

Exploring Wellbeing and Mental Health of Elite Athletes: A Bioecological Perspective

Georgia Brown



Swansea University
Prifysgol Abertawe

Submitted to Swansea University in fulfilment of the requirements for the Degree of Doctor
of Philosophy

Swansea University

2024

Summary

1
2 The aim of the thesis was to explore the processes that affect the wellbeing and mental health
3 of elite athletes, to then inform, implement and evaluate a multi-level intervention designed to
4 enhance their wellbeing and mental health. To expand the recent research in the area it is
5 advantageous to explore wellbeing and mental health from an ecological perspective (see
6 Purcell et al., 2019; 2021). Thus, the thesis was underpinned by the bioecological model (i.e.,
7 PPCT; Bronfenbrenner 1995; Bronfenbrenner & Morris, 2006), which proposes the
8 interactions (i.e., processes) the individual experiences across the lifespan influence their
9 physical, emotional, and psychological development. The processes and their impact on the
10 development (i.e., positive or negative) are influenced by the characterisers of the person, their
11 environmental context, and time. Providing an insight into the complex processes that affect
12 wellbeing and mental health would allow the thesis to develop and deliver an evidence based
13 and theoretically informed intervention. Therefore, the aims of the thesis was achieved by using
14 the collective case study methodology. Study one used a collective case study to explore the
15 processes that affected the wellbeing and mental health of judo and cycling athletes via
16 observations, semi-structured interviews, self-report diaries, and a researcher reflexive journal.
17 The processes included: (i) the development of trusting relationships; (ii) negative perceptions
18 of self; (iii) attitudinal changes towards wellbeing and mental health; and (iv) the expansion of
19 a resource pool, which impacted athletes' wellbeing and mental health positively and
20 negatively. The impact of the processes was influenced by person characteristics, the context
21 (i.e., immediate and remote environments), and time. The aim of Study two was to design,
22 implement, and evaluate a theoretical-informed, evidence based, multi-level intervention to
23 enhance the athletes' wellbeing and mental health. The intervention consisted of an educational
24 podcast series, infographics, and environmental recommendations. The two cases received the
25 intervention differently. That is, judo received a guided intervention (i.e., a series of reflective
26 questions and researcher present within the environment), whilst cycling received an
27 information only intervention (i.e., received all components but no reflective questions and
28 researcher was not present). The findings highlighted the intervention was perceived to
29 increase the athletes' confidence of help-seeking, ability to manage poor wellbeing and mental
30 health, while also being perceived to provide an opportunity to increase their knowledge of
31 wellbeing and mental health concerns. The intervention was also perceived to be preventive
32 measure of wellbeing and mental health concerns. Furthermore, the study found that were a
33 number of perceived benefits of multi-components and in particular the podcasts and
34 infographics. The benefits of the podcasts included flexibility of listening, easy and informal
35 listening, and the control and ownership. The infographics were as equally well received as
36 they provided concise information, accessibility of critical information, and supporting
37 different ways of learning. Moreover, the researcher reflexive journal provided an insight into
38 the design, delivery, and evaluation of the intervention. The reflections included: (i) the feeling
39 of excitement; (ii) the need for collaboration; (iii) the lack of personal stories (iv) the lack of
40 progression; (v) the feeling of hope; and (vi) the relief of gaining feedback. Interestingly, the
41 data highlighted that there was a lack of engagement in the evaluation process from the cycling
42 athletes, which may have been due to the lack of presence from the lead researcher in the
43 cycling environment.

Declarations and Statements

DECLARATION

This work has not previously been accepted in substance for any degree and is not being concurrently submitted in candidature for any degree.

Signed: 

Date.....04.03.24.....

STATEMENT ONE

This thesis is the result of my own investigations, except where otherwise stated. Other sources are acknowledged by footnotes giving explicit references. A bibliography is appended.

Signed: 

Date.....04.03.24.....

STATEMENT TWO

I hereby give my consent for my work, if relevant and accepted, to be available for photocopying and for inter-library loans **after expiry of a bar on access approved by the Swansea University.**

Signed: 

Date.....04.03.24.....

STATEMENT THREE

The University's ethical procedures have been followed and, where appropriate, that ethical approval has been granted.

