including practice schedules, competitive fixtures, travel, media engagements, continuing education, and family and social obligations, can also result in mental fatigue and related well-being concerns among support staff (e.g., disengagement, decreased motivation, and reduced concentration) [29].

Previous reviews have explored various constructs related to high-performance sport practitioners, including stressors and coping [30, 31], psychological stress and well-being [32, 33], mental health [34, 35], and burnout [36–38]. However, these reviews tend to adopt a narrow focus, either limited to specific populations (e.g., coaches or athletic trainers) or grouping findings across various sport levels (e.g., amateur to high-performance sport) and employment classifications (i.e., full-time and part-time). The narrow scope and grouping of diverse contexts in these reviews make it difficult to compare and interpret differences between individuals working in different roles and settings. While some reviews have been published as recently as 2024 [33–35], the latest database searches appear to have been conducted in 2021, meaning that more recent research has not been collated. No review to date has provided a comprehensive synthesis of stress-related constructs specifically among non-athlete personnel in high-performance sport. This review addresses that gap by offering a broad and integrated synthesis of constructs, including work demands, coping strategies, job resources, and staff responses, across a diverse range of professional roles, some of which have received limited collective attention in prior reviews.

This scoping review aims to provide a current overview of literature focused on non-athlete personnel whose roles and responsibilities directly support athlete preparation, care (e.g., medical and performance staff), performance, or operations within high-performance sport. Examples of these roles include coaches, medical and performance support, and logistics staff. Anchored in established frameworks [17, 19], we adopt their definitions of demands, resources, coping, and responses to guide a consistent, theory-driven

interpretation and nuanced synthesis of study findings. Additionally, given the wide range of theoretical frameworks available, this study aims to identify and summarize the most widely used frameworks for understanding how stress has been studied in high-performance sport. By employing a framework-driven approach, this scoping review maps pertinent studies and describes findings related to work demands, resources, coping strategies, and responses across a range of staff roles. The findings of this review may help guide future research directions and support the development of evidence-informed strategies aimed at improving the health, well-being, and performance of staff working in high-performance sport environments.

2 Methods

This scoping review was conducted and reported according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR), with all required items completed [39]. The review follows a population–exposure–outcome format, with the population defined as staff, the exposure as working in high-performance sport, and the outcome as varied coping and psychobiological responses. In the context of this review, high-performance sport refers to the most advanced levels of sport development and competition, encompassing athletes or teams competing at national or international levels [40]. This definition is supported by the proposed taxonomy for skill in sport by Baker et al. [41], who defined “eminent,” “expert,” and “advanced” athletes as those who train regularly and compete at the international or national level, respectively. A scoping review proposal was registered with the Open Science Framework (OSF) on 31 May 2023 (osf.io/br9hm/).

2.1 Search Strategy

A systematic literature search was performed by one author (R.M.) on 1 June 2023. Three electronic databases (PubMed, PsycINFO, and SPORTDiscus) were searched to identify relevant articles. These databases were selected to provide a comprehensive perspective of sport, covering a variety of disciplines pertinent to the scope of this review. The following terms were searched for in “all fields”: [(Coach* OR Trainer* OR Support Staff OR Medical Staff OR Scout* OR Practitioner OR Sports Scientist OR Performance Scientist OR Player Facing) AND (Sport*) AND (Mental Fatigue OR Physical Fatigue OR Psychological Fatigue OR Mental Stress* OR Physical Stress* OR Psychological Stress* OR Work-Life Balance OR Work Stress* OR Burnout)].

Backward citation searching was conducted via title screening of reference lists from included studies and

relevant review articles, to identify additional articles that may meet the inclusion criteria. All database records were exported into Covidence (Covidence systematic review software, Veritas Health Innovation, Melbourne, Australia; available at www.covidence.org) as separate files, and duplicates were identified and removed. Once data extraction from the original search was complete, a second search was conducted on 1 August 2024, using the same search strategy but limited to publications between the two search dates, to identify and include any additional studies published during the data extraction period. Forward citation searching was conducted on 12 July 2025 (during peer review), using the “citationchaser” package [42] in R statistical software (R Core Team. R: A language and environment for statistical computing, version 4.5.0; R Foundation for Statistical Computing, Vienna, Austria, 2025). This process identified all records that cited any included articles from the original searches. The “citationchaser” package was used to retrieve citing records from the Lens.org database, which aggregates citations from PubMed, PubMed Central, CrossRef, Microsoft Academic Graph, and CORE [42]. Records were then screened for inclusion using the same criteria as those applied in the primary and secondary searches.

2.2 Eligibility Criteria

Studies were eligible for inclusion if they used original data and examined non-athlete personnel/staff working in high-performance sport with roles and responsibilities related to athlete preparation, care, performance, or operations (e.g., coaching, medical and performance, logistics, etc.). Settings included Olympic, Paralympic, national, international, professional, or national collegiate sport. All study designs were eligible for inclusion, and no limits were set regarding publication date. Studies were excluded if they studied individuals employed on a part-time or casual basis, including dual-role practitioners whose primary full-time focus is not sport-related (e.g., graduate assistants, teacher–practitioners). Additionally, studies examining individuals working exclusively within youth sports (i.e., athletes competing in age classifications of 18 years or younger) or recreational sports were excluded. Studies including both full-time high-performance sport staff and those in part-time, casual, youth, or recreational sport roles were eligible for inclusion, provided that original data specific to full-time high-performance sport staff could be extracted separately. Only articles available in full-text English were included, and textbooks, conference papers, and theses were excluded.

Inclusion/exclusion criteria were established prior to registration with the OSF and before commencement of

searches, to reduce risk of bias. Minor clarifications of the inclusion and exclusion criteria were made during the screening phase (i.e., after registration) to better define the level of sport and the type of work examined, thereby enabling a more precise review of the literature. These clarifications included the explicit inclusion of Paralympic sport, given that these athletes compete at national and international levels, and the exclusion of individuals working on a part-time or casual basis. The protocol was updated accordingly in July and August 2023.

2.3 Study Selection

The titles and abstracts were screened by two authors (R.M. and J.R.) working independently and using Covidence. If the two reviewers agreed, articles were either progressed to full-text review or excluded on the basis of the inclusion/exclusion criteria. In cases of disagreement, both reviewers (R.M. and J.R.) met to reach a consensus. Any unresolved conflicts were assessed by a third reviewer (B.M.), who made the final decision regarding inclusion. Full texts of progressed articles were then reviewed for eligibility using the same procedure. If necessary, further details were sought by contacting the primary author of the respective manuscript. All records for included full-text articles were managed through EndNote 20 (The EndNote Team, 2013, Clarivate, Philadelphia, PA).

2.4 Data Synthesis

Data extraction was performed by one author (R.M.) and subsequently checked for accuracy by other authors (J.R. and B.M.). Extracted data were entered into a custom table using Microsoft Excel (Microsoft Corporation, 2023, Redmond, WA, USA). Given the exploratory nature of the scoping review, data items to extract were finalized following the screening process to capture relevant concepts and information in the literature. The extraction items were designed to accommodate various study types and designs, to allow for between-study comparison while acknowledging the unique aspects of studies. The extracted data items and their definitions are provided in Table 1. Included studies were grouped by outcomes investigated (i.e., demands, responses, resources and coping, or mixed outcomes) using the JD–R model [17] and Transactional Stress Theory [19]. Descriptive and summary statistics, along with a narrative synthesis of the literature, are reported. Consistent with our registered protocol (osf.io/br9hm/), this review did not include a risk of bias assessment for individual studies, a formal appraisal of methodological quality, or an assessment of confidence in the overall body of evidence. These steps were not undertaken as the objective of the review was to descriptively synthesize and map the scope of existing literature rather than to critically appraise study quality or

Table 1 Data items included for the extraction process

Item	Definition
Authors	All authors involved in the paper
Year	Year the article was published
Title	Title of the article
Journal	Journal the article was published in
Practitioners studied	Roles of staff studied in the study
Level of sport	Competitive level of sport the practitioners are servicing
Competition analyzed	Specific competition or similar that the practitioners are working in or preparing for
Sport(s)	Sport(s) that practitioners are described as working in
Country	Country or countries where the practitioners being studied are based and work
Study design	Type of study that was undertaken
Theoretical framework(s)	Underlying theories, models, or concepts used to guide design, data collection, analysis, and interpretation of the research study
Inclusion and exclusion criteria	Inclusion and exclusion criteria used to determine eligibility of practitioners for the study
Sampling	Sampling technique(s) that were used to recruit participants for the study
No. of participants invited	Number of participants invited to participate in the study
Sample size (number of staff)	Number of participants, roles, or similar that were analyzed in the study
Number of observations	Number of observations or similar that were collected for the study and exist in the dataset
Age	Ages for the studied sample of participants (mean $\pm$ standard deviation; range)
Experience	Years of experience participants have in their profession (mean $\pm$ standard deviation; range)
Quantitative tools and measures	Quantitative tools and measures that were used for data collection
Qualitative tools and measures	Qualitative tools and measures that were used for data collection
Work demands studied	Specific measures that were studied in the analysis related to work demands
Responses studied	Specific measures that were studied in the analysis related to staff responses working in high-performance sport
Resources and coping strategies reported	Specific resources that were described to support staff working in high-performance sport

draw practice- or clinically oriented conclusions on the basis of evidence strength.

3 Results

3.1 Study Selection

The first and second database searches yielded a total of 3663 results (1964 from PubMed, 1093 from SPORTDiscus, and 606 from PsycINFO). All citation information was imported into Covidence, and duplicates ($n = 512$) were removed. Furthermore, an additional 40 references were identified from other sources (i.e., citation searching). A total of 3191 titles and abstracts were screened for inclusion, with 248 studies qualifying for full-text review. Full texts were retrieved and assessed against eligibility criteria, resulting in an additional 124 studies being excluded. One corresponding author was contacted to clarify the employment status of participants, resulting in the exclusion of one

study during full-text screening. Regarding inclusion and exclusion, there was 94.6% and 80.8% agreement between reviewers (R.M. and J.R.) during title and abstract, and full-text screening, respectively. The three most common reasons for exclusion at the full-text level were “wrong level of sport” ($n = 13$), “level of sport not specified” ($n = 20$), and “mixed populations/levels of sport” ($n = 43$), with all reasons for exclusion shown in Fig. 1. Upon completion of screening, 124 studies were selected for data extraction and inclusion in this review.

3.2 Studies per Publication Year

The first publication dated back to 1984, while 2007 was the first year with more than one publication, and the highest number of publications ($N = 14$) occurred in 2022 (Fig. 2). Overall, 36 studies (29%) were published in the 31 years from 1984 to 2014. This was followed by a notable increase in research in this area over the last 11 years, with 88 articles (71%) published between 2015 and 2025.

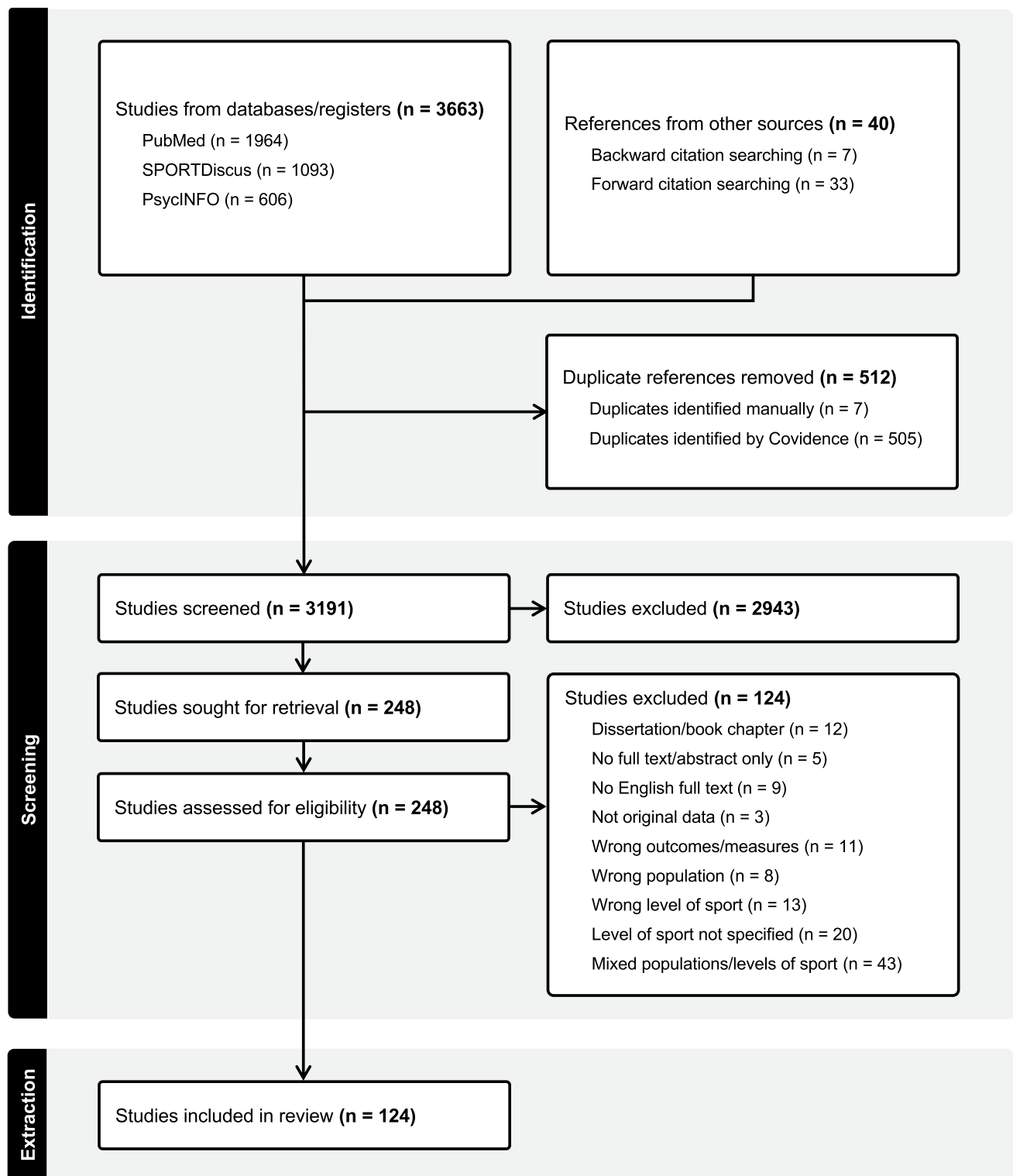


Fig. 1 PRISMA flow chart illustrating the search and study inclusion process

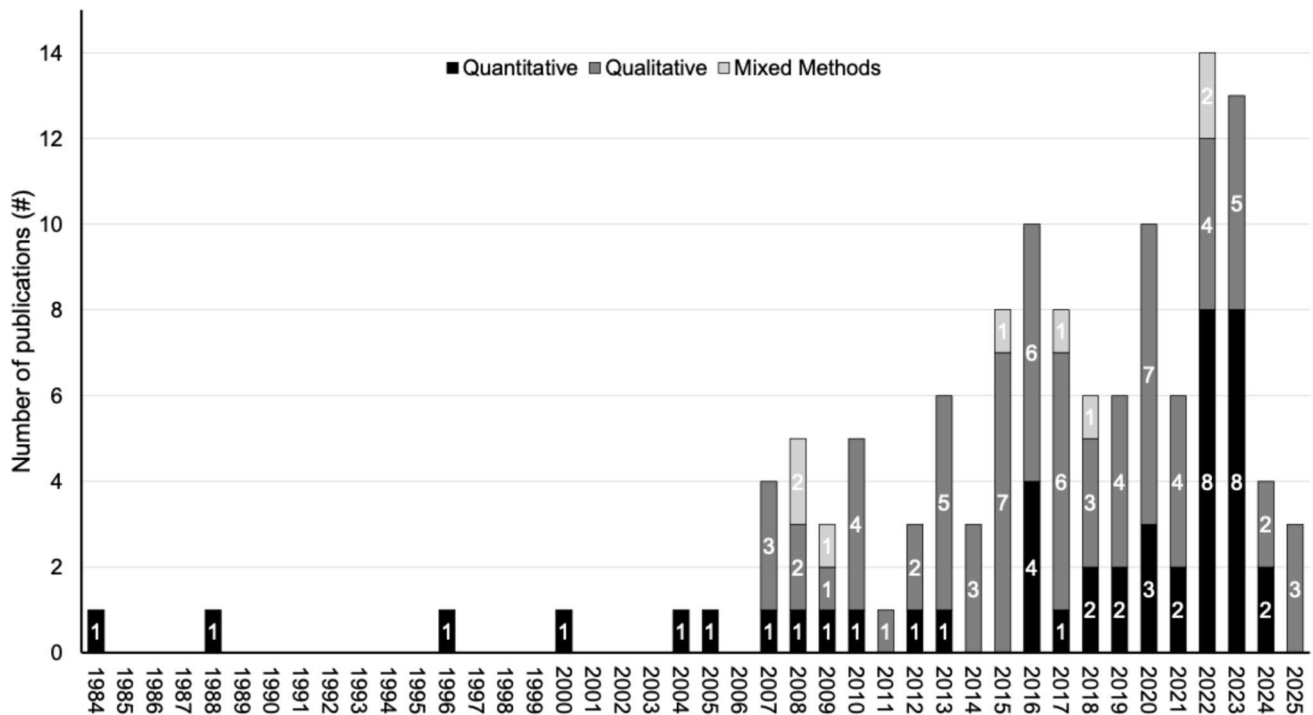


Fig. 2 Number of studies and study designs per publication year (search date 1 August 2024; forward citation search date 12 July 2025)

Table 2 Study design characteristics of the studies included in this review ($n = 124$)

	<i>n</i>	% of sample
<i>Methodology</i>		
Qualitative	72	58
Quantitative	44	36
Mixed methods	8	6
<i>Design</i>		
Cross-sectional	96	77
Longitudinal	25	20
Retrospective	2	2
Intervention	1	1
<i>Outcome/measures</i>		
Responses	24	19
Demands	12	10
Resources and coping	12	10
<i>Mixed outcomes/measures</i>		
Demands, responses, and resources and coping	23	19
Demands, and resources and coping	21	17
Responses, and resources and coping	16	13
Demands and responses	16	13

3.3 Study Methodology and Design Characteristics

More studies used qualitative ($n = 72$, 58%) methodology, compared with quantitative ($n = 44$, 36%), and the most

frequently used study design was a cross-sectional design ($n = 96$, 77%). Full results for study methodology and design characteristics are reported in Table 2. Theoretical frameworks used by each study are summarized in Tables 3, 4 and 5, with the “Transactional Theory of Stress” ($n = 12$) and the “Meta-Model of Stress, Emotion, and Performance” ($n = 6$) being the most reported, while 65 studies did not specify a framework. Finally, the tools and methods used to assess outcomes for each study are also reported in Tables 3, 4 and 5.

