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An exploration of high-performance environments in esports: A preliminary model

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ABSTRACT

The professionalisation of esports has led to increased investment in high-performance environments. However, disparities in resources and infrastructure between major and minor regions remain a challenge to achieving competitive parity. We explored key success factors in elite esports environments and developed a preliminary conceptual model to capture the core elements identified. Semi-structured interviews were conducted with elite players ($n = 10$), coaches ($n = 9$), and support staff ($n = 7$) from major and minor regions. Three categories were developed to represent the key success factors: *training environment*, *interpersonal dynamics*, and *intrapersonal development*. Players from major regions benefited from structured support, including dedicated training facilities, psychological services, and in-person cohesion-building strategies. In contrast, minor region players faced resource limitations, restricted access to support services, and appeared at high risk of burnout. From these findings, we proposed the Esports High-Performance Model (EHPM), a multi-layered, context-specific preliminary model illustrating the interplay between training conditions, social dynamics, and individual development in high-performance esports settings. This model offers a foundation for future research and can inform policies to support healthy, sustainable esports environments. The EHPM also provides a promising platform of evidence upon which to develop policies and practices that address disparities between regions.

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Competitive video games; elite; expertise

Esports, or the competitive playing of video games (Pedraza-Ramirez et al., 2020), has rapidly evolved over the last five years into a multi-billion dollar industry, driven by game developers and third-party organisations who have established an engaging competitive ecosystem consisting of international tournaments and domestic leagues (Ahn et al., 2020). With increased viewership, participation, and investment, esports is becoming increasingly professionalised, prompting greater recognition of and interest in the factors that contribute to success. This transformation is underscored by projections that the global esports audience will reach approximately 640.8 million by 2025, including 318.1 million dedicated fans and 322.7 million occasional viewers (Newzoo, 2025). Reflecting this surge in engagement, the 2024 World Championship Final in League of Legends (LoL), one of the most popular esports games, reached a peak viewership of 6.9 million (excluding China), marking a historic milestone for the industry (Jha, 2025). Similar to high-performance sporting environments, esports organisationsg are now investing in purpose-built facilities (i.e., esports performance centres) and hiring support staff (i.e., sports psychologists) to adopt more structured, systematic, and deliberate approaches to training and performance in an attempt to gain competitive advantages (Nordland, 2023). However, not all regions (a term in esports that refers to competitive zones created by game developers to organise tournaments and leagues, rather than to traditional countries or continents; Games, 2025) have benefited equally from the increased professionalisation, particularly as much of the investment into teams comes from private entities rather than state-level funding. As an example, South Korea, a major esports region,

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This article has been corrected with minor changes. These changes do not impact the academic content of the article.

has produced some of the most talented players (e.g., Lee 'Faker' Sang-hyeok) and teams (e.g., SK Telecom T1) in League of Legends. The team has won five world championships, along with countless other accolades. Evidently, high-performance esports environments can vary significantly between nations, giving some an advantage when it comes to newly formed, nation-based competitions, like the Olympic Esports Games (Olympics.com, 2024; Sharpe et al., 2023).

As a result of the differences in investment between teams and regions, it is likely that players from more established regions, colloquially termed major regions, will have better access to training facilities, coaching, and support services, which could amplify their advantage and subsequently increase their chances of success when compared with those in minor esports region (Pedraza-Ramirez et al. 2024; Poulus et al. 2022)). Understanding what major regions and established esports countries are doing to achieve sustained success on the international stage could provide an evidence base that informs how other countries attempt to close the performance divide. However, such evidence is limited in esports. Nevertheless, in other high-performance contexts, such as football, researchers have suggested that emerging nations cannot necessarily duplicate relevant systems to bridge performance gaps (Bennett et al., 2019). Instead, Bennett et al. (2019) emphasised that established nations should adapt their systems to be contextually tailored to suit their unique characteristics (i.e., talent pool quality, participation rates, resourcing, and domestic competition strength). It is reasonable to assume that minor regions and emerging esports nations may also benefit from a similarly pragmatic approach when designing their high-performance ecosystems, particularly because the esports landscape is still unstable, due to its lack of maturity as a performance domain.

Given the limited existing evidence on high-performance environments in esports (Poulus et al., 2022), a useful starting point would be to explore the experiences of key personnel within the esports ecosystem from both major and minor regions, including those who benefit from the high-performance environments (e.g., players) and those responsible for their design, development and implementation (i.e., coaches and support staff). Researchers have adopted similar methodological designs in high-performance sports, capturing multiple perspectives when developing working models of athletic talent development (e.g., Henriksen et al., 2010a, 2010b; Larsen et al., 2013). By exploring the perspectives of key personnel from both major and minor regions, this could enable the identification of similarities and differences between high-performance environments. In turn, these insights could be used to directly inform how esports organisation leaders and sporting institutes invest in resources and infrastructure to support performance development, particularly in minor regions. For example, findings may help national-level esports bodies determine whether to prioritise recruiting qualified coaching staff, establishing centralised training facilities, or implementing structured player development pathways, decisions often made with limited evidence in resource-constrained settings. Furthermore, enhancing understanding of esports environments could provide a 'contextual map' (Brown et al., 2005) that can enhance the contextual intelligence of support personnel and practitioners working in esports and enable the delivery of context-driven services (Schinke & Stambulova, 2017).

As seen in other high-performance domains (e.g., Bennett et al., 2019), delaying context-specific research in emerging regions can exacerbate existing performance disparities and lead to inefficient use of resources. Without intervention, the divide between major and minor regions may become increasingly difficult to close and may lead to the continued dominance of a small number of established nations in international esports. To support efforts to address this challenge, we explored the perceived factors contributing to success in high-performance esports environments and how these may differ across major and minor regions. Specifically, we asked: what are the perceived factors that contribute to success in high-performance esports environments according to elite esports players, coaches, and support staff in established (major) and emerging (minor) regions? In addressing this question, we also sought to develop a preliminary conceptual model depicting our findings. By generating novel insights into high-performance esports environments, these findings could be useful for individuals and groups across the esports ecosystem, ranging from policymakers to individual coaches, players, and support personnel. Furthermore, this evidence base could support future research across the broader esports landscape and may be especially helpful for supporting efforts to improve high-performance environments in minor regions.

Methods

Philosophical position and approach

Our approach in the current study was underpinned by a realist ontology and constructivist epistemology. In adopting this position, we assumed that participants' perspectives and experiences of high-performance esport environments were directly influenced by their behaviours, values, beliefs, identities, experiences and

Table 1. Demographic characteristics of the sample.

Demographic characteristic	Description
Role	Elite e'athletes $n = 10$
	Coaches of elite e'athletes $n = 9$
	Support staff working with elite e'athletes $n = 7$–
	Sports psychologist ($n = 2$)
	Performance coach ($n = 2$)
	Performance manager ($n = 3$)
Experience	Elite e'athletes *M* experience = 3.85 years
	Coaches of elite e'athletes *M* experience = 3.83 years
	Support staff working with elite e'athletes *M* experience = 4.71 years
Gender	Elite e'athletes male $n = 10$, female $n = 0$
	Coaches of elite e'athletes male $n = 9$, female $n = 0$
	Support staff working with elite e'athletes male $n = 4$, female $n = 3$
Age	Elite e'athletes *M* age = 24.00 years
	Coaches of elite e'athletes *M* age = 26.89 years
	Support staff working with elite e'athletes *M* age = 36.00 years
Region	*Major regions*
	Europe $n = 9$
	North America $n = 3$
	Asia $n = 2$
	Minor region
	Australia $n = 12$
Esport	*Elite e-athletes*
	League of Legends $n = 4$
	Rainbow Six Siege $n = 2$
	Counterstrike $n = 1$
	Rocket League $n = 1$
	Overwatch $n = 1$
	Valorant $n = 1$
	Coaches of elite e-athletes
	League of Legends $n = 2$
	Rainbow Six Siege $n = 2$
	Rocket League $n = 2$
	Counterstrike $n = 1$
	Overwatch $n = 1$
	Valorant $n = 1$
Level of elite e'athletes[1]	All sample pariticants can be considered as elite or working in elite esports.

