Esports athletes' needs for their holistic wellbeing

Business report: a complementary project

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BACKGROUND TO THE PROJECT

The present study is a complementary project following the previous project of 'An international analysis of organisational support for esports players' mental health and physical activity', which aimed to investigate how esports athletes perceive organisational support focusing on mental health and physical activity, and what their coping skills/strategies are to ensure both their mental and physical health. Six different themes were emerged from the data: 1) Support for mental health, 2) Support for physical activity, 3) Stakeholders and support providers, 4) Coping skills and strategies, 5) Combating criticisms of esports, and 6) Advice for the next esports generation. The findings show that most esports athletes self-managed both their mental and physical health but would appreciate some external support, particularly psychological support. It was found that some top teams and players have structured support from their teams and sponsors although such cases are limited. Each stakeholder's roles and responsibilities were identified regarding esports athletes' welfare. Esports athletes' self-developed coping skills/strategies such as a balanced lifestyle, time management, meditation, social support, and good sleeping habits were discussed. All participants across the different stakeholder groups are aware of the criticisms around esports and they suggested different ways to combat criticism, including governmental support. They also advised the younger generation to have balanced lifestyle (e.g., dual career), be passionate, and be realistic when they pursue their career paths in the eSports industry.

The current complementary project was designed based on the findings from the previous project as presented above to identify esports athletes' needs at all levels for their holistic wellbeing both during and after their esports career via mixed methods of focus groups, online questionnaires, and semi-structured interviews. We intend to inform stakeholders in the esports industry to develop a relevant support scheme/programme based on empirical evidence.

PROJECT AIMS

The primary purpose of the project is to identify esports athletes' needs at all levels (professional, semi-professional, amateur) for their holistic wellbeing both during and after their esports career. There are six key areas to identify their needs: Wellness, Career, Performance, Integrity, Finance, and Voice. Such areas were examined based on the framework of human wellbeing (Biedenweg et al., 2016), which includes six domains: physical, psychological, cultural, social, economic, and governance.
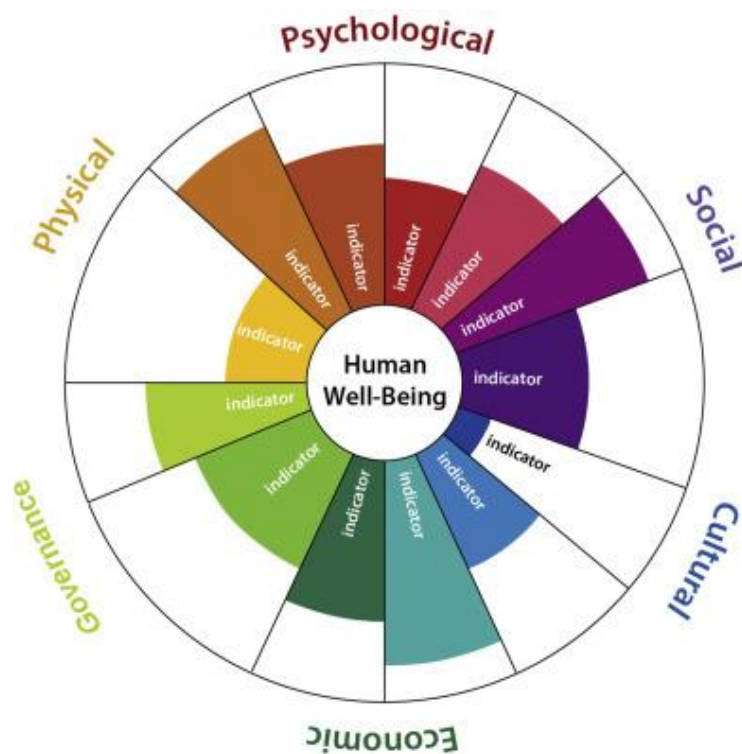

Figure. 1. Visual representation of Human Wellbeing domains (Biedenweg et al., 2016)

The identified needs intend to inform stakeholders in the esports industry to develop a support scheme/system as well as a larger project of developing online resources to support esports athletes' holistic wellbeing while using the well-established platform for traditional sport athletes called Athlete 365.

METHODOLOGY

The research involved three main stages as follows:

1. **Development of an online questionnaire**: Two focus groups and semi-structured interview. The draft of an online questionnaire was developed based on the findings from the previous project prior to the focus groups and semi-structured interview. The participants discussed items for each factor to help improve the questionnaire. Please see the final version of the questionnaire (Appendix 1).

   - **Focus group 1 (n=5)**: Three academic staff members and two practitioners related to esports and career assistance programme for athletes.
   - **Focus group 2 (n=3)**: A professional and two semi-professional esports athletes
   - **Semi-structured interview (n=1)**: A professional esports athletes (he could not make the focus group 2 so was interviewed instead).

2. **Dissemination of the online questionnaire**: the online questionnaire was developed in English and translated into six different languages (Chinese, French, German, Japanese, Korean, and Spanish). The questionnaire was designed and disseminated via www.onlinesurveys.ac.uk, which the researchers' institution supports.

   - English: https://stirling.onlinesurveys.ac.uk/esports-players-needs-for-their-holistic-wellbeing
   - Korean: https://stirling.onlinesurveys.ac.uk/2baxkyx5ex
   - French: https://stirling.onlinesurveys.ac.uk/besoins-des-joueurs-desport-en-matiere-de-bien-etre-gener
   - Spanish: https://stirling.onlinesurveys.ac.uk/necesidades-de-los-jugadores-de-esports-para-su-bienestar
   - German: https://stirling.onlinesurveys.ac.uk/bedurfnisse-von-e-sportlern-fur-ihr-ganzheitliches-wohlbef
   - Chinese: https://stirling.onlinesurveys.ac.uk/hdj-y7tsa5
   - Japanese: https://stirling.onlinesurveys.ac.uk/sumdckyar5

3. **Investigation of the perspectives of key stakeholders** in the esports industry on esports athletes' holistic wellbeing considering the framework of human wellbeing: six semi-structured interviews were conducted. The developed questionnaire was used as an interview guide.

   - Event organisers (n=2)
   - International esports association (n=1)
   - National esports association (n=1)
   - Professional team (n=1)
   - Sponsor (n=1)

KEY FINDINGS: ESPORTS ATHLETES' PERSPECTIVES

Esports players of all career levels were asked to complete a survey which contained questions about their characteristics, challenges and barriers to a career in esports (linked to the six wellbeing domains), and support systems needed to help pursue a career in esports (linked to the six wellbeing domains). A total of 410 responded to the survey, of which 393 provided sufficient data (completion rate = 96%). Table 1 contains participants' characteristics.

Main findings:

- Most respondents were either amateur players (47.8%) or playing at the professional level (38.2%).

- The majority of esports players were male (80.7%).

- Most respondents were of either Asian (81.2%) or White (13.0%) ethnicity.

- The majority of esports players were either attending university/college (55.2%) or attending secondary school (20.6%). Most players were currently receiving formal education.

- Most respondents were students (71.5%) or full-time employees (15.0%)

- The majority of players did not earn any income through esports (67.7%) through some earned between $1 to $9,999 (14.2%)

- Almost half of all players had no plans for their career after esports (49.4%). A similar split of those who did have plans either wanted to work in the esports industry (15.5%) or had plans for further study (14.5%). Further analysis showed that less than half (44.2%) of Asian players had plans for their career after esports while most White players (76.6%) did have plans.

Table 1. Characteristics of esports players

		Count	Column %
Total		393	100%
Level of career	**Professional**	150	38.2%
	Semi-professional	38	9.7%
	Amateur	188	47.8%
Gender	**Male**	317	80.7%
	Female	65	16.5%
Ethnicity	**White**	51	13.0%
	Asian	319	81.2%
	Black	3	0.8%
	Mixed/multiple ethnic groups	5	1.3%
	Other	6	1.5%
Education	**Attending secondary school**	81	20.6%
	Graduated from secondary school	35	8.9%
	Attending university/college	217	55.2%
	Graduated from university/college	29	7.4%
	Advanced degree	11	2.8%
	Other	10	2.5%
Employment status	**Full time employee**	59	15.0%
	Part time employee	3	0.8%
	Self-employed	9	2.3%
	Furloughed	0	0%
	Student	281	71.5%
	Unemployed	12	3.1%
	Other	20	5.1%
Annual income earned through esports	**$0**	266	67.7%
	$1 to $9,999	56	14.2%
	$10,000 to $24,999	15	3.8%
	$25,000 to $49,000	12	3.1%
	$50,000 or more	30	7.6%
Plans for after esports	**No plans**	194	49.4%
	Further study	57	14.5%
	Employment within esports industry	61	15.5%
	Employment out with esports industry	14	3.6%
	Streaming	27	6.9%
	Other	22	5.6%

1. Physical factor

The 14 items linked to the Physical wellbeing domain and their means and standard deviations are listed in Table 2 and Table 3. The relevancy of challenges and barriers, and support systems to the careers of esports players are ranked from 'Not at all relevant' (1) to 'Very relevant' (5).

Table 2. Physical Challenges and Barriers to an esports career

Factors	Mean	SD	N (valid)	Missing
Injuries	2.09	1.35	386	7
Physical inactivity	2.34	1.34	389	4
Sedentary behaviour	2.61	1.38	389	4
Sleep management	2.58	1.36	391	2
Access to sport and leisure facilities	2.61	1.31	392	1
Diet/nutrition intake	2.76	1.33	391	2

Table 3. Physical Support systems for an esports career

Factors	Mean	SD	N (valid)	Missing
Physiotherapy	2.52	1.38	389	4
Rehabilitation sessions	2.36	1.35	391	2
Face-to-face personal training programmes	2.59	1.37	392	1
Online personal training programmes	2.38	1.29	389	4
Sport centre memberships	2.44	1.31	393	0
Online physical activity resources	2.40	1.24	390	3
Dietary/Nutrition support/resources	2.55	1.30	392	1
Education on use of performance enhancing substances	2.54	1.39	391	2

Main findings:

- Diet/nutrition intake, sedentary behaviour, and access to leisure facilities were the most relevant physical challenges and barriers to a career in esports.

- Face-to-face personal training programmes, dietary/nutrition support/resources, and education on use of performance enhancing substances were the most relevant physical support systems needed for an esports career.

- All mean scores were between 2 and 3, suggesting a neutral to somewhat not relevant view on all physical factors.

2. Psychological factor

The 12 items linked to the Psychological wellbeing domain and their means and standard deviations are listed in Table 4 and Table 5. The relevancy of challenges and barriers, and support systems to the careers of esports players are ranked from 'Not at all relevant' (1) to 'Very relevant' (5).

Table 4. Psychological Challenges and Barriers to an esports career

Factors	Mean	SD	N (valid)	Missing
Anxiety	2.42	1.35	390	3
Emotion/Mood control	2.71	1.37	391	2
Possession of psychology performance skills	2.75	1.37	390	3
Burnout	2.63	1.39	391	2
Uncertainty over future career	2.61	1.35	389	4

Table 5. Psychological Support systems for an esports career

Factors	Mean	SD	N (valid)	Missing
Mental/psychological performance skills development sessions	2.55	1.34	389	4
Mentoring by other players (former or current)	2.80	1.34	392	1
Mentoring by coaches	2.87	1.36	390	3
Counselling sessions delivered by experts	2.65	1.37	389	4
Career management consulting/advice	2.67	1.32	386	7
Time management skills	2.82	1.33	391	2
Prioritization skills	2.86	1.31	391	2

Main findings:

- Possession of psychology performance skills, emotion/mood control, and burnout were the most relevant psychological challenges and barriers to a career in esports.

- Mentoring by coaches, prioritization skills, and time management skills were the most relevant psychological support systems needed for an esports career.

- All mean scores were between 2 and 3, suggesting a neutral to somewhat not relevant view on all psychological factors.

3. Social factor

The 17 items linked to the Social wellbeing domain and their means and standard deviations are listed in Table 6 and Table 7. The relevancy of challenges and barriers, and support systems to the careers of esports players are ranked from 'Not at all relevant' (1) to 'Very relevant' (5).

Table 6. Social Challenges and Barriers to an esports career

Factors	Mean	SD	N (valid)	Missing
Communication with other players	2.97	1.42	391	2
Communication with other support staff including coaches	2.91	1.37	391	2
Limited social support and loneliness	2.48	1.18	389	4
Criticism and stigma towards esports	2.49	1.25	392	1
eSports not valued by parents, family members, friends, and significant others	2.60	1.30	391	2
Race/Ethnicity-based discrimination	1.96	1.16	389	4
Religion-based discrimination	1.80	1.08	391	2
Gender inequality	2.00	1.23	393	0
Verbal/online harassment (toxicity)	2.35	1.29	391	2
Disability access and inclusion	2.14	1.20	391	2

Table 7. Social Support systems for an esports career

Factors	Mean	SD	N (valid)	Missing
Communication skills development	2.88	1.35	393	0
Social media skills development	2.82	1.29	391	2
Professional media training	2.71	1.29	391	2
Educational/informative tutorial for parents, family members, friends, and significant others	2.63	1.30	389	4
Anti-discrimination educational tutorials	2.42	1.25	389	4
Educational tutorials to promote gender equality	2.45	1.24	391	2
Educational tutorials to promote inclusion	2.58	1.30	391	2

Main findings:

- Communication with other players, communication with other support staff including coaches, and criticism and esports not valued by friends and family were the most relevant social challenges and barriers to a career in esports.

- Communication skills development, social media skills development, and professional media training were the most relevant social support systems needed for an esports career.

- All mean scores were between 2 and 3, suggesting a neutral to somewhat not relevant view on all social factors.

4. Cultural factor

The 12 items linked to the Cultural wellbeing domain and their means and standard deviations are listed in Table 8 and Table 9. The relevancy of challenges and barriers, and support systems to the careers of esports players are ranked from 'Not at all relevant' (1) to 'Very relevant' (5).

Table 8. Cultural Challenges and Barriers to an esports career

Factors	Mean	SD	N (valid)	Missing
Language barrier to communicate with others	2.48	1.27	390	3
Understanding other cultures	2.49	1.21	389	4
Training environment	2.71	1.34	390	3
Working with multi-national team members	2.45	1.29	389	4
Work-life balance	2.76	1.30	390	3
Career duration	2.78	1.31	391	2

Table 9 – Cultural Support systems for an esports career

Factors	Mean	SD	N (valid)	Missing
Language education support	2.62	1.28	389	4
Translation support services	2.55	1.29	389	4
Educational tutorials on understanding other cultures	2.42	1.20	389	4
Educational tutorials on how to improve the training environment	2.57	1.27	390	3

	Mean	SD	N	Missing
Educational tutorials on working with foreign teammates	2.53	1.25	390	3
Team building activities	3.02	1.38	389	4

Main findings:

- Career duration, work-life balance, and training environment were the most relevant cultural challenges and barriers to a career in esports.

- Team building activities, language education support, and educational tutorials on how to improve the training environment were the most relevant cultural support systems needed for an esports career.

- All mean scores were between 2 and 3, suggesting a neutral to somewhat not relevant view on all cultural factors.

5. Economic factor

The 16 items linked to the Economic wellbeing domain and their means and standard deviations are listed in Table 10 and Table 11. The relevancy of challenges and barriers, and support systems to the careers of esports players are ranked from 'Not at all relevant' (1) to 'Very relevant' (5).

Table 10. Economic Challenges and Barriers to an esports career

Factors	Mean	SD	N (valid)	Missing
Financial independence	2.80	1.34	391	2
Finance to cover travel expenses	2.74	1.33	389	4
Finance to cover living expenses	2.72	1.32	385	8
Having a job outside of esports career to secure living/travel expenses	2.42	1.27	389	4
Access to income generation opportunities	2.55	1.31	386	7
Financial planning and management skills	2.65	1.28	389	4

Knowledge of tax system	2.63	1.28	387	6

Table 11. Economic Support systems for an esports career

Factors	Mean	SD	N (valid)	Missing
Small grants scheme for travel expenses	2.70	1.31	390	3
An opportunity to be exposed to sponsors	2.84	1.37	389	4
Educational tutorials on financial planning and management skills	2.65	1.26	389	4
Educational tutorials on how to balance dual careers	2.69	1.26	385	8
Support around understanding esports contracts	2.91	1.33	388	5
Support around understanding tax systems	2.76	1.30	384	9
Training on how to improve income potential	2.82	1.31	390	3
Support for transitioning to other careers after esports	2.83	1.34	389	4
Internships for professional players/Jobs based skills learning	2.80	1.33	388	5

Main findings:

- Financial independence, finance to cover travel expenses, and finance to cover living expenses were the most relevant economic challenges and barriers to a career in esports.

- Support around understanding esports contracts, opportunities to be exposed to sponsors, and support for transitioning to other careers after esports were the most relevant economic support systems needed for an esports career.

- All mean scores were between 2 and 3, suggesting a neutral to somewhat not relevant view on all economic factors.

6. Governance factor

The 13 items linked to the Governance wellbeing domain and their means and standard deviations are listed in Table 12 and Table 13. The relevancy of challenges and barriers, and support systems to the careers of esports players are ranked from 'Not at all relevant' (1) to 'Very relevant' (5).

Table 12. Governance Challenges and Barriers to an esports career

Factors	Mean	SD	N (valid)	Missing
Opportunity for player voice (opinion) to be heard	2.87	1.35	390	3
Understanding of structure of federations/teams/national associations	2.72	1.26	388	5
Knowledge on how decisions on esports players' wellbeing and welfare are made	2.76	1.30	387	6
Awareness on responsibility/accountability of each governing body/stakeholder	2.76	1.26	389	4
Lack of contact point to raise concerns with	2.71	1.27	389	4

Table 13. Governance Support systems for an esports career

Factors	Mean	SD	N (valid)	Missing
Informative tutorials on the roles and responsibilities of each governing body/stakeholder	2.66	1.26	390	3
Informative tutorials on how each governing body/stakeholder is structured	2.62	1.22	386	7
Informative tutorials on decision-making process around esports players' wellbeing and welfare	2.72	1.25	389	4
Educational tutorials on how players can influence decisions using player voice (opinion)	2.73	1.26	390	3
Sharing good practice between stakeholders	2.73	1.26	388	5
Contact point to raise concerns with	2.79	1.27	390	3

Player representatives to liaise with other stakeholders	2.76	1.28	388	5
Support from esports stakeholders to help navigate local barriers to participation	2.82	1.32	386	7

Main findings:

- Opportunity for player voice to be heard, knowledge on how decisions on esports players' wellbeing and welfare are made, and awareness on responsibility/accountability of each governing body/stakeholder were the most relevant governance challenges and barriers to a career in esports.

- Support from esports stakeholders to help navigate local barriers to participation, contact point to raise concerns with, and player representatives to liaise with other stakeholders were the most relevant governance support systems needed for an esports career.

- All mean scores were between 2 and 3, suggesting a neutral to somewhat not relevant view on all governance factors.

7. Prioritization of factors

All 84 factors were ranked from most relevant (5) to least relevant (1). Table 14 presents the most relevant challenges and barriers to a career in esports across all wellbeing domains. Table 15 presents the most relevant support systems for a career in esports across all wellbeing domains.

Table 14. Most Relevant Challenges and barriers to a career in esports

Factors	Mean	SD	N (valid)	Area
Communication with other players	2.97	1.42	391	Social
Communication with other support staff including coaches	2.91	1.37	391	Social
Opportunity for player voice (opinion) to be heard	2.87	1.35	390	Governance
Financial independence	2.80	1.34	391	Economic
Career duration	2.78	1.31	391	Cultural
Diet/nutrition intake	2.76	1.33	391	Physical
Work-life balance	2.76	1.30	390	Cultural
Knowledge on how decisions on esports players' wellbeing and welfare are made	2.76	1.30	387	Governance
Awareness on responsibility/accountability of each governing body/stakeholder	2.76	1.26	389	Governance
Possession of psychology performance skills	2.75	1.37	390	Psychological
Finance to cover travel expenses	2.74	1.33	389	Economic

Table 15. Most Relevant Support systems for an esports career

Factors	Mean	SD	N (valid)	Area
Team building activities	3.02	1.38	389	Cultural
Support around understanding esports contracts	2.91	1.33	388	Economic
Communication skills development	2.88	1.35	393	Social
Mentoring by coaches	2.87	1.36	390	Psychological
Prioritization skills	2.86	1.31	391	Psychological
An opportunity to be exposed to sponsors	2.84	1.37	389	Economic
Support for transitioning to other careers after esports	2.83	1.34	389	Economic
Time management skills	2.82	1.33	391	Psychological
Social media skills development	2.82	1.29	391	Social
Training on how to improve income potential	2.82	1.31	390	Economic
Support from esports stakeholders to help navigate local barriers to participation	2.82	1.32	386	Governance

Main findings:

- Communication with other players, communication with other support staff including coaches, and an opportunity for player voice to be heard were the most relevant challenges and barriers to a career in esports.

- Team building activities, support around understanding esports contracts, and communication skills development were the most relevant support systems needed for an esports career.

- Governance (mean = 2.76), Economic (mean = 2.64), and Psychological (mean = 2.62) wellbeing domains overall provided the most relevant challenges and barriers to a career in esports.

- Economic (mean = 2.78), Psychological (mean = 2.74), and Governance (mean = 2.73) wellbeing domains overall provided the most relevant support systems needed for an esports career.

KEY FINDINGS: STAKEHOLDERS' PERSPECTIVES

1. Physical factor

All stakeholders in this study appreciate the importance of physical activity for esports athletes. They discussed that many professional teams have provided specialised support to esports athletes such as personal training, gym membership, gym facilities within gaming houses, which is in line with the findings from the previous project that the research team conducted. However, they highlighted that esports athletes should be more aware of the importance of physical activity to have a long-term career. At an organisational level, the stakeholders in the esports ecosystem should establish an appropriate environment by

encouraging esports athletes, professional teams, and gaming communities to have regular physical activity for both their health/wellbeing and performance. Not surprisingly, the role of parents was highlighted by the participants in terms of ensuring young esports athletes to engage in sport/physical activity while playing esports.

Two key issues are mainly discussed: injuries and sleep management. As high-performance athletes in traditional sport highly experience, esports athletes in particular the ones at professional level also can face issues of injuries even career-ending injuries due to their intensive training and high-performance at international tournaments. Since they practice for long hours and the training schedules are not always regular depending on tournaments, team training schedule and personal training, many esports athletes may face the issues of poor/lack of sleep, which can negatively influence their performance. While it is also an individual's responsibility, the participants consider that esports athletes need support from their teams or other relevant authorities to prevent them from injuries and develop their sleep management skills to ensure their health and improve their performance. Another topic that was discussed in-depth was 'nutrition intake/diet'. Once again, the participants note that many professional teams care about their esports athletes' nutrition intake/diet so that they have provided appropriate support such as hiring nutritionists, chefs for gaming houses, providing information about proper meals, etc. However, they also appreciate that such support is limited to professional players at the top tier. Since esports players at other levels have limited access to such support, it is considered as critical to collectively raise an awareness of the importance of appropriate nutrition intake/diet and provide information support within the ecosystem.

2. Psychological factor

The significance of addressing psychological factors was emphasised. As esports are also considered as mental games, it is important for esports athletes to have strong mindset and mental/psychological skills to overcome psychological distress/mental health issues such as burnout, anxiety, and depression. It was reported that many professional teams have provided psychological support such as hiring sport psychologists, counsellors, mental coaches, etc. While professional support services are available for professional esports athletes at a top tier, it is unknown what type of psychological support that esports athletes at other levels can access. It might be possible that young people who play esports can access some general support services from their schools, but it has not been clearly identified, which is beyond the scope of the current project. Therefore, the importance of the role of parents, once again, was emphasised. Interestingly, most of participants pointed out the esports athletes' major stressors related to social media. This issue will be further discussed in 'Social factor'. One of the topics within the psychology factor that was discussed in depth was 'uncertainty over future career'. Since the career span of esports athletes is relatively short and the profession itself is very competitive, young athletes might have to terminate their professional career at an early age and their career may be shorter than they expect due to unexpected circumstances such as injuries. Therefore, the participants highlighted the importance of understanding different pathways within the industry as being a professional esports athlete is not the only profession that exists within the ecosystem. It was observed that some stakeholders within the industry already have schemes related to 'esports academies' to educate young people

by providing an opportunity to develop different skill sets and helping them better understand the whole ecosystem and the nature of the industry.

3. Social factor

As mentioned earlier, it was reported that esports athletes can face several issues via social media related to verbal/online abuse and harassment (toxicity). In the case of professional esports athletes, they have many followers and fans who support them as well as criticise them. Since many of the professional esports athletes are relatively young (e.g., in their early 20s or in their adolescence), they may not know how to deal with such toxicity and criticism, which can hugely affect their mental health and performance. Therefore, the participants considered it is very critical to educate young esports athletes on how to properly use social media via media training. Although professional teams have staff members to support their esports athletes in this area (e.g., marketing department), such specialised support is not in place for a majority of esports athletes at other levels. The participants regard that this should be addressed by all key stakeholders collectively to improve the environment.

In terms of 'Criticism and stigma towards esports', the participants did not see this as an issue anymore as the perceptions on esports has been positively changed and they consider it is a matter of time that the public better understand the nature of esports and appreciate the positive aspects of it. On the other hand, the participants discussed that the issue of 'gender inequality' is something that the industry and ecosystem should address and find a way to create a better environment for females to engage more in esports. Some of the participants noted that there are some schemes providing female only competitions and some teams are comprised of both females and males.

While they appreciate that it is still a long way to ensure gender equality within the industry and ecosystem, it appears that the stakeholders including the participants in this study are aware of the significance of the issue and have strong intentions to address it.

4. Cultural factor

Six items were listed within the cultural factor to discuss: 1) Language barrier to communicate with others, 2) Understanding other cultures, 3) Training environment (e.g., gaming house, relocation to other culture), 4) working with multi-national team members, 5) work-life balance, and 6) career duration. While they appreciate that there might be an issue within a professional team that have multi-national team members due to language barriers and misunderstanding the culture, they did not think it is very significant as professional teams provide language support (e.g., translator) and other associated support to help them understand each other's background and culture. However, it is beyond the scope of the study to identify the details of provision in place although one of the participants was from a top-tier professional team; this team is comprised of the team members with one nationality. One topic that the participants discussed in-depth was 'career duration'. This topic was discussed in relation to the item 'uncertainty over future career' in the psychological factor. Since professional esports athletes' career duration will be relatively short compared to other professions, the participants pointed out that young people should be aware of that fact before they decide to become a professional esports athlete and need to consider other professions within the ecosystem. For the industry to be sustainably developed, the participants also appreciate that it is

important to attract high-quality human resources for different positions and professions to the industry.

5. Economic factor

The participants considered that the items in this factor are mainly relevant to professional athletes as only professional players who have a contact with professional teams can make a living out of esports. In the case of professional esports athletes, the importance of 'developing financial management skills as a transferrable skill' was highlighted. Since young professional esports athletes have an opportunity to make a huge amount of money (e.g., prize money, high salary) compared to their age group, it is important for them to be aware that they need to manage their money well as their career would not last long. Some of the participants referred to some high-performance athletes in traditional sport who went bankrupt after retirement even though they made fortune during their athletic career. While young esports athletes may be supported by family, in particular parents, in terms of financial management, the participants also considered that some organisational support should be in place to provide an opportunity for them to be financially independent and develop financial literacy and management skills for a long-term career/life.

6. Governance factor

The governance factor is the one that many participants found it hard to discuss because the esports industry is still in its initial stage of establishing structured governance. In terms of esports athletes' wellbeing and welfare, while it is very clear for professional esports athletes to report any issues raised during their career to their

teams, other esports athletes at the semi-professional or amateur level may not know of any contact points, suggesting a lack of clarity within the ecosystem. Some of the participants mentioned that it might be possible to establish an 'esports athletes' union' in the future to make the esports athletes' voice be heard and engage in decision-making processes. However, it was reported that an esports impartial panel (fair commission) has been established in South Korea to ensure esports athletes' rights and interests, which is a good practice to be shared.

OVERALL

1. Physical factor

Through analysis of both the survey and interview data, support for diet/nutrition intake is required. This support is currently limited to a subset of professional players at the top tier. Injuries and sleep management are common challenges for players as viewed by the various stakeholders. Players report sedentary behaviour and access to leisure facilities are challenges they face. While the risk of injury is important at the professional level, survey respondents appear mostly unaffected by injuries. Support for their physical wellbeing and use of performance enhancing substances were identified as priorities.

2. Psychological factor

The survey and interview data both promote the importance of psychological skills to help overcome health issues such as emotion/mood control and burnout. Stakeholders reported that uncertainty over their future career was a challenge facing many players.

While this was not one of the main challenges reported by players in the survey, the score was still high relative to other challenges. Most psychological support is limited to a subset of professional players as players reported needing mentoring by coaches as well as prioritization and time managements skills.

One of the main challenges presented by stakeholders was 'uncertainty over future career'. Although this did not score highly on the surveys, support for transitioning to a career after esports was identified as a key area of support needed under the Economic wellbeing factors.

3. Social factor

Stakeholders reported that verbal/online abuse and harassment (toxicity) was one of the main challenges facing esports players. Players did not find this to be a priority challenge facing them which suggests they may have coping strategies to mitigate the negative effects from it. 'Criticism and stigma towards esports' were not seen as an issue anymore both from interview and survey respondents further reinforcing that the perceptions on esports have positively changed. While the stakeholders discussed 'gender inequality' as an important issue facing esports players, the survey data did not support this claim. This is likely because most respondents were male. The survey data did not report any issues of discrimination which is likely due to players in the sample having characteristics which are less exposed to such discrimination. The survey data did suggest that communication with players and staff were important challenges faced by players. While the stigma on esports may be reduced, players do report that as a career it is still not valued by friends and family. Support is also

needed for communication and social media skills development, as well as
professional media training.

4. Cultural factor

Stakeholders suggests that there are unlikely to be challenges facing players over
language barriers and misunderstanding the culture of other players. This is not
supported by survey data as language education support was one of the main
challenges facing players. Stakeholders emphasised that young players should be
aware of the short career lengths of esports players, but survey respondents still
identified this as one of the main challenges facing players. Other challenges
identified included work-life balance and the training environment. This was reflected
by the support needed which included team building activities and educational
tutorials on how to improve the training environment. Stakeholders should address the
training environments of players and provide support which helps the players work
together as a team.

5. Economic factor

Stakeholders and players both suggest the importance of financial independence for
players. This is elaborated in the survey data to cover both living and travel expenses.
Stakeholders suggest that players are aware that only professional players who have a
contract with professional teams can make a living out of esports. This is supported
by the survey data where support needed included understanding esports contracts and
having opportunities to be exposed to sponsors. Players also requested support for
transitioning to other careers after esports, reflecting an awareness of esports careers

being short with limited opportunity to make a living. Some stakeholders expressed an awareness of teaching players to manage their money well as some high-performance athletes in traditional sports went bankrupt shortly after retirement. This suggests that although players are realistic about their chances of succeeding in the industry, they should still receive support at managing their finances.

6. **Governance factor**

Stakeholders reported difficulty in discussing the governance factor because the esports industry is still in its initial stage of establishing structured governance. This was reinforced by players identifying a lack of awareness on the responsibilities and accountability of various stakeholders. Players also identified the importance of having their voices heard and understanding how decisions on their welfare were made. Future governance structures should involve the players as evidenced by players who requested player representatives to liaise with stakeholders and contact points to raise concerns with. Stakeholders also supported this idea by suggesting the establishment of an 'esports athletes' union', where good practice could be shared from an esports impartial panel in South Korea. Stakeholders were also requested to support players by helping them navigate local barriers to participation.

IMPACT

This research has the potential to contribute in several ways:

1. Provide empirical evidence on key areas to address to ensure esports athletes' health and wellbeing.

2. Provide detailed items of esports athletes' challenges/barriers and support needed that stakeholders could consider when establishing their support schemes/systems.

3. Provide empirical evidence on esports athletes' holistic wellbeing based on the theoretical framework, which will also contribute to the academic literature.

4. Provide both perspectives of esports athletes and stakeholders on the topic of esports athletes' holistic wellbeing, which deepen the knowledge and understanding of the topic and signpost for stakeholders the future direction related to the sustainable growth of industry by ensuring esports athletes' wellbeing and welfare.

NEXT STEPS

The initial project of 'An international analysis of organisational support for esports players' and the present project both investigated esports athletes' health and wellbeing/welfare, which is a significant but under-researched area. Responding to the recent 'Olympic Agenda 2020+5 15 Recommendations', future studies can investigate in relation to Recommendation 9, 'Encourage the development of virtual sports and further engage with video gaming communities'. Since the Olympic Virtual Series have been recently launched, future studies can examine the impact of the Olympic Virtual Series on the virtual sport/videogaming industry, and the changes made and the relation between virtual sport and traditional sport with respect to how virtual sport can help young people engage in traditional sport and vice versa. It may be worth investigating the mutual benefits between virtual sport and traditional support for their sustainable growth and development in relation to the Olympic Movement.

RESEARCH TEAM

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Dr Hee Jung Hong completed her PhD in sport psychology and her research interests include career transitions in sport, dual career of athletes, and athletes' welfare and wellbeing. She is a project manager of the Dual Career for Junior Athletes (DCJA) project funded by the European Commission (2019 – 2022).
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APPENDIX 1

Demographics

1. Levels of your career
   1) Professional
   2) Semi-Professional
   3) Amateur

2. Age
   a. _____
3. Gender
   a. Male
   b. Female
   c. Prefer not to say
4. Nationality
   a. _____
5. Have you relocated to pursue your eSports career?
   a. Yes _____
      If you selected 'Yes', please specify the country to which you have relocated.
      _____
   b. No_____

6. Ethnicity
   a. White
   b. Asian
   c. Black
   d. Mixed/multiple ethnic groups
   e. Other
      If you selected 'Other', please specify.
      _____

7. Education
   a. Attending secondary school (junior high/high school)
   b. Graduated from secondary school (junior high/high school)
   c. Attending university/college
   d. Graduated from university/college
   e. Advanced degree (e.g. master's degree, PhD)
   f. Other
      If you selected 'Other', please specify.
      _____

8. Employment status
   a. Full Time employee
   b. Part Time employee
   c. Self-employment
   d. Furloughed
   e. Student

      f.   Unemployed
      g.   Other
          If you selected 'Other', please specify.
          _____

9. Annual Income earned through eSports
    a. $0
    b. $1 to $9,999
    c. $10,000 to $24,999
    d. $25,000 to $49,000
    e. $50,000 or more

10. Other income
    a. $0
    b. $1 to $9,999
    c. $10,000 to $24,999
    d. $25,000 to $49,000
    e. $50,000 or more

11. eSports games you are primarily playing
    a.   _____

12. Do you have any plans for your life after eSports?
    a.   Yes
        If Yes, please select one option below.

          a) Further study
          b) Employment within eSports industry
          c) Employment out with eSports industry
          d) Streaming (full/part time)
          e) Other
             If you selected 'Other', please specify.
             _____

    b.   No

Below, you can see a list of challenges and barriers to a career in eSports, and a list of support options to address these. They are grouped under different factors. Please select how relevant these are to your experiences from a career in eSports.

You can select on the scale starting from No. 1 to No. 5, from 'Not at all relevant' to 'Very relevant'. If you are viewing this survey on your mobile phone, you may need to reduce the screen size to see the entire scale from No.1 to No 5. Thank you for your understanding.

Physical factors

Regarding your career in eSports, how relevant for you are the following challenges and barriers?

1. Challenges and Barriers
   1) Injuries

Not at all relevant	1	2	3	4	5	Very relevant

       a. How many times have you been injured in the past year?
       _____

       b. Type of injuries

       _____

   2) Physical inactivity

Not at all relevant	1	2	3	4	5	Very relevant

   3) Sedentary behaviour

Not at all relevant	1	2	3	4	5	Very relevant

   4) Sleep management (e.g. lack of sleep due to irregular training schedule)

Not at all relevant	1	2	3	4	5	Very relevant

   5) Access to sport and leisure facilities

Not at all relevant	1	2	3	4	5	Very relevant

   6) Diet/nutrition intake

Not at all relevant	1	2	3	4	5	Very relevant

Regarding your career in eSports, how relevant for you are the following support items?

2. Support needed

   1) Physiotherapy

Not at all relevant	1	2	3	4	5	Very relevant

   2) Rehabilitation sessions

Not at all relevant	1	2	3	4	5	Very relevant

   3) Face-to face personal training programmes

Not at all relevant	1	2	3	4	5	Very relevant

   4) Online personal training programmes

Not at all relevant	1	2	3	4	5	Very relevant

   5) Sport centre memberships

Not at all relevant	1	2	3	4	5	Very relevant

   6) Online physical activity resources

Not at all relevant	1	2	3	4	5	Very relevant

   7) Dietary/Nutrition support/resources

Not at all relevant	1	2	3	4	5	Very relevant

   8) Education on use of performance enhancing substances

Not at all relevant	1	2	3	4	5	Very relevant

Psychological factors

Regarding your career in eSports, how relevant for you are the following challenges and barriers?

1. Challenges and Barriers
    1) Anxiety

Not at all relevant	1	2	3	4	5	Very relevant

    2) Emotion/Mood control

Not at all relevant	1	2	3	4	5	Very relevant

    3) Possession of psychology performance skills (e.g. imagery, self-talk, team cohesion/dynamic)

Not at all relevant	1	2	3	4	5	Very relevant

    4) Burnout (e.g. both physical and mental exhaustion due to long hours of training that may affect your motivation and performance negatively)

Not at all relevant	1	2	3	4	5	Very relevant

    5) Uncertainty over future career

Not at all relevant	1	2	3	4	5	Very relevant

Regarding your career in eSports, how relevant for you are the following support items?

2. Support needed

1) Mental/psychological performance skills development sessions

Not at all relevant	1	2	3	4	5	Very relevant

2) Mentoring by other players (former or current)

Not at all relevant	1	2	3	4	5	Very relevant

3) Mentoring by coaches

Not at all relevant	1	2	3	4	5	Very relevant

4) Counselling sessions delivered by experts (e.g. sport psychologists, mental coaches)

Not at all relevant	1	2	3	4	5	Very relevant

5) Career management consulting/advice

Not at all relevant	1	2	3	4	5	Very relevant

6) Time management skills

Not at all relevant	1	2	3	4	5	Very relevant

7) Prioritization skills

Not at all relevant	1	2	3	4	5	Very relevant

Social factors

Regarding your career in eSports, how relevant for you are the following challenges and barriers?

1. Challenges and Barriers
   1) Communication with other players

Not at all relevant	1	2	3	4	5	Very relevant

   2) Communication with other support staff including coaches

Not at all relevant	1	2	3	4	5	Very relevant

   3) Limited social support and loneliness

Not at all relevant	1	2	3	4	5	Very relevant

   4) Criticism and stigma towards eSports

Not at all relevant	1	2	3	4	5	Very relevant

   5) eSports not valued by parents, family members, friends and significant others

Not at all relevant	1	2	3	4	5	Very relevant

   6) Race/Ethnicity-based discrimination

Not at all relevant	1	2	3	4	5	Very relevant

   7) Religion-based discrimination

Not at all relevant	1	2	3	4	5	Very relevant

8) Gender inequality

Not at all relevant	1	2	3	4	5	Very relevant

9) Verbal/online harassment (toxicity)

Not at all relevant	1	2	3	4	5	Very relevant

10) Disability access and inclusion

Not at all relevant	1	2	3	4	5	Very relevant

Regarding your career in eSports, how relevant for you are the following support items?

2. Support needed
   1) Communication skills development

Not at all relevant	1	2	3	4	5	Very relevant

   2) Social media skills development

Not at all relevant	1	2	3	4	5	Very relevant

   3) Professional media training (e.g. interview, speech)

Not at all relevant	1	2	3	4	5	Very relevant

   4) Educational/informative tutorials for parents, family members, friends and significant others

Not at all relevant	1	2	3	4	5	Very relevant

5) Anti-discrimination educational tutorials

Not at all relevant	1	2	3	4	5	Very relevant

6) Educational tutorials to promote gender equality

Not at all relevant	1	2	3	4	5	Very relevant

7) Educational tutorials to promote inclusion

Not at all relevant	1	2	3	4	5	Very relevant

_____

Cultural factors

Regarding your career in eSports, how relevant for you are the following challenges and barriers?

1. Challenges and Barriers
   1) Language barrier to communicate with others

Not at all relevant	1	2	3	4	5	Very relevant

2) Understanding other cultures

Not at all relevant	1	2	3	4	5	Very relevant

3) Training environment (e.g. Game house, relocation to other culture)

Not at all relevant	1	2	3	4	5	Very relevant

4) Working with multi-national team members

Not at all relevant	1	2	3	4	5	Very relevant

5) Work-life balance

Not at all relevant	1	2	3	4	5	Very relevant

6) Career duration

Not at all relevant	1	2	3	4	5	Very relevant

Regarding your career in eSports, how relevant for you are the following support items?

2. Support needed
   1) Language education support

Not at all relevant	1	2	3	4	5	Very relevant

2) Translation support services (e.g. translators)

Not at all relevant	1	2	3	4	5	Very relevant

3) Educational tutorials on understanding other cultures

Not at all relevant	1	2	3	4	5	Very relevant

4) Educational tutorials on how to improve the training environment

Not at all relevant	1	2	3	4	5	Very relevant

5) Educational tutorials on working with foreign teammates

Not at all relevant	1	2	3	4	5	Very relevant

6) Team building activities

Not at all relevant	1	2	3	4	5	Very relevant

Economic factors

Regarding your career in eSports, how relevant for you are the following challenges and barriers?

1. Challenges and Barriers
   1) Financial independence

Not at all relevant	1	2	3	4	5	Very relevant

2) Finance to cover travel expenses

Not at all relevant	1	2	3	4	5	Very relevant

3) Finance to cover living expenses

Not at all relevant	1	2	3	4	5	Very relevant

4) Having a job outside of eSport career to secure living/travel expenses

Not at all relevant	1	2	3	4	5	Very relevant

5) Access to income generation opportunities (e.g. imbalance of prize money distribution/no salary)

Not at all relevant	1	2	3	4	5	Very relevant

6) Financial planning and management skills

Not at all relevant	1	2	3	4	5	Very relevant

7) Knowledge of tax system

Not at all relevant	1	2	3	4	5	Very relevant

Regarding your career in eSports, how relevant for you are the following support items?

2. Support needed
   1) Small grants scheme for travel expenses

Not at all relevant	1	2	3	4	5	Very relevant

   2) An opportunity to be exposed to sponsors (e.g. conferences, business networking events)

Not at all relevant	1	2	3	4	5	Very relevant

   3) Educational tutorials on financial planning and management skills

Not at all relevant	1	2	3	4	5	Very relevant

   4) Educational tutorials on how to balance dual careers (e.g. eSports and study or eSports and work)

Not at all relevant	1	2	3	4	5	Very relevant

   5) Support around understanding eSports contracts

Not at all relevant	1	2	3	4	5	Very relevant

6) Support around understanding tax systems

Not at all relevant	1	2	3	4	5	Very relevant

7) Training on how to improve income potential (e.g. exposure to sponsors, influencer, and branding)

Not at all relevant	1	2	3	4	5	Very relevant

8) Support for transitioning to other careers after eSports

Not at all relevant	1	2	3	4	5	Very relevant

9) Internships for professional players/Jobs based skill learning

Not at all relevant	1	2	3	4	5	Very relevant

Governance factors

Regarding your career in eSports, how relevant for you are the following challenges and barriers?
  1. Challenges and Barriers
  1) Opportunity for player voice (opinion) to be heard

Not at all relevant	1	2	3	4	5	Very relevant

  2) Understanding of structure of federations/teams/national associations

Not at all relevant	1	2	3	4	5	Very relevant

3) Knowledge on how decisions on eSports players' wellbeing and welfare are made

Not at all relevant	1	2	3	4	5	Very relevant

4) Awareness on responsibility/accountability of each governing body/stakeholder

Not at all relevant	1	2	3	4	5	Very relevant

5) Lack of contact point to raise concerns with

Not at all relevant	1	2	3	4	5	Very relevant

Regarding your career in eSports, how relevant for you are the following support items?

2. Support needed
   1) Informative tutorials on the roles and responsibilities of each governing body/stakeholder

Not at all relevant	1	2	3	4	5	Very relevant

2) Informative tutorials on how each governing body/stakeholder is structured

Not at all relevant	1	2	3	4	5	Very relevant

3) Informative tutorials on decision-making process around eSports players' wellbeing and welfare

Not at all relevant	1	2	3	4	5	Very relevant

4) Educational tutorials on how players can influence decisions using player voice (opinion)

Not at all relevant	1	2	3	4	5	Very relevant

5) Sharing good practice between stakeholders

Not at all relevant	1	2	3	4	5	Very relevant

6) Contact point to raise concerns with

Not at all relevant	1	2	3	4	5	Very relevant

7) Player representatives to liaise with other stakeholders

Not at all relevant	1	2	3	4	5	Very relevant

8) Support from eSports stakeholders to help navigate local barriers to participation (e.g. communicate with schools/universities)

Not at all relevant	1	2	3	4	5	Very relevant

Thank you for your participation.