3.4 Sample Characteristics

Research originated from a range of geographical regions, with most studies conducted in North America ($n = 59$, 48%) and Europe ($n = 43$, 35%). Collegiate ($n = 53$, 43%) and professional ($n = 24$, 19%) sport were the most researched levels of sport, with 14 studies containing mixed levels of high-performance sport and 10 studies not specifying levels for “high-performance” or “elite” sport. There was a large difference in the populations studied, with 79 studies (64%) investigating coaches, 41 studies (33%) investigating medical and performance practitioners, and 4 studies studying mixed groups of staff (3%). Further results for region and country, and levels of sport and participant characteristics are reported in Tables 6 and 7, respectively. Summary characteristics for specific competitions studied, number of participants invited and participated, and the sex or gender

Table 3 Summary of quantitative studies included in this review ($n = 44$)

Authors (year) Study title	Country(ies); level(s) of sport	Sport(s); competition(s)	Practitioners studied; participant demographics	Study design; tools used	Theoretical framework(s)
<i>Demands</i>					
Lastella et al. (2017) Sleep at the helm: a case study of how a head coach sleeps compared to his team [57]	Australia; National/International	Soccer; Under-20 National Team	Head Coach; Invited = 1; participated = 1 Male = 1 Age = 55 Years at Elite Level = 29	Longitudinal; Sleep Diary and Wrist Activity Monitor (Philips Respironics, Bend, OR, USA)	NS
McCluney et al. (2018) Factors triggering pressure on basketball coaches' in-game decision-making [152]	USA; Collegiate	Basketball; NCAA Division I, Division II, Division III	Head Coaches, Assistant Coaches; Invited = NS; participated = 80 College Coaches Male/female = NS HP Age = NS Experience = NS HP	Cross-sectional; Survey NS	NS
Pearson et al. (2021) Stress and burnout experienced by intercollegiate swimming head coaches [111]	USA; Collegiate	Swimming; NCAA Division I, Division II, Division III	Head Coaches; Invited = 521; participated = 223 Male = 174/female = 49 Age = 20–29 = 24, 30–39 = 61, 40–49 = 61, 50–59 = 42, 60–69 = 23, > 70 = 5, NS = 7 Coaching experience as Coach/Head Coach = 1–5 = 12/62, 6–10 = 29/33, 11–15 = 40/35, 16–20 = 38/33, 21–25 = 29/14, 26–30 = 23/15, 31–35 = 18/13, > 36 = 27/11, NS = 7/7	Cross-sectional; Coaching Issues Survey [178]	NS
Srem-Sai et al. (2022) Assessing the prevalence, sources, and selective antecedents of organizational stressors among elite football players and coaches in the Ghana premier league: Empirical evidence for applied practice [162]	Ghana; Professional	Soccer; Premier League	Coaches; Invited = NS; participated = 44 Male = NS Age = 31–70 Experience = 1–17	Cross-sectional; Organizational Stressor Indicator for Sport Performers [179]	Meta-Model of Stress, Emotion, and Performance [158]
<i>Responses</i>					

Table 3 (continued)

Authors (year) Study title	Country(ies); level(s) of sport	Sport(s); competition(s)	Practitioners studied; participant demographics	Study design; tools used	Theoretical framework(s)
Akesdotter et al. (2022) Prevalence and comorbidity of psychiatric disorders among treatment-seeking elite athletes and high-performance coaches [84]	Sweden; 'High-Performance Sport'	NS; NS	Coaches; Invited = NA; participated = 29 Male = 20/female = 9 Age = male = 41.9 ± 9.7/ female = 43.3 ± 6.9 Experience = NS	Retrospective; Mini-International neuropsychiatric Interview 7.0.0 Swedish version [180]	NS
Bentzen et al. (2016) Changes in motivation and burnout indices in high-performance coaches over the course of a competitive season [89]	Norway, Sweden; National/International	Soccer, Track and Field, Biathlon, Swimming, Handball, Cross Country Skiing, Orienteering, Ice Hockey, Volleyball, Basketball, Ski Jumping, Speed Skating, Figure Skating, Alpine Skiing, Nordic Combined Skiing, Telemark Skiing; Highest national level within their sport and in their country	Coaches; Invited = 853; participated = 467 Men = 91.3%/women = 8.7% Age = 40.3 ± 9.8 (21–70) Coaching experience = 13.1 ± 9.7 (1–49)	Longitudinal; Perceived Goal Attainment and Goal Probability [181] The Areas of Work Life Scale–Workload Subscale [182] Health Care Climate Questionnaire–Adapted [183] Basic Needs Satisfaction at Work [184] Self-Regulation Questionnaire at Work [185, 186] Maslach Burnout Inventory General Scales [187] Subjective Vitality Scale [188] Satisfaction with Life Scale–Adapted [189]	Self-Determination Theory [166]

Table 3 (continued)

Authors (year) Study title	Country(ies); level(s) of sport	Sport(s); competition(s)	Practitioners studied; participant demographics	Study design; tools used	Theoretical framework(s)
Caccese et al. (1984) Gender differences in perceived burnout of college coaches [175]	USA; Collegiate	NS; NCAA Division I, AIAW Division I	Head Coaches; Invited = 375; participated = 231 Male/female = NS Age > 40—male = 52%/female = 21% 30–39—male = 52%/female = 21% < 30—male = 9%/female = 38% Total years in coaching (%) 1–5—male = 10%/female = 20% 6–10—male = 16%/female = 42% 11–15—male = 22%/female = 26% > 16—male = 52%/female = 12% Years in present position (%) 1–3—male = 41%/female = 26% 4–6—male = 25%/female = 44% 7–9—male = 11%/female = 23% > 10—male = 23%/female = 8%	Cross-sectional; Maslach Burnout Inventory [190]	NS
Carson et al. (2019) Examining the mental wellbeing of Australian sport coaches [23]	Australia; 'High-Performance Sport'	NS; NS	Coaches; Invited = NS; participated = 128 Male/female = NS Age = NS Experience in elite sport = NS HP	Cross-sectional; Areas of Work–Life Scale [182] Warwick–Edinburgh Mental Wellbeing Scale [191]	NS
Foretí et al. (2022) Stress levels in handball coaching-case study: preliminary analysis of the differences between training and match [142]	Qatar; Professional	Handball; First Handball League	Head Coach; Invited = NS; Participated = 1 Gender/Sex = NS Age = 37 Coaching experience = 19	Longitudinal; Saliva Sample–Cortisol, α -Amylase Heart Rate–Polar M430 State-Trait Anxiety Inventory–Form Y-1 [192]	NS

Table 3 (continued)

Authors (year) Study title	Country(ies); level(s) of sport	Sport(s); competition(s)	Practitioners studied; participant demographics	Study design; tools used	Theoretical framework(s)
Hoon Lee (2021) The roles of different appraisals in anxiety and emotional exhaustion: A case of NCAA Division I head coaches [98]	USA; Collegiate	Swimming and Diving, Basketball, Golf, Volleyball, Soccer; NCAA Division I	Head Coaches; Invited = 2500; participated = 203 Male = 115/female = 88 Age = 46.2 ± 11.0 Coaching experience = 21.1 ± 10.4 Years in current position = 10.1 ± 8.8	Cross-sectional; Teacher Emotional Appraisal Scale [193] Sport Emotion Questionnaire–Anxiety Subscale [194] Coach Burnout Questionnaire–Emotional Exhaustion Subscale [105]	Cognitive–Motivational–Relational Theory of Emotions [159]
Kellmann et al. (2016) Recovery–stress imbalance in Australian Rules Football league coaches: a pilot longitudinal study [24]	Australia; Professional	Australian Rules Football; The Australian Football League	Head Coach, Assistant Coaches; Invited = 6; participated = 6 Male = 6 Age = 36.9 ± 8.0 (32–59) Experience = NS	Longitudinal; Recovery–Stress Questionnaire [195]–‘Overall Stress’ category = General Stress, Emotional Stress, Social Stress, Conflicts/Pressure, Fatigue, Lack of Energy, Physical Complaints Sub-scales ‘Overall Recovery’ category = Success, Social Recovery, Physical Recovery, General Well-Being, Sleep Quality Subscales	Transactional Theory of Stress [19]
Knight et al. (2013) Personal and situational factors influencing coaches’ perceptions of stress [102]	Canada; Collegiate, National/International	NS; Canadian Interuniversity Sport, Canadian Colleges Athletic Association, Canada Games	Coaches; Invited = 1907; participated = 502 Female = 130 Age = 43.0 Experience = NS	Cross-sectional; Demographic and Personal Information, Coaching/Job Related Characteristics, and Characteristics of the Coaching Contract Interpersonal Support Evaluation List–Tangible Social Support Subscale [196] Perceived Stress Scale [197]	Meta-Model of Stress, Emotion, and Performance [158]
Kugler et al. (1996) Competition stress in soccer coaches increases salivary immunoglobulin A and salivary cortisol concentrations [56]	Germany; Professional	Soccer; First and Second League (Men)	Coaches; Invited = NS; Participated = 17 Male = 17 Age = 41.0 (34–58) Experience = NS	Longitudinal; Saliva sample–Secretory Immunoglobulin A and Cortisol Estimation of Perceived State of Physiological Arousal–Graphic Rating Scale [198, 199]	NS

Table 3 (continued)

Authors (year) Study title	Country(ies); level(s) of sport	Sport(s); competition(s)	Practitioners studied; participant demographics	Study design; tools used	Theoretical framework(s)
Loupos et al. (2004) Psychophysiological effects of competitive stress on swimming coaches [59]	Greece; National/International	Swimming; National Swimming Championships	Coaches; Invited = 10; participated = 8 Male = 8 Age = 33.0 (26–40) Experience with athletes competing at national or international level = 5–14	Longitudinal; Saliva Sample–Cortisol Competitive State Anxiety Inventory–2–Greek Version [200] Perceived Importance of Day–Likert Scale (Validation Unknown)	NS
Loupos et al. (2005) Changes of plasma fibrinogen and fibrinolysis in response to competition stress in swimming coaches [58]	Greece; National/International	Swimming; NS	Coaches; Invited = NS; participated = 14 Male = 14 Age = 36 (32–40) Experience with athletes competing at international level = 8–12	Longitudinal; Blood Sample–Plasma Fibrinogen and Tissue Plasminogen Activator	NS
Malinauskas and Malinauskienė (2023) Characteristics of stress and burnout among Lithuanian university coaches: a pre-pandemic coronavirus and post-pandemic period comparison [104]	Lithuania; Collegiate	NS; University level	Coaches; Invited = 240; participated = 229 Male = 138/Female = 76 Age = 36.8 ± 9.9 Experience = NS	Longitudinal; Perceived Stress Scale [197] Coach Burnout Questionnaire–Adapted from Athletic Burnout Questionnaire [105, 201]	NS
Malinauskas et al. (2010) Burnout and perceived stress among university coaches in Lithuania [105]	Lithuania; Collegiate	NS; University level	Coaches; Invited = 250; participated = 203 Male = 136/female = 67 Age = 35.0 ± 9.6 Experience > 10 = 131 < 10 = 72	Cross-sectional; Coach Burnout Questionnaire–Adapted and Lithuanian Version [202] Perceived Stress Scale–Adapted and Lithuanian Version [197]	NS
Moreira et al. (2008) The impact of a 17-day training period for an international championship on mucosal immune parameters in top-level basketball players and staff members [65]	Brazil; National/International	Basketball; National team competing at 2007 Pan American Games	Coaches; Support Staff–NS; Invited = NS; participated = 5 Male = 5 Age = 40.0 ± 6.0 Experience = NS	Longitudinal; Weekly Log–Signs and Symptoms of Upper Respiratory Tract Infection [203] Saliva Sample–Secretory Immunoglobulin A Concentration and Secretion Rate, Total Protein, and Relative Amount of Immunoglobulin A to Protein Ratio	NS

Table 3 (continued)

Authors (year) Study title	Country(ies); level(s) of sport	Sport(s); competition(s)	Practitioners studied; participant demographics	Study design; tools used	Theoretical framework(s)
Obmiński et al. (2022) Stress responses to one-day athletic tournament in sport coaches: a pilot study [144]	Poland; National/International	Judo; International Club Tournament	Coaches; Invited = NS; participated = 17 Gender/sex = NS Age = 39–57 Experience = NS	Longitudinal; Capillary Blood Sample (Ear-lobe)–Cortisol, Testosterone, Testosterone: Cortisol Ratio Saliva Sample–Cortisol, Testosterone, Testosterone: Cortisol Ratio Heart Rate, Diastolic Blood Pressure, Systolic Blood Pressure; Sleep Quality–Likert Scale, Sleep Time–Self-Report	NS
Østerås et al. (2023) Elite-level coaches' coping: stress appraisal and covid-19 [145]	Norway; 'Elite Sport'	NS; NS	Coaches; Invited = 136; participated = 97 Gender/sex = NS Age = NS Experience = NS	Longitudinal; Maslach Burnout Inventory General Scale [187, 204] Athlete Satisfaction Questionnaire–Individual Performance Subscale–Adapted [205, 206] Stress Appraisal Measure [207]	Transactional Theory of Stress [19]
Price et al. (2024) Examining coach psychophysiological stress responses during Association Football matches: a preliminary study [70]	UK; Professional	Soccer; NS	Coaches; Invited = NS; participated = 5 (Professional Coaches) Male = 5 Age = 33.6 ± 8.38 Experience = NS	Longitudinal; Saliva Sample–Salivary Alpha Amylase Heart Rate and Respiratory Rate–Equivalent Life Monitor	Transactional Model of Stress and Coping [19]

Table 3 (continued)

Authors (year) Study title	Country(ies); level(s) of sport	Sport(s); competition(s)	Practitioners studied; participant demographics	Study design; tools used	Theoretical framework(s)
Romero et al. (2018) Role strain, part 1: experiences of athletic trainers employed in the professional sports setting [146]	USA; Professional	Baseball, Soccer; Basketball, American Football, Ice Hockey; Major League Baseball, Major League Soccer, National Football League, National Hockey League, National Basketball Association	Athletic Trainers; Invited = 386; participated = 152 Gender/Sex = NS Age = NS Years in Professional Sport League 0–5 = 59, 6–10 = 21, 11–15 = 21, 16–20 = 24, 21+ = 27 Years in current organization 0–5 = 61, 6–10 = 33, 11–15 = 19, 16–20 = 19, 21+ = 19, NS = 1 Total years in Professional Sports 0–5 = 40, 6–10 = 28, 11–15 = 28, 16–20 = 23, 21+ = 33	Cross-sectional; Role-Strain Survey–Adapted [208, 209]	Organizational Role Theory [164]; Role Strain Theory [176]
Rossiter et al. (2022) Effects of long-haul transmeridian travel on physiological, sleep, perceptual and mood markers in Olympic team support staff [114]	Ireland; Olympic/Paralympic	NS; NS	Physiotherapists, Performance Managers, Strength and Conditioning Coaches, Physiologists; Invited = NS; participated = 9 M = 2/F = 7 Age = 34.3 ± 8.3 Experience = NS	Longitudinal; Saliva Samples–Cortisol, α -Amylase Sleep Actigraphy Sleep Diary–Self-Report Wrist Activity Monitor Perceived Sleep Data via Liverpool John Moore’s University Jet Lag Questionnaire [210–212] Brumel Mood Scale–Derivative of Profile of Mood States [213]	NS
Ruddock et al. (2023) Beyond the game: exploring the link between occupational burnout and symptoms of ill-health in Australian Rules Football league coaches [73]	Australia; Professional	Australian Rules Football; The Australian Football League	Senior Coaches, Assistant Coaches; Invited = 193; participated = 132 Male = 132 Age = 40.6 ± 7.1 (30–61) Experience = NS	Cross-sectional; Maslach Burnout Inventory Human Services Survey [214] Depression, Anxiety and Stress Scale–Short-Form [215]	NS

Table 3 (continued)

Authors (year) Study title	Country(ies); level(s) of sport	Sport(s); competition(s)	Practitioners studied; participant demographics	Study design; tools used	Theoretical framework(s)
Russell et al. (2023) Thinking about elite performance: the experience and impact of mental fatigue in elite sport coaching [115]	Australia; Professional	Netball; SunCorp Super Netball Team	Head Coach, Assistant Coach, Head Strength and Conditioning Coach; Invited = NS; participated = 3 Men = 1/Women = 2 Age = NS Experience = NS	Longitudinal; Subjective responses using 100-mm visual analog scales for current levels of 'physical fatigue', 'mental fatigue', 'readiness to perform' (Validation Unknown) Saliva Samples–Cortisol, α -Amylase, Cortisol; α -Amylase Ratio	NS
Ryska (2009) Multivariate analysis of program goals, leadership style, and occupational burnout among intercollegiate sport coaches [216]	USA; Collegiate	Soccer, Tennis, Golf, Volleyball, Baseball; NCAA Division I	Head Coaches; Invited = 660; participated = 345 Male/female = NS Age = 36.4 ± 3.84 (26–64) Head Coaching Experience at College Level = 6.2 ± 4.5 (1–38)	Cross-sectional; Maslach Burnout Inventory [172]	Person–Environment Fit Theory [165]
Singe et al. (2022) Work-family conflict and guilt among athletic trainers: influences of family role performance, years of experience and National Collegiate Athletic Association level [117]	USA; Collegiate	NS; NCAA Division I, Division II, Division III	Athletic Trainers; Invited = 6110; participated = 586 Male = 210/female = 374/ gender variant or nonconforming = 1/prefer not to answer = 1 Age = 33.0 ± 9.0 (21–70) Experience = 10.0 ± 8.0	Cross-sectional; Family Role Performance Scale [217] Work–Family Conflict Scale [218] Work–Family Guilt Scale [219]	NS
<i>Resources and coping</i> Raabe et al. (2022) An exploration of National Collegiate Athletic Association Division I assistant coaches' basic psychological need satisfaction and frustration [134]	USA; Collegiate	American Football, Baseball, Basketball, Beach Volleyball, Cross-Country, Track and Field, Field Hockey, Golf, Gymnastics, Ice Hockey, Lacrosse, Rifle, Rowing, Soccer, Softball, Swimming and Diving, Tennis, Volleyball, Water Polo, Wrestling; NCAA Division I	Assistant Coaches; Invited = NS; participated = 445 Men = 254/women = 191 Age = 34.9 ± 9.6 Coaching experience = 12.4 ± 8.6 Experience in current job = 3.5 ± 3.2	Cross-sectional; Tripartite Measure of Interpersonal Behaviors–Coach [220] Psychological Need States in Sport Scale [221]	Self-Determination Theory [166]

Demands and responses

Table 3 (continued)

Authors (year) Study title	Country(ies); level(s) of sport	Sport(s); competition(s)	Practitioners studied; participant demographics	Study design; tools used	Theoretical framework(s)
Bentzen et al. (2016) Development of exhaustion for high-performance coaches in association with workload and motivation: A person-centered approach [49]	Norway, Sweden; Professional, National/International	Soccer, Track and Field, Biathlon, Swimming, Handball, Cross Country Skiing, Orienteering, Ice Hockey, Volleyball, Basketball, Ski Jumping, Speed Skating, Figure Skating, Alpine Skiing, Nordic Combined Skiing, Telemark Skiing; Highest domestic leagues for Males and Females, Athletes competing at the highest levels at their national championships within their sports	Coaches; Invited = 853; participated = 467 Male = 91.6%/female = 8.4% Age = 41.0 ± 10.0 Coaching experience = 15.5 ± 10.0	Longitudinal; Maslach Burnout Inventory General Scales [187] The Areas of Work Life Scale–Workload Subscale [182] Inter-Role Conflict [222] Recovery Experience Questionnaire–Psychological Detachment and Relaxation Subscales [223] Self-Regulation Questionnaire at Work [185, 186]	Self-Determination Theory [166]
Hjältn et al. (2007) Burnout among elite soccer coaches [55]	Sweden; Professional	Soccer; Premier League First Division (Men)	Head Coaches; Invited = 53; participated = 47 (13 Premier League First Division) Men = 13/women = 0 Age = 48.0 ± 6.7 Total years as Coach = 17.0 ± 6.5	Cross-sectional; Maslach Burnout Inventory Educator Survey [214]	NS
Kim et al. (2020) Elite coaches have a similar prevalence of depressive symptoms to the general population and lower rates than elite athletes [101]	New Zealand; National/International	Soccer, Other(s) NS; National and International level with High-Performance Sport New Zealand or New Zealand Football	Coaches; Invited = 110; participated = 71 Male = 55/female = 15/gender diverse = 1 Age 20–39 = 27 40–49 = 24 50+ = 20 Experience = NS	Cross-sectional; The Centre for Epidemiological Studies Depression Scale–Revised [224] Daily Hassles Scale [225]	NS
Rynkiewicz et al. (2022) Collegiate athletic trainers' experiences with work-family conflict and work-family guilt based upon organizational factors [116]	USA; Collegiate	NS; NCAA Division I, Division II, Division III	Athletic Trainers; Invited = 6110; participated = 615 Male = 222/female = 391/gender variant or Nonconforming = 1/prefer not to answer = 1 Age = 33.0 ± 9.0 (21–70) Experience = NS	Cross-sectional; Work–Family Conflict Scale [218] Work–Family Guilt Scale [219]	Multilevel Model of Work–Family Conflict in Sport [163]

Table 3 (continued)

Authors (year) Study title	Country(ies); level(s) of sport	Sport(s); competition(s)	Practitioners studied; participant demographics	Study design; tools used	Theoretical framework(s)
Singe et al. (2023) Work-family conflict and family role performance among collegiate athletic trainers [136]	USA; Collegiate	NS; NCAA Division I, Division II, Division III	Athletic Trainers; Invited = 6110; Participated = 586 Male = 210/Female = 374/ gender variant or nonconforming = 1/prefer not to answer = 1 Age = 33 ± 7 (21–70) Experience in Athletic Training Field = 10 ± 8 (0–45)	Cross-sectional; Work-Family Conflict Questionnaire [218] Family Role Performance Scale [217]	NS
<i>Responses, and resources and coping</i>					
Balk et al. (2019) Antecedents and consequences of perceived autonomy support in elite sport: a diary study linking coaches' off-job recovery and athletes' performance satisfaction [86]	Netherlands, Australia; National/International	Soccer, Swimming, Australian Rules Football, Handball, Beach Volleyball, Speed Skating, Water Polo, Archery; NS	Coaches; Invited = NS; participated = 31 Male = 30/female = 1 Age = 38.7 ± 7.7 (22–52) Coaching experience = 11.9 ± 9.5	Longitudinal; Off-Job Detachment [226] Multidimensional Fatigue Symptom Inventory Short Form [227] International Positive and Negative Affect Schedule Short Form–Positive Affect Subscale [228] Utrecht Work Engagement Scale [229] Sleep Quality and Duration–Self Report Questionnaire	Demands-Induced Strain Compensation Recovery Model [226]
Bentzen et al. (2020) Impact of job insecurity on psychological well- and ill-being among high performance coaches [87]	Norway, Sweden; Professional, National/International	Soccer, Cross Country Skiing, Biathlon, Ski-Jumping, Alpine, Speed Skating, Ice Hockey, Track and Field, Swimming, Orienteering, Handball, Volleyball, Basketball; Highest national levels within their sport and in their country (i.e., highest competitive leagues, national teams, elite clubs)	Coaches; Invited = NS; participated = 467 Male = 91.6% Age = 40.7 ± 9.9 Coaching experience = 13.6 ± 9.8	Longitudinal; Job Security–1 item (Validation Unknown) Areas of Work–Life Scale–Job Value Incongruence Subscale [182] Subjective Vitality Scale [188] Satisfaction with Life Scale–Adapted [189]	Job Demands–Resources Model [17]

Table 3 (continued)

Authors (year) Study title	Country(ies); level(s) of sport	Sport(s); competition(s)	Practitioners studied; participant demographics	Study design; tools used	Theoretical framework(s)
Georgios and Nikolaos (2012) An investigation of a model of personal-situational factors, stress and burnout in track and field coaches [173]	Greece; National/International	Track and Field; National Club level	Coaches; Invited = NS; participated = 164 Male = NS Age = 40.9 ± 8.2 (24–68) Experience > 16 = 59 11–15 = 48 6–10 = 32 1–5 = 25	Cross-sectional; Maslach Burnout Inventory [172] Perceived Stress Scale [197] Sport Competition Anxiety Test [230] Coaching Issues Survey [231] Social Support Questionnaire [232] Cognitive Hardiness Scale [233] Leader Behavior Description Questionnaire [234]	Cognitive–Affective Model of Stress and Burnout [160]
Lee and Chelladurai (2016) Affectivity, emotional labor, emotional exhaustion, and emotional intelligence in coaching [103]	USA; Collegiate	NS; NCAA Division I	Coaches; Invited = NS; participated = 40 Male = 33/female = 7 Age = 34.58 ± 7.10 (25–54) Experience in elite sport = 9.43 ± 5.83 (2–25)	Cross-sectional; Positive Affectivity and Negative Affectivity Scales–Short Form [235] Emotional Labor Scale–Adapted [236] Genuine Expression Scale–Adapted [237] Maslach Burnout Inventory–Emotional Exhaustion Subscale–Adapted and Shortened [172] Emotional Intelligence Scale [238]	Three-Component Model of Emotional Labor [239]
Nikolovski et al. (2023) Acute and long-lasting effects of slow-paced breathing on handball team coach's match stress [66]	Qatar; Professional	Handball; First Handball League	Head Coach; Invited = 1; participated = 1 He/His = 1 Age = 37 Experience = 19	Intervention; Saliva Samples–Cortisol, α-Amylase; Heart Rate (Polar M430)	NS
Singe et al. (2023) A cross-sectional study—examine the relationship between work interference with family conflict and burnout among athletic trainers [118]	USA; Collegiate	NS; NCAA Division I, Division II, Division III	Athletic Trainers; Invited = 6148; participated = 984 Men = 370/WOMEN = 605/ did not disclose = 9 Age = 32.6 ± 9.2 (21–71) Certified Athletic Trainer = 9.8 ± 8.9 (0–48)	Cross-sectional; Work–Family Conflict Scale [240] Copenhagen Burnout Inventory [241]	NS

Table 3 (continued)

Authors (year) Study title	Country(ies); level(s) of sport	Sport(s); competition(s)	Practitioners studied; participant demographics	Study design; tools used	Theoretical framework(s)
Tolentino et al. (2024) "No days off": using self-determination theory to better understand workaholism in National Collegiate Athletic Association Division I coaches [137]	USA; Collegiate	Cross-Country, Track and Field, Volleyball, Soccer, Basketball, Swimming and Diving, Softball, Baseball, Golf, American Football, Tennis, Rowing, Lacrosse, Field Hockey, Gymnastics, Ice Hockey, Water Polo, Rifle, Bowling, Beach Volleyball, Wrestling, Skiing, Fencing; NCAA Division I	Head Coaches, Associate Coaches; Invited = NS; participated = 873 Male = 504/female = 366/ chose not to identify their gender = 2 Age = 39.68 ± 11.22 (22–76) Overall coaching experience = 16.83 ± 10.41 College coaching experience = 13.60 ± 9.68 Experience in current job = 6.45 ± 7.32	Cross-sectional; Dutch Workaholism Scale [242] Psychological Need States in Sport Scale [221]	Self-Determination Theory [166]
Ugrenovic et al. (2020) The relationship between emotional intelligence, leadership styles, and burnout in NCAA coaches [120]	USA; Collegiate	Track and Field, Cross Country, Basketball, Lacrosse, Soccer, Swimming, Volleyball, Rowing, Field Hockey, Rugby, Water Polo, Gymnastics, Fencing, Bowling, Softball, Wrestling; NCAA Division I, Division II, Division III	Head Coaches, Assistant Coaches; Invited = 8520; participated = 244 Male = 140/female = 103/ undisclosed = 1 Age = 45.1 ± 11.6 (24–74) Coaching experience at NCAA level = 20.0 ± 36.3 (2–51)	Cross-sectional; Oldenburg Burnout Inventory [243] Emotional Intelligence Scale [244] Multifactor Leadership Questionnaire–Leader Form 5 × Short [245]	Job Demands–Resources Model [17]
<i>Demands, responses, and resources and coping</i>					
Hendrix et al. (2000) An examination of stress and burnout in certified athletic trainers at Division I–A Universities [174]	USA; Collegiate	American Football, Other(s) NS; NCAA Division I	Athletic Trainers; Invited = 224; participated = 118 Male/female = NS Age = American Football = 38.7/non-football = 31.0 Years employed 2–5 = 45% 6–10 = 14% 11–15 = 12% 21–25 = 11%	Cross-sectional; The Hardiness Test [246] Social Support Questionnaire–Adapted [247] Athletic Training Issues Survey–Adapted version of the Coaching Issues Survey [231] Perceived Stress Scale [197] Maslach Burnout Inventory [172]	Cognitive–Affective Model of Stress and Burnout [160]

Table 3 (continued)

Authors (year) Study title	Country(ies); level(s) of sport	Sport(s); competition(s)	Practitioners studied; participant demographics	Study design; tools used	Theoretical framework(s)
Upenieks et al. (2023) When a bad day at the golf course is a bad day at the office: occupational stressors, institutional supports, and the mental health of NCAA golf coaches [153]	USA; Collegiate	Golf; NCAA Division I	Head Coaches, Associate Coaches, Assistant Coaches; Invited = 52; participated = 48 (84.8% full-time) Male/female = NS HP Age = NS HP Experience = NS	Cross-sectional; Center for Epidemiological Studies Depression [248] Hospital Anxiety and Depression Scale [249] Maslach Burnout Inventory Educators Survey [250] Turnover Intention Scale [251] Coaching Stressors Scale [252] Workplace Stress Scale (Validation Unknown); Perceived Organizational Support (Validation Unknown)	NS
Wilson and Bird (1988) Burnout in coaching—part two: Results from survey of national coaches [169]	Canada; Collegiate	NS; University level	Coaches; Invited = 500; participated = 93 full-time Coaches Men/women = NS HP Age = NS HP Experience in elite sport = NS HP	Cross-sectional; Maslach Burnout Inventory—Adapted [190] Crowne-Marlowe Social Desirability Scale [253]	NS

All age and experience characteristics are reported in years, mean $\pm$ standard deviation (range) (if available). Definitions for measures of experience are reported as they were defined in the respective study

NCAA National Collegiate Athletic Association, NA not applicable, NS not specified, NS HP not specified for high-performance sport

Table 4 Summary of qualitative studies included in this review (*n* = 72)

Authors (year) study title	Country; level(s) of sport	Sport(s); competition(s)	Practitioners; demographics	Study design; tools used	Theoretical framework(s)
<i>Demands</i>					
Augustad and Hemmestad (2022) Gender, care, and sport: an attempt to understand the deficit of women among Norwegian elite-level coaches [122]	Norway; Olympic/Paralympic	NS; NS	Coaches; Invited = NS; Participated = 11 Women = 7 Age = NS Coaching Experience = NS	Cross-sectional; Semistructured Interviews	NS
Dixon and Bruening (2007) Work-family conflict in coaching I: a top-down perspective [76]	USA; Collegiate	Basketball, Cross Country, Rowing, Softball, Soccer, Tennis, Track, Volleyball; NCAA Division I	Head Coaches; Invited = 51; participated = 41 Female = 41 Age = 35.4 (29–40) Average Tenure as Head Coach = 6.5 (2–10)	Cross-sectional; Asynchronous Online Focus Groups	Multilevel Model of Work-Family Conflict in Sport [163] Role Theory [254]
du Plooy et al. (2020) Leadership challenges experienced by elite South African rugby coaches [149]	South Africa; Professional + National/International	Rugby; South African Senior National Team, U20 National Team, U19 National Team, Rugby Sevens, Super Rugby, Pro 14 Rugby	Head Coaches; Invited = 11; participated = 6 Gender/sex = NS Age = NS Experience = NS	Cross-sectional; Unstructured Interviews	General Systems Theory [255]
Mazerolle and Eason (2015) Perceptions of National Collegiate Athletic Association Division I female athletic trainers on motherhood and work-life balance: individual- and sociocultural-level factors [80]	USA; Collegiate	NS; NCAA Division I	Athletic Trainers; Invited = 35; participated = 27 Female = 27 Age = 34.0 (26–57) Average Tenure as Athletic Trainer = 11.0 (3–35)	Cross-sectional; Online Asynchronous interviewing—Journal Style Free-Form	Multilevel Model of Work-Family Conflict in Sport [163] Preference Theory [256]
Olusoga et al. (2009) Stress in elite sports coaching: Identifying stressors [10]	UK; Olympic/Paralympic, National/International	Swimming and Diving, Sailing, Bowls, Equestrian, Field Hockey, Lacrosse, Table Tennis; Previously coached at an Olympic Games, World Championships, World Cup, and/or Commonwealth Games	Coaches; Invited = NS; participated = 12 Male = 6/female = 6 Age = 47.3 ± 7.6 (36–64) Experience coaching at world class level = 14.5 ± 5.5 (6–22)	Cross-sectional; Semistructured Interviews	Transactional Theory of Stress [19]
Rhind et al. (2013) Organizational stress in professional soccer coaches [71]	England; Professional	Soccer; English Premier League, Football League Championship, Football League One, Football League Two	First Team Coaches; Invited = NS; participated = 10 Male = 10 Age = 46.2 ± 6.2 (36–55) Coaching Experience in Soccer = 14.5 ± 6.3 (5–25)	Cross-sectional; Semistructured Interviews	Meta-Model of Stress, Emotion, and Performance [158]

Table 4 (continued)

Authors (year) study title	Country; level(s) of sport	Sport(s); competition(s)	Practitioners; demographics	Study design; tools used	Theoretical framework(s)
Robbins et al. (2015) Coaching stressors in a Division II historically Black university [113]	USA; Collegiate	Cross-Country, Tennis, Track and Field, Baseball, Basketball, American Football, Volleyball; NCAA Division I	Head Coaches, Assistant Coaches; Invited = 14; participated = 12 Male = 9/Female = 3 Age = 37.9 ± 9.4 (27–58) Coaching Experience = 2–36	Cross-sectional; Semistructured Interviews	Transactional Theory of Stress [19]
Thelwell et al. (2008) Stressors in elite sport: a coach perspective [13]	UK; Professional, National/International	Soccer, Cricket, Rugby Union, Field Hockey, Golf, Gymnastics, Athletics, Sailing; Work with current national squad members and/or perform at the highest level in their sport at professional clubs	Coaches; Invited = NS; participated = 11 Male = 7/Female = 4 Age = 35.7 ± 9.6 (26–55) Experience working with elite athletes = 6.5 ± 3.2	Cross-sectional; Semistructured Interviews	Transactional Theory of Stress [19]
<i>Resources and coping</i>					
Abrahamsen and Chroni (2021) Longevity in elite coaching: motivates and maneuvers keeping them in the game [50]	Norway; Olympic/Paralympic	NS; Olympic Games	Coaches; Invited = NS; Participated = 6 Men = 6 Age = 45 ± 7.69 (34–59) Experience with Coaching = 26 ± 10.1 (14–39) Experience Coaching National Team = 10.5 ± 3.21 (6–14)	Cross-sectional; Semistructured interviews	Self-Determination Theory [166] Dualistic Model of Passion [257, 258]
Cropley et al. (2020) A multi-study exploration of factors that optimize hardiness in sport coaches and the role of reflective practices in facilitating hardy attitudes [123]	UK, Other–NS; Professional + National/International	Examples included Soccer, Netball, Rugby League, Triathlon; National (e.g., English Premier League) and International Team Sports	Coaches; Study 1 Invited = 25; participated = 13 Male = 9/female = 4 Age = 40.3 ± 6.7 Coaching experience = 8.69 ± 4.1 Experience in current position = 2.7 ± 1.3 Study 2 Excluded due to mixed levels of sports (e.g., youth, regional club)	Cross-sectional; Semistructured Interviews	Transactional Model of Stress and Coping [19]; Cognitive–Motivational–Relational Theory of Stress and Emotions [159]
Eason et al. (2015) Athletic trainers' facilitators of professional commitment in the collegiate setting [127]	USA; Collegiate	NS; NCAA Division I, Division II, Division III	Head Athletic Trainers, Assistant Athletic Trainers, Associate Athletic Trainers, Directors of Sports Medicine; Invited = NS; participated = 33 Male = 19/female = 14 Age = NS Clinical experience = 10 ± 8	Cross-sectional; Online journaling	NS