Note: The level of elite e'athletes was computed using criteria proposed by Poulus et al. (2024).

local conditions (e.g., Maxwell, 2012). While we compared and contrasted the characteristics of high-performance esports environments in different regions, we also acknowledged their uniqueness and the influence of different conditions and contexts (Miles et al., 2014). Equally, we acknowledged that our own positions as researchers shaped the co-construction of meaning (see Researcher Positioning). We used qualitative interviews to generate data, as this method can enable the development of rich, in-depth insights into social-psychological phenomena (Smith & Sparkes, 2016). Ethical approval for the study was provided by the university ethics committee at *[Southern Cross University* (Approval Number: *2023/031*).

Researcher positioning

All five authors had different positions in relation to the research. The first, third, fourth and fifth authors had varying degrees of research or applied experience in high-performance esports environments. Consequently, we considered that each of these authors had varying degrees of cultural *insiderness* (Dwyer & Buckle, 2009) in esports, both in major esports regions (first author) and the emerging region under study (first, third, fourth, and fifth authors). This 'insider' status gave these authors cultural understandings that contributed to our research. For example, the first author's experience of working with esports teams enabled the co-construction of meaning in the interviews through their dialogue with participants (e.g., what expressions the author used and how the author interacted with participants). Likewise, the first and fifth authors' knowledge of esports sensitised them to the terminology used in esports during data analysis. In contrast, the second author had less knowledge of esports and considered herself a cultural 'outsider' (Dwyer & Buckle, 2009). Consequently, the second author acted as a critical friend throughout the project (Smith & McGannon, 2018), and a key part of her role was to challenge the other authors (e.g., about the conceptual model and practical implications) and pose questions that encouraged them to elaborate on the meanings of their interpretations and the findings generated.

Participants

Given the exploratory nature of this study and our intention to explore a plurality of perspectives, we adopted a maximum-variation sampling approach (Sparkes &

Table 2. Semi-structured interview guide of players, coaches, and support staff.

Role	Question type	Primary question	Prompts/sub-questions
Players/ Coaches	Demographic	Which esport do you play/coach?	–
		(Coaches only) Have you previously played competitively?	
		What is your highest level of competition?	
		How long have you participated at this level?	
		What level of success have you had?	
	Interview	Can you tell me about you/your player's current high-performance environment?	Esports-specific training (hours/week, focus)
			Non-esports-specific training:
			– Physical training
			– Psychological training
			Which of these is most important to your success and why?
		How does your/your player's high-performance environment change during the competition and off-season?	Esports-specific training
			Non-esports-specific training:
			– Physical training
			– Psychological training
			What's most important to your success in the off-season and why?
		Are there any other things you/your players do that contribute to success in esports?	–
Support Staff	Demographic	What is your current role title?	–
		Which esports do your players compete in?	
		What is the highest level of athletes you've supported?	
		How long have you worked in this role?	
		What level of success have your players had?	
		What qualifications or accreditations do you hold?	
	Interview	What is your role within the high-performance environment?	What specifically do you do?
		How does your role contribute to the success of the team?	What aspects of your work contribute most to the team's success?

Note. Questions were tailored to participants' roles and were designed to explore perceived factors influencing performance in elite esports environments across major and minor regions.

Smith, 2013), recruiting a diverse sample across roles (players, coaches, support staff) and major and minor esports regions. To be eligible to take part in the study, participants needed to be elite e'athletes (Bubna et al., 2023), esport coaches, or support staff working with elite e'athletes in major regions (Europe, Asia, and North America) or in a minor region (Oceania; see Poulus, Sharpe et al., 2024; for defining 'elite' in esports). We shared information about the study through our existing personal networks and on social media (X, Discord, and LinkedIn), with eligible and interested participants asked to contact the research team to express interest in taking part in the study. Using this strategy, we recruited 26 participants (male $n = 23$, female $n = 3$; see Table 1 for demographic information). Participants were drawn from a near-even distribution of roles (10 elite players, nine coaches, seven support staff) and regions (14 from major regions, 12 from minor regions).

Sample size estimation and justification

Using criteria for information power (Malterud et al., 2016), we deemed the sample size to be appropriate as we: (1) had a broad aim; (2) recruited a dense yet diverse sample; (3) were not drawing on established theory; (4) had focused dialogue; and (5) employed cross-case analysis. Participants did not receive any non-monetary or monetary incentives to be involved in the project. All participants were from the highest national league in their respective region, and among them were some of the highest-level international esports players, coaches, and support staff.

Data collection

After participants provided informed consent, online interviews were scheduled at a mutually convenient time between each participant and the first author. We adopted a semi-structured approach to the interviews, as this enabled the first author to ask focused questions about the topics of interest and the flexibility to explore interesting and relevant areas that arose during the discussions in more depth (Smith & Sparkes, 2016). The semi-structured interview guide was developed to explore characteristics of high-performance environments in elite esports. It was informed by previous qualitative studies in talent development and high-performance sport (e.g., Henriksen et al., 2010a), as well as esports-specific literature on team dynamics and performance culture (e.g., Pedraza-Ramirez et al., 2020; Poulus et al., 2022). The guide included open-ended questions and role-specific prompts designed to explore participants' perspectives on training structure, performance support systems, seasonal variations, team dynamics, and individual contributions to success within high-performance esports environments. The guide was informally piloted with two esports practitioners to ensure clarity and relevance. Based on their feedback, minor revisions were made to question wording and sequencing to enhance flow and participant understanding (see Table 2).

Prior to each interview, the first author discussed their own background in esports with participants to build rapport (Patton, 2014). The interview guide included two sections. The initial section of the interview included questions that sought to elicit background and demographic information (esport, highest level of competition, experience, success and employment status). The questions in the main section of the interview sought to elicit information about the high-performance environment during the in-season and off-season. To enable us to understand the perspectives of participants with different roles in relation to high-performance esport environments, we developed unique questions for each of our three participant groups. For example, support staff were asked about their role within the high-performance environment and how they felt their role contributed to the success of the team. In addition to these main questions, the first author also posed additional questions to explore points discussed in more detail (e.g., 'Do you think taking 2–3 months off between seasons impacts your performance?', International Player 1). In the final section of the interview, the first author invited participants to add any further information they thought was relevant to the study. The interviews were recorded and lasted 32.31 minutes on average (range 19.11–58.54 minutes). Interview recordings were transcribed verbatim (via Otter.ai) and checked for accuracy by the first author. The interviews were short as they were highly focused and with an elite, hard-to-reach sample.

Data analysis

Our analysis, conducted by the first and fifth authors, followed guidance for template analysis (King, 2012), a method designed for the thematic organisation and analysis of qualitative data. In interpreting the dataset, we used both inductive (i.e., data-driven) and deductive (i.e., interpreting data using existing conceptual ideas) viewpoints at different stages (Jackman et al., 2021). The same two authors (first and fifth) initially analysed a subset of two interviews to develop the initial *codes* and coding template. To enable comparison across regions, we created separate templates for participants in major and minor regions. Both authors read and re-read the transcripts to enhance familiarity, generating descriptive codes (i.e., explicit content) and interpretative codes (e.g., inferred meaning; King, 2004). For instance, the extract 'a high-performance environment for my players

is one where we have clear goals' was coded as 'goal setting' (descriptive code), while the extract, 'So in Australia, we have a catch-22. You need a lot of money to get the right resources. But you can't find the success and the money from that until you have those resources', was coded as 'challenges of being in a minor region' (interpretative code). Following initial coding, the first and fifth authors collaborated to develop initial coding templates and used these to guide, but not constrain, the coding of the remaining transcripts. Subsequently, they organised similar codes into *lower-order themes* (e.g., the codes 'Coping' and 'Breathing work' were combined into the lower-order theme 'Psychological skills'), with this same process repeated to develop more substantive *higher-order themes* (e.g., the lower-order themes 'Psychological skills' and 'Psychological Characteristics' were combined into the higher-order theme 'Performance Optimisation'), and again to create candidate *themes* (e.g., the lower-order themes 'Conflict Resolution' and 'Communication' were combined into the higher-order theme 'Team Cohesion'). During this process, we compared and contrasted the two coding templates to identify similarities and differences and to discuss potential explanations for this based on the dataset. As the clustering process progressed, we engaged in critical friends discussions (Smith & McGannon, 2018), with the second and fourth authors reviewing the coding templates and offering suggestions that helped develop