Signed.: 

Date.....04.03.24.....

Publications from the Thesis

Articles (peer reviewed)

Hill, D. M., Brown, G., Lambert, T.-L., Mackintosh, K., Knight, C., & Gorczynski, P. (2021). Factors perceived to affect the wellbeing and mental health of coaches and practitioners working within elite sport. *Sport, Exercise, and Performance Psychology, 10*(4), 504–518. <https://doi.org/10.1037/spy0000263>

Conference Presentations

Brown., G., Hill., D. M., Lambert, T.L., Mackintosh, K., Knight., C. J & Gorczynski, P. (2021, April 6-9). *The wellbeing and mental health of coaches and sport science staff within elite sport*. [Conference presentation]. International Virtual ECR and Student Conference for the International Society of Qualitative Research in Sport.

Brown., G., Hill., D. M., & Knight., C. J. (2021, June 9-11). *The wellbeing and mental health of athletes within elite sport: The case of cycling*. [Conference presentation]. 2021 North American Society for the Psychology and Physical Activity Virtual Conference.

Brown., G., Hill., D. M., & Knight., C. J. (2021, November 29-30). *The development and implementation of a multi-level intervention to enhance elite athletes' wellbeing and mental health* [Conference presentation]. DSEP 2021 Conference, Liverpool, United Kingdom.

Brown., G., Hill., D. M., & Knight., C. J. (2022, July 26-28). Reflections on implementing, delivering, and evaluating a multi-level intervention to enhance elite athletes' wellbeing and mental health. [Conference presentation]. QRSE 2022 Conference, Durham, United Kingdom.

Contents

Summary	2
Declarations and Statements	3
Publications from the Thesis	4
Acknowledgments	8
List of Figures	10
List of Tables	11
Chapter One: Introduction	12
1.1 Thesis Structure	14
Chapter Two: Literature Review	15
2.1 Introduction.....	15
2.2 Wellbeing and Mental Health Definitions and Conceptualisations	15
2.2.1 Wellbeing Traditions and Definitions	16
2.2.2 Mental Health.....	19
2.2.3 Flourishing and Thriving	21
2.2.4 Summary of Definitions	23
2.2.5 Measurements of Wellbeing and Mental Health	23
2.3 Prevalence of Athlete Wellbeing and Mental Health	25
2.3.1 General Anxiety Disorder and Depression.....	26
2.3.2. Substance Misuse / Abuse	26
2.3.3. Eating Disorders	27
2.3.4. Summary of Prevalence.....	28
2.4 Factors Affecting Athletes' Wellbeing and Mental Health	28
2.4.1 Protective Factors Affecting Athlete Wellbeing and Mental Health.....	29
2.4.2 Risk Factors of Wellbeing and Mental Health	30
2.4.3. Section Summary.....	33
2.5 Wellbeing and Mental Health Interventions	34
2.5.1 Mental Health Awareness Interventions.....	34
2.5.2 Critique of Interventions.....	43
2.6 Future Directions	44
Chapter 3: The Bioecological Model: Wellbeing and Mental Health in Elite Sport	46
3.1 Introduction.....	46
3.2 Background	46
3.2.1 Ecological Model of Human Development.....	47
3.2.2 Person, Process, and Time.....	51
3.2.3 The Bioecological Model of Development	52
3.3 Conclusion	57
Chapter 4: Methodology Chapter	59
4.1 Introduction.....	59
4.2 Research Philosophy	59
4.3 Researcher and Practitioner Positionality	59
4.4 Case Study Methodology	61

4.5 The Cases	64
4.5.1. Welsh Judo	65
4.5.2 Welsh Cycling	66
4.6 The Research Process	67
4.6.1 Research Design of Thesis	67
4.6.2 Gaining Entry	67
4.6.3 Ethical Considerations	69
4.7 Data Collection	70
4.7.1 Becoming Embedded.....	71
4.7.2 Observations	72
4.7.2. Reflexive Diary	74
4.7.3 Semi-structured Interviews.....	74
4.7.4 Self-report Diary	76
4.8 Data Analysis	78
4.9 Ensuring Quality of Data	79
Chapter 5: Perceived Processes that Affect Elite Athletes' Wellbeing and Mental Health (Study one)	81
5.1 Introduction.....	81
5.2 Factors Affecting Athlete Wellbeing and Mental Health	82
5.3 The Bioecological Model of Development.....	84
5.4 The Current Study.....	85
5.5 Method	86
5.5.1 Methodological Approach and Philosophical Underpinnings.....	86
5.5.2 Procedure	86
5.5.3 Participants	87
5.6 Data Collection	88
5.6.1 Becoming Embedded.....	89
5.6.1 Observations	89
5.6.2 Reflexive Diary	90
5.6.3 Semi-Structured Interviews	91
5.6.4 Self-Report Diaries	92
5.7 Data Analysis	93
5.8 Ensuring Quality of Data	94
5.9 Results.....	94
5.9.1 The Development of Trusting Relationships.....	95
5.9.2 Negative Perceptions of Self	106
5.9.3 Attitudinal Changes Towards Wellbeing and Mental Health.....	108
5.9.4 The Expansion of a Resource Pool.....	110
5.10 Discussion.....	112
5.12 Applied Implications.....	117
5.13 Limitations and Future Directions	119
Chapter Six: A Multi-Level Intervention to Enhance the Wellbeing and Mental Health of Athletes	121
6.1 Introduction.....	121
6.1.2 Face-to-Face vs Online Interventions.....	122
6.1.3 Community Informed Interventions	124

6.1.4 Multi-component Interventions	124
6.1.5 The Current Study	125
6.2.1 Philosophical Underpinnings and Methodology	126
6.2.2 The Wellbeing and Mental Health Intervention Development	127
6.2.3 Intervention Design	130
6.2.4 Intervention Delivery.....	140
6.2.5 Intervention Evaluation	142
6.2.6 Data Collection.....	142
6.3 Results	145
6.3.1 Reflections on Designing an Intervention	145
6.3.2 Reflections on Implementing an Intervention	148
6.3.3 Reflections on Evaluating an Intervention	149
6.3.4 Participant Evaluation of the Intervention	150
6.3.5 Evaluation of the Resources	154
6.3.6 Lack of Engagement in Evaluation	159
6.4 Discussion	160
6.4.1 Intervention Impact	161
6.4.2 Challenges of the Intervention.....	163
6.4.3 The Development of the Intervention.....	164
6.4.4 Applied Implications	165
6.4.5 Limitations and Future Directions	166
6.5 Conclusion	168
Chapter 7: General Discussion	169
7.1 Introduction.....	169
7.2 Theoretical Contributions of the Thesis.....	169
7.3 Methodological Contributions of the Thesis.....	173
7.4 Applied Implications.....	175
7.5 Reflexive Account of the Research Journey	177
7.6 Limitations and Future Research Directions.....	180
7.7 Personal Reflections.....	181
References.....	186
Appendix A: Pre-Interview Guide (Study one).....	215
Appendix B: Study one Interview Schedule (Example)	217
Appendix C: Study two Interview Schedule (Example)	219
Appendix D: Self-report Diary Booklet (Study one)	221
Appendix E: Intervention Infographics.....	222
Appendix F: Guide to Access Podcasts	228

Acknowledgments

Firstly, I want to say a big thank you to everyone who took part in this research. It has been an honour to be trusted with your stories, especially through such an unprecedented time of the COVID-19 pandemic. To give up your time during a time of uncertainty, I will be forever thankful. So, to everyone in Sport Wales, Welsh Judo, and Welsh Cycling – thank you.

To Dr Denise Hill, thank you for everything. Your support throughout the process has been second to none. Thank you for the times you have listened and the times where I have needed a bit of a push. You have challenged me to constantly progress, and I have learnt so much from you. Not only research, but how to grow as a researcher, applied practitioner, and as a person. Thank you.

A special thank you to my second supervisor, Professor Camilla Knight. You have been a constant source of support throughout the PhD, and I cannot thank you enough for always challenging me to improve. Also, thank you for taking me into the Sport Psychology lab group, pushing me to new limits.

To the Sport Psychology lab group members over the last four years – thank you for always keeping me on my toes and being there in times of need. A big shout must go out to Katie for all the constant conversations we have had about PhD life. The morning swims and the evening beers got me through.

To my friends. Where do I start? To every single friