Int. J. Sport Psychol., 2025; 56: 047-070
doi: 10.7352/IJSP.2025.56.047

Stressors and coping strategies in amateur esports players: An Interview Study

Oliver Leis*, Michael G. Trotter**/, Phil DJ Birch****, Kabir Bubna*****, Dylan R. Poulus*********

(*) *Sport Psychology, Leipzig University, Leipzig, Germany*
(**) *Institution for Psychology Umeå University, Umeå, Sweden*
(***) *School of Health and Welfare, Halmstad University, Halmstad, Sweden*
(****) *Institute of Applied Sciences, University of Chichester, Chichester, United Kingdom*
(****) *University of Northampton, Northampton, United Kingdom*
(******) *Southern Cross University, Lismore, Australia*

While previous research has examined stress in professional esports players, the experiences of amateur esports players have received less attention. Therefore, this interview study, guided by the philosophical framework of critical realism, aimed to explore the stressors and coping strategies of amateur esports players. Semi-structured interviews were conducted with 20 amateur esports players, selected purposefully through contacting esports clubs and social media, to capture diverse perspectives. The data analysis followed the principles of reflective thematic analysis, focusing on identifying stressors and coping strategies based on Leis et al. (2024). We identified a range of stressors, including team stressors (e.g., communication issues, criticism), performance stressors (e.g., performance pressure, fear of mistakes), social stressors (e.g., toxic in-game communication), organizational stressors (e.g., technical issues, travel demands), and personal stressors (e.g., balancing life, exam uncertainty). Coping strategies employed by amateur esports players encompass mastery coping (e.g., concentrating, optimizing surroundings), internal regulation (e.g., breathing, meditation), and goal withdrawal strategies (e.g., behavioral disengagement). The study further reports potential avenues for interventions, such as fostering positive team environments, promoting effective communication, and offering training in coping techniques tailored to the unique demands of esports. While the present study focuses on amateur esports players, our findings may contribute to a deeper understanding of stress and coping in esports and offer practical implications for enhancing well-being and performance in this competitive domain.

Key Words: Esports; Competitive gaming; Sport psychology; Sports; Stress; Stress management.

We have no conflicts of interest to disclose.
The authors would like to thank all interviewees for participating in this study.
Correspondence to: Oliver Leis, Faculty of Sport Science, Leipzig University, Jahnallee 59, 04109 Leipzig, Germany. (E-mail: oliver.leis@uni-leipzig.de)

Performing in competitive esports environments has been associated with the experience of psychophysiological demands and changes in performance as well as well-being (see review by Leis & Lautenbach, 2020). Sport psychology research has provided valuable insights into stressors and coping strategies among athletes, which in turn has informed evidence-based intervention strategies and allows for appropriate sport psychology support (e.g., Association for Applied Sport Psychology, 2011). Although a recent systematic review highlighted predominant stressors (e.g., performance pressure) and coping strategies (e.g., physical activity) in esports research, our current understanding is still limited (Leis et al., 2024). One limitation refers to the lack of understanding of distinctions between performance levels. While some stressors and coping strategies may be similar across amateur and professional players, the divergent contextual factors (e.g., training and competitive schedules) and personal variables (e.g., experience, goals) likely influence the transactional process of stress and coping. For instance, amateur players may encounter fewer stressors related to social media or audience reactions than professional players (Leis et al., 2022; Smith et al., 2019). Nonetheless, the delineation of various levels of performance could facilitate the development evidence-based interventions tailored to the distinct challenges of amateur players in esports. Focusing on amateur esports players ensures that the findings are applicable to a larger segment of the esports community. This provides insights into how stress changes with player development, informing skill acquisition and mental health research. For example, mental health research can help protect professional (Birch et al., 2024), elite (Pereira et al. 2023), and amateur players (Smith et al., 2022), especially with the emergence of interventions for elite esports players (Poulus et al., 2023) based on elite sports research. Conducting similar research with amateur players is crucial for relevant interventions. Overall, the current state of research on stressors and coping strategies in amateur esports presents a challenge to the development of evidence-based support practices and the formulation of practical implications. To address this gap, this study focuses on investigating stressors and coping strategies among amateur esports players.

Theoretical Framework

A widely applied theoretical framework used to explore stress and coping in both esports and traditional sports is the cognitive-motivational-relational theory (Lazarus, 2000). From the transactional perspective, stress depends on how individuals appraise stimuli (Lazarus, 1966). This appraisal process involves primary appraisal (evaluation in terms of a stimuli's relevance to

ones beliefs, values, goals, and situational intentions) and secondary appraisal (assessing control, available resources, and likelihood of effective coping). When individuals appraise a stimulus (i.e., environmental demand) as taxing or exceeding their available resources, these stimuli become stressors. These stressors prompt the need for cognitive and behavioral efforts (i.e., coping) aimed at managing the environmental demand (Lazarus & Folkman, 1984). According to Fletcher and Fletcher's (2005) meta-model of stress, emotion and performance, primary and secondary appraisal is followed by an additional cognitive appraisal process. This process involves tertiary appraisal, the evaluation of ones' emotional responses (e.g., nervousness, anxiety) with regard to its relevance to performance. Similar to secondary appraisal, quaternary appraisal includes the assessment of available coping resources. After this appraisal process, coping strategies are employed.

According to Fletcher et al. (2006) stressors can be associated primarily and directly with; competitive performance (i.e., competitive stressors), the organization (i.e., organizational stressors), and non-sporting life events (i.e., personal stressors). These stressor classifications have been supported by multiple reviews in the sport context (Arnold et al., 2017; Arnold & Fletcher, 2012; Sarkar & Fletcher, 2014). Coping strategies have previously been classified by authors in different ways (see review by Crocker et al., 2015; Nicholls et al., 2016; Nicholls & Polman, 2007). Nicholls et al. (2016) introduced a classification that includes; mastery coping, internal regulation, and goal withdrawal. Mastery coping refers to efforts to gain control over a stressor and thus eliminate it (e.g., problem-focused coping, approach coping, goal setting). In contrast, internal regulation involves efforts to manage one's internal resources to stress (e.g., acceptance, emotion-focused, avoidance-focused coping). Goal withdrawal, on the other hand, involves individuals discontinuing their pursuit of a goal (e.g., mental disengagement, behavioral disengagement, venting emotions).