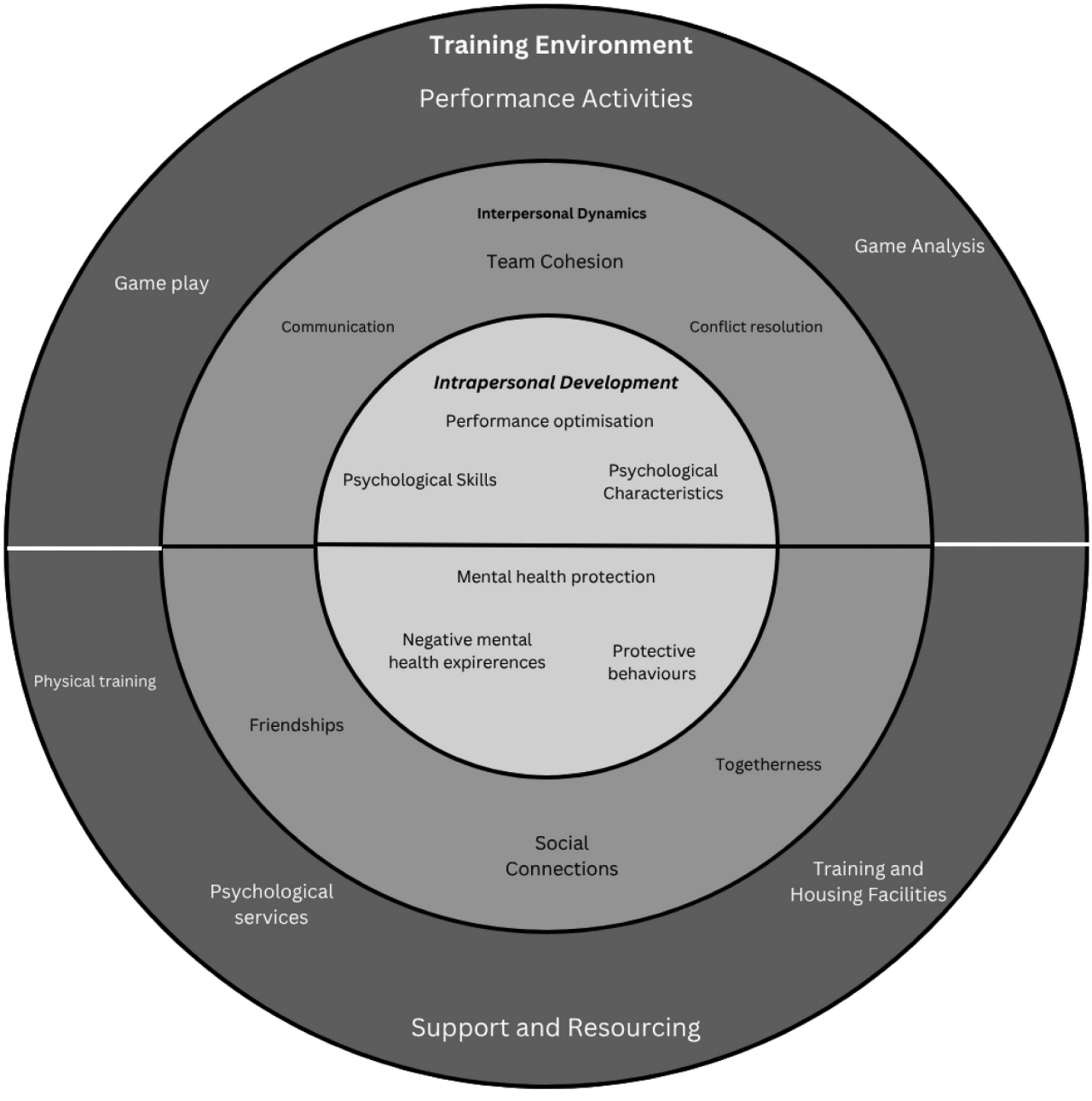

Figure 1. The esports high-performance model.

Table 3. Conceptual table of high-performance environments in major regions.

Theme	Higher order Theme	Lower-order Theme	Code	Example raw data quote
Interpersonal dynamics	Team Cohesion	Conflict resolution	Conflict resolution	"But you see that if a player feels supported within their team, by their teammates, less toxicity, better communication, better performance. . ." S3
		Communication	Communication	"We share our ideas about the game, we challenge each other, we eat, we share strategies with each other, and we try to improve on our communications and find new goals where we want to get at." P3
	Social Connections	Friendships	Friendships	". . . say you've got the five most mechanically skilled, gifted players in the world, but they all hate each other, the team isn't, the team isn't going to work" P1
		Togetherness	Togetherness	"It's good to have time where whether it's just like eating dinner together or if you go out to a farmers market or you go on a hike or something like that all that stuff. If you have the time to do it without over stressing people is equally valuable because then people can afford just to be themselves and they don't have to be. It's a little bit harder when you interact with people. And you're always in that like, high performance mindset with them, rather than this as a group of people that I get along with. And we do stuff outside of that as well." C3
Training Environment	Performance Activities	Gameplay	Team Training	"We go into either four to six hours of team practice every day, which will just be two hour blocks of screaming against other teams." P1
			Individual Training	"Yeah, it is definitely important. Say my average is around four games of that day. So that is like after scrims" P2
			Preseason	"In sort of preseason, it'll only be like two, maybe three lunchtime scrims and nighttime scrims and like, two days of just nighttime scrim. So we have a bit more rest, right and the offseason, as well, we have weekends off." P5
		Game analysis	Team briefs and debriefs	"We have another hour, which is like a flex. It's just a hard review. So Just like the coach's time after the whole day was over, the coach collects a lot of notes. And we'll basically just go over the footage with him. And he'll talk about what he thinks we need to improve, and he'll give us little micro goals but also a macro picture." P4
			Player Reflection	"It brings a lot of structure and lets me reflect as well. Kind of on what I've learned today, what I want to achieve today. It's very helpful, to be honest." P3
			Video Review	"So most days, we wake up, do VOD review where we review yesterday's scrim for half an hour." P1
			Goal Setting	"This is something that isn't tailored to Esports in general, but I think high-performing teams because I've been a part of one. And I think it's important for the coach to be able to have micro goals for each player, but also an overarching goal . . . this is the theme of what we need to get better at, I think when you just kind of throw around a bunch of improvement ideas, but don't kind of put it together if that makes sense. It's like, oh, you should improve on this. But also this, which is completely different. It, it is important to call out those issues of the players game. But I think it's much easier to digest when you just pick and choose the improvements you want out of the player. And you try to make an overarching theme of it, instead of just calling out every single mistake. Because I've been in both. And I could say, when you make a theme, it's much easier to digest as a player because you just say, Okay, this is what we got to get better at together. And boom, that's your focus for the rest of the day." P4
	Support and Resourcing	Physical Training	Access	"I go to the gym in the morning, or I do some kind of physical activity, I started doing a bit of just running data trying it out. But that's only because I had a wrist injury. But before that, I would go to the gym consistently, around four times a week. I would go to the gym at 10 in the morning. . . and then on the other days I'm taking a rest from gym." P2
			Programming	"Before the split starts, I sit with every single player. And I asked them, What do you want to do? Do you want to run? Do you want to go climbing? Do you want to just go to the gym? Do you just want to do mobility, whatever you want, but you have to do something, choose something and you chooses how many sessions you want to have per week. And that's our base. And then it's when it becomes mandatory. If you tell me I just want to do one session per week. It's okay. But you are going to do that session. And then there are also some mandatory group sessions" S5
		Psychological Services	Consultation	"A conversation I had with a coach where they didn't know what to do. There was a player in the team that was clearly bringing some tension to the group. And being quite combative with other players and also with the coach. And there were various situations that actually brought a rise out of other players where there was a disagreement verbally, even with the coach. And the situation seemed really on a knife edge. And then our reflective conversation was, you know, do we need this player? Do I need to bench this player? And the reflective conversation there is? What is your overarching goal for your time with this team? So if I was to write the story of your time with this team, what do you want that story to say? So what do you want out of it?" S3

(*Continued*)

Table 3. (Continued).