Table 4 (continued)

Authors (year) study title	Country; level(s) of sport	Sport(s); competition(s)	Practitioners; demographics	Study design; tools used	Theoretical framework(s)
Hodgson et al. (2017) Exploring the psychological attributes underpinning elite sports coaching [130]	NS; 'Elite Sport'	Gymnastics, Disability Table Tennis, Canoe Slalom, Judo, Lacrosse, Field Hockey, Track and Field, Rowing, Trampoline; NS	Coaches; Invited = NS; participated = 12 Male = 8/female = 4 Age = NS Experience = NS	Cross-sectional; Semistructured interviews	NS
Mazerolle et al. (2013) Factors influencing retention of male athletic trainers in the NCAA Division I set- ting [61]	USA; Collegiate	NS; NCAA Division I	Athletic Trainers; Invited = NS; participated = 11 Male = 11 Age = 34 ± 5 NCAA Division I Clinical Expe- rience = 6 ± 6 years	Cross-sectional; Semistructured Interviews	NS
Mazerolle et al. (2013) Retention factors for head athletic trainers in the NCAA Division I collegiate setting [133]	USA; Collegiate	NS; NCAA Division I	Head Athletic Trainers; Invited = 20; participated = 18 Male = 13/female = 5 Age = 44 ± 8 Professional Experience as Head Athletic Trainer = 14 ± 6	Cross-sectional; Open-ended Survey Ques- tions	NS
Mazerolle et al. (2015) Achieving work-life balance in the National Collegiate Athletic Association Divi- sion I setting, part I: the role of the head athletic trainer [108]	USA; Collegiate	NS; NCAA Division I	Head Athletic Trainers; Invited = NS; participated = 18 Men = 13/Women = 5 Age = 44.0 ± 8.0 Athletic Training Experi- ence = 22.0 ± 7.0 employment at current Univer- sity = 14 ± 6.0	Cross-sectional; Online Asynchronous inter- viewing–Semistructured, Open-Ended format	NS
Mazerolle and Eason (2016) Positive factors influencing the advancement of women to the role of head athletic trainer in the National Col- legiate Athletic Association Divisions II and III [82]	USA; Collegiate	NS; NCAA Division II, Divi- sion III	Head Athletic Trainers; Invited = NS; participated = 77 Female = 77 Age = 38 ± 9 (24–57) Athletic training experi- ence = 14 ± 8 (1–33) Years in Head Athletic Trainer role = 9 ± 8 (1–30)	Cross-sectional; Asynchronous In-Depth Online Journaling	NS
Olusoga et al. (2012) Coaching under pressure: a study of Olympic coaches [67]	UK; Olympic/Paralympic	NS; Worked with Olympic standard athletes	Coaches; Invited = NS; participated = 8 Male = 8/female = 0 Age = 43.3 ± 6.2 (33–53) Experience = 13.1 ± 8.1	Cross-sectional; Semistructured Interviews	Meta-Model of Stress, Emo- tion, and Performance [158]

Table 4 (continued)

Authors (year) study title	Country; level(s) of sport	Sport(s); competition(s)	Practitioners; demographics	Study design; tools used	Theoretical framework(s)
Thelwell et al. (2008) A qualitative exploration of psychological-skills use in coaches [148]	UK; Olympic/Paralympic, National/International	Golf, Sailing, Cricket, Gymnastics, Rugby, Athletics, Soccer, Field Hockey; Work with performers on a regular basis who are current national squad members and perform at the highest level in their sport (e.g., World Championships, Olympics)	Coaches; Invited = 13; participated = 13 Gender/sex = NS Age = 33.8 ± 9.7 (23–57) Experience with elite athletes = 8.2 ± 5.4	Cross-sectional; Semistructured Interviews	NS
Weinberg et al. (2020) What does it mean to be “mentally tough” as a NCAA Division I collegiate coach? [139]	USA; Collegiate	Basketball, Track and Field, Swimming and Diving, Volleyball, Tennis; NCAA Division I	Head Coaches; Invited = NS; participated = 12 Male = 8/female = 4 Age = 44.6 ± 8.1 (32–61) Collegiate coaching experience = 24.3 ± 8.3 (9–34)	Cross-sectional; Semistructured interviews	NS
<i>Demands and responses</i>					
Arnold et al. (2019) ‘The team behind the team’: Exploring the organizational stressor experiences of sport science and management staff in elite sport [85]	NS; ‘Elite Sport’	Athletics, Cricket, Cycling, Football, Rugby Union, Tennis, Triathlon; NS	Performance Directors and Leads, Strength and Conditioning Coaches, Sports Scientists, Physiotherapists; Invited = NS; participated = 40 Male = 33/female = 7 Age = 34.6 ± 7.1 (25–54) Experience in Elite Sport = 9.4 ± 5.8 (2–25)	Cross-sectional; Semistructured Interviews	Meta-Model of Stress, Emotion, and Performance [158]
Bentzen et al. (2014) The process of burnout among professional sport coaches through the lens of self-determination theory—a qualitative approach [53]	Denmark, Norway; Professional, National/International	NS; National team and elite-level clubs	Coaches; Invited = NS; Participated = 4 Gender/Sex = NS Age = 31.3 ± 5.0 (24–35) Experience as Professional Coaches = 8.0 ± 5.2 (2–14)	Cross-sectional; Semistructured Interviews	Self-Determination Theory [166]
Burton et al. (2012) “They cannot seem to get past the gender issue”: experiences of young female athletic trainers in NCAA Division I intercollegiate athletics [75]	USA; Collegiate	Basketball, Soccer, Baseball, Volleyball, Softball, Tennis, Lacrosse, Golf; NCAA Division I	Athletic Trainers; Invited = NS; participated = 14 Female = 14 Age = 27 ± 1.5 Experience = 5.0 ± 1.5	Cross-sectional; Semistructured interviews	Post-structural Feminism [259]

Table 4 (continued)

Authors (year) study title	Country; level(s) of sport	Sport(s); competition(s)	Practitioners; demographics	Study design; tools used	Theoretical framework(s)
Hings et al. (2018) Professional challenges in elite sports medicine and science: composite vignettes of practitioner emotional labor [128]	UK; "Elite Sport"	NS; NS	Sport and Exercise Psychologists, Strength and Conditioning Coaches, Physiotherapists, Sports Doctor, Sport Scientist; Invited = NS; participated = 18 Male = 15/female = 3 Age = NS Experience = 2–23	Cross-sectional; Semistructured Interviews; Composite Vignettes	NS
Kerai et al. (2019) Stressors experienced in elite sport by physiotherapists [100]	UK; Olympic/Paralympic	NS; Attended international events such as Olympic Games in Beijing 2008, London 2012, Rio de Janeiro 2016, Common- wealth Games, World Cups, or World Championships	Physiotherapists; Invited = NS; Participated = 10 Male = 5/Female = 5 Age = NS Experience at this performance level = 3–25	Cross-sectional; Semistructured Interviews	Meta-Model of Stress, Emotion, and Performance [158]
Mazerolle et al. (2015) Athletic trainers' barriers to maintaining professional commitment in the col- legiate setting [150]	USA; Collegiate	NS; NCAA Division I, Division II, Division III	Athletic Trainers; Invited = NS; participated = 33 Gender/sex = NS Age = NS Clinical Experience = 10 ± 8	Cross-sectional; Online Open- and Closed-ended Interview Questions	NS
Mazerolle and Eason (2013) Work-life balance: a perspective from the athletic trainer employed in the NCAA Division I setting [132]	USA; Collegiate	NS; NCAA Division I	Athletic Trainers; Invited = NS; participated = 42 Male = 15/female = 27 Age = 45 ± 11; Tenure as an Athletic Trainer = 11 ± 7 (3–32)	Cross-sectional; Online interviews	NS
Mazerolle and Eason (2016) Barriers to the role of head athletic trainer for women in National Collegiate Athletic Association Division II and III settings [81]	USA; Collegiate	NS; NCAA Division II, Division III	Head Athletic Trainers; Invited = 122; participated = 77 Female = 77 Age = 38 ± 9 (24–57) Athletic training experience = 14 ± 8 (1–33) Years in Head Athletic Trainer Role = 9 ± 8 (1–30)	Cross-sectional; Asynchronous In-Depth Online Journaling	NS
Mazerolle et al. (2013) Factors influencing the decisions of male athletic trainers to leave the NCAA Division-I practice setting [64]	USA; Collegiate	NS; NCAA Division I	Athletic Trainers; Invited = NS; participated = 8 Male = 8 Age = 45 ± 11 NCAA Division I Experience = 15 ± 11 years	Cross-sectional; Semistructured Interviews	NS

Demands, and resources and coping

Table 4 (continued)

Authors (year) study title	Country; level(s) of sport	Sport(s); competition(s)	Practitioners; demographics	Study design; tools used	Theoretical framework(s)
Chroni et al. (2016) To be the eye within the storm. I am challenged not stressed [170]	Norway; Olympic/Paralympic	NS; National teams competing at Winter Olympic Games	Coaches; Invited = 20; participated = 7 Men = 7 Age = 28–53 Coaching experience = 4–30 Coaching experience with National Team = 2–11	Cross-sectional; Semistructured Interviews	Cognitive Activation Theory of Stress [161]
Dabbs et al. (2020) Extending the Kaleidoscope Career Model: understanding career needs of mid-career elite head coaches [124]	USA; Collegiate	Rowing, Lacrosse, Swimming and Diving, Volleyball, Baseball, Cheerleading, Soccer, Softball, Football, Track and Field, Golf, Basketball, Synchronized Swimming, Equestrian; NS	Head Coaches; Invited = NS; participated = 26 Male = 15/female = 11 Age = 48.1 ± 5.9 (38–59) Years in career = 21.6 ± 5.4 (10–30) Years at Current Organization = 10.8 ± 7.4 (2–25)	Cross-sectional; Semistructured Interviews	Kaleidoscope Career Model [260]
Dehghansai et al. (2021) Challenges and stresses experienced by athletes and coaches leading up to the Paralympic Games [141]	Australia; Olympic/Paralympic	NS; Paralympic team	Coaches; Invited = 6; participated = 5 Gender/sex = NS Age = 34.58 ± 7.10 (25–54) Coaching experience = > 10	Cross-sectional; Semistructured Interviews	NS
Didymus (2017) Olympic and international level sports coaches' experiences of stressors, appraisals, and coping [90]	NS; Olympic/Paralympic, National/International	Athletics, Equestrian, Squash, Tennis, Triathlon, Netball, Rugby League, Rugby Union, Water Polo; NS	Coaches; Invited = NS; participated = 15 Men = 9/women = 6 Age = NS Experience = NS	Cross-sectional; Semistructured Interviews	Cognitive–Motivational–Relational Theory of Stress and Emotions [159]
Eason et al. (2017) Organizational Infrastructure in the Collegiate Athletic Training Setting, Part III: Benefits of and Barriers in the Medical and Academic Models [92]	USA; Collegiate	NS; NCAA Division I, Division II, Division III	Athletic Trainers; Invited = NS; participated = 16 (8 medical model) Men = 4/women = 4 Age = 31.9 ± 6.2 (25–42) Experience = 10.1 ± 5.5 (3–20)	Cross-sectional; Semistructured Interviews	NS
Goodman et al. (2015) Achieving work-life balance in the National Collegiate Athletic Association Division I setting, part II: perspectives from head athletic trainers [96]	USA; Collegiate	NS; NCAA Division I	Head Athletic Trainer; Invited = NS; participated = 18 Men = 13/women = 5 Age = 44.0 ± 8.0 Experience = 22.0 ± 7.0 Employment at current university = 14.0 ± 6.0	Cross-sectional; Online Asynchronous interviewing–Journal Style Free-Form	NS

Table 4 (continued)

Authors (year) study title	Country; level(s) of sport	Sport(s); competition(s)	Practitioners; demographics	Study design; tools used	Theoretical framework(s)
Hill et al. (2021) Factors perceived to affect the wellbeing and mental health of coaches and practitioners working within elite sport [97]	NS; National/International	NS; National Governing Body	Coaches, Strength and Conditioning Coach, Sport Psychologist, Performance Analyst, Nutritionist, Physiotherapist, Performance Lifestyle Advisor, Performance Liaison Advisor, Performance Director; Invited = NS; participated = 11 Male = 5/female = 6 Age = NS Experience = NS	Cross-sectional; Semistructured Interviews	NS
Kegelaers et al. (2023) "We signed up for it": a qualitative examination of job resources in elite sport support staff members [131]	NS; 'Elite Sport'	NS; NS	Sport Managers, Physiotherapists, Sport Physicians, Technician, Data Analyst, Soigneur, Sport Psychologist; Invited = NS; participated = 13 Males = 11/Females = 2 Age = 44.85 ± 7.89 (31–60) Experience Working as a Support Staff Member in Elite Sport = 14.31 ± 10.50 (5–38)	Cross-sectional; Semistructured Interviews	Job Demands–Resources Model [18, 261]
Kenttä et al. (2020) Challenges experienced by women high-performance coaches: sustainability in the profession [151]	Sweden; National/International	NS; National teams	Coaches; Invited = 37; participated = 37 Female = 37 Age = 42.3 ± 9.5 (27–61) Coaching experience = 7.7 ± 6.5 (1–27)	Cross-sectional; Written Open-Ended Questionnaire	NS
Mazerolle and Eason (2016) A longitudinal examination of work-life balance in the collegiate setting [106]	USA; Collegiate	NS; NCAA Division I	Athletic Trainers; Invited = NS; participated = 6 Men = 3/women = 3 Age = 31.2 ± 2.9 Experience = 9.2 ± 2.9	Longitudinal; Semistructured Interviews	NS
Mazerolle and Hunter (2017) A qualitative exploration of the professional commitment of athletic trainers employed in the professional sports setting [62]	USA; Professional	Baseball, American Football, Ice Hockey, Basketball; Major League Baseball, National Football League, National Hockey League, National Basketball Association	Head Athletic Trainers, Assistant Trainer/Physical Therapists; Invited = NS; participated = 27 Male = 27 Age = 34.0 ± 8.0 (30–58) Experience as Athletic Trainer = 21.0 ± 8.0 (7–35) Experience in Professional Sports = 18.0 ± 7.0 (5–35)	Cross-sectional; Online Asynchronous interviewing–Open-Ended Survey	Three-Component Model of Organizational Commitment [262]

Table 4 (continued)

Authors (year) study title	Country; level(s) of sport	Sport(s); competition(s)	Practitioners; demographics	Study design; tools used	Theoretical framework(s)
Mazerolle et al. (2010) Athletic trainers' workload in NCAA Division I athletic programs [107]	USA; Collegiate	NS; NCAA Division I	Head Athletic Trainers, Assistant Athletic Trainers, Associate Athletic Trainers; Invited = 31; participated = 27 Male = 14/female = 13 Age = 34.0 ± 8.5 Experience = 11.8 ± 8.0	Cross-sectional; Open-Ended Survey Ques- tionnaire	NS
Mazerolle et al. (2011) Assessing strategies to man- age work and life balance of athletic trainers working in the National Collegiate Athletic Association Divi- sion I setting [109]	USA; Collegiate	American Football, Bas- ketball, Track, Soccer, Other(s) NS; NCAA Divi- sion I	Head Athletic Trainers, Assistant Athletic Trainers; Invited = NS; participated = 28 Men = 13/women = 15 Age = 35.0 ± 9.0 Experience = NS	Cross-sectional; Online Asynchronous inter- viewing–Semistructured, Open-Ended Format; Follow-Up Phone Interviews	NS
Mazerolle et al. (2014) The experiences of female athletic trainers in the role of the head athletic trainer [79]	USA; Collegiate	NS; NCAA Division I	Head Athletic Trainers; Invited = 10; participated = 8 Female = 8 Age = 45 ± 12 Experience in Role of Head Athletic Trainer = 5 ± 1.5 Experience as Athletic Trainer = 21 ± 10	Cross-sectional; Semistructured Interviews	NS
Poos and Carson (2022) The experiences of high-per- formance female coaches in Luxembourg [83]	Luxembourg; “High-Perfor- mance Sport”	NS; NS	Coaches; Invited = NS; participated = 6 Women = 6 Age = 41 ± 10 Coaching at High-Performance Level = 16.5	Cross-sectional; Semistructured interviews	Ecological Model [263]
Powell et al. (2022) Pressure, stress, and coping: exploring the professional demands of NCAA Divi- sion I coaching [112]	USA; Collegiate	Baseball, Softball, Basket- ball, American Football, Volleyball, Soccer, Track and Field, Field Hockey, Swimming and Diving; NCAA Division I	Head Coaches, Assistant Coaches; Invited = NS; participated = 22 Male = 14/female = 8 Age = 39.5 ± 11.6 Coaching experi- ence = 16.5 ± 10.8	Cross-sectional; Semistructured Interviews	NS
Sarkar and Hilton (2020) Psychological resilience in olympic medal-winning coaches: a longitudinal qualitative study [48]	UK; Olympic/Paralympic	Swimming; NS	Head Coaches; Invited = NS; participated = 5 Male = 4/female = 1 Age = 51.2 ± 11.2 (34–65) Experiencing Coaching Olympic Level Swimmers = 19.2 ± 9.9 (4–30)	Longitudinal; Semistructured Interviews	NS

Table 4 (continued)