Empirical Evidence

The current esports stress and coping literature has focused primarily on expert and elite samples, with minimal focus being placed on amateur players (e.g. Poulus & Polman, 2022b). Compared to elite athletes, amateur athletes may experience a unique blend of stressors related to the need to balance work and other life demands (Rose et al., 2023). Just as in traditional sport, those who compete in amateur esports will likely have to balance esports and other life commitments. However, to date the re-

search on amateur esports is limited. Research on amateur League of Legends players has provided insights into the mental barriers encountered by competitive gamers (e.g., confidence issues), techniques used to achieve optimal performance (e.g., playing smart; Himmelstein et al., 2017), emotional triggers (e.g., achievement and teammates), and regulation strategies (e.g., avoidance and using emotional support; Kou & Gui, 2020). For instance, Himmelstein et al. (2017) demonstrated mental barriers experienced by amateur players (e.g., confidence issues, trouble performing under pressure, lack of team reliance) and techniques employed to cope with these barriers (e.g., utilize pre-performance routine, play forward, rely on team). However, these findings cannot be generalized without bias to the broader concept of stressors and coping, thereby restricting our understanding. A review by Leis et al. (2024) revealed a range of stressors, that were categorized into performance stressors (e.g., defeat, performance pressure), team stressors (e.g., communication issues, intra-team criticism), organizational stressors (e.g., schedule and time conflicts), social stressors (e.g., audience reactions, social media), and personal stressors (e.g., balancing life commitments). In contrast to traditional sports, esports literature indicated more distinct stressors such as social media, online harassment, meta changes, and equipment challenges. Stressors such as leadership and other personnel (e.g., referees) were less frequently reported in esports. The review further highlighted that mastery coping emerged as the most commonly cited coping strategy (e.g., physical activity, self-focus in gaming, attention management), followed by internal regulation (e.g., communication, team interaction, avoidance behaviors) and goal withdrawal (e.g., substance use, venting negative emotions, leaving the team). These findings are in line with previous research among traditional athletes, demonstrating a higher prevalence of mastery coping than internal regulation and goal withdrawal strategies (Simpson et al., 2021). Given the limited number of research, however, the review by Leis et al. (2024) did not provide insights into the specific differences between amateur and professional players. This restricts our understanding of the stressors amateur esports players experience and the way they cope with these. Highlighting these distinctions is crucial for tailoring effective intervention strategies for amateur players. The role of contextual and personal factors in the stress and coping process has been emphasized by Trotter et al. (2023), who found that amateur (university student teams) esports players were more likely to appraise a stressful situation as a threat than national level (professional) Counter-Strike: Global-Offensive teams. In addition to lower demand-resource evaluation scores, student-level play-

ers showed lower scores variables including self-regulation, self-evaluation, and performance compared to national-level players. Furthermore, players self-regulation partially mediated the stress appraisal and esports performance relationship (shooting accuracy, time trial performance). Similarly, Sharpe et al. (2024) found that high-pressure conditions led to higher anxiety, threat appraisals, suboptimal gaze behavior, and poorer performance than low-pressure conditions. This effect was stronger for university-level competitors than national-level competitors, emphasizing the role of the player's experience. Conversely, expert players demonstrated higher cortisol, cognitive anxiety, and perceived match importance before competition compared to non-expert players (Mendoza et al., 2021).

Study Purpose

Sports psychology research has provided insights into stressors and coping strategies among athletes (e.g., Arnold et al., 2017; Arnold & Fletcher, 2012; Nicholls et al., 2016; Nicholls & Polman, 2007). Research also extends toward more specific subgroups of amateur athletes, including those participating in endurance sports (e.g., Rose et al., 2023) and those navigating the challenges presented by the coronavirus crisis (e.g., Lautenbach et al., 2021). As highlighted by Leis et al. (2024), a greater differentiation between various levels of performance in esports, including amateur players, is needed. Research continues to emphasize the role of performance levels on outcomes such as stress responses (e.g., Mendoza et al., 2021) and performance (e.g., Sharpe et al., 2024). As such, further research is necessary to advance our understanding and develop evidence-based interventions to enhance performance and well-being across the varying expertise levels of the esports community. This research offers several advantages, including broader application to a larger portion of the esports community, insights into diverse experiences among amateur players, informing future research (e.g., mental health research), and potential of identifying unique stressors and coping strategies in amateur esports.

To contribute to the knowledge base on amateur esports players, the present study aimed to provide new insights into stressors experienced by amateur esports players and the coping strategies adopted to deal with this stress. Specifically, this study sought to explore i) what stressors amateur esports players experience and ii) what coping strategies amateur esports players use to manage these stressors. By conducting interviews with a broad

range of participants, including male and female esports players across multiple esports, this study aimed to shed light on stress and coping among amateur esports players.

Method

The present study adopted a qualitative approach to explore the stressors and coping strategies experienced by amateur esports competitors. This methodological choice was under-pinned by the philosophical framework of critical realism (Bhaskar & Bhaskar, 1979; Ronkain-en & Wiltshire, 2021; Wiltshire & Ronkainen, 2021). By adopting this philosophical position, semi-structured interviews were used to capture a diverse range of perspectives that could il-luminate the subjective understanding of contextual situations within amateur esports. By em-ploying critical realism, we integrated a realist perspective, which delves into the underlying structures and mechanisms, with an emphasis on individual experiences. This approach allowed us to better understand how amateur esports players experience competitive esports environ-ment, and enabled us to explore the stressors they experience and coping strategies they employ.

Researcher Positionality

Aligning with our philosophical standpoint, we briefly outline the authors' backgrounds to illuminate potential influences on data interpretation. Four of the five authors have conducted studies on stress in both sports and esports contexts. Author 1, an esports researcher, brings insights into the competitive structure, terminology, and strategies. Author 2 specializes in self-regulation, stress, and coping, offering expertise in psychological skills relevant to esports. Author 3 and author 5, with broad experience in stress and coping among athletes, extend their knowledge to esports. Author 4, a researcher and esports coach, contributes expertise in skill acquisition and talent development. These diverse perspectives enrich the study by combining theoretical and practical insights into stress and coping in esports.

However, it's essential to acknowledge that our positions within the field may have influenced our interpretations and findings. For instance, our famil-iarity with traditional sports contexts might have influenced how we interpret and frame the experiences of esports players. Additionally, our backgrounds may have shaped the way we approach data collection, analysis, and interpretation. This may have impacted our decision to draw on existing research, such as a review categorizing stressors and coping strategies (Leis et al., 2024), as we sought to integrate established frameworks from both sports and esports to understand the unique challenges faced by amateur esports players. Therefore, readers should consider our positionality when interpreting the findings of this study.

Participants

A diverse sample of amateur esports players were recruited for this study. The sample included 20 esports players from: FIFA (n = 2), League of Legends (n = 8), Valorant (n = 6), and World of Warcraft (n = 4), which represented four distinct genres of esports includ-

ing sports, multiplayer online battle area, first-person shooter, and mass multiplayer online role-playing games, respectively. On average, participants were 23.4 years old (SD = 4.4) with between 1 and 9 years of experience playing their esports title (M = 4.5, SD = 2.3). While four participants were female, 16 participants were male. Participants were from Germany (n = 15), United States of America (n = 2), Czech Republic (n = 1), Denmark (n = 1), and United Kingdom (n = 1). All participants were members of non-professional esports teams and actively participated in weekly training sessions. In addition to their involvement in team training, participants also allocated time to individual practice, often playing the game with various teammates rather than exclusively with their team. Information regarding players' esports successes, current rankings, in-game roles, or occupations beyond esports were not recorded.

In line with suggestions by Mendoza et al. (2023), participating amateur esports players were required to 1) have participated in an esports competition within the past three months, and 2) dedicate a minimum of ten hours per week on training or studying esports. Furthermore, to be eligible for participation, players were required to 3) have a minimum of one year of experience playing their esports, 4) not be in receipt of a regular salary as an esports player or rely significantly on prize money as their income source, 5) be at least 18 years old, and 6) be proficient in English or German. The fourth criterion was employed due to studies often relying on criteria to differentiate between performance levels such as participation in elite or high-level league teams (e.g., Poulus et al., 2021; Schubert et al., 2022) or earning prize money as a significant income source (Sainz et al., 2020).