			Educational Workshops	"I start from the base, like the education, so I run psycho-education workshops for them. Like, start from the basic stuff that I think is crucial. So it's like, it's very difficult to teach them very basic stuff, because if you did they will feel bored. So I do topics like team culture, growth mindset, definitely tell them what is stress? What is appraisal and coping? Because that is important." S4
		Training Facilities and Housing	Training Facilities and Housing	"We have our own apartments, and then an office nearby that we go for scrims." P1
Intrapersonal	Performance Optimisation	Psychological Skills	Goal Setting	"For example, in football, or soccer or whatever, you can just set up some cones and play like a smaller detail-level match, you can't do that in Rainbow Six. So you are kind of shoehorned and limited in that sense. And that's why setting tiny goals for yourself is very important. Because in a big game with a crazy amount of things going on, if you're just focusing on a tiny little bit, then I guess you are sort of getting what that kind of smaller, more traditional training does that you would get you in a traditional sport." C2
			Meditation	"I think meditation is important. It's not a super big investment, but 10 minutes a day of meditation is, it's really good for me. And then, on match days, I will meditate a little bit more to collect my thoughts before the game. But I think it kind of teaches you a lot about yourself, and teaches you to be more calm, and Zen in some stressful situations and teaches you to be taking those breaths as well, when, when it's getting harder to kind of remember that you can do that." P3
			Breathing work	"just use the breathing techniques to calm you down. " P2
			Coping	"So like the ability to cope with or be resilient to this really fast paced game where you don't really get a break, it's constant, you know, you might have the most crippling loss in one round, and it's all your fault. But then you need to pick yourself up and show up for the next round and be your best." C3
		Psychological Characteristics	Mental Toughness	"I definitely think the mental stuff is by far the most important and I always think that will be the key that use words because I think it's so much easier to become unraveled, and eSports since you don't have as much control over the game as you will have to kick in a soccer ball if you've been playing it for like 10 years. I think there's always going to be that level of what's the best way to phrase it, this lack of control over the reality of the game to a certain extent that you need to really be mentally strong when things aren't going your way." C3
			Growth Mindset	"So I do topics like team culture, growth mindset, definitely tell them what is stress? What is appraisal and coping? Because that is important, you know." S4
			Resilience	"Yeah, definitely. I mean, mental is just a lot of. I think confidence gets thrown around a lot in eSports. And people don't really, it's very hard to describe what confidence actually is. But it's definitely a big part of the mental component. Resilience is a good word, perseverance, just having the ability to reset at any time." C3
			Discipline	"But if they don't really believe in that kind of culture, in that kind of discipline, in the same ideas, if you are not, if you don't totally buy in those ideas, it doesn't work out." S5
			Holistic Approach to High Performance	"the players that I that I that I have, they have some limited information about different areas of performance from a holistic or integral perspective meaning considering the psychological aspect, movement, nutrition, sleep, all these areas that are part of human performance." S2

(*Continued*)

Table 3. (Continued).

	Navigating Mental Health Challenges	Experiences	Burnout	"We work a lot around teaching them why it is important for them to regenerate and to have healthy habits to avoid burnout because most of them, at the end of the year, will be either burnout or almost burned out it is just because the pressure of the competition and just how competition is and then the issue is that it is because we're a little bit behind on preventing it or giving them tools to prevent it or minimize it" S2
			Mental Ill-Health	"a lot of these pro players are gone for seven months from home oftentimes or moving to another part of the state are these, like, kind of like what I talked about earlier about how there's lots him in Brazil teams in America as they're moving away from their country. So I think the biggest thing for these pro players is to go back home, reconnect your relationships with your, with your parents, reconnect with their siblings, your friends, your girlfriend, whoever they, whatever it may be, and just as much time as you need, just hanging out with them and make sure that you're happy." P5
			Well-being impacts	"but it stuck with me for a long time that we continue to underappreciate or undervalue the importance of social relationships in terms of performance. . . if a player feels supported within their team, by their teammates, less toxicity, better communication, better performance, if you see that they're better supported by their coach, there's maybe a feeling of psychological safety created within that team, you're seeing higher levels of well being, if the player is feeling more supported in their gaming by their parents, their mental health is generally better, and they're maybe better able to schedule their time and build in the appropriate, broader, holistic performance factors. So I think overarching, all of our attempts to improve to improve performance is the social side. And I think it's it's heavily undervalued and underappreciated by many people. I think that's because it's harder, it takes longer." S3
			Mental Fatigue	"the way you look out, look after yourself outside of game is gonna give you the advantage. Because think about all these other players and teams that are not doing that. If you're doing it, you have such an advantage, you know, and it's just better mental clarity, better focus." C2
			Stress	"We talk a lot about stress, what is the stress and how that influenced their lives and how they influence their performance. And then we go into more of the practical aspects, tools and strategies for them to live it day to day because as well that's that's the important part." S2
		Protective Behaviours	Pro-social behaviours	"So we have the first block from around 1pm to about 3. Then there's like a short break, where we will go for a walk as a team or we might play like a little board game, or like, it's called Avalon, like we like to play like a card game where it's like socialise and bond a bit and just have a break. And then we'll play another block that a break takes around 30 minutes usually. We play another block that ends around it's hard to say because sometimes it can go longer, but it ends up maybe 7pm or 730. Sometimes, it stretches out all the way till eight because you play extra games. And somewhere in between that or after you have dinner and Yeah, after that, we have free some of us decide to stay in the office. Some will go to the gym, and some will just go home. Maybe I'd usually people just stay around to play solo Q" P2
			Physical Activity	"In between some of the scrim blocks in practice, I'll go for a walk outside, try and find somewhere vaguely nice to go for a walk. And then I'll go to the gym in between scrims and then the individual practice as well. Because I just find these things sort of stopped me from losing my mind." P1

the analysis further. For example, the second author posed critical questions (e.g., how do these themes differ or relate to one another?) and encouraged these authors to consider connections within the analysis. This process led to further modifications and development of the final coding template and the creation of a figure to illustrate the analysis visually.

Rigour

We chose specific strategies suggested for rigour in qualitative research (Smith & McGannon, 2018; Tracy, 2010) to enhance quality. With esports growing in popularity and becoming an area of increased research interest (Sharpe et al., 2024; Leis et al., 2024), we considered the research to be a *worthy topic* based on its relevance, timeliness, and significance. We sought to achieve *rich rigour* by recruiting participants in different roles from different global regions and through our data collection and data analysis processes (e.g., engaging with the second author as a critical friend). By developing a preliminary conceptual model of high-performance environments in esports, we sought to make a *significant conceptual and practical contribution* to the field of esport research and talent development environments (Naeem et al., 2023). We also sought to produce findings that were *credible* by including in-depth quotes and being transparent about our methods and how our findings were generated.

Findings

In the following sections, we present findings concerning the factors contributing to high performance in major and minor regions. We present the major region data first, before portraying the minor region data, highlighting any differences. In Tables 3 and 4, we present the themes, higher-order themes, lower-order themes, codes, and representative quotes for the major and minor regions, respectively (see Appendix A for the definition of each theme, higher-order theme, lower-order theme, and code). Finally, we present a visual representation characterising esports high-performance environments in Figure 1.

High-performance environment factors

Through our analysis, we organised our findings in terms of three overarching themes: *training environment*, *interpersonal dynamics*, and *intrapersonal factors*.

Major regions

Training environment

The training environment theme portrayed characteristics of and activities within the environment that maintain or improve esports performance. Participants reported a series of *performance activities* related directly to training in their esport or analysing their esports play. Of the activities related directly to their esports gameplay, team training was referred to as the most important performance activity. This was captured in the following exert from Major Region Player 1 when asked 'what is most important to high performance?':

> Good-quality team practices are always the most important. If you have a team where you feel like you're getting good quality practice … I can look back and think that was great practice, and I have done really well. Number one is team scrims.[1] (Major Region Player 1)

Another key activity reported was game analysis. Such game analysis included team briefs and debriefs, player reflections, video reviews, and goal setting. Team briefs and debriefs were reported as being an important part of a training day that helped players set goals and review their performances. The nature of these activities was described by one coach when asked what their training environment looks like:

> Thirty minutes to an hour of review, or we just have a meeting at the start of the day, and in that, we might review something, or we might just talk about what we're going to do, what our ideas are, and just have like a discussion. (Major Region Coach 4)

Support and resourcing were needed to improve or maintain high performance in esports. The infrastructure in major regions allowed e'athletes to access a variety of support services. For example, access to psychological services (both for performance and mental health) included consultations and educational workshops. The importance of psychological support, both from the point of view of performance and mental health, was highlighted by a coach when emphasising the importance of support staff:

> I definitely think the mental stuff is by far the most important, and I always think that will be the key … . and in esports, since you don't have as much control over the game… you need to really be mentally strong when things aren't going your way. (Major Region Coach 3)

Another aspect of support and resourcing was access to physical training facilities and physical training

Table 4. Conceptual Table of High-Performance Environments in Minor Regions.