Authors (year) study title	Country; level(s) of sport	Sport(s); competition(s)	Practitioners; demographics	Study design; tools used	Theoretical framework(s)
Singe et al. (2023) Work–family conflict: understanding workplace relationships for collegiate athletic trainers [119]	USA; Collegiate	NS; NCAA Division I, Division II, Division III	Athletic Trainers; Invited = NS; participated = 28 Male = 14/female = 14 Age = 35.0 ± 7.0 (26–49) Certified Athletic Trainer = 10.8 ± 5.5 (2.5–24) Worked at current institution = 7.9 ± 5.8 (0.2–22)	Cross-sectional; Semistructured Interviews	NS
Thelwell et al. (2010) Coping with stressors in elite sport: A coach perspective [12]	UK; Professional	Crickets, Rugby Union, Soccer; Employed by respective governing bodies of sport or by professional clubs	Head Coaches, Assistant Coaches; Invited = 3; participated = 3 Male = 3 Age = 36.7 ± 2.3 (34–38) Coaching experience = 8.3 ± 3.8 (4–11)	Cross-sectional; Semistructured Interviews	Transactional Theory of Stress [19]
Zweigle et al. (2020) The workplace experiences of athletic trainers in the professional sports setting [121]	USA; Professional	Baseball, American Football, Basketball, Soccer, Ice Hockey, Rugby; Major League Baseball, National Football League, National Basketball Association, Women's National Basketball Association, Major League Soccer, National Hockey League, Major League Rugby	Athletic Trainers; Invited = NS; participated = 18 Male = 15/female = 3 Age = 38.0 ± 8.0 (28–53) Experience in Professional Sport = 11.0 ± 9.0 (1–29)	Cross-sectional; Semistructured Interviews	NS
<i>Responses, and resources and coping</i>					
Bruening and Dixon (2007) Work–family conflict in coaching II: managing role conflict [74]	USA; Collegiate	Basketball, Cross Country, Rowing, Softball, Soccer, Tennis, Track, Volleyball; NCAA Division I	Head Coaches; Invited = 51; participated = 41 Female = 41 Age = 35.4 (29–40) Coaching experience = 6.5	Cross-sectional; Asynchronous Online Focus Groups	Multilevel Model of Work–Family Conflict in Sport [163] Organizational Role Theory [164]
Dixon and Bolter (2024) Collegiate coaches' reflective inquiry processes to manage performance demands [126]	USA; Collegiate	Baseball, Basketball, Golf, Soccer, Track and Field, Volleyball, Wrestling; NCAA Division II	Head Coaches; Invited = NS; participated = 13 Male = 10/Female = 3 Age = 44.92 ± 10.28 Collegiate coaching experience = 13.67 Head Coach experience = 9.50	Cross-sectional; Semistructured interviews	Broaden-and-Build Theory of Positive Emotion [264, 265]

Table 4 (continued)

Authors (year) study title	Country; level(s) of sport	Sport(s); competition(s)	Practitioners; demographics	Study design; tools used	Theoretical framework(s)
Hings et al. (2017) Emotional labor and professional practice in sports medicine and science [129]	UK; National/International	NS; NS	Sport and Exercise Psychologists, Strength and Conditioning Coaches, Physiotherapists, Sports Doctor, Sport Scientist; Invited = NS; participated = 18 Men = 15/women = 3 Age = NS Experience 0–5 = 2 6–10 = 3 11–15 = 7 16–20 = 1 16–20 = 3 20+ = 2	Cross-sectional; Semistructured Interviews	NS
McCormack et al. (2015) Practicing what we preach: investigating the role of social support in sport psychologists' well-being [110]	USA, UK, Ireland, Australia, New Zealand; Olympic/Paralympic, National/International	NS; Attended an international competition such as the Olympic or Paralympic Games, World Cup, European Cup, Pan-American Games or Commonwealth Games	Sport Psychologists; Invited = 80; participated = 30 Male = 18/female = 12 Age = NS Experience = NS	Cross-sectional; Semistructured Interviews	Job Demands–Resources Model [17]
Olusoga et al. (2010) Stress and coping: A study of world class coaches [11]	UK; Olympic/Paralympic, National/International	Swimming and Diving, Sailing, Bowls, Equestrian, Field Hockey, Lacrosse, Table Tennis; Previously coached at an Olympic Games, World Championships, World Cup, and/or Commonwealth Games	Coaches; Invited = NS; participated = 12 Male = 6/female = 6 Age = 47.3 ± 7.6 (36–64) Experience coaching at world class level = 14.5 ± 5.5 (6–22)	Cross-sectional; Semistructured Interviews	Transactional Theory of Stress [19] Cognitive–Affective Model of Stress and Burnout [160]
Petiot et al. (2025) Emotional labor in sport coaching: a situational approach in the context of elite French handball [69]	France; Professional	Handball; First and Second Division French Championship	Coaches; Invited = NS; participated = 10 Men = 10 Age = 44.6 ± 9.4 (33–63) Professional coaching experience = 13.8 ± 8.5 (4–33)	Cross-sectional; Individual Self-Confrontation Interviews; Dictaphone to capture verbalizations throughout the match	NS
Simova et al. (2025) Understanding well-being in high-performance coaches: a constructivist grounded theory approach [135]	UK, Czech Republic, Canada, Greece, Sweden, Norway, Australia; “High-Performance Sport”	Water Sports, Gymnastics, Athletics, Judo, Football, Basketball, Snowsport, Rugby, Golf, Hockey; NS	Head Coaches, Assistant Coaches; Invited = NS; participated = 14 Identifying as man = 12, identifying as woman = 4 Age = NS High-performance experience = 7.62	Cross-sectional; Semistructured interviews	NS

Table 4 (continued)

Authors (year) study title	Country; level(s) of sport	Sport(s); competition(s)	Practitioners; demographics	Study design; tools used	Theoretical framework(s)
<i>Demands, responses, and resources and coping</i>					
Baldock et al. (2021) Stress and mental well-being experiences of professional football coaches [52]	England; Professional	Soccer; English Premier League, English Football League Championship	First Team Coaches; Invited = NS; participated = 8 Male = 8 Age = 45.8 ± 7.4 (34–56) Experience as Professional Coaches = 7.8 ± 5.2 (3–14)	Cross-sectional; Semistructured Interviews	Transactional Theory of Stress [19] Cognitive–Motivational–Rela- tional Theory [159]
DeWolfe and Dithurbide (2022) Beware of the blues: wellbe- ing of coaches and support staff throughout the Olym- pic Games [125]	Canada; Olympic/Paralympic	NS; Summer or Winter Olympic Games	Head Coaches, Assistant Coaches, Support Staff–NS; Invited = NS; participated = 8 Male = 5/female = 3 Age = NS Experience = NS	Cross-sectional; Semistructured Interviews Visual Timelines	Dual Continua Model of Men- tal Health [266]
DiSanti et al. (2023) Athletic trainers' psychoso- cial experiences during the COVID-19 pandemic: a qualitative research study [91]	USA; Collegiate	NS; NCAA Division I, Divi- sion II, Division III	Athletic Trainers; Invited = NS; Participated = 27 Male = 18/Female = 9 Age = 47.7 ± 9.3 Experience = 25.0 ± 10.7	Cross-sectional; Semistructured Interviews	NS
Eccles et al. (2023) “Switching the mind off completely”—Understand- ing the psychology of rest in coaches [93]	USA; Collegiate	Basketball, Baseball, Beach Volleyball, Indoor Volley- ball, Field Hockey, Soccer, Softball, Tennis, Golf, Track and Field; NCAA Division I	Head Coaches, Assistant Coaches; Invited = NS; participated = 22 Male = 11/female = 11 Age = male = 41.0 ± 14.0 (22–71)/ female = 39.6 ± 9.9 (28–59) Coaching experi- ence = male = 13.1 ± 10.4 (1–35)/female = 14.2 ± 10.6 (4–38)	Cross-sectional; Semistructured Interviews	Eccles–Kazmier Model [267]
Fraser et al. (2024) University serial winning coaches' experiences with low performance and mala- daptive team culture [94]	USA; Collegiate	Ice Hockey, Basketball, Rugby, Soccer, Volleyball; NS	Coaches; Invited = NS; participated = 7 Male = 5/female = 2 Age = NS Experience = 23.3	Cross-sectional; Semistructured Interviews	Leader–Member Exchange Theory [268, 269]
Frey (2007) College coaches' experiences with stress—“Problem solv- ers' have problems, too [95]	USA; Collegiate	Baseball, Basketball, Div- ing, Softball, Swimming, Tennis, Volleyball; NCAA Division I	Head Coaches; Invited = 15; participated = 10 Male = 6/female = 4 Age = 45.7 (36–55) Coaching experience = 14–30 Time spent as Head Coach or Co- Head Coach = 5–30	Cross-sectional; Semistructured Interviews	Cognitive–Affective Model of Stress and Burnout [160]

Table 4 (continued)

Authors (year) study title	Country; level(s) of sport	Sport(s); competition(s)	Practitioners; demographics	Study design; tools used	Theoretical framework(s)
Goodman et al. (2010) Retention and attrition factors for F certified athletic trainers in the National Collegiate Athletic Association Division I Football Bowl Subdivision setting [77]	USA; Collegiate	American Football; NCAA Division I	Athletic Trainers; Invited = NS; participated = 23 Female = 23 Age = 36.3 ± 7.6 (26–51) Full-time experience = 14.0 ± 7.6 (4–30) NCAA Division I experience = 8.2 ± 6.2 (2–26)	Cross-sectional; Semistructured Interviews	NS
Griffin et al. (2025) Lived experiences of stress and the coping mechanisms of assistant coaches in the National Basketball Association (NBA) [51]	USA; Professional	Basketball; National Basketball Association	Assistant Coaches; Invited = 21; Participated = 20 Male = 20 Age = 43.85 Experience coaching professionally = 8.6	Cross-sectional; Semistructured interviews	Transactional Model of Stress and Coping [19]
Higham et al. (2023) Using video documentaries to explore male professional football head coaches' well-being experiences throughout a season [54]	England, Spain; Professional	Soccer; English Premier League, Spanish La Liga	First Team Head Coaches; Invited = NA; participated = 4 Male = 4 Age = NS Experience = NS	Longitudinal; Interpretative Phenomenological Analysis of video documentary data	Bioecological Theory and Process-Person-Context-Time Model [270]
Joncheray et al. (2019) Is the game lost in advance? Being a high-performance coach and preserving family life [99]	France; Olympic/Paralympic	Archery, Basketball, Beach Volleyball, Boxing, Cycling, Canoe Kayaking, Fencing, Golf, Gymnastics, Handball, Horseback Riding, Judo, Rowing, Rugby, Skiing, Swimming, Table Tennis, Taekwondo, Track and Field, Weightlifting, Wrestling; Teams in preparation for the Olympic Games in Rio 2016, Pyeongchang 2018, and/or Tokyo 2020	Coaches; Invited = NS; participated = 41 Male = 33/female = 8 Age < 35 = 4 35–50 = 25 > 50 = 12 Experience as “high-level coach” < 8 = 11 8–10 = 20 > 16 = 9	Cross-sectional; Semistructured Interviews	Interactionist Theory [271]
Kenttä et al. (2016) Are career termination concerns only for athletes? A case study of the career termination of an elite female coach [78]	Sweden; Olympic/Paralympic, National/International	Swimming; Coached elite swimmers at World Championships, European Championships, and Olympic Games in Sydney (2000), Athens (2004), Beijing (2008), and London (2012)	Coach; Invited = 1; participated = 1 Female = 1 Age = NS Experience = NS	Cross-sectional; Autobiographical Approach using Expressive Writing	Athletic Career Transition Model [272]

Table 4 (continued)

Authors (year) study title	Country; level(s) of sport	Sport(s); competition(s)	Practitioners; demographics	Study design; tools used	Theoretical framework(s)
Knights and Ruddock-Hudson (2016) Experiences of occupational stress and social support in Australian Rules Football League senior coaches [143]	Australia; Professional	Australian Rules Football; The Australian Football League	Head Coaches; Invited = 18; participated = 12 Gender/Se = NS Age = 44.0 ± 6.4 (37–58) Experience = 4.8 ± 3.5 (1–12)	Cross-sectional; Semistructured Interviews	NS
Olusoga and Kenttä (2017) Desperate to quit: A narrative analysis of burnout and recovery in high-performance sports coaching [171]	Sweden; Professional, National/International	NS; Highest club level and International level	Coaches; Invited = NS; participated = 2 He/H = 2 Age = NS Experience = 10–20	Retrospective; Loosely Structured Interviews–‘Active Listener’ [273]	NS
Roberts et al. (2018) Lifting the veil of depression and alcoholism in sport coaching: how do we care for carers? [72]	UK; ‘Elite Sport’	NS; NS	Coach; Invited = NS; participated = 1 Male = 1 Age = mid-40s	Longitudinal; Semistructured Interviews	NS
Romero et al. (2018) Role strain, part 2: perceptions among athletic trainers employed in the professional practice setting [147]	USA; Professional	Baseball, Soccer, Basketball, American Football, Ice Hockey; Major League Baseball, Major League Soccer, National Football League, National Hockey League, National Basketball Association	Athletic Trainers; Invited = NS; participated = 34 Gender/sex = NS Age = NS Years in Professional Sport League = 11.9 ± 8.7 (1–33) Years in current organization = 9.3 ± 6.9 (1–23) Total years in Professional Sports = 12.9 ± 8.9 (1–33)	Cross-sectional; Semistructured Interviews	Organizational Role Theory [164] Role Strain Theory [176]
Wagstaff et al. (2014) Sport medicine and sport science practitioners’ experiences of organizational change [138]	UK; Professional	Soccer, Cricket; English Premier League, County Championship Division I Cricket	Doctors, Physiotherapists, Psychologists, Performance Analysts, Strength and Conditioning Coaches; Invited = NS; participated = 20 Male = 19/female = 1 Age = NS Experience = NS	Longitudinal; Semistructured interviews	NS

Table 4 (continued)

Authors (year) study title	Country; level(s) of sport	Sport(s); competition(s)	Practitioners; demographics	Study design; tools used	Theoretical framework(s)
Zakrjsek et al. (2019) Collegiate assistant coaches' perceptions of basic psychological need satisfaction and thwarting from head coaches: a qualitative investigation [140]	USA; Collegiate	NS; NCAA Division I	Assistant Coaches, Associate Head Coaches; Invited = NS; participated = 17 Male = 9/female = 8 Age = 36.24 ± 9.26 (24–56) Coaching experience = 34 ± 8.60 Experience with Current Head Coach = 4.53 ± 3.84 seasons	Cross-sectional; Semistructured interviews	Self-Determination Theory [166]

All age and experience characteristics are reported in years, mean ± standard deviation (range) (if available). Definitions for measures of experience are reported as they were defined in the respective study

NCAA National Collegiate Athletic Association, NA not applicable, NS not specified

representation, age, and experience of the study samples are summarized in Tables 3, 4 and 5.

3.5 Demands, Responses, and Resources and Coping

There was a balanced distribution of studies across outcomes studied, with “responses” being the most researched category ($n = 24$, 19%). Several papers assessed mixed groups of outcomes, with “demands, responses, and resources and coping” ($n = 23$, 19%) and “demands and resources and coping” ($n = 21$, 17%) being the most common combinations. Further results on the outcomes studied are presented in Table 2. The key reported demands included workload and travel, organizational factors and the structure of work, interpersonal and performance-related stressors, and socio-cultural factors. Key responses identified were emotional and psychological responses, physiological reactivity, burn-out, and work–life balance and role strain. Key reported resources and coping strategies included individual coping efforts, emotional regulation and psychological coping, work–life balance strategies, and the use of support networks and cohesion. A narrative synthesis of key findings from each study is also presented in Online Resource 1–3.

4 Discussion

This review provides a comprehensive overview of peer-reviewed research on high-performance sport staff across disciplines such as coaching, medical, and performance. It describes the quantity and characteristics of studies conducted to date, including study designs, methodologies, and participant demographics that shape this area of work. Key theoretical frameworks are identified to support the interpretation of staff's experiences. Building on these foundational elements, the review outlines the demands encountered by staff, the responses exhibited, and the coping strategies and resources used to navigate these environments. By synthesizing these findings, the review offers a broad understanding of the current literature and highlights areas that may support future research and model development to enhance staff health and well-being.

4.1 Overall Quantity of Peer-Reviewed Literature Available

Research in this area has increased since 2007, with a notable increase in the last decade. Of the studies included in this review, 71% ($n = 88$) were published between 2015 and 2025, and almost half (40%, $n = 50$) were published from 2020 onward. This growth highlights the timeliness of the current review and its role in providing a broad

Table 5 Summary of mixed-method studies included in this review ($n=8$)

Authors (year) Study title	Country; level(s) of sport	Sport(s); competition(s)	Practitioners; demographics	Study design; tools used	Theoretical framework(s)
<i>Responses</i>					
Baldock et al. (2022) A longitudinal examination of stress and mental ill-/ well-being in elite football coaches [47]	England, France, Portugal, Belgium; Professional	Soccer; English Premier League, English Football League Championship, Eng- lish Football League, French Ligue 1, Primeira Liga, Jupiler Pro League	First Team Coaches; Quantitative Invited = NS; participated = 18 Male = 18 Age = 38.0 ± 7.6 (26–53) Experience as professional coaches = 9.8 ± 6.3 (1–20) Qualitative Invited = 18; participated = 8 Male = 8 Age = 38.6 ± 7.7 (5–20) Experience as Professional Coaches = 11.8 ± 5.1 (1–20)	Longitudinal; Demands/Resources Evalua- tion Tool–Adapted [274] Warwick-Edinburgh Mental Well-Being Scale [191] Maslach Burnout Inventory for Coaches [190] Semistructured Interviews	Transactional Theory of Stress [19] Cognitive–Motivational–Rela- tional Theory [159]
<i>Demands, responses</i>					
Mazerolle et al. (2008) Work-family conflict, part I: Antecedents of work-family conflict in National Col- legiate Athletic Association Division I-A certified athletic trainers [167]	USA; Collegiate	NS; NCAA Division I	Head Athletic Trainers, Assistant Athletic Trainers, Program Directors; Quantitative Invited = 1407; partici- pated = 587 (includes part- time) Male/female = NS HP Age = NS HP Experience in elite sport = NS HP Qualitative Invited = NS; participated = 8 full-time Male/female = NS HP Age = NS HP Experience 0–5 = 1 5–10 = 1 10–15 = 2 15–20 = 3 20–25 = 1	Cross-sectional; Work–Family Conflict and Family–Work Conflict Scales [240] Semistructured interviews	NS

Table 5 (continued)

Authors (year) Study title	Country; level(s) of sport	Sport(s); competition(s)	Practitioners; demographics	Study design; tools used	Theoretical framework(s)
Mazerolle et al. (2008) Work-family conflict, part II: Job and life satisfaction in National Collegiate Athletic Association Division I-A cer- tified athletic trainers [168]	USA; Collegiate	NS; NCAA Division I	Head Athletic Trainers, Assistant Athletic Trainers, Program Directors; Quantitative Invited = 1407; partici- pated = 587 (includes part- time) Male/female = NS HP Age = NS HP Experience in elite sport = NS HP Qualitative Invited = NS; participated = 8 full-time Male/female = NS HP Age = NS HP Experience 0–5 = 1 5–10 = 1 10–15 = 2 15–20 = 3 20–25 = 1	Cross-sectional; Work–Family Conflict and Family–Work Conflict Scales [240] Semistructured interviews	NS
<i>Demands, resources and coping</i>					
Levy et al. (2009) Organizational stressors, cop- ing, and coping effectiveness: A longitudinal study of an elite coach [9]	UK; National/International	Aquatics; NS	Head Coach; Invited = 1; participated = 1 Male = 1 Age = 40 Experience Coaching Elite Athletes = 6	Longitudinal; Effectiveness of Coping Response [275] Daily Diary–Open-Ended Format	NS
<i>Responses, resources and coping</i>					

Table 5 (continued)

Authors (year) Study title	Country; level(s) of sport	Sport(s); competition(s)	Practitioners; demographics	Study design; tools used	Theoretical framework(s)
Pankow et al. (2022) The role of mental health protection and promotion among flourishing Canadian university sport coaches [68]	Canada; Collegiate	American Football, Soccer, Basketball, Rugby; University level	Head Coaches, Associate Head Coaches; Quantitative Invited = 40; participated = 14 Men/women = NS for quantitative results Age = NS for quantitative results Experience in elite sport = NS for quantitative results Qualitative Invited = 9; participated = 7 Men = 7/women = 0 Age = 45 (30–57) Experience University Coaching = 15 (8–21) Years in current role = 8 (2–21)	Cross-sectional; Mental Health Continuum–Short Form [276] Sport Mental Health Continuum–Short Form [277] Semistructured Interviews	Dual Continua Model of Mental Health [266]
<i>Demands, responses, resources and coping</i>					
Bentzen et al. (2017) A comparison of high-performance football coaches experiencing high- versus low-burnout symptoms across a season of play: quality of motivation and recovery matters [88]	Norway; Professional	Soccer; Premier Norwegian Football League (Men), Second Highest Division (Men) and Premier Football League (Women)	Head Coaches, Assistant Coaches, Expert Development Coaches, Goalkeeper Coaches, Physical Coaches; Quantitative Invited = 169; participated = 92 Male = 93.5%/female = 6.5% Age = 40.4 ± 7.3 years (25–58) Coaching experience = 10.9 ± 7.2 (1–30) Qualitative Invited = 4; participated = 4 Age = 40–55 Coaching experience = 16.8 ± 9.2 (7–28)	Longitudinal; Maslach Burnout Inventory General Scales [187] Perceived Goal Attainment and Goal Probability [181] Resources of Club–Objectively Assessed Self-Regulation Questionnaire at Work [186] Areas of Work Life Scale–Workload Subscale [182] Inter-Role Conflict [222] Recovery Experience Questionnaire–Psychological Detachment and Relaxation Subscales [223] Semistructured Interviews	Self-Determination Theory [166]

Table 5 (continued)

Authors (year) Study title	Country; level(s) of sport	Sport(s); competition(s)	Practitioners; demographics	Study design; tools used	Theoretical framework(s)
Mazerolle and Hunter (2018) Work-life balance in the professional sports setting: the athletic trainer's perspective [63]	USA; Professional	Baseball, American Football, Ice Hockey, Basketball; Major League Baseball, National Football League, National Hockey League, National Basketball Association	Head Athletic Trainers, Assistant Athletic Trainers, Athletic Trainer/Physical Therapists Invited = NS; participated = 27 Male = 27 Age = 34.0 ± 8.0 (30–58) Experience as Athletic Trainer = 21.0 ± 8.0 (7–35) Experience in Professional Sports = 18.0 ± 7.0 (5–35)	Cross-sectional; Work-Family Conflict Scale–Adapted [167]; Likert Scale Questionnaire–Fulfilling Work-Responsibilities while Managing Roles and Responsibilities in Personal Life (Validation Unknown) Online Asynchronous Interviewing–Journal Style Open-Ended	NS
Mazerolle et al. (2015) Work-life balance perspectives of male NCAA Division I athletic trainers: strategies and antecedents [60]	USA; Collegiate	American Football, Basketball, Ice Hockey, Baseball, Soccer, Cross Country, Track and Field, Swimming and Diving, Tennis, Volleyball, Golf, Cheerleading, Dancing; NCAA Division I	Head Athletic Trainers, Assistant Head Athletic Trainers, Senior Athletic Trainers, Associate Athletic Trainers, Assistant Athletic Trainers, Athletic Training Coordinators Invited = NS; participated = 22 Male = 22 Age = NS Experience as Certified Athletic Trainer = 10.5 ± 7.7 Years in current position = 6.0 ± 6.9	Cross-sectional; Work-Family Conflict Scale–Adapted [167]; Likert Scale Questionnaire–Fulfilling Work-Responsibilities while Managing Roles and Responsibilities in Personal Life (Validation Unknown) Online Asynchronous Interviewing–Journal Style Open-Ended	NS

All age and experience characteristics are reported in years, mean $\pm$ standard deviation (range) (if available). Definitions for measures of experience are reported as they were defined in the respective study

NCAA National Collegiate Athletic Association, NS not specified, NS HP not specified for high-performance sport

Table 6 Summary of the region and country characteristics of the studies included in this review ($n = 124$)

	<i>N</i>	% of sample
<i>Region(s)</i>		
North America	59	48
Europe	43	35
Australia and Oceania	8	6
Africa	2	2
Asia	2	2
South America	1	1
Not specified	5	4
Mixed regions		
USA, UK, Ireland, Australia, New Zealand	1	1
UK, Czech Republic, Canada, Greece, Sweden, Norway, Australia	1	1
UK, other (not specified)	1	1
Netherlands, Australia	1	1
<i>Country</i>		
USA	55	44
UK	14	11
Australia	7	6
Norway	5	4
Sweden	5	4
Canada	4	3
Greece	3	2
Norway, Sweden	3	2
England	2	2
France	2	2
Lithuania	2	2
Qatar	2	2
Brazil	1	1
Denmark, Norway	1	1
England, France, Portugal, Belgium	1	1
England, Spain	1	1
Germany	1	1
Ghana	1	1
Ireland	1	1
Luxembourg	1	1
New Zealand	1	1
Poland	1	1
South Africa	1	1
Netherlands, Australia	1	1
UK, Czech Republic, Canada, Greece, Sweden, Norway, Australia	1	1
USA, UK, Ireland, Australia, New Zealand	1	1
UK, other (not specified)	1	1
Not specified	5	4

overview of a developing area of research. Despite this recent progress, there remains a clear disparity between practitioner-focused and athlete-focused research. For example, reviews examining the physical demands of athletes often include over 100 studies, such as in basketball

(122 studies) [4], American Football (112 studies) [3], Australian Rules Football (164 studies) [2], and other multidirectional team sports (81 studies) [5], while the present review includes a similar number of studies ($n = 124$) despite covering a much broader range of constructs. This imbalance underscores the need for greater

Table 7 Summary of the level of sport and practitioner characteristics of the studies included in this review ($n = 124$)

	<i>n</i>	% of sample
<i>Level of sport</i>		
Collegiate	53	43
Professional	24	19
National/International	13	10
Olympic/Paralympic	10	8
<i>Mixed levels of sport</i>		
Professional, National/International	7	6
Olympic/Paralympic, National/International	6	5
Collegiate, National/International	1	1
<i>Level of sport not specified</i>		
“Elite sport”	6	5
“High-performance”	4	3
<i>Practitioners</i>		
Coach	79	64
Medical and performance	41	33
Mixed practitioners	4	3

research attention on non-athlete personnel and staff in high-performance sport.

4.2 Study Design and Methodologies

This review found more qualitative ($n = 72$, 58%) versus quantitative ($n = 44$, 36%) studies, with few using mixed-method approaches ($n = 8$, 6%). Mixed-method research is increasingly being used in health sciences [43, 44] to gain a more comprehensive understanding of research questions while integrating input from key stakeholders [45]. This approach capitalizes on the strengths of both quantitative and qualitative methodologies to address complex challenges faced in modern health services [46]. Future research in high-performance sport could benefit from adopting mixed-methods designs, for example, independent, concurrent designs with exploratory (quantitative) and explanatory (qualitative) components, as used by Baldock et al. [47] to examine stress and mental health in elite football coaches.

The reviewed studies were mostly cross-sectional ($n = 96$, 77%), with fewer longitudinal designs conducted in high-performance sport ($n = 25$, 20%). This focus on cross-sectional research may limit our understanding of more dynamic constructs in this area. For example, previous work has emphasized the dynamic relationship between environmental demands (i.e., stressors) and an individual’s psychological resources for dealing with them (i.e., coping ability) [22]. Moreover, coping involves “constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person” [19]. As such, stress responses

can result from a perceived imbalance between demands and resources that can fluctuate over time [22]. Longitudinal studies are warranted to understand how work demands and responses evolve over time, as existing research has revealed additional stressors during prolonged periods of pressure (e.g., Olympics) [48], fluctuations in stress experiences and mental well-being [47], and changes in exhaustion throughout a competitive season [49].

The reviewed studies often had small sample sizes, with a median of 18 participants, likely owing to limited accessibility of larger groups of staff, particularly in single-organization case studies. This trend is especially evident in the qualitative and/or longitudinal studies, often using more time-intensive methods such as semistructured interviews or prolonged/repeat data collection. Larger samples were more common in the quantitative, cross-sectional studies, often achieved through large-scale electronic surveys distributed to organizations (e.g., the National Athletic Training Association). This reflects a reliance on convenience sampling in larger studies, while smaller studies (e.g., observational/longitudinal) often used purposive or snowball sampling.

4.3 Participant Characteristics

4.3.1 Roles and Disciplines

Almost two-thirds (64%) of the research in this review focused on coaches in high-performance sport ($n = 79$), with less attention given to medical and performance practitioners ($n = 41$) and a small number of studies examining mixed groups of staff (i.e., coaches and medical/performance practitioners; $n = 4$). Research on coaching has examined both head and assistant coaches, while studies on medical and performance practitioners have included head and assistant athletic trainers, physical therapists, performance directors, strength and conditioning coaches, sports scientists, and sport psychologists. To date, research has largely overlooked other roles within high-performance sport, such as management, logistics, and public relations staff. While dual-role practitioners (e.g., graduate assistants, teacher-practitioners) have been studied in the literature, the demands, responses, and coping strategies for these individuals were excluded from this review to control for the potentially confounding results of responsibilities that are not sport-related.

4.3.2 Sex and Gender Representation

A recurring theme across the reviewed literature was the differentiated experiences of practitioners on the basis of sex and/or gender, underscoring its relevance as a critical dimension shaping how individuals navigate, contribute to, and are perceived within high-performance sport environments. In the reviewed literature, there was a strong bias toward

male representation. Specifically, 28 studies included only male/men participants [9, 12, 24, 47, 50–73], while just 10 studies focused exclusively on females/women participants [74–83]. Of the 62 studies that included cohorts of both males/men and females/women [10, 11, 13, 48, 49, 84–140], nearly 65% of participants were male/men, approximately 35% were female/women, and fewer than 1% identified as another gender. Eleven studies did not report the sex or gender of participants [53, 141–150]. As previous work suggests that females may face different challenges compared with their male counterparts [101, 111], it is important for future research to continue exploring the experiences of female staff. Indeed, women coaches in high-performance sport have reported that challenges within their work environments include “stereotypical, male-dominated culture” and “gender inequality” [151]. Similarly, none of the literature reviewed discussed broader social constructs that may be relevant to individuals with diverse gender and/or sexual identities.

4.3.3 Level of Sport

In terms of level of sport and location, most research has focused on staff in North America ($n=60$), Europe ($n=46$), and Australia and Oceania ($n=10$), with an emphasis on individuals working in collegiate ($n=53$) and professional sports ($n=24$). Notably, 89% of the research in the USA involved practitioners in collegiate sports ($n=49$), reflecting the prominence of this industry governed by the National Collegiate Athletics Association (NCAA). In contrast, only six studies focused on practitioners in professional sports within the USA.

Defining the level of sport can be challenging when studies involve diverse cohorts across cultures and use varying terminology. This difficulty is often compounded by limited detail in published research. For example, 10 studies in this review used the terms “high-performance” or “elite” to describe their populations but did not clarify the specific level of sport or competition involved. Studies examined in the current review included many high-level settings such as Olympic, professional, and national collegiate sports, illustrating how inconsistent definitions of “elite” complicate comparisons. Similarly, while some studies have compared work demands and stress responses between different levels of sport (e.g., NCAA Divisions [111, 117, 152], high-performance versus community level [23]), and employment types (e.g., full-time versus part-time [102, 153]), there is limited research that explores these differences, therefore restricting our understanding of the unique demands of various settings and roles. Encouragingly, most studies ($n=114$) in this review clearly defined the level of sport, and many ($n=103$) specified the competitions analyzed. However, nearly half of

the studies excluded during full-text screening were removed owing to unclear levels of sport ($n=20$) or grouping staff across levels or employment types ($n=43$).

4.4 Theoretical Frameworks

Theoretical frameworks integrate evidence and foundational knowledge to build a consolidated understanding of phenomena, guiding future research and informing practical applications [154]. By conceptualizing and articulating causal phenomena, they strengthen methodological choices in research, ensuring conceptual clarity and a solid foundation for robust empirical studies [155].

Frameworks offer a valuable lens for interpreting findings and guiding decision-making in applied settings. This approach is well established in sport; for instance, prior studies have developed [156] and implemented [157] conceptual frameworks to better understand physical training of athletes. These frameworks conceptualize aspects such as training load, individual and contextual factors, training effects, and their effects on performance. Approximately half of the reviewed literature ($n=59$) incorporated theoretical frameworks to study practitioners, emphasizing their potential to enhance understanding of staff demands and experiences while advancing best practices. Greater consistency in applying and reporting theoretical frameworks in this field would also strengthen comparisons and insights from research findings. The following sections summarize the most frequently reported theoretical frameworks from the reviewed literature for future research.

4.4.1 Stress and Coping Frameworks

The reviewed literature featured various theoretical frameworks, with 24 studies focusing on constructs related to “stress and coping,” and how individuals experience and manage work demands. These include the Transactional Theory of Stress ($n=12$) [19], Meta-Model of Stress, Emotion, and Performance ($n=6$) [158], Cognitive–Motivational–Relational Theory of Stress and Emotions ($n=5$) [159], Cognitive–Affective Model of Stress and Burnout ($n=4$) [160], and Cognitive Activation Theory of Stress ($n=1$) [161].

The Transactional Theory of Stress [19], the most reported framework in the literature [10–13, 24, 47, 51, 52, 70, 113, 123, 145], defines stress as the interaction between the person and the environment (i.e., stressor) that is appraised as personally significant (i.e., threat, harm, or challenge) and as taxing or exceeding one’s coping resources [22]. The Meta-Model of Stress, Emotion, and Performance [158], the second most referenced framework [67, 71, 85, 100, 102, 162], builds on this by highlighting how

appraisal-driven emotional responses affect stress management and performance outcomes [158]. Both frameworks provide a dynamic and individualized perspective on stress, making them highly relevant for assessing individual experiences, and how this may impact responses and performance outcomes [19, 158].

4.4.2 Work Demands and Organizational Frameworks

Thirteen studies explored “work demands and organizational theories,” providing frameworks that explain how work pressures and individual resources influence employee well-being, commitment, and performance. The work demands and organizational frameworks identified in this review include the Multilevel Model of Work–Family Conflict in Sport ($n=4$) [163], Job Demands–Resources Model ($n=4$) [17], Organizational Role Theory ($n=3$) [164], Three-Component Model of Organizational Commitment ($n=1$) [164], Demands-Induced Strain Compensation Recovery Model ($n=1$) [164], and Person–Environment Fit Theory ($n=1$) [165].

The JD–R model, widely used in organizational psychology, broadly categorizes job stress factors into job demands and job resources [17]. Consequently, the interaction between job demands and resources determines the level of strain, with strain arising when there is an imbalance between demands and available coping resources [17, 18]. Another commonly referenced framework was the Multilevel Model of Work–Family Conflict in Sport [163], which integrates multiple theoretical levels (individual, organizational/structural, and sociocultural) regarding the processes and outcomes of work–family conflict, as well as the larger structural and social meanings behind work, family, and their interface.

4.4.3 Motivation and Behavior Frameworks

Frameworks related to “motivation and behavior” were less commonly reported across the reviewed literature. However, the Self-Determination Theory, cited in eight studies [49, 50, 53, 88, 89, 134, 137, 140], provides a framework for understanding how psychological processes promote optimal functioning and health in high-performance environments [166]. This theory suggests that work environments that support basic psychological needs, such as competence, autonomy, and relatedness, boost intrinsic motivation (i.e., engaging in activities out of genuine interest and personal value). Competence refers to feeling effective and capable in one’s activities, autonomy reflects a sense of choice and control over one’s actions, and relatedness refers to feeling connected and a sense of belonging with others [166]. These environments also promote the internalization of extrinsic motivation, promote self-driven and internally motivated

attitudes, and encourage aspirations that satisfy these psychological needs, leading to positive emotions, high-quality performance, sustained healthy behaviors, and improved mental health [166].

4.5 Demands and Stressors in High-Performance Sport

Job demands encompass the physical, psychological, social, and organizational elements of a role that requires sustained physical and/or psychological effort [17]. Understanding the resulting physiological or psychological costs [17] is essential to examining experiences of staff in high-performance sport, as these factors have direct impacts on well-being, job satisfaction, and performance [19, 158]. Individual perceptions and appraisals of demands play a crucial role in shaping their stress responses and determining the coping strategies employed to manage both the demands and their potential impacts [19]. This review included 72 studies that explored the demands faced by staff in high-performance sport, with 60 (83%) investigating corresponding responses and/or coping strategies. The findings from these studies provide insight into a range of demands encountered by staff working in high-performance sport, including workload, organizational stressors and structural constraints, athlete- and performance-related stressors, and sociocultural factors, all of which are explored in more detail below.

4.5.1 Workload and Travel

Workload is the most reported stressor in high-performance sport settings. It was characterized by long work hours, extensive travel, infrequent days off, and an increasing number of responsibilities, such as administrative duties [9, 76, 93, 96, 100, 121]. Notable examples illustrating the workload stress in sport include staff reporting working “seven days a week,” characterizing their workload as “heavy,” “unpredictable” [100], and “never stopping” [99]. There is often a perceived expectation to be “on-call 24/7” [100]. The expectation of extensive “face time” in the office was another factor contributing to long workdays [76], requiring staff to adopt strategies to meet these demands, which also impacted overall well-being. Many staff reported that the combined demands of work, travel, and associated time commitments necessitate personal sacrifices [10, 121, 143], such as prolonged time away from home, family, and friends [62, 167, 168]. Coaches in collegiate sports indicated that job demands, including extensive work and travel obligations, limit their time and resources for rest, recovery, and personal responsibilities, impacting other areas of their lives, such as the home environment [62, 119]. Another common theme related to workload was the additional burden of

administrative duties at work, which extended beyond the staff's primary responsibilities, such as coaching or athlete care, and were largely driven by directives from professional organizations, sports leagues, or governing bodies [9, 13, 60, 96, 112, 147, 169].

While the evidence discussed above indicates that high-performance sport staff can experience very high workloads, some research suggests that staff may come to accept these demands as "normal" for the job [170]. In professional sport, workloads are often acknowledged as "considerable" but "expected and manageable" [97]. These findings underscore the importance of understanding how individuals appraise stressors, as discussed in the Cognitive Activation Theory of Stress [161] and Transactional Stress Theory [19], and how this appraisal influences their potential psychobiological responses. Understanding individual motivations and psychological needs is also essential [166], as passion for one's work has been identified as a factor in professional commitment [99]. However, when this passion turns into obsession [54] or is coupled with a sense of obligation to perform [99], it can lead staff to become consumed by their role and cause physical and psychological absence at home [54, 99].

In-season workloads for athletic trainers have been reported to average 51–75 h per week in professional sports [55, 62] and 58–65 h in NCAA Division I collegiate sports [80, 107, 109]. Furthermore, while travel is highlighted by much of the qualitative work in this review [9, 13, 62, 71, 96, 100, 121, 151] and frequently described as "extensive" [76, 170], only one study provided an estimate for travel demands, with athletic trainers reporting approximately 10 days of travel per month in collegiate sports [80]. Previous quantitative work studying athletes in basketball employed methods to quantify travel demands, including hours traveled and days spent away from the team's home city throughout the competitive season [157]. However, there are no comparable methods and limited data quantifying work and travel hours across the reviewed literature for staff. While self-reported data are valuable, developing consistent methods to better quantify work and travel hours is essential to gain a clearer understanding of the hours worked and traveled by staff in these environments, informing strategies for coping and organizational support.

4.5.2 Organizational Factors and Structure of Work

The reviewed literature indicates that work structure and organizational factors can intensify work demands and stressors beyond the pressures of a high workload. An inflexible work schedule emerged as a prominent structural concern, where the stress of long hours and frequent travel is frequently amplified by restricted autonomy and lack of scheduling flexibility [96, 106, 109, 167, 168]. Other organizational factors said to exacerbate work stress included

inadequate resources, poor facilities and equipment, and governance issues [9, 13, 52, 53, 62, 71, 90, 109, 113, 169]. Organizational governance issues included insufficient support or interference from leadership, organizational instability, job insecurity, autocratic decision-making, prescriptive management, inadequate infrastructure, financial constraints, and staffing issues (e.g., lack of or low-quality staff). Staff have also highlighted individual-level stressors, such as low salaries and inadequate financial compensation [71, 113, 167, 168], the increasing need for qualifications and professional development [71], and limited promotion opportunities, with long timeframes required to achieve career progression [121]. While these factors are not direct stressors from the work itself, they are closely linked to organizational dynamics, illustrating how external structural issues can shape individual experiences.

4.5.3 Interpersonal and Performance-Related Stressors

Many staff reported stress arising from interpersonal dynamics and performance-related pressures [10, 13, 52, 71, 90, 100, 111–113, 143, 147, 169], primarily related to coaching duties, athlete management, and performance demands. Interpersonal dynamics with athletes emerged as a key source of stress, including managing athlete dissatisfaction, poor communication, negative attitudes, strong egos, lack of respect, behavioral problems, commitment issues, and underperformance [10, 71, 113]. Some practitioners also reported feeling stressed by athletes' increasing expectations for high-quality care and personalized training support [143, 147]. However, pressure and expectations were not only from athletes, as governing bodies, supporters, media, other staff, and self-imposed expectations add to the strain [10, 95, 113, 116, 143, 171]. As a result, many practitioners reported working excessive hours and sacrificing personal and family time to meet these growing demands [143, 147]. External scrutiny from the public and media was frequently reported [143, 171], with negative media coverage increasing coaches' sensitivity to external pressures and heightening stress levels [171]. From an intrapersonal perspective, coaches reported internal stressors such as a desire to win, fear of failure, and a sense of responsibility for the program and team [113]. It is essential for staff to consider these pressures, as it has been suggested that self-imposed expectations and emphasizing the importance of outcomes can negatively influence coaches' in-game decision-making, especially at higher competition levels [152]. Some studies also noted interpersonal challenges among staff, such as high turnover, role ambiguity, and rivalry within the group [100].

4.5.4 Sociocultural Factors

Sociocultural factors, such as the culture in high-performance sport and traditional gender roles, also play a role in shaping perceived stressors and may be especially influential in contributing to work–family conflict. The culture of the sporting industry itself was among the most frequently cited sociocultural factors impacting staff, often described as a culture prioritizing success over athlete well-being and staff satisfaction and fostering an expectation that work takes precedence over other areas of life, such as family, friends, and hobbies [100, 119]. Staff described a culture emphasizing relentless improvement and strong work ethic [93], contributing to the heavy workloads and long hours. Current evidence suggests that many coaches, particularly in the early stages of their careers, adopt harmful cultural norms such as the idealization of coaching as a “dream job” and the expectation of constant availability, which can contribute to burnout, alienation, and misalignment with personal values [135]. Traditional definitions positioned coaching as a role demanding significant time, energy, and commitment [76]. These expectations were closely tied to traditional family and gender roles [76, 151], encompassing responsibilities of motherhood and fatherhood [76, 80], with an implicit assumption that a spouse would handle household responsibilities, contributing to feelings of conflict for many participants. Women navigating leadership in sport environments also often experience an intensified pressure to exceed expectations to gain equal recognition, frequently reporting the need to outperform male counterparts to establish credibility [79, 83]. Although some women actively aspire to leadership, others report an initial hesitancy due to anticipated stress, extensive time demands, and a perceived incompatibility with motherhood [81]. These factors can lead some to delay or forgo having children altogether in order to meet perceived professional expectations [81]. These challenges appear further compounded by the lack of mentors and female role models in athletic leadership positions. Many women report a lack of guidance, inspiration, or visible examples of success [81]. In particular, the absence of other women thriving in head athletic trainer roles, especially those managing both professional and family responsibilities, was described as both discouraging and deeply isolating [81].

Furthermore, the male-dominated nature reported in coaching and athletic training professions [75, 79, 83], coupled with prevailing male-centric definitions of success, has shaped narrow standards of success and expectations of on-field performance. These systemic barriers reinforce performance expectations that marginalize alternative measures of achievement [76]. Reports also highlighted that this stereotypical male-dominated culture also perpetuated inappropriate behaviors and language, and a subculture that normalized

and accepted such behaviors [121, 151]. These dynamics create challenging work environments, particularly for women practitioners, who often feel pressured to conform to the stereotypical male culture rather than challenging it. This process of assimilation necessitates additional coping strategies to manage these stressors [151]. Female coaches also reported encountering more daily hassles (e.g., too many responsibilities, not enough time for family, and not getting enough sleep) than their male counterparts, perceived these stressors as more severe [101], and experienced higher stress levels related to balancing coaching responsibilities, personal time, program success, and pressure to win [111]. Other sociocultural factors influencing the work environment and affecting stress levels included the level of competition, program success, position (e.g., head versus assistant coach), and the coach’s age or experience [95, 112].

While much of the literature focused on gendered stressors, minority status also emerged as a salient sociocultural factor influencing perceived stress and professional experiences in high-performance sport [51]. Assistant coaches in the National Basketball Association described ongoing uncertainty regarding career advancement, perceived racial inequities in hiring and promotion, and additional pressures associated with navigating predominantly white leadership structures [51]. Minority coaches also expressed hesitation about engaging with team psychologists, citing a disconnect between their lived experiences and those of organizational psychologists [51]. While some evidence suggests that individuals from minority backgrounds face distinct stressors in high-performance sport environments, the existing literature provides only limited examination of these experiences. Future research should aim to explore these perspectives more comprehensively across a range of sport settings and professional roles.

4.6 Responses of Staff Working in High-Performance Sport

While the previous section highlights numerous challenging demands and stressors in high-performance sport, the ultimate impact of these stressors depends on how they are appraised and responded to by staff. In line with the Transactional Theory of Stress, stress is conceptualized not as a direct response to an external stimulus but as an internal process involving the individual’s appraisal of a situation as personally significant and as taxing or exceeding their coping resources [19, 22]. If this appraisal persists over time without sufficient coping, it may result in strain [19]. Conversely, when individuals perceive adequate resources to manage stressors, adaptive outcomes may emerge, such as increased motivation and preparedness, high work engagement, and personal development opportunities [17, 160]. A total of 79 studies explored a range of these responses,

including emotional and psychological distress, physiological reactivity, burnout, and work–life balance challenges. These findings underscore the importance of tailored support strategies to foster sustainable functioning in these demanding roles.

4.6.1 Emotional and Psychological Responses

This review shows that staff in sport frequently experience heightened emotional and psychological distress, with research largely studying the responses of coaches. Negative appraisals of demanding situations often evoke emotional responses such as fear, frustration, anxiety, disappointment, anger, and self-doubt, which can ultimately lead to reduced well-being [52, 94].

Preparing for major competitions emerged as a common high-stress environment that presents challenges to mental, physical, and social well-being, with coaches commonly reporting negative affective experiences and increased anxieties, particularly when athletes' performances do not meet expectations [78]. After major events, coaches described feeling emotional unrest, marked by uncertainty, anxiety, exhaustion, and low self-esteem and self-efficacy [78].

Many coaches experience high levels of chronic stress [169], leading to various emotional, physical, behavioral, and psychological symptoms. These symptoms included mood swings, insomnia, fatigue, cardiovascular issues, illness, trouble sleeping, depression, decreased motivation, strained relationships, and withdrawal [11, 143, 169]. The research indicates that full-time coaches (i.e., working more than 40 h per week) report higher perceived stress scores compared with coaches working part-time or on a casual basis (i.e., irregular hours) in Canada [102], highlighting the unique nature of stress for full-time staff in sport. However, one study found that high-performance sport coaches working in Australia report high levels of mental well-being compared with the general population, teachers, and general practitioners (i.e., medical doctors) [23]. This suggests that, despite experiencing significant demands, coaches in high-performance environments may experience high levels of mental well-being, likely mediated by available internal and/or external resources or intrinsic motivation.

Staff working in sport also frequently experience loneliness and isolation, which can contribute to emotional and psychological distress [54, 78, 97, 114, 141, 143, 171]. These feelings stem from various internal and external factors, such as lack of support and solitary decision-making [10], self-imposed demands and performance pressures [143], consistent pressure and expectations from media and fans [54], and generally demanding commitments during seasons or in preparation for major events [78], which often required individuals to sacrifice personal time [143]. For some participants, isolation was also intensified by fears

of vulnerability and the stigma associated with engaging psychological support services [171]. A study investigating coaches with psychiatric diagnoses found anxiety and depressive disorders in nearly 93% of cases [84]. Substance abuse disorders were also reported in one out of six individuals in this cohort [84]. When examining coaches and athletes with a psychiatric diagnosis, it is also interesting to note that coaches experience a higher incidence of affective disorders (e.g., depressive or bipolar disorder) compared with athletes [84], despite working in the same environment.

Despite the prevalence of negative responses, staff in sport can also experience positive adaptations following work-related stressors, which can enhance their perceptions of mental well-being. This is in line with Frey et al.'s [160] application of the Cognitive Affective Model of Stress, which suggests that, when sufficient resources are available, eustress can boost motivation and preparedness, thereby reducing the risk of burnout [95]. Findings from a study by Baldock et al. [52] of professional football coaches support this suggestion, highlighting that positive adaptations resulting from effective coping can contribute to better mental health outcomes, underscoring the importance of a supportive environment in fostering resilience and well-being among practitioners in high-performance settings.

4.6.2 Physiological Reactivity

Research examining physiological stress markers in high-performance staff indicate heightened reactivity to the pressures and acute psychological stress of competition [56, 142, 144]. Elevated salivary cortisol and alpha-amylase levels [56, 142, 144], and increased heart rates [142] have been observed before, during, and after competition. Notably, cortisol and alpha-amylase stress responses were heightened following games compared with training or non-competition days [142, 144]. Higher average cortisol levels were also observed on tournament days compared with control days, such as routine club activities or training camps, while testosterone levels exhibited a less pronounced response [144]. Research into slow-paced breathing interventions reveals their effectiveness in helping coaches manage physiological stress during matches, with reductions observed in alpha-amylase levels and heart rate, although cortisol levels remained unchanged [66]. This suggests that self-regulation and self-management techniques can play a critical role in moderating the stress response. Furthermore, competition was shown to impact cardiovascular stress markers, with Loupos et al. [58] reporting increased fibrinogen levels during swimming events, alongside significant increases in tissue-type plasminogen activator concentrations, indicating heightened blood clotting activity during competition. However, not all studies observed significant changes in stress responses to intense competition periods. For instance,

Loupos et al. [59] found that, while salivary cortisol levels showed a general upward trend over a swimming championship, the changes were not statistically significant and cognitive anxiety levels remained stable throughout the event.

Several studies also examined staff's physiological responses to extensive travel, which was identified as a significant stressor in earlier sections. An investigation into the effects of long-haul transmeridian travel on Olympic team support staff revealed that morning cortisol levels dropped below baseline on the first day post-travel and remained suppressed for up to six days, while evening cortisol levels stayed consistent with baseline throughout the training camp [114]. This was accompanied by other symptoms of perceived jet lag, including disturbances in mental performance and irregular appetite and bowel functions, indicating prolonged hormonal disruption due to travel-related stress [114]. Negative mood changes were also observed in the evenings post travel, along with elevated confusion, fatigue, symptoms of depression, and reduced vigor [114].

Immune function was also studied, with research examining the physiological responses of sport staff highlighting the nuanced impact of acute versus chronic stress on immune function. Research indicates that stress in sport elicits varied immunological responses; soccer coaches showed temporary increases in salivary immunoglobulin A during matches [56], while staff experienced decreases in immunological markers during a 17-day training period preparing for an important championship, potentially heightening illness susceptibility despite minimal observed respiratory infections [65]. Together, these findings suggest that, while acute psychological stress may lead to temporary activation of nonspecific humoral immune functions, chronic stress may suppress them, potentially impacting an individual's overall health and resilience.

4.6.3 Burnout

Burnout is defined as symptoms of work-related exhaustion (emotional and physical) combined with increased cynicism (i.e., negative changes in work-related attitude) and decreased sense of efficacy [172]. Coaches often reported increased exhaustion and cynicism as the season progressed, experiencing a range of symptoms such as fatigue, lethargy, sleep disturbances, and irritability, and were less self-determined in their motivation throughout the season [88]. The reviewed literature highlighted the critical role of rest in coaches' performance, noting that being poorly rested led to decreased concentration, effectiveness, mood, motivation, and engagement [93]. In a case study of two "elite" coaches, Olusoga and Kenttä [171] observed that burnout not only manifested physically and emotionally but also hindered the coaches' decision-making abilities. Moreover, the symptoms of burnout led to both coaches experiencing a "downward

spiral" into depression, with stress triggering anxiety, negative thinking, and a sense of worthlessness [171]. This resulted in coaches withdrawing from social interactions and experiencing a diminished sense of personal accomplishment, with the impact of burnout extending beyond the workplace and into home life (e.g., irritability and reduced engagement at home) [171]. Higher levels of perceived stress and anxiety have also been shown to be associated with greater emotional exhaustion and depersonalization, as well as reduced feelings of personal accomplishment [98, 173, 174]. As discussed above, cognitive appraisals play a crucial role in mediating an individual's response. This is evident in the development of exhaustion, where threat appraisals are associated with greater exhaustion, whereas "controllable-by-self" appraisals (i.e., a sense of personal control) are linked to lower levels of exhaustion [145].

Research also indicates that coaches experience increasing stress and burnout symptoms over a competitive season, with emotional exhaustion and depersonalization often peaking at season's end, likely due to accumulated workload and performance pressures [47, 49]. While well-being generally declines, burnout symptoms show small to moderate increases throughout the season [89]. Interestingly, some coaches experienced high exhaustion during preseason that subsides later, while others remain consistently high [49], highlighting concerns about insufficient off-season recovery. While emotional exhaustion is a key component among individuals experiencing burnout, it is also worth noting that individuals with low burnout still experienced episodic exhaustion, which tended to dissipate after the competitive season [110]. Overall, increased workload, work-home interference, and severe stressors were linked to higher exhaustion, increased cynicism, and decreased personal accomplishment [47, 49, 89]. Conversely, better recovery, characterized by psychological detachment and relaxation, as well as higher intrinsic motivation, were associated with lower exhaustion [49]. In-season breaks temporarily improve coaches' recovery scores, but these gains return to pre-break levels within a month of resuming work [24], suggesting limited long-term benefits from short breaks. The temporary recovery is likely driven by psychological detachment and relaxation during the break. Strategies to sustain recovery throughout the season should be further explored, including incorporating intermittent psychological detachment and relaxation.

Research has shown mixed findings regarding differences in burnout experiences among male and female coaches. Several studies reported that female coaches experienced higher levels of emotional exhaustion, depersonalization, lower personal accomplishment, and greater frustration with their jobs, leading to more intense burnout compared with male coaches [104, 175]. Cacesse et al. [175] offered one potential explanation for these findings, noting that female

coaches in their sample were younger, less experienced, and had fewer coping resources compared with the male coaches [175]. In contrast, Malinauskas et al. [105] found no significant difference in burnout between male and female collegiate coaches, although male coaches in this sample tended to experience burnout more frequently [105].

When considering coaching position/role, evidence relating to stress levels also appears mixed. Ruddock et al. [73] reported that senior coaches experienced higher stress than assistants, while Kellman et al. [24] found that head coaches had lower stress and minimal fluctuation compared with assistants. Team performance in recent seasons also does not appear to influence the development of burnout, with consistent levels of burnout reported for professional coaches in Australia, regardless of their team's success in the previous year [73]. Notably, mental fatigue was associated with physical fatigue [115], underscoring the interconnected nature of exhaustion, which can compound burnout in sport. These findings emphasize the importance of providing targeted support tailored to the unique challenges coaches face based on sex and coaching role, aiming to foster improved mental health within the profession.

Stress and adversity in professional sport have been shown to increase sleep difficulties among coaches [143], particularly those with concomitant high burnout levels who report consistent sleep disturbances [88, 171]. This pattern perpetuates a cycle of physical and emotional exhaustion. Many staff cited a lack of sleep caused by professional responsibilities [62, 101, 118], such as competition schedules, player care, and additional administrative responsibilities, along with significantly shorter sleep duration and lower sleep efficiency after travel [114]. Sleep quality, particularly lower sleep efficiency, has been shown to decline before tournaments and important games, while sleep duration also shortens compared with routine activities in clubs or training camps [57, 144]. High-quality sleep is essential for coaches' well-being, as it serves to both decrease physical fatigue and enhance positive affect [86]. Interestingly, very long sleep durations led to a decline in positive affect, suggesting a potential curvilinear relationship between sleep duration and well-being. Given that emotional and physical exhaustion are key components of burnout [118], recovery- and sleep-related factors appear to be critical considerations when assessing burnout in sport.

4.6.4 Work–Life Balance and Role Strain

Given the previously discussed long work hours, travel demands, and expectations to be on call at all hours of the day, work–life balance is a significant challenge for staff in high-performance sports. Being physically and/or psychologically absent at home is disruptive to the well-being of both staff and their families [54, 143], particularly when

work-related ruminations, such as worries and self-doubt, spill over into home life [54]. Coaches are often described as deeply passionate and highly dedicated but may also become consumed by their professional roles [54, 99]. Such obsessive tendencies can reduce their awareness of how they engage with others beyond the sporting environment [54, 99]. Demanding work commitments often lead to distancing and isolation from partners [78, 143], and stress has been reported to negatively affect not only staff themselves but also their partners, families, children, and friends [143]. This stress is evident in professional sports, with 96% of the athletic trainers studied by Mazerolle et al. [63] reporting high to extremely high levels of work–family/personal life conflict. Work–family conflict and guilt were also particularly common among athletic trainers in collegiate sports, especially those in high-stress settings such as NCAA Division I or among older, more experienced practitioners [117].

Role strain was another issue faced by athletic trainers working across professional sport leagues in the USA [146, 147]. Role strain occurs when individuals strive to meet expectations across multiple roles but experience stress or conflict when those expectations are competing or difficult to fulfill [176]. A study by Romero et al. [146] showed that over 83% of the athletic trainers studied in professional sport experienced some degree of role strain, with more than half reporting moderate to high levels. Athletic trainers in the National Hockey League (NHL) previously reported the highest levels of role strain compared with those in the other four major leagues (i.e., American Football, basketball, baseball, and soccer), with higher scores across role-strain subscales of role overload, role ambiguity, role incompetence, role conflict, intersender conflict, and interrole conflict [146]. These subscales reflect different dimensions of strain, such as uncertainty in expectations (ambiguity), conflicting demands (conflict and intersender conflict), or having too many responsibilities (overload), among others [177]. Similar findings were observed for athletic trainers working in NCAA Division I settings, as life balance issues, role conflict, and role overload contributed to decisions by these practitioners to leave the athletic training profession [77].

4.7 Resources and Coping Strategies in High-Performance Sport

Given the extensive demands that staff face in high-performance sport, and the associated responses they experience, it is essential to explore effective coping strategies and job resources that support their well-being. Job resources encompass physical, psychological, social, or organizational aspects of a job “that help achieve work goals, reduce job demands and the associated physiological and psychological costs, or stimulate personal growth, learning, and

development” [17]. As defined above, strain results from prolonged stress exposure coupled with insufficient coping over time, where coping refers to changing behavioral efforts to manage external and/or internal demands appraised as taxing or exceeding one’s resources [19]. Drawing on theoretical frameworks discussed above [17, 19], coping strategies and job resources may function as either mediators or moderators, shaping how stress is processed and experienced, and influencing the strength of its impact on outcomes such as strain. A total of 72 studies examined the resources and coping strategies used by staff in high-performance sport, such as emotional regulation, psychological resilience, work–life balance resources, and support networks.

4.7.1 Coping Strategies

Within the Transactional Theory of Stress, Lazarus and Folkman [19] suggest that coping takes the form of either emotion-focused strategies, involving efforts to regulate emotional states, or problem-focused strategies, aimed at addressing or managing the stressor [19]. More recent classifications expand on coping strategies to also include avoidance coping (e.g., removal from situation), approach coping (e.g., actively increasing effort), and appraisal coping (e.g., reevaluating the situation) [12]. Building upon this framework, Didymus et al. [90] identified seven families of coping used by Olympic and international-level coaches: dyadic coping (i.e., pooling available resources), escape (i.e., distancing from the environment), information seeking (i.e., finding additional contingencies), negotiation (i.e., exploring new options), problem-solving (i.e., adjusting actions to be effective), self-reliance (i.e., protecting available social resources), and support seeking (i.e., utilizing social resources). These seven families of coping reported by coaches provide a framework that aligns with the Cognitive–Motivational–Relational Theory [159], highlighting coping as a process supporting individual adaptation to environmental demands [90]. Each categorization of coping strategies serves a distinct function in adaptive processes, offering valuable insight into how coaches adjust to high-performance environments [90]. This approach advances understanding by shifting away from lists of strategies tied to the intention and function of coping [9, 11, 67], instead framing coping as an interpersonal phenomenon moderating adaptational processes [90].

In a longitudinal case study of one elite coach, Levy et al. [9] highlighted five commonly used strategies to alleviate stress: communication, preparation, planning, social support, and self-talk. While these strategies were reported to be effective initially in managing the response to stress, their effectiveness was suggested to diminish over time [9].

Staff frequently emphasize the importance of preparation in coping with stressful environments, with organization, time management, and structured planning (e.g., contingency planning) identified as key strategies to manage the demands of high-performance sport [11, 67, 74, 141]. Other problem- and approach-focused strategies included behavioral changes, personal sacrifice (e.g., work–life balance), increased effort, and information seeking [9]. Some individuals also employed avoidance techniques, such as avoiding stress-inducing situations [11], mentally suppressing feelings of fatigue, or not using any coping strategies at all [9]. Many coaches suggested that there is value in drawing on their previous personal experience as both athletes and coaches to better navigate challenges and more effectively inform their team and athlete preparation [11, 67].

Research also indicates that physical and emotional detachment from work is a critical coping strategy to support recovery. Indeed, emotional detachment has been linked to improved positive affect, while physical detachment is associated with reduced fatigue the following day, offering benefits beyond the effects of sleep alone [86]. Both sleep and wakeful rest are crucial in the context of recovery. Wakeful resting is characterized by taking breaks from thinking about work or engaging in effortful thinking, and actively engaging in life outside of coaching [93]. Olympic coaches, for example, would take time away from the competition environment during the Games themselves as a strategy to cope with event-specific stressors [67]. As highlighted above, while vacations can reduce stress and improve recovery, their effects are typically short-lived. Stress levels tend to rise again in the week following coaches’ return to work after vacation, with recovery scores often declining within a month [24]. Off-task hobbies, exercise, and relaxation are key strategies that coaches use to mitigate stress and support recovery during periods of work [11]. These findings underscore that intentional disengagement from work benefits staff’s health and well-being.

4.7.2 Emotional Regulation and Psychological Coping

Many coaches have come to accept the intense demands working in sport and view them as a “normal” part of the job [170]. This appraisal stems from evaluating stressors through two main filters: stimulus expectancy and positive response outcome expectancy [170]. Stimulus expectancy involves using past experiences to assess stress, with three defense mechanisms identified: reframing workload demands, expecting positive outcomes from stress, and adapting to a supportive work environment. Positive response outcome expectancy is shaped by past experiences and helps

individuals appraise stress as positive (coping), negative (hopeless), or uncertain (helpless). Coaches emphasized the importance of preparation, anticipating challenges, remaining flexible, and focusing on the work quality and processes as key factors in maintaining a positive response outcome expectancy [170]. Additionally, work examining Olympic coaches suggests that psychological attributes are vital for effective coaching performance at the Games. These coaches felt that attributes including emotional control, perception, confidence, focus, passion, commitment, communication, consistency and maintaining a sense of fun were influential for successful performance [67].

Various studies highlight two distinct types of coping strategies: emotion-focused coping strategies, such as controlling self-doubt, self-talk, mindfulness, and gratitude; and appraisal-focused coping strategies, including rationalization, self-awareness, and faith [9, 11, 12, 48, 68, 74, 112]. The Self-Determination Theory [166] emphasizes that work environments supporting basic psychological needs (i.e., autonomy, relatedness, and competence) enhance intrinsic motivation, which is linked to positive emotional experiences, high performance, healthy behaviors, and improved mental health [166]. Research demonstrates that greater perceived autonomy support correlates with increased vitality, satisfaction, and fulfillment of autonomy and relatedness needs. Similarly, improvements in autonomy, competence, and relatedness are associated with reduced exhaustion and cynicism, and increased job satisfaction [89]. Coaches also emphasize the importance of durable motivation, with intrinsic motivation and self-reflection playing crucial roles in long-term development and performance under pressure [48]. Recent research further distinguishes between strengths-based and deficits-based reflective inquiry, with the former helping coaches build resilience and motivation through gratitude, self-awareness, and positive reinforcement [126]. However, when reflection becomes overly self-critical, it can lead to rumination, emotional distress, and diminished well-being, highlighting that not all reflective practices are inherently beneficial [126]. Immersion in the competitive nature of sport further facilitates professional commitment, strengthened by factors such as winning, teamwork, and the success of athletes and teams [62, 68]. A positive work environment, characterized by strong relationships with coworkers, appreciation from athletes, and recognition from management, also played a crucial role in maintaining commitment [62]. Opportunities for professional and personal growth during the off-season support this dedication [62, 68, 121].

In addition to motivation, other individual traits [97, 103, 120, 173, 174] such as hardiness, characterized by commitment, control, and willingness to accept challenge, are crucial in coping with stress in sport, serving as protective factors against stress and burnout. Research indicates that

hardiness, along with support satisfaction, plays a mediating role in stress perceptions and burnout, with higher hardiness levels linked to reduced stress and burnout [173, 174]. Conversely, competitive trait anxiety, which refers to an individual's tendency to experience anxiety in competitive situations, amplifies stress and elevates burnout risk, highlighting the importance of anxiety management for reducing stress [173].

Emotional regulation strategies also play a vital role in managing stress. Surface acting, which involves hiding true emotions, is linked to increased emotional exhaustion, while deep acting (i.e., modifying actual feelings) and genuine emotional expression are associated with lower exhaustion [103]. Recent research also highlights that surface acting may lead to emotional dissonance and long-term psychological costs, with practitioners engaging in surface acting reporting identity conflict, moral distress, and burnout, especially when emotional expression was suppressed to align with cultural norms or organizational expectations [128, 129]. The interaction between surface acting and emotional intelligence is also noteworthy, as coaches who engage in surface acting but possess high emotional intelligence report decreased emotional exhaustion [103]. Emotional intelligence encompasses perceiving, understanding, and managing emotions, and collectively these skills serve as a buffer against burnout [120]. Leadership style further influences this relationship, as passive-avoidant leadership weakens the protective effect of emotional intelligence [120]. Conversely, transformational leadership, characterized by flexibility and appreciation of staff, is associated with lower burnout and emotional exhaustion [97, 120].

4.7.3 Managing Work–Life Balance

Managing work–life balance is a critical challenge for staff in high-performance sport, given that extensive work demands often have adverse effects on personal life [60, 63, 99, 147]. Poor work–life balance was often seen as inevitable, particularly in the collegiate setting; however, staff regarded it as manageable and employed various strategies to better navigate these challenges [96]. Strategies recommended by individuals interviewed in the literature included setting strategic boundaries with athletes and staff, prioritizing commitments (e.g., putting family first), scheduling personal and family time, and integrating work with family life [68, 96, 106, 109]. Integrating work and family life was a common approach to increasing family contact, with examples such as bringing children to work or involving family in travel opportunities [68, 96, 109]. Family-friendly policies and supportive organizational culture were also highlighted as ways to enhance work–life balance for staff [74]. However, it was noted in the literature that, despite the presence of policies supporting family life, many work–life balance

practices were driven more by individual workplace philosophies than by administration initiatives [109]. Overall, an organizational culture and a secure, stable working environment are key protective factors for maintaining work–life balance and promoting well-being and mental health among staff [48, 97].

Leaders in high-performance environments, for example, head coaches and head athletic trainers, play a crucial role in promoting work–life balance. Interviews with head athletic trainers in collegiate sports revealed key strategies for promoting this balance, such as modeling work–life balance themselves, encouraging their staff to disengage from work (e.g., take time off or pursue outside interests), fostering cooperation between coworkers, and ensuring administrative support [109]. Further qualitative findings emphasized the importance of head athletic trainers being role models by prioritizing family and self-care and demonstrating that achieving work–life balance is both possible and necessary [108]. Leaders also stress the importance of granting staff the autonomy to decide when to take time off, emphasizing that time for rejuvenation is vital but should be controlled by the individual [108]. Flexibility in work hours was another common theme in promoting work–life balance and well-being [68, 74], along with fostering a cooperative, team-oriented environment where staff supported each other in managing workloads, which was vital for promoting work–life balance [108, 109]. Delegating and trusting other staff, such as assistants, were also noted by leaders as important factors in maintaining their own work–life balance [68].

4.7.4 Support Networks and Cohesion

Spending time with family and friends, and maintaining a strong personal [48, 106] and professional [11, 106, 110] support network, has been shown to significantly contribute to healthy work–life balance in sport by alleviating work–family strain and enhancing overall well-being [11, 48, 106, 110]. This was particularly relevant for staff experiencing high burnout, who relied more heavily on this external support [110]. Numerous studies have also highlighted social support and cohesion as protective factors for coping with stress in high-performance environments [11, 48, 76, 91, 97, 106, 109, 110], and social support can be categorized into work-based and non-work-based sources [110], as well as informal versus formal support [97]. Many individuals reported receiving support from coworkers and supervisors [11, 106, 110], with informal peer support being particularly valuable [110].

The quality of support was also discussed by professional soccer coaches, where having the “right” people in one’s circle was suggested as being important [54]. These professional soccer coaches reported that simply having people around was not enough to alleviate feelings of isolation and

obsession [54]. Rather, those people needed to understand the unique demands of the coaching profession to provide meaningful support [54]. Indeed, coaches who successfully balanced work and family often discussed how having a spouse who also worked in high-performance sport increased their understanding of the profession’s demands [99]. However, sex differences in managing domestic responsibilities were noted, as female coaches felt that male coaches found it easier to manage these duties owing to their spouses typically being at home [151]. Overall, while social support was crucial, it was often informal and unstructured, providing more short-term relief than more structured, long-term coping strategies (e.g., professional support groups or lifestyle changes such as regular physical activity) [110]. When formal or accessible support is lacking, staff may turn to other coping mechanisms that can lead to damaging long-term consequences [72]. For example, Roberts et al. [72] illustrated how one coach, overwhelmed by pressure and isolation in a high-performance environment, internalized his distress and relied on alcohol as a coping mechanism, eventually leading to emotional withdrawal, a mental health crisis, and a near-suicidal episode. In contrast, shared challenges in sport can also strengthen work-based support and cohesion among colleagues. For instance, athletic trainers reported that the uncertainty and rapidly changing conditions of the COVID-19 pandemic fostered greater cohesion among staff, institutional stakeholders, and professional networks [91].

5 Conclusions

This review provides a comprehensive overview of the literature on staff in high-performance sport, offering a detailed summary of the demands, responses, and coping strategies observed in these environments. Although studies spanned a range of competitive settings, most were conducted in collegiate sport, with fewer focusing on professional, national/international, and Olympic/Paralympic environments. Across the literature, research predominantly focused on coaches, used cross-sectional study designs, and often relied on small sample sizes. Future research should prioritize longitudinal and mixed-method approaches to better capture the dynamic nature of stress in these settings and leverage the strengths of both quantitative and qualitative methods. The integration of theoretical frameworks should also be considered to strengthen future research and support more nuanced interpretation of findings.

Staff in high-performance sport face a diverse range of demands, including workload challenges, organizational and structural factors, athlete- and performance-related pressures, and sociocultural factors. These stressors often trigger emotional, psychological, physical, and physiological

responses, contributing to burnout and work–life balance difficulties. To manage these challenges, individuals employ various coping strategies and draw on both personal and organizational resources, highlighting the complexity of their experiences. Although some high-performance environments remain underrepresented in the literature, this review provides a thorough synthesis of research examining staff in these settings.

To support the health and well-being of individuals working in high-performance sport, it is important to build on this foundation of knowledge by identifying directions for future research and informing the development of more targeted, evidence-informed strategies. By describing key demands, responses, and coping strategies, this review may help guide organizational policies, staff development initiatives, and workplace practices aimed at improving the sustainability, well-being, and performance of high-performance support staff.

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