Procedure

The participants were recruited and sampled purposefully (Patton, 2002) through contacting esports clubs and via social media (e.g., X, formerly known as Twitter). The lead institution awarded ethical approval for the study protocol, and the study complied with the Declaration of Helsinki and APA ethical guidelines. After the interviewees provided informed consent, each participant was interviewed according to his/her preference, either face-to-face (n = 4) or via TeamSpeak or Discord (software for audio communication; n = 16). Face-to-face interviews were recorded with a regular digital recorder and TeamSpeak interviews were recorded using embedded recording functions. No other person was present during the recording. The interviews were performed between February 2020 and December 2021, amidst the COVID-19 pandemic. The audio recording started with an inviting open-ended question (i.e., "Can you briefly describe how you came to play your esports in competition?"). The interviews lasted an average of 41 minutes (SD = 9.4). After completion of the interview, demographic data was recorded, and the interviewee was open to discussing the participants' experience with the interview.

Interview Guide

Semi-structured interview guides were constructed for the purpose of the present study based on recommendations by Kallio et al. (2016). The semi-structured format allowed the interviewers to be responsive, offered interviewees the opportunity to individually express important aspects, and kept the conversation flowing. The interview guide was developed collaboratively by two researchers. The content of the interview guide was built on

the cognitive-motivational-relational theory (Lazarus, 2000) and the meta-model of stress, emotion and performance (Fletcher & Fletcher, 2005). Specifically, the protocol was designed to identify esports players' experiences related to stressors and coping strategies in relation to esports competition (see interview guide: https://osf.io/6knbe?view_only=3e620418a398427b9df79957db204bfe). For example, participants were asked to share their experience from their most recent competition (e.g., "Could you share your experience from your last competition…?") and discuss their reactions to this event (e.g., "What were your immediate thoughts and feelings associated with this competition?"; "How did your body react physically in response to the stressor?"). Furthermore, the interview guide inquired about coping strategies employed by players (e.g., "An you elaborate on the strategies you used to manage the demands you faced?"). After creating a first draft of the interview guide, it was discussed by two researchers and adjusted accordingly. The interview guide was piloted with two esports players that met the inclusion criteria for study participation, but were not included in the study. As a result, we simplified certain questions and introduced an additional question to better identify contrasting examples from other competitive experiences in esports (i.e., "Could you compare this experience with your previous competitive encounters and highlight any differences you noticed?").

Data Analysis

Following data collection, all audio files were transcribed verbatim. To maintain the anonymity of participants, pseudonyms were used to replace participants' names. In line with our philosophical position, the analysis was performed by two researchers according to the main principles of reflective thematic analysis: becoming familiar with the data, coding, generating initial themes, reviewing, defining, and naming themes, and contextualizing the analysis (e.g., Braun et al., 2016; Braun & Clarke, 2020). The research team read and re-read the transcripts, making notes on initial ideas about the data. After becoming familiar with the data, initial codes were created while consulting initial notes using the software MAXQDA Plus 2020. Next, the transcripts were deductively coded on a line-by-line basis focusing on stressors and coping strategies highlighted by Leis et al. (2024). Stressors were defined as environmental demands encountered by an individual (Fletcher et al., 2006, p. 9), while the interviewees' efforts of managing these stressors were categorized as a coping strategy (Lazarus & Folkman, 1984). In alignment with the systematic review by Leis et al. (2024), stressors were classified into team, performance, organizational, social, and personal stressors. Coping strategies were grouped into mastery coping, internal regulation, goal withdrawal strategies, following the framework proposed by Nicholls et al. (2016). The final set of codes, encompassing stressors and coping strategies, was extracted to an Excel spreadsheet by the first author. Any codes in German were translated into English by a bilingual researcher (OL). Afterwards, these categories were discussed (e.g., Smith & McGannon, 2018) between the two researchers, leading to a discussion on differentiating between a few organizational, team, and performance stressors. For instance, certain stressors related to the organization or team could also be viewed as performance stressors due to their impact on performance. Thus, the context of these codes and quotes were thoroughly examined. The final categories were then reviewed to ensure alignment with the existing body of literature on stress and coping.

Methodological Rigor

To increase the methodological rigor of our research, we recruited participants with diverse levels of experience across various esports games. This approach allowed us to gain more in-depth insights into stressors and coping strategies in amateur esports from a range of esports genres, such as multiplayer online battle area (League of Legends) and first-person shooter (Valorant). Prior to conducting the interviews, a preliminary pilot study was conducted to test interview questions and methodologies to ensure that data collection process was well-prepared and effective. Moreover, the interview guide was provided to offer insights into the methodology and findings, and quotes were reported to benefit the understanding of the data. Data analysis was a collaborative effort involving two researchers. To illuminate blind spots and reflect on our analysis of stressors and coping strategies, a third researcher served as a critical friend (e.g., Smith & McGannon, 2018). Although we considered our positionality as researchers and its potential influence on the study, our previous experiences in research (e.g., conducting interview studies) and coaching might have influenced the types of questions, we asked during data collection, analysis, and interpretation of findings. Similarly, our analysis was grounded in existing esports research (see review by Leis et al., 2024) to enhance understanding of how the experiences of amateur players fit within esports research. While readers should consider our positionality when interpreting the findings of this study, this approach ensured transparency about our personal perspectives and potential biases.

Results

In line with the study's aims, the findings are presented in two main sections: i) stressors and ii) coping strategies. Esports players' names are pseudonyms, and quotes translated from German into English are marked with (t).

Stressors

Esports players described experiencing stressors including team stressors, performance stressors, organizational stressors, social stressors, and personal stressors.

Team Stressors

Interviewees discussed various team-related stressors, relating to communication issues, intra-team criticism, lack of confidence in teammates, and ones' role within the team. For instance, lack of communication was addressed by amateur players, while too much communication in tools such as Snapchat was also discussed. Simon illustrates that he's capable of discussing non-game-related topics with his teammates, but he also points out that this

communication can distract from gameplay. On the other hand, he mentions how a lack of communication can result in not being aware of teammates' decision-making in-game, potentially leading to unfavorable outcomes: *"Sometimes, we talk a lot during the game. We talk about random stuff, and it's hard to stay focused on the game. This can be a big problem when you play for important objectives. There are also games where we don't talk at all, and then you wonder why your teammate is not joining a fight without warning you (t)."*

Players also experienced difficulties expressing feedback about gameplay to teammates as illustrated by Ben: "*Sometimes I find it hard to express my opinion to team members. I think they take it very negatively when they are criticized, so I prefer to keep quiet (t)*."