Theme	Higher order Theme	Lower-order Theme	Code	Example raw data quote
Interpersonal dynamics	Team Cohesion	Conflict resolution		"More coaches focused over player focused, is the crisis management. So over the coaching year or the season, there is almost guaranteed to be conflicts, because League is a game that is very time consuming. One game basically will cost you up to an hour, and then usually, it will take an hour to finish a game, do the review, etc." C1
		Communication		"I would say even just hanging out and playing games with each other collectively can help to just build that communication" C2
Training Environment	Performance Activities	Gameplay	Team Training	"So what to have four days of scrims where we'll play five games at least a day" P4
			Individual Training	"So when I solo train, I'm normally just playing solo queue and practising champs I'm likely to play or matchups I'm likely to play. Sometimes, I'm not the best at doing this, but sometimes I will practice 1v1 matchups" P1
			Bootcamps	"A big part of it is giving ourselves time to adjust to the sleep schedule, when a European team has a boot camp, usually it's a little bit shorter than us, because they don't have to deal with that, like a typical one would be around. For the teams that have unlimited money, it'd be like 10 days, eight to 10 days" C3
		Game analysis	Team Meetings	"we'll allocate one hour afterwards to discuss my coaching. So I'll go over my notes, people will go over their notes. We come together as a team and we just discuss how can we improve after our practice." C4
			Player Reflection	"So the sports psychologist that we work with used to also be a teacher. Now he is very into esports. Sometimes, the sports psychologist does not know that much about esports, so it does require the presence of a coach to explain things a little bit occasionally. However, the focus of those sessions is to give an opportunity for players to reflect or to express the stress that they're feeling, maybe something that's not performing and they don't understand why." C1
			Video Review	"This practice, typically, it looks like we have team meetings. These meetings will be about what are we focusing on, and what's come up. Let's keep up with the program. Let's do some exercises as players. Not even touching the game. It might be we brainstorm ideas. We set enquiry questions. We do our VOD reviews. It's everything that we can look at, ascertain some data, maybe find some information, whatever it is, that's a big part of it." C5
			Goal Setting	"A high-performance environment for my players is one where we have clear goals and everyone feels motivated." C3
	Support and Resourcing	Psychological Services	Consultation	"Depending on the resources the team have, then we'll also incorporate things like performance coaching, esports psychology or sports psychology, into the weekly training schedule. So for example, at [redacted], we have a weekly meeting, one with the team, and the players can also just book their own session with a sports psychologist" C1
		Training Facilities	Digital Training Environment	"When it's online, the environment's a bit different. Because it's all of a sudden, you're in your room, you're by yourself, and you can only really use your voice to give that affirmation when you can't do that physical stuff" C2
		Challenges within the training environment	Playing From Home	"It is the fact that given the current esports environment, teams aren't really. . . Teams do not work in person right now. So a lot of the training, a lot of the practice, etc. are just done online. So players are scattered all across Australia and sometimes even New Zealand." C1
			No Support Staff	"Whereas we know that other orgs do have an actual contracted psychologist. They do have someone who is contracted as their physio, their doctor. They have access to those resources. We recognise that those are great and we try to make it work however we can. But it's literally a funding concern at the moment." C5
			No Psychological Support	"I think in most European teams, they've (sports psychologist) contacted the team at least once a week, but I think every day for some teams, and they will, they'll do team based sessions and indeed a lot of individual work as well." C3
			No Bootcamps	"A lot of OCE teams don't have luxury of bootcamping." C5
			Short Careers	"An esports career is short lived, especially in Rocket League, you know, that the minimum minimum age is 15. And most pros retire like the age of 23." P5
			A Lack of Competitiveness (Low Training Quality)	"There's fewer teams to scrim and the practice level isn't as good." C5

(*Continued*)

Table 4. (Continued).

Intrapersonal	Performance Optimisation	Psychological Skills	Goal Setting	"We know what we're going to be focusing on next and how we're going to review it, or, if things do work well, we know exactly where we're moving to next. You've always got this informed way and your practice isn't hitting walls. That's the big concern that I hear by a lot of other teams is they hit a wall in their practice, they hit a wall in their programming, and the team stagnates and falls to pieces." C5
			Meditation	"for Esports I would probably say the mental side. So the off-screen stuff. So literally just going to the gym, getting meditation in your routine. Because I feel like you need to have a strong mentality to play Esports, you're not getting [unclear], you're not getting angry, you're not in your own head. So that's a big thing." P1
			Breathing Work	"Meditation or breath work either in-game or as preparation for gameplay. I find that there have been some immediate impacts with certain kinds of breathwork in both scenarios, in-game or pregame." S1
			Coping	"I always try to keep that as stress free and let's just play how we play. Just try to keep it as relaxed as possible." C4
		Psychological characteristics	Discipline / Grinding	"You actually have to keep grinding it. It's a it's a grinder all the top players in the world, they're grinding it like, as soon as you stop, they're catching up. You're not learning the new stuff you're improving, your skill level will slowly decrease, right? Not because you're a bad player, it's just you need to keep doing it.P3
	Navigating Mental Health Challenges	Experiences	Burnout	"We always have five-day weeks and two days off. Good, cool. Yeah, and it's no exception. If it's a Focus Week, we make sure we always have like days off, because it's, I think it's important that people don't burnout." P2
			Well-Being Impacts	"So I didn't pick up that we were actually burning ourselves out. Until it was we'd been through the first tournament we didn't do as well as we wanted to. And we were just constantly wrecked.S2
		Protective Behaviours	Physical Activity	"But that's, and then there's been a study that you know, like a healthier body is a healthier and healthier mind." P5

programming regimes. Finally, participants from major regions reported being able to train together and live together or close to the training facility during the pre-season and throughout the competitive season, with one explaining how 'we have our own apartments, and then an office nearby that we go for scrims' (Major Region Player 1). This close proximity not only afforded players opportunities to train together but also to form strong relationships.

Interpersonal dynamics

The theme, interpersonal dynamics, represented the ways in which individuals within the esport environment interacted with one another to enable high performance. Participants recognised the importance of *team cohesion*, with performance more likely to be optimised in environments that were characterised by an ability to communicate effectively and to engage in conflict resolution activities when in-game conflicts arose. For instance, Major Region Support Staff 4 outlined the connections between the interpersonal dynamics in the performance environment and individual functioning when explaining that 'if a player feels supported within their team, by their teammates, less toxicity, better communication, better performance . . . there's maybe a feeling of psychological safety created within that team. You're seeing higher levels of well-being'. As highlighted here, the interpersonal dynamics within esports environments was perceived as important for the well-being of players. *Social connections* also played a role, which encompassed how the close-knit performance environment allowed players to develop strong affective bonds and friendships with other players. These close ties between players were thought to foster a sense of togetherness within the environment. As one support staff member noted when discussing the role of social ties, 'It stuck with me for a long time that we continue to underappreciate or undervalue the importance of social relationships in terms of performance' (Major Region Support Staff 3). This illustrative example further highlights the integral role of close affective bonds for performance within esports environments.

Intrapersonal factors

The theme, intrapersonal factors, represented the internal processes and experiences reported by individuals in relation to their high-performance esport environment. Participants reported a series of psychological skills and characteristics related to *performance optimisation*. Players and coaches perceived that a series of psychological skills were important for success in elite esports, including goal setting, breathing work, coping strategies, and meditation. For example, one player spoke of their belief in the benefits of meditation in their performance preparation: 'I think meditation is important . . . 10 minutes a day of meditation is, it's really good for me. And then on match days, I will meditate a little bit more to collect my thoughts before the game' (Major Region Player 2). In addition to psychological skills, participants also referenced psychological characteristics that they believed helped them excel in their performances. Personal characteristics like mental toughness and resilience were mentioned, as well as mindsets like growth mindset and discipline. One coach outlined the role of resilience in his player's success and the meaning of this term to him: 'Resilience is a good word, perseverance, just having the ability to reset at any time' (Coach 3). Beyond performance, a series of negative mental health experiences and protective behaviours or strategies seem to be used to buffer against mental ill health, grouped in the *navigating mental health challenges* higher-order theme. When asked about their experiences in elite esports, participants reported a series of codes relating to navigating mental health challenges, including both clinical conditions and mental ill-health. In relation to the demanding and pressurised nature of elite esports training and competition, participants reported burnout, mental ill-health, adverse well-being impacts, stress, and mental fatigue. A support staff member outlined how burnout is something they focus on when supporting players:

> We work a lot around teaching them why it is important for them to regenerate to have healthy habits to avoid burnout because most of them, at the end of the year, will be either burned out or almost burned out it is just because the pressure of the competition and just how competition is, and then the issue is that it is because we're a little bit behind on preventing it or giving them tools to prevent it or minimise it. (Major Region Support staff 2)

Players also reported engaging in protective behaviours to minimise or mitigate poor mental health. For instance, connecting with others and physical activity were viewed as factors that could protect their mental health. One coach noted how their players relax:

> The game and their lives are so intertwined, you know? They'll be like, sitting down, eating food, like play one game, talk to their friends, like, watch Netflix, and then play another game with their friends. And it's like, to them, it's like, it's work, but it's also like this social thing. (Major Region Coach 4)

As portrayed by this coach, esports are often central to players' competitive lives but are also used by players as an opportunity to form strong social bonds, which helped to prevent mental health concerns.

Minor regions

At the theme and higher-order theme levels, minor and major region data were very similar, with more salient differences evident at the lower-order theme and code levels. A visual representation of the similarities and differences in minor and major region high-performance environments is presented in Appendix B.

Training environment

Although the training environments in minor and major regions had broad similarities, there were some nuances. In terms of *performance activities*, a novel aspect of minor regions was the value of bootcamps (i.e., intense periods of preseason or pre-competition training). In contrast to major regions, where team training was commonly the most important component of success, minor region participants mentioned needing to balance team training, solo training, and studying gameplay. The importance of balancing the components of the training environment was highlighted by Minor Region Player 1:

> So, scrims are there for team synergy and to play the game as a team. But if you do too many scrims, it's too mentally taxing, so you cannot play enough solo queue or study other players without being mentally checked out. So playing more is not useful, so if you're just scrimming, it's harder to get better individually, you can improve some individually, but it's not the same benefits you will see if you watch people's gameplay. So you're basically inhibiting your individual growth for the team growth. And so it's that balance then, is it? In that if we do too much scrimming and not enough individual development, and too much poor-quality scrims, it's going to lead to burnout and overplaying and shitty quality practice. (Minor Region Player 1)

Whereas major region players reported spending the whole preseason (~2 weeks) and competitive season training and competing in-person, due to the time and resource constraints faced in minor regions, bootcamps seemed to be particularly vital, as these were the only opportunities for these players to come together in person to prepare for competition. As Minor Region Coach 5 said:

> We have two weeks there where we meet up in person. We live under the same roof. We bootcamp in the same facility … that only happens maybe three or four times a year, if that, when we do move to the international competition.

There were also differences in *support and resourcing*. While some players in minor regions had access to psychological services (for mental health or performance), they were only available in the form of ad-hoc individual consultations. Illustrating the impact of lower financial resources in minor regions, one coach described psychological support as 'not something that every team gets. That is a luxury to have' (Minor Region Coach 4). Alongside little engagement in physical training, participants in minor regions reported challenges in obtaining the support reported by participants in major regions. One coach surmised the impact of a lack of resources: 'You're at a disadvantage geographically because you can't compete against the best teams, but you also have way fewer resources than the very best in Australia at the moment' (Coach 3). Whereas major region players were financially supported to live in the vicinity of their training facility, participants in minor regions emphasised the need for players, coaches and support staff to work in digital training environments. Finally, minor region participants highlighted gaps between their region and major regions in the level of competition. For instance, Coach 3 (who coaches Counterstrike 2) pointed out that the lack of opportunities to compete against high-quality players in other parts of the world could lead to a further widening of the gap in performance standards, stating that 'The best players in the world all compete in Europe and they compete against each other. And because they're playing against the best, they get even better, and Australia's left in a little bubble when it comes to esports'. In addition, further challenges raised by minor region participants related to difficulties with achieving and maintaining high performance included playing from home (i.e., rather than at a training facility), the absence of support staff, lack of psychological support, short careers (i.e., due to low pay and burnout), and a lack of competitiveness (i.e., low training quality).

Interpersonal dynamics

Differences in *interpersonal dynamics* theme were narrower in scope compared to the major regions. Similar to participants from the major region, *team cohesion*, characterised by both conflict resolution and communication, was recognised as important. This was highlighted by one coach, who, when asked what they do to contribute to the success of their players, said, 'Just interpersonal relationships, managing conflict … once every two weeks where we all just sit down and kind of talk, you know, … it's like you're in a long-term relationship or something' (Minor Region Coach 3). As conveyed in this extract, the opportunities for players in minor regions to spend time with one another were more restricted than in major regions, which appeared to subsequently make the formation of strong interpersonal bonds slower and more challenging.

Intrapersonal factors

The intrapersonal factors associated with high performance in minor regions were broadly similar to those of the major regions at higher thematic levels, but we interpreted some more nuanced differences. Performance optimisation in minor regions mirrored major regions with respect to the psychological skills reported by participants. Conversely, minor region participants only identified one psychological characteristic, discipline or '*grinding*',[2] a colloquial esports term referring to long, sustained hours of playing their game, to improve their skill. As one player commented:

> You actually have to keep grinding it. It's a grinder. All the top players in the world, they're grinding, as soon as you stop, they're catching up. (If) you're not learning the new stuff (or) improving, your skill level will slowly decrease. (Minor Region Player 3)

Minor region participants also reported *negative mental health experiences* and *protective behaviours*. Players, coaches, and support staff in minor regions highlighted the importance of monitoring and preventing burnout. One player mentioned, 'If it's a "focus week" [i.e., a week of more intense training ~ 8–10 hours per day], we make sure we always have days off, because it's, I think it's important that people don't burn out' (Minor Region Player 2). The importance of being mindful of the potential for burnout was also supported by a coach when asked what the most important contribution to the players' success said, 'it's ensuring that you've got your finger on the pulse on burnout and motivation and the overall player efficacy, that's really important'. (Minor Region Coach 5). Finally, physical activity was perceived as a protective factor for mental health, ' . . . you know, like a healthier body is a healthier and healthier mind' (Minor Region Player 5). Both minor and major region participants recognised that physical activity (not focused on improving performance), for example, taking a walk, was a good strategy for protecting their mental health. For a summary comparison of high-performance factors across major and minor regions, see Appendix B.

A preliminary model of high-performance environments in elite esports

Building on the combined results of major and minor region data, we developed a preliminary model of high-performance environments in elite esports (Figure 1). The Esports High-Performance Model (EHPM), guided primarily by major region participant data, graphically represents the combined factors that might be associated with high performance across esports environments. The EHPM comprises three layers: (1) Training Environment, (2) Interpersonal Dynamics, and (3) Intrapersonal Development. While we acknowledge that these layers are likely related, the model does not depict specific causal or dynamic interactions between them. Instead, it offers a preliminary conceptual model that visually represents our interpretations of the data in the current study. Importantly, the EHPM is intended as a preliminary conceptual model that can be used to support future research and theoretical development.

The outermost level of the EHPM, the training environment layer, represents performance activities that the players, coaches, and support staff do or facilitate to achieve success in esports, as well as the support and resources available to the team. Having access to frequent, high-quality team training against other elite players is a core component of improving gameplay. Secondary to team training when improving game-specific performance is creating time for quality individual training. Supporting both team and individual training are various game analysis activities. Players, coaches, and support staff should engage in team briefs and debriefs to set training goals and reflect on area training outcomes and areas for improvement. Reviewing individual and team video footage and other elite players' video footage was also reported as important. To maximise performance, strengthen interpersonal dynamics, and promote intrapersonal development, players, coaches, and support staff should be given the resources to compete and train at in-person facilities (this may include providing proximal housing). Furthermore, resourcing should be allocated to physical training and psychological services to improve performance and protect against mental health.

The interpersonal dynamics layer represents the active ingredients within the personal and professional relationships between players, coaches, and support staff. Specifically, this captured how the team's cohesion, ability to resolve conflicts, communication in professional contexts, sense of mutual respect, psychological safety, and, in some cases, social connectedness or friendship, could influence success within high performance esports environments. Team cohesion appeared to support players and coaches in working more effectively under high-pressure competitive conditions by reducing the impact of stressors, losses, and conflict. Outside of competition, participants perceived that developing strong social connections between players, coaches, and support staff may help to buffer against interpersonal breakdowns and protect against chronic stress associated with esports training. As noted in the

findings, interpersonal dynamics appeared to be strengthened when training and competition occurred in person. Moreover, these dynamics may be associated with players' psychological skill development and experiences of mental ill-health within high-performance environments.

The innermost layer, intrapersonal development, of the EHPM reflects players' internal psychological processes, experiences, and behaviours. This includes performance optimisation through the development of psychological skills and characteristics, such as coping strategies, resilience, and mental focus, often supported by sports psychologists or other performance staff. Participants also emphasised the importance of maintaining psychological wellbeing alongside performance demands. For example, strategies like engaging in physical activity (e.g., walking) or maintaining social connections were viewed as protective against chronic stress and burnout. While not performance-focused *per se*, these behaviours were seen as contributing to a sustainable, high-performance lifestyle and helped individuals to build and retain a more multidimensional identity. Coaches and support staff were perceived as playing an important role in enabling space for such behaviours within the training environment.

Discussion

The current study explored qualitatively the factors perceived to contribute to the success of high-performance environments in esports, capturing the perspectives of players, coaches, and support staff in major and minor regions. Overall, we interpreted that the primary features of esports high-performance environments could be organised within three themes: (1) training environment, (2) interpersonal dynamics, and (3) intrapersonal factors. Generally, the structure of high-performance environments was similar between major and minor regions; however, in minor regions, these structures appeared to differ in practice due to a perceived lack of support and resources. Furthermore, performance preparation appeared more difficult because of weaker domestic competition, possibly impacting minor region players' skillfulness. Based on empirical evidence generated in the current study, we developed a preliminary model representing key factors contributing to success in high-performance esports environments. The preliminary model is intended as a platform to guide and build future research investigating factors that contribute to high performance in esports, while also offering a contextual map that can inform policy and practice. In the following sections, we unpack our findings at each level within the preliminary model.

Training environment

Our findings provide novel insights into contextual factors within the training environments of elite esports that contribute to success. Previous research has identified team training (scrims) and game analysis as key determinants of success (Poulus et al., 2022). Consistent with these findings, the current study highlights that major region players typically engage in structured training schedules involving a combination of team scrims, individual practice, and extensive game analysis. While this structured approach was common in major regions, players in minor regions described more variable training environments, such that they encountered more obstacles when attempting to optimise their training and development. For instance, our findings highlighted that contextual factors, such as team organisation, scheduling challenges across time zones, and differing access to performance staff, limited the ability of players in minor regions to engage in these training practices more consistently. Thus, our findings build on previous research by highlighting how structural (e.g., inconsistent or absent daily routines and long-distance remote team setups that reduce face-to-face interactions; Pedraza-Ramirez et al., 2024), cultural (e.g., varying levels of professionalism and accountability across regions, including differences in team norms around punctuality, work ethic, and communication styles; Poulus et al., 2022; Watson et al., 2022), and resource-based (e.g., disparities in access to specialised performance staff like sport psychologists and analysts; Abbott et al., 2023; Pedraza-Ramirez et al., 2024) differences can create disparities in the training environments for elite esports players.

A notable difference between major and minor regions was the availability of support resources. Participants from major regions had access to dedicated training facilities, psychological services (i.e., one-on-one sessions and team workshops), and structured physical training programs, whereas minor region players often trained remotely, gained little guidance for physical training, and had limited opportunities for psychological support. Without further investment in these supports, it is possible that the gap between regions could continue to grow and that the performance and wellbeing of players may be negatively impacted. For instance, McNulty et al. (2023) identified a potential relationship between structured physical training and improved cognitive function and injury prevention in esports athletes. In addition, access to psychological services has been linked to improved stress management, resilience, and overall well-being in traditional sports (Wang et al.,

2025). Given concerns surrounding mental health within esports (Kegelaers et al., 2024; Poulus & Sharpe, 2025) and evidence concerning the unique stressors/challenges encountered by esports players in minor regions, making psychological support available could be an important step to not only helping players, teams and support personnel to navigate the challenges that they face, but also fundamental to cultivating esports environments that protect and nourish wellbeing.

Interpersonal dynamics

Interpersonal dynamics, particularly team cohesion and social connections, were perceived to be central to high-performance environments. Findings from the current study resonate with existing research in both traditional sports (e.g., McEwan, 2020; López-Gajardo et al., 2023) and esports (e.g., Poulus et al., 2022; Swettenham & Whitehead, 2022) by reinforcing the importance of strong interpersonal dynamics for team success. While this theme was evident across both major and minor regions, our findings offer novel insight into how these dynamics were cultivated. Major region participants highlighted the importance of structured team-building activities, conflict-resolution strategies, and deliberate communication practices. In contrast, teams in minor regions relied more on organic, informal interactions, which were often shaped by logistical constraints and remote working conditions. This suggests that, while the underlying group and interpersonal dynamics that contribute to successful performance may be shared, the opportunities to develop these attributes in high-performance esports environments are highly context-dependent, with more constraints in minor-region environments. Despite these challenges, our findings offer insights that can enhance the contextual intelligence (Brown et al., 2005) within high-performance esports environments and that could inform the delivery of tailored, context-driven interventions (Schinke & Stambulova, 2017) to enhance group and interpersonal dynamics in minor regions teams. For example, engaging in structured online team-building sessions, regular informal check-ins, virtual social activities, and clearly defined communication norms or conflict resolution protocols could help to overcome some of the barriers stemming from the more remote nature of minor region environments. While such approaches may not fully replicate in-person bonding, they offer practical ways to strengthen cohesion and psychological safety in remote training environments.

Intrapersonal development

The intrapersonal factors influencing high-performance esports environments included psychological optimisation skills and navigating mental health challenges. Psychological skills such as goal-setting, meditation/breathing work, and stress-coping skills were emphasised across both major and minor regions, aligning with prior findings on the value of esports mental skills training (Poulus & Polman, 2022; Poulus et al., 2023; Trotter et al., 2021). However, a key difference was the degree of psychological support available. In major regions, sports psychologists actively guided players through structured interventions, whereas minor region players relied on self-developed coping mechanisms.

The findings also highlighted the perceived role of psychological characteristics in high-performance esports environments. Whereas major region players tended to attribute success to developing resilience, mental toughness, and a growth mindset, factors that have been widely associated with success in elite esports (Behnke et al., 2024; Poulus et al., 2024a, 2024b), minor region participants primarily emphasised the importance of discipline and '*grinding*' (Bikas et al., 2023), reflecting a more individualised, self-reliant approach to skill development. These findings suggest that similar to psychological skills intervention in traditional sports (see Lange-Smith et al., 2024) for review), training and developing psychological characteristics are crucial across all esports environments. However, due to resource constraints, some psychological interventions may provide additional performance benefits that are less accessible to minor region players.

Navigating mental health challenges was another critical component of intrapersonal development. Consistent with prior research (Birch et al., 2024), participants reported experiences of burnout, stress, and mental fatigue, particularly during intensive training periods. Major region teams implemented structured strategies to mitigate these effects, such as scheduled breaks (DiFrancisco-Donoghue et al., 2021), sports psychology interventions (Poulus et al., 2023; Sharpe et al., 2024; Sharpe et al., 2025), physical training (Nicholson, et al., 2024a; Nicholson, et al., 2024b), and facilitated social activities (Trotter et al., 2021). In contrast, minor region players had fewer formal support structures, potentially increasing their risk of burnout. The role of protective behaviours, such as physical training and social support (Trotter et al., 2020, 2021), were interpreted as important factors in managing mental health. Kari and Karhulahti (2016) reported that physical training plays a protective role against mental fatigue, a finding

echoed in the current study, where both major and minor region participants acknowledged its benefits.