Another aspect that was discussed was a lack of common team goals, which resulted resulting in conflicts and critics between the amateur esports players. Other esports players also articulated consequences such as negative comments by teammates during gameplay, negative thinking by teammates, and teammates' bad usage of sarcasm. Max provided the example of one teammate being "*so sarcastic that it's not even funny [as] he tends to overdo it* (t)". Team stressors were also connected with performance, including worries about teammates' performance, different ranks within teams, and playing in a not well-coordinated team. For example, Michael highlighted struggling with not feeling like a part of the team: *"I was thrown into the team right in the middle of the season and got to play – I was basically not yet a real part of the team. You need some time to get to know each other (t)."*

Performance Stressors

A variety of stressors were addressed that were associated with performance stressors. The participants reflected upon experiencing high performance pressure. Esports players provided examples such as wanting to win for and/or to carry the team, coach performance expectations, fear of losing, excitement before games, opponents, and worries about own skill level. Michael discussed his worries as follows: *"[…] sometimes I have the feeling that I might be too bad for my team, in the sense that I say 'yes, I made a mistake and that drags them down with me' (t)."* On the other hand, Peter described the pressure that comes from the coach before games: *"Sometimes, we have conversations with the coach before the game, and he might say something like 'Yeah, we have to win this now.' Those are statements that I struggle to deal with (t)".* Peter further elaborated how this led to increased worry and nervousness.

Similarly, esports players described the pressure they experience from making mistakes in-game, including bad farm (i.e., not effectively collecting in-game resources), making bad calls, not performing to ones' potential, failing risky plays, or giving opponents multiple kills (i.e., feeding). Regarding in-game situations, esports players highlighted the experience of being the only one alive. While Toni spoke about experiencing performance pressure and high levels of adrenalin, Mark discussed this as immense pressure given that everyone is counting on him. Toni – a Valorant player – also mentioned time pressure as "*the most stressful thing*". In addition, players mentioned being a substitute player and in-team competition for one position as a stressor, leading to performance pressure. Amateur esports players also shared struggling with managing a defeat and difficulties coping with the associated emotional response of losing. Conversely, the participants noted poor preparation as another stressor resulting in poor daily form or uncertainty of outcome.

Moreover, esports players acknowledged the opposing team as a significant performance stressor. For instance, the perception of opponents' performance such as previous victories and high-performance teams were reported as stressors. Simon – a League of Legends player – acknowledged how facing a stronger opponent team made him feel: *"We had to fight a much stronger team […]. I was completely stressed about whether I could perform at all. I was absolutely nervous, shaking, lighting one cigarette after another (t)".* Another aspect highlighted in relation to opponents was associated with the draft (i.e., League of Legends). The players provided examples such as when opponents effectively counter their chosen team composition or, more broadly, situations where their own team's initial draft (the selection of characters or champions) is suboptimal or not well-suited for the match. For instance, Toni discussed that his team "*forgot to ban that one champion and then [his team] also picked the wrong champion (t)*", leading to a collective lack of energy to motivate themselves or each other and a general feeling of disappointment. In addition, the interviewees reported a stressor relating to opponents performing provocative actions before, during, and after game play (e.g., use of emotes to mock, trash-talking).

Organizational Stressors

Technical issues such as an internet crash, game crash, or lag, were highlighted by the participants. For example, Thomas mentioned "*Nothing is more frustrating than an internet crash in the middle of a crucial match (t)*".

In addition, amateur esports players reflected upon the pressure of travel, including sleeping in hostels, as stressful. Furthermore, the participants discussed that both familiar and unfamiliar competitive environments could cause stress. Independent of the competition, esports players described competition for prizes, unexpected changes in competitive schedule or competition, and lack of resting opportunities as stressors. Additionally, amateur players elaborated on additional environmental stressors including team meetings, fixed training hours, long practice hours, and game patches.

Social Stressors

The amateur players discussed interactions with individuals outside their team as demanding. These interactions included in-person meetings and toxic and sexualized in-game communication. Max also mentioned feeling pressured by the need to meet and converse with many people during familiar competitions. The toxic and sexualized in-game communication has been highlighted by Chrisi, drawing on her experience of playing online with strangers, as follows: *"The in-game communication is very toxic and sexist. Especially as a woman, you are already stressed when you go into solo-que alone. How can it be that you are discriminated all the time just because of your gender (t)".* Similar to other amateur players, Michael acknowledged that esports has a negative environment: "*Unfortunately, in esports, as I've often encountered, there are many negative people. Many use this anonymity to inflict suffering on others, or however you want to phrase it (t).*" Moreover, players reflected on external pressure including criticism from spectators, casters, friends, and family. Participants also highlighted the disruptive nature of external stimuli, such as screaming supporters and interfering noise, as well as the anxiety surrounding live interviews and the fear of unfriendly encounters with others.

Personal Stressors

Esports players mentioning personal stressors talked about difficulties balancing personal life and esports, uncertainty about exam outcomes, and relationship issues. For instance, participants spoke about not having enough time to play or thinking about playing while doing other activities, as Mike described: "*Sometimes I would like to play more. Recently, I was at work and got annoyed that I couldn't play with my buddies. It even happens sometimes when I'm out with friends that I'd rather like to play (t)."*

Simon pointed out that he was receiving bad news and the need to address other personal matters that were previously forgotten. In contrast to other participants, Simon also mentioned his relationship as a potential stressor: "*when your girlfriend is there and wants something from you, or whatever, that distracts you. That can, of course, have a negative impact (t)".*

Coping Strategies

Professional esports players highlighted a range of coping strategies that were categorized into the following themes: internal regulation, mastery coping, and goal withdrawal (Nicholls et al., 2016).

Internal Regulation

Internal regulation strategies discussed by amateur esports players included social networks relating to teammates, coaches, friends, and family. Esports players utilized their network by talking to teammates, discussing issues with the team, receiving emotional support, spending time with teammates such as drinking nonalcoholic drinks or physical activity, and in general "*benefiting from a healthy team atmosphere*" as Thomas described it. Amy described this in a similar way when she expressed that the team environment helps her shift her attention and thoughts:

"We go on vacation together, we are very good friends and spend a lot of time together outside of the game. It's actually pretty relaxed afterwards and you hang out with your friends and then you actually get out of such thoughts relatively quickly, think about other things (t)."

The following quote provides an example of how players like Tobias use physical activity as a way to manage stress:

"I have a good balance with gaming and leisure. I go running a lot, which is my way of finding balance, because otherwise, I notice that I can't concentrate as well, as I tend to be very fidgety. I also go for a run specifically before a competition to be more relaxed (t)."

With regard to in-game events, esports players described starting out with a passive playstyle and relying on their teammates for support. For example, Thomas articulated that it "*might be better to pull back at that moment and let others take the lead than be frustrated […]*". In addition, the coach's role in providing emotional support and being someone to talk to has also been addressed by the participants. For instance, Ben said the following: "*It really helped when we were told by the coaching staff: 'Hey guys, it happens,*

such a game can happen. Stay calm, let's take a short break' (t)." Furthermore, friends and family were contacted to manage the demands of the competitive environment. Esports players noted seeking social support by engaging in shared activities with friends (e.g., doing sports, visiting a bar), and talking to their family prior before a competition.

Another reported internal regulation strategy was utilizing breathing techniques. Laura expressed this, for example, as follows: "*just breathe, you can't change it anyway, relax*". Other strategies included meditation, countdowns, music immersion, refreshing showers, established routines, and mental imagery. To illustrate, Markus shared a compelling perspective on how imagery serves as a powerful motivational force for him: *"I have this scene in my head, when you win now, then people react like this and that. That often makes me play better, because I just want to win so much (t)".*

Esports players also talked about unintentionally acting out their emotions by crying because of disappointment, swearing, and wanting to hit themselves. Esports players further highlighted a shift in focus towards alternative activities, which included dedicating time to academic pursuits, participating in sports, going for walks, enjoying humorous memes, prioritizing sleep, and taking deliberate relaxation breaks. Moreover, esports players acknowledged employing external factors to modulate their emotional responses to environmental stressors. This included consuming coffee and energy drinks, eating, or resorting to smoking to manage their emotional reactions effectively.

Mastery Coping

The amateur esports players reported managing challenging situations by actively enhancing their strategies. For instance, they dedicated more time to rigorous practice sessions, intensifying their efforts during training, and even attempted to lead the team individually when necessary. Thomas said "*When my team is not performing well. I try my best to make the plays that make us win (t)*". In addition, esports players discussed reappraising the situation and self-reflecting on past behaviors, defeats, and successes. The players also displayed a proactive approach by optimizing their surroundings, both at home and during training camps. Physical preparation was also emphasized, with esports players engaging in hand-warming routines and stretches before matches. Effective communication was another strategy, as esports players not only adapted their communication but also sought feedback to improve their performance. Esports players reflected upon actively

cultivating a culture of positive communication within the team. Additionally, the esports players discussed seeking knowledge and inspiration by studying guides and professional gameplay. Lastly, the esports players shared their commitment to maintaining a forward-looking mindset. Instead of dwelling on mistakes, they emphasized concentrating on their current performance and anticipating the next opportunity.

Goal Withdrawal Strategies

Goal withdrawal strategies were not as prominent in the accounts of amateur esports players. Nevertheless, some players shared that they distanced themselves from stressors, often manifesting as behavioral disengagement. This encompassed refraining from discussing mistakes with teammates, disregarding social media commentary, muting and reporting disruptive opponents, temporarily disconnecting from the gaming setup, and taking deliberate breaks. For example, Peter described his avoidance behavior when his calls don't work: "*Sometimes, when I've made one or two bad calls, I become quieter. […] I try to hold back a bit, not talk as much, and only provide necessary information*". When players lost games and felt unhappy about it, they considered physically removing themselves from the situation and tried to mentally distract themselves. Another example of goal withdrawal strategies was provided by Max: "*If I don't get along with someone and have to play with them, I try to avoid the situations together (t)*".

Discussion

The aim of the present qualitative study was to provide new insights into the stressors and coping strategies of amateur esports players. Amateur esports players reflected upon a variety of stressors including: team stressors, performance stressors, organizational stressors, social stressors, and personal stressors. To manage these stressors, amateur players discussed mastery coping, internal regulation, and goal withdrawal.

The present study highlighted the role of the team (e.g., lack of communication), performance stressors (e.g., performance pressure), and organizational stressors (e.g., technical issues). While there is a degree of overlap in the stressors experienced by amateur and professional players, nuanced differences have been identified. Amateur players in the present study encounter stressors associated with criticism from random teammates, whereas professional players address negative comments within their team (e.g., Leis

et al., 2022; Poulus et al., 2022a). This distinction could be attributed to the training environment of amateur players, who often engage in fewer games as a fixed team. Indeed, studies have demonstrated that unclear roles are also a stressor in traditional sports (e.g., Mellalieu et al., 2009). Team stressors may be more prevalent in female amateur players as this sample reported sexualized comments and negative comments due to their gender (e.g., Leis et al., 2024). Although research on (professional) female esports players is limited, studies show that female players experience includes more sexual harassment in online gaming compared to men (e.g., Rubalcaba et al., 2018). Reflecting on organizational stressors, the data suggests that amateur players generally experience fewer organizational stressors compared to their professional counterparts (e.g., Leis et al., 2022; Poulus et al., 2022a). Fletcher et al. (2006) also suggested that organizational stressors may be more prevalent and pertinent at the higher levels of competitive performance. The significance of organizational stressors appears to be reduced due to less structured and financially demanding nature of the amateur esports scene, where players typically have fewer commitments to organizations, sponsors, and extensive competitive schedules. As such, a stressor that prominently affects professional, but is less evident among amateur players, is the impact of social media (e.g., Leis et al., 2022; Smith et al., 2019). Personal stressors, such as balancing life or uncertainty about exams, did not appear to be prominent in the narratives of both amateur and professional esports players.

Amateur esports players in this study rely on their social networks for stress management, emphasizing internal regulation. Unlike professionals who also acknowledge this coping strategy (Leis et al., 2022; Smith et al., 2019), amateurs appear to place a greater emphasis on it. For instance, amateur players often lean on friends and family for emotional support, and spending their leisure time with them. This suggests a potential prioritization of social relationships over performance in amateur contexts, though further research is needed to confirm this (e.g., Trotter et al., 2021). Generally, studies like LePrince et al. (2018) underscore the perceived benefits of social networks in athletes, such as drawing on motivational support or collectively venting emotions. While breathing techniques stood out as the predominant internal regulation strategy among amateur esports players, additional approaches included acceptance, engaging in alternative activities, and creating distance from gaming-related pursuits. In contrast to research on professional players (e.g., Leis et al., 2022; Smith et al., 2019), amateur esports players in the present study appeared to not prioritize strategies aimed at adjusting focus during gameplay. Similarly, Trotter et al. (2023) reported less self-regulation among student-level players compared to national-level players. Studies in the sport context also demon-

strated self-regulation as a differentiating factor between elite football players and less skilled counterparts (Toering et al., 2009). One potential explanation could be that amateur players may not have reached the same level of strategic awareness, in-game decision-making proficiency, self-evaluation as their professional counterparts (e.g., Trotter et al., 2023). This disparity may arise due to factors such as a potential lack of advanced strategic awareness, limited access to coaching, strategic training sessions, and sport psychology resources. Additionally, the consequences of inconsistent focus adjustments during gameplay might be less severe in the context of amateur esports. Overall, research indicates that both amateur and professional esports players utilize comparable strategies within the competitive environment (Hong & Connelly, 2022; Leis et al., 2022; Leis et al., 2023), with goal withdrawal strategies receiving little attention across esports players (Leis et al., 2024).

The esports players in this study reported that a lack of self-regulatory skills such as poor goal setting and inadequately structured preparation resulted in perceived suboptimal performance, and an increase in the uncertainty of performance outcomes. This lack of self-regulatory skills have also been reported in previous studies. In a sample of 993 esports players, Trotter et al. (2021) reported that the subsample of 846 amateur players (bottom 69%) demonstrated borderline impaired levels of self-regulation. It was also revealed that many psychological strategies (e.g., goal setting, imagery; Surujlal et al., 2013; Turner et al., 2020) were used less by novices compared to expert esports players. Specifically, Kleinman et al. (2021) found that expert League of Legends players reported a more even use of outcome and process goals compared to novices, who only set process goals. It is recommended that when amateur esports players employ goal setting as a stress coping strategy that they focus on setting both outcome and performance goals. Learning to set more effective goals, should also see improved performance outcomes. Trotter et al. (2023) found that self-regulation partially mediated the relationship between stress appraisal and performance (i.e., time trail speed, FPS accuracy) in Counter-Strike: Global Offensive players. Overall, the present study highlighted similar strategies as reported by athletes, including strategies such as concentration, effort, and acceptance (Didymus & Fletcher, 2014; McGreary et al., 2021).

Limitations

The current study has several limitations that must be considered in future studies. As the interview guide primarily focused on the competitive

experience of amateur esports players, it may have limited insights into their personal stressors. In essence, the emphasis on competition-related stressors and coping strategies likely resulted in fewer responses related to non-competitive context or non-sporting stressors. In a similar vein, a prolonged qualitative approach (i.e., spending extended time with interviewees) with a greater interview duration might lead to an enhanced understanding of stressors and coping in esports across different facets of gameplay, such as the research conducted by Poulus et al. (2022a). This study lacks in-depth explanation of the lived experiences and contextual detail related to stressors and coping strategies. Instead, the study provides a broad understanding of stressors and coping strategies without highlighting the nuances aspects of individual experiences. Furthermore, the present study provides limited insights on female esports players and does not allow for generalization to specific esports games but only to amateur esports in general. For example, esports players from different games (e.g., CS:GO) might recognize similarities and differences with the findings (e.g., Smith et al., 2019).

Future Research

To achieve a greater understanding of stressors and coping in (amateur) esports, studies should investigate the effects of the identified stressors and individual and interpersonal coping strategies on stress and performance (Leis et al., 2022). Indeed, recent research in sport has highlighted the importance and utility of interpersonal coping (Eckardt & Tamminen, 2023). Qualitative approaches such as diary methods and thinking aloud protocols could develop a greater understanding of these aspects (e.g., Didymus & Jones, 2021). For instance, Birch et al. (2022a) provided preliminary evidence of the use of think aloud protocols to facilitate self-regulation in golfers. Future research should also explore the effectivess of cognitive, behavioural and emotional self-regulation as a coping strategy in esports, and seek to measure self-regulation using objective data such as temporal trace or multimodal data (Malmberg et al., 2017) as well as heart rate variability (Welsh et al., 2023). In addition, future research could examine the relationship between factors such as expertise (Murphy et al. 2020) and personality (Birch et al., 2022b) player's ability to cope and manage stressors. For instance, research could delve into the experiences and coping strategies of female players. In general, studies should account for additional aspects such as the frequency, intensity, duration, perceived controllability, and severity of the stressors that esports player encounter (e.g., Arnold & Fletcher, 2021; Leis et al., 2024). As the

importance of the team has been highlighted in terms of stressors and coping strategies, research on team cohesion and communication in esports seems highly valuable. Accordingly, future research could pay closer attention to how esports players collectively appraise stressors and manage them together (e.g., Eckardt & Tamminen, 2023). Additionally, tailored workshops on team cohesion (Swettenham & Whitehead, 2022), adapted coping effectiveness training (Poulus et al., 2023), and appraisal workshops (Sharpe et al., 2024) should be investigated and refined for esports contexts.

Practical Implications

Awareness of specific stressors in amateur esports and coping strategies could support esports players to proactively recognize and apply tailored techniques, optimizing their performance and well-being (e.g., Leis et al., 2024; Swettenham et al., 2024). This notion aligns with recent assertions by Smith and colleagues (2019), advocating for the assessment of current psychological skill employment in esports, subsequently tailoring training strategies to the precise demands of the specific esports. To actualize this perspective, practitioners in esports – comprising sport psychologists and performance coaches – may benefit from developing a comprehensive understanding of their roles while maintaining a diligent exchange of information within the boundaries of confidentiality (Swettenham et al., 2024; Watson et al., 2021). Drawing from the present study's findings, interventions directed towards enhancing team cohesion and refining interpersonal communication within amateur esports players stand out as potential avenues for implementation (Swettenham & Whitehead, 2022). Given the esports players' endorsement of strategies encompassing dietary adjustments, hydration, preparatory routines, and meditative practices, workshops oriented towards various regulatory techniques could hold potential for amateur esports teams (e.g., Smith et al., 2019). Furthermore, the stress management strategies outlined by Leis et al. (2023) could provide valuable insights for developing personalized approaches both pre- and post-competition in amateur esports. By implementing platforms facilitating exposure to specialized consultation, tailored to address distinct aspects attuned to the unique requirements of individual esports players or teams, even within amateur environments, the holistic growth and adaptive evolution of esports endeavors stand to be notably fortified.

Conclusion

In conclusion, amateur players in the present study discussed various stressors, including to team stressors (e.g., lack of communication), performance stressors (e.g., performance pressure), organizational stressors (e.g., technical issues), social stressors (e.g., toxic in-game comments), and personal stressors (e.g., balancing life commitments). Amateur players reflected the use of mastery coping (e.g., intensifying effort) and internal regulation (e.g., relying on social networks), with a lesser emphasis in the interviews on goal withdrawal coping (e.g., behavioral disengagement). Despite similarities with professional players, amateurs prioritize reliance on social networks for support. While this study is limited by its focus on competition-related stressors and lack of in-depth exploration, it highlights avenues for future research and practical implications. For example, future research could explore how stressors and coping strategies impact performance and the effectiveness of interventions. Intervention strategies might focus on enhancing team cohesion and communication to improve player performance and Mnd well-being.

REFERENCES

Arnold, R, & Fletcher, D. (2012). A research synthesis and taxonomic classification of the organizational stressors encountered by sport performers. *Journal of Sport and Exercise Psychology*, *34* (3), 397-429. https://doi.org/10.1123/jsep.34.3.397

Arnold, R, & Fletcher, D. (2021). Stressors, hassles, and adversity. In A. Rachel & D. Fletcher (Eds.), *Stress, well-being, and performance in sport* (pp. 31-62). Routeledge.

Arnold, Rachel, Fletcher, D., & Daniels, K. (2017). Organisational stressors, coping, and outcomes in competitive sport. *Journal of Sports Sciences*, *35* (7), 694-703. https://doi.org/10.1080/02640414.2016.1184299

Association for Applied Sport Psychology. (2011). *Ethics code: AASP ethical principles and standards*. https://appliedsportpsych.org/about/ethics/ethics-code/

Bhaskar, R., & Bhaskar, R. (1979). *Philosophy and the human sciences: A philosophical critique of the contemporary human sciences. The possibility of naturalism*. Harvester Press.

Birch, P. D. J., Yeoman, B., & Whitehead, A. E. (2022a). "Think Aloud" as a Facilitator of Self-Regulation in Golfers. *The Sport Psychologist*, *1*(aop), 1-10.

Birch, P. D. J., Greenlees, L., & Sharpe, B. T. (2022b). An Exploratory Investigation of Personality in CS:GO. *Journal of Electronic Gaming and Esports, 1*, (1), 1-9. https://doi.org/10.1123/jege.2022-0027

Birch, P. D. J., Smith, M. J., Arumuham, A., Ortiz de Gortari, A. B., & Sharpe, B. T. (2024). Mental ill health in professional esports athletes: Prevalence and relationships. Journal of Electronic Gaming and Esports.

Braun, V., & Clarke, V. (2020). One size fits all? What counts as quality practice in (reflexive) thematic analysis? *Qualitative Research in Psychology*, *18*(3), 328-352. https://doi.org/ https://doi.org/10.1080/14780887.2020.1769238

Braun, V., Clarke, V., & Weate, P. (2016). Using thematic analysis in sport and exercise research. In *Routledge handbook of qualitative research in sport and exercise* (pp. 213-227). Routledge. https://doi.org/10.4324/9781315762012-26

Crocker, P. R. E., Tamminen, K. A., & Gaudreau, P. (2015). Coping in sport. In S. D. Mellalieu & S. Hanton (Eds.), *Contemporary Advances in Sport Psychology: A Review* (pp. 28-67). Routledge.

Didymus, F. F., & Fletcher, D. (2014). Swimmers' experiences of organizational stress: Exploring the role of cognitive appraisal and coping strategies. *Journal of Clinical Sport Psychology*, *8*(2), 159-183. https://doi.org/10.1123/jcsp.2014-0020

Didymus, F. F., & Jones, M. V. (2021). Cognitive appraisals. In R Arnold & F. D (Eds.), *Stress, Well-Being, and Performance in Sport* (pp. 63-77). Routledge.

Eckardt, V. C., & Tamminen, K. A. (2023). A scoping review on interpersonal coping in sports. *International Review of Sport and Exercise Psychology*, 1-27. https://doi.org/https://doi.org/10.1080/1750984X.2023.2251137

Fletcher, D., & Fletcher, J. (2005). A meta-model of stress, emotions and performance: Conceptual foundations, theoretical framework, and research directions. *Journal of Sports Sciences*, *23*(2), 157-158.

Fletcher, D., Hanton, S., & Mellalieu, S. D. (2006). An organizational stress review: Conceptual and theoretical issues in competitive sport. In S. Hanton & S. D. Mellalieu (Eds.), *Literature Reviews in Sport Psychology* (pp. 321-373). Nova Science Publishers.

Himmelstein, D., Liu, Y., & Shapiro, J. L. (2017). An exploration of mental skills among competitive League of Legend players. *International Journal of Gaming and Computer-Mediated Simulations*, *9* (2), 1-21. https://doi.org/10.4018/IJGCMS.2017040101

Hong, H. J., & Connelly, J. (2022). High e-Performance: esports players` coping skills and strategies. *International Journal of Esports*, *2*(2), 93. https://www.ijesports.org/article/93/html

Kallio, H., Pietilä, A. M., Johnson, M., & Kangasniemi, M. (2016). Systematic methodological review: developing a framework for a qualitative semi-structured interview guide. *Journal of Advanced Nursing*, *72*(12), 2954-2965. https://doi.org/10.1111/jan.13031

Kleinman, E., Gayle, C., & Seif El-Nasr, M. (2021). "Because I'm Bad at the Game!" A Microanalytic Study of Self Regulated Learning in League of Legends. *Frontiers in Psychology*, *12*, 5570.

Kou, Y., & Gui, X. (2020). Emotion regulation in esports gaming: A qualitative study of League of Legends. *Proceedings of the ACM on Human-Computer Interaction*, *4*(CSCW2), 1-25. https://doi.org/10.1145/3415229

Lautenbach, F., Leisterer, S., Walter, N., Kronenberg, L., Manges, T., Leis, O., Pelikan, V., Gebhardt, S., & Elbe, A.-M. (2021). Amateur and recreational athletes' motivation to exercise, stress, and coping during the Corona ,crisis. *Frontiers in Psychology*, *11*, 4032. https://doi.org/https://doi.org/10.3389/fpsyg.2020.611658

Lazarus, R. S. (1966). *Psychological stress and the coping process.* McGraw-Hill.

Lazarus, R. S. (2000). Cognitive-motivational-relational theory of emotion. In Y. L. Hanin (Ed.), *Emotions in Sport* (pp. 39-63). Human Kinetics.

Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping.* Springer publishing company.

Leis, O., & Lautenbach, F. (2020). Psychological and physiological stress in non-competitive and competitive esports settings: A systematic review. *Psychology of Sport and Exercise*, *51*(3), 101738. https://doi.org/10.1016/j.psychsport.2020.101738

Leis, O., Lautenbach, F., Birch, P. D. J., & Elbe, A.-M. (2022). Stressors, associated responses, and coping strategies in professional esports players: A qualitative study. *International Journal of Esports*, *3*(3), 76. https://www.ijesports.org/article/76/html

Leis, O., Watson, M., Swettenham, L., Pedraza-Ramirez, I., & Lautenbach, F. (2023). Stress

management strategies in esports: An exploratory online survey on applied practice. *Journal of Electronic Gaming and Esports*, *1*(1).

Leis, O., Sharpe, B. T., Pelikan, V., Fritsch, J., Nicholls, A. R., & Poulus, D. (2024). Stressors and coping strategies in esports: a systematic review. International Review of Sport and Exercise Psychology, 1-31. https://doi.org/10.1080/1750984X.2024.2386528

Leprince, C., D'Arripe-Longueville, F., & Doron, J. (2018). Coping in teams: Exploring athletes' communal coping strategies to deal with shared stressors. *Frontiers in Psychology, 9*, 360549. https://doi.org/10.1080/1750984X.2021.1975305

Malmberg, J., Järvelä, S., & Järvenoja, H. (2017). Capturing temporal and sequential patterns of self-, co-, and socially shared regulation in the context of collaborative learning. *Contemporary Educational Psychology*, *49*, 160-174.

McGreary, M., Birch, P., Eubank, M., & Whitehead, A. (2021). Thinking Aloud. A qualitative analysis of stressors and coping responses in cricket bowlers during a competitive match. *Qualitative Research in Sport, Exercise and Health*, *13*(6), 972-989. https://doi.org/10.1080/2159676X.2020.1829013

Mellalieu, S. D., Neil, R., Hanton, S., & Fletcher, D. (2009). Competition stress in sport performers: Stressors experienced in the competition environment. *Journal of Sports Sciences, 27*(7), 729-744. https://doi.org/https://doi.org/10.1080/02640410902889834

Mendoza, G., Clemente-Suárez, V. J., Alvero-Cruz, J. R., Rivilla, I., García-Romero, J., Fernández-Navas, M., de Albornoz-Gil, M. C., & Jiménez, M. (2021). The role of experience, perceived match importance, and anxiety on cortisol response in an official esports competition. *International Journal of Environmental Research and Public Health*, *18*(6), 1-8. https://doi.org/10.3390/ijerph18062893

Mendoza, G., Bonilla, I., Chamarro, A., & Jiménez, M. (2023). The defining characteristics of esports players. A systematic review of the samples used in esports research. *Aloma*, *41*(1). https://doi.org/https://doi.org/10.51698/aloma.2023.41.1.111-120

Murphy, C. P., Wakefield, A., Birch, P. D. J., & North, J. S. (2020). Esport expertise benefits perceptual-cognitive skill in (traditional) sport. J*ournal of Expertise, 3*(4).

Nicholls, A. R., & Polman, R. C. J. (2007). Coping in sport: A systematic review. *Journal of Sports Sciences*, *25*(1), 11-31. https://doi.org/10.1080/02640410600630654

Nicholls, A. R., Taylor, N. J., Carroll, S., & Perry, J. L. (2016). The development of a new sport-specific classification of coping and a meta-analysis of the relationship between different coping strategies and moderators on sporting outcomes. *Frontiers in Psychology*, *7* (11), 1-14. https://doi.org/10.3389/fpsyg.2016.01674

Patton, M. Q. (2002). Qualitative research and evaluation methods. Thousand Oaks. *Cal.: Sage Publications*, *4*.

Pereira, A., Bolling, C., Birch, P. D. J., Figueiredo, P., Verhagen, E., & Brito, J. (2023). Perspectives of elite esports players and staff members regarding the effects of esports on health - a qualitative study. Sports Medicine - Open, 9(62), 1-17. https://doi.org/10.21203/rs.3.rs-2784247/v1

Poulus, D. R., Bennett, K., Swann, C., Moyle, G., & Polman, R. (2023). The influence of an esports-adapted coping effectiveness training (E-CET) on resilience, mental health, and subjective performance among elite league of Legends players: A pilot study. *Psychology of Sport and Exercise*, 102510.

Poulus, D. R., Coulter, T. J., Trotter, M. G., & Polman, R. (2021). The perceived determinants of success in professional esports athletes. *International Journal of Sport and Exercise Psychology*, *19*, 64-65.

Poulus, D. R., Coulter, T., Trotter, M., & Polman, R. (2022a). Longitudinal analysis of stressors, stress, coping and coping effectiveness in elite esports athletes. *Psychology of Sport and Exercise*, *60*, 102093. https://doi.org/https://doi.org/10.1016/j.psychsport.2021.102093

Poulus, D. R., & Polman, R. (2022). Stress and coping in esports. *Social Issues in Esports*,

83-100. https://doi.org/10.4324/9781003258650-9/STRESS-COPING-ESPORTS-DYLAN-POULUS-REMCO-POLMAN

Ronkainen, N. J., & Wiltshire, G. (2021). Rethinking validity in qualitative sport and exercise psychology research: A realist perspective. *International Journal of Sport and Exercise Psychology*, *19* (1), 13-28.

Rose, S., Burton, D., Kercher, V., Grindley, E., & Richardson, C. (2023). Enduring stress: A quantitative analysis on coping profiles and sport well-being in amateur endurance athletes. *Psychology of Sport and Exercise*, *65*, 102365.

Sainz, I., Collado-Mateo, D., & Del Coso, J. (2020). Effect of acute caffeine intake on hit accuracy and reaction time in professional e-sports players. *Physiology and Behavior*, *224*, 113031.

Sarkar, M., & Fletcher, D. (2014). Psychological resilience in sport performers: a review of stressors and protective factors. *Journal of Sports Sciences*, *32* (15), 1419-1434. https://doi.org/10.1080/02640414.2014.901551

Schubert, M., Eing, F., & Könecke, T. (2022). Perceptions of professional esports players on performance-enhancing substances. *Performance Enhancement and Health*, *10* (4), 100236. https://doi.org/https://doi.org/10.1016/j.peh.2022.100236

Sharpe, B., Leis, O., Moore, L., Sharpe, A., Seymour, S., Obine, E., & Poulus, D. (2024). Reappraisal and Mindset Interventions on Pressurised Esport Performance. *Applied Psychology: An International Review*.

Simpson, R. A. C., Didymus, F. F., & Williams, T. L. (2021). Organizational stress and well-being in competitive sport: A systematic review. *International Review of Sport and Exercise Psychology*, 1-29.

Smith, B., & McGannon, K. R. (2018). Developing rigor in qualitative research: Problems and opportunities within sport and exercise psychology. *International Review of Sport and Exercise Psychology*, *11* (1), 101-121.

Smith, M J, Birch, P. D. J., & Bright, D. (2019). Identifying stressors and coping strategies of elite esports competitors. *International Journal of Gaming and Computer-Mediated Simulations*, *11* (2), 22-39. https://doi.org/10.4018/IJGCMS.2019040102

Smith, M., Sharpe, B., Arumuham, A., & Birch, P. (2022, March). Examining the predictors of mental ill health in esport competitors. In Healthcare (Vol. 10, No. 4, p. 626). MDPI.

Surujlal, J., Van Zyl, Y., & Nolan, V. T. (2013). Perceived stress and coping skills of university student-athletes and the relationship with life satisfaction. *African Journal for Physical Health Education, Recreation and Dance*, *19* (42), 1047-1059.

Swettenham, L., & Whitehead, A. (2022). Working in esports: Developing team cohesion. *Case Studies in Sport and Exercise Psychology*, *6*, 36-44. https://doi.org/https://doi.org/10.1123/cssep.2021-0023

Swettenham, L., Abbott, C., & Leis, O. (2024). Applied sport psychology in esports. In S. E. Jenny, N. Besombes, T. Brock, A. C. Cote, & T. M. Scholz (Eds.), Routledge handbook of esports (pp. 114-124). Routledge.

Toering, T. T., Elferink-Gemser, M. T., Jordet, G., & Visscher, C. (2009). Self-regulation and performance level of elite and non-elite youth soccer players. *Journal of Sports Sciences*, *27* (14), 1509-1517.

Trotter, M. G., Coulter, T. J., Davis, P. A., & Polman, R. (2021). Social support, self-regulation, and psychological skill use in e-athletes. *Frontiers in Psychology*, *12*. https://doi.org/https://doi.org/10.3389/fpsyg.2021.722030

Trotter, M. G., Obine, E. A. C., & Sharpe, B. T. (2023). Self-regulation, stress appraisal, and esport action performance. *Frontiers in Psychology*, *14*.

Turner, M. J., Jones, M. V., Whittaker, A. C., Laborde, S., Williams, S., Meijen, C., & Tamminen, K. A. (2020). Adaptation to psychological stress in sport. *Frontiers in Psychology*, *11*, 2199. https://doi.org/10.3389/fpsyg.2020.02199

Watson, M., Abbott, C., & Pedraza-Ramirez, I. (2021). A parallel approach to performance and sport psychology work in esports teams. *International Journal of Esports*, *1* (1).

Welsh, M. R., Mosley, E., Laborde, S., Day, M. C., Sharpe, B. T., Burkill, R. A., & Birch, P. D. J. (2023). The Use of Heart Rate Variability in Esports: A Systematic Review. P*sychology of Sport and Exercise, 69*. https://doi.org/10.1016/j.psychsport.2023.102495

Wiltshire, G., & Ronkainen, N. (2021). A realist approach to thematic analysis: making sense of qualitative data through experiential, inferential and dispositional themes. *Journal of Critical Realism*, *20* (2), 159-180.

Manuscript submitted January 2024. Accepted for publication September 2024.