Key differences between major and minor regions

Several key differences were identified between high-performance environments in major and minor esports regions, with these differences appearing to be closely related to players' ability to train and compete at the highest level. First, minor region players had fewer opportunities for in-person social bonding, which limited their ability to build strong team cohesion. Minor region players primarily trained remotely, unlike major region teams that benefited from in-person training and structured team-building activities. This lack of in-person interaction may negatively impact communication and teamwork, both of which are critical for maintaining high performance in esports. Second, resource constraints posed a significant challenge for minor region teams. Many teams in these regions lacked access to dedicated physical training programs, psychological support services, and in-person training facilities. Without these structured high-performance resources, players in minor regions may struggle to develop and refine their skills at the same level as those in major regions. This disparity in resources further exacerbates the performance gap between the regions. Third, the emphasis on psychological characteristics differed between major and minor region players. While players in major regions identified psychological attributes vital for success, minor region players primarily focused on discipline and grinding. This suggests that players in minor regions may rely more on self-directed efforts to improve their performance, rather than benefiting from structured psychological interventions that could support their long-term development. Finally, the lack of formal mental health interventions placed minor region players at greater risk of burnout and stress-related issues. Major region teams had access to sports psychologists and structured mental health programs designed to mitigate the effects of high-pressure competition. In contrast, minor region players had fewer resources to manage stress, making them more susceptible to mental fatigue and potential early career burnout. Addressing these disparities in mental health support is crucial for fostering sustainable high-performance environments in esports across all regions.

A preliminary esports high-performance model

The Esports High-Performance Model (EHPM) was developed to conceptualise the key factors influencing high-performance environments in esports. The model consists of three interconnected layers: training environment, interpersonal dynamics, and intrapersonal development. The training environment encompasses performance activities such as team training, individual practice, game analysis, and access to essential resources, including physical training programs and psychological support. Interpersonal dynamics refer to team cohesion, communication, and social connectedness, which are critical in maintaining an effective high-performance ecosystem. Finally, intrapersonal development includes psychological skills (e.g., goal-setting, stress management) and protective factors for mental health, such as resilience and burnout prevention. The EHPM provides a structured model that can guide future research and inform practical applications for esports organisations. By addressing the resource disparities and psychological challenges identified in minor regions, the model aims to support sustainable, high-performance environments in esports worldwide.

Strengths, limitations and future directions

This study presents several strengths that contribute to the growing understanding of high-performance environments in esports. First, the study provides a novel conceptualisation of esports performance environments through the EHPM, integrating insights from both major and minor regions. This approach allows for a more comprehensive understanding of the factors contributing to elite esports performance and provides a foundation for future research and practical applications. Second, diverse perspectives, including players, coaches, and support staff from multiple esports disciplines, enhance the findings' generalisability and applicability. Furthermore, considering the challenges associated with recruiting elite participants (Baker et al., 2022; Mitchell et al., 2024), a sample of 26 represents one of the largest elite esports samples to date. The study's qualitative approach also enabled an exploration of experiences and perceptions, offering rich and nuanced insights into the challenges and opportunities within esports high-performance settings.

Despite these strengths, several limitations should be acknowledged and addressed through future research. First, there is an absence of participants from the Republic of Korea and the People's Republic of China, two of the most dominant esports regions globally. The absence of these perspectives means that the current findings may not account for factors contributing to success unique to these regions. Thus, further research is warranted to explore the experiences of relevant groups in these regions. Second, despite our best efforts to recruit female participants, the vast majority of participants were male (86.96%). While this imbalance somewhat reflects the underrepresentation of women and girls in esports

(DiNicola et al., 2024), further research with females is needed to understand gendered dimensions of participation in esports. Third, the current study involved relatively brief, single-shot interviews, which were unavoidable due to the time pressures faced by elite participants. In future, researchers should employ longitudinal methods to assess how high-performance environments evolve over time. Finally, while the EHPM offers a preliminary conceptual model, further empirical research is needed to evaluate its effectiveness in guiding esports training and development strategies.

Conclusion

This is the first study to provide an in-depth exploration of high-performance environments in esports, highlighting key differences between major and minor regions. The EHPM development offers a conceptual framework that captures the interconnected factors influencing performance, including training environment, interpersonal dynamics, and intrapersonal development. The findings emphasise the need for tailored strategies to enhance performance sustainability in minor regions by addressing disparities in resources, support structures, and mental health provisions. Future research should focus on refining and empirically testing the EHPM to further understand its applicability across different esports disciplines and competitive structures. Ultimately, this study contributes to the evolving understanding of esports performance science and provides a foundation for improving training environments in competitive gaming globally.

Notes

1. 'Scrims' is short for 'scrimmages' and refers to structured, practice matches between competitive teams. In esports, scrims are typically scheduled in advance, often follow tournament rules, and are used to test strategies, build team coordination, and evaluate performance in a controlled, competitive environment.
2. 'Grinding' refers to the sustained, repetitive effort players invest in playing a game for long hours with the goal of improving skill, gaining experience, or maintaining competitive readiness. In esports, it often implies individual practice through ranked matches or in-game tasks outside of team scrims.

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Appendices

Appendix A. Level 1, 2, 3, and 4 definitions

Level	Label	Definition
Level 1	Training Environment	Themes that are related to the training environment
Level 2	Performance Activities	Codes that relate to playing and improving performance in their esport
	Support and Resourcing	Codes that capture the support and resourcing offered to the players within the performance environment
Level 3	Gameplay	Codes that relate to esports-specific, in-game training efforts
	Game analysis	Codes that relate to esports-specific, out-of-game training efforts
	Physical training	Codes that relate to physical training opportunities in the high-performance esports environment
	Psychological services	Codes that relate to psychological services available within the high-performance esports environment
	Training Facilities	Codes that capture the training facilities and housing offered to the players in the elite esports environment
Level 1	Intrapersonal dynamics	Themes that capture the psychology of the elite esports environment
Level 2	Performance optimisation	Codes that relate to the mentality and psychological skills used to optimise performance
	Navigating mental health challenges	Codes that relate to the mental health experiences and protective behaviours used in elite esports environments.
Level 3	Psychological Skills	Codes that refer to psychological skills used to increase or maintain high performance
	Psychological Characteristics	Codes that refer to the characteristics needed to perform in an elite esports environment
	Negative mental health experiences	Codes that capture negative mental health experiences of elite esports participants
	Protective Behaviours for mental health	Codes that refer to behaviours that protect against negative mental health
Level 1	Interpersonal development	Themes that capture interpersonal development in elite esports environments
Level 2	Team Cohesion	Codes that capture efforts to improve in-game teamwork
	Team Building	Codes that capture efforts to improve the team environment outside of the game
Level 3	Conflict resolution	Codes that relate to efforts to better manage in-game conflicts
	Communication	Codes that relate to in-game communication
	Friendship	Codes that relate to building relationships between the players
	Togetherness	Codes that relate to the opportunities to build connections due to an in-person environment

Appendix B. A Comparison of high-performance factors in elite esports environments between major and minor esports regions

Major region				Minor region			
Theme	Higher-order theme	Lower-order theme	Code	Theme	Higher-order theme	Lower-order theme	Code
Training environment	Performance Activities	Gameplay	Team training	Training Environment	Performance Activities	Gameplay	Team training
			Individual training				Individual training
			Preseason				Bootcamps
		Game Analysis	Team briefs and debriefs			Game Analysis	Team meetings
			Player reflection				Player reflection
			Video review				Video review
			Goal setting				Goal setting
	Support And Resourcing	Physical Training	Access		Support And Resourcing	Psychological Services	Consultation
			Programming			Training Facilities	Digital training environment
		Psychological Services	Consultation			Challenges Within The Training Environment	Playing from home
			Educational workshops				No support staff
		Training Facilities and Housing	Training facilities and housing				No psychological support
Interpersonal dynamics	Team Cohesion	Conflict Resolution	Conflict resolution				No bootcamps
		Communication	Communication				Short careers
	Social Connections	Friendships	Friendships				A lack of competitiveness (low training quality)
		Togetherness	Togetherness	Interpersonal Dynamics	Team Cohesion	Conflict Resolution	Conflict resolution
Intrapersonal development	Performance Optimisation	Psychological Skills	Goal setting			Communication	Communication
			Meditation	Intrapersonal Development	Performance Optimisation	Psychological Skills	Goal setting
			Breathing work				Meditation
			Coping				Breathing work
		Psychological Characteristics	Mental toughness				Coping
			Growth mindset			Psychological Characteristics	Discipline/grinding
			Resilience		Navigating Mental Health Challenges	Negative Mental Health Experiences	Burnout
			Discipline				Well-being impacts
			A holistic approach to high-performance			Protective Behaviours for Mental Health	Physical activity
	Navigating Mental Health Challenges	Negative Mental Health Experiences	Burnout				
			Mental ill-health				
			Well-being impacts				
			Mental fatigue				
			Stress				
		Protective Behaviours for Mental Health	Pro-social behaviours				
			Physical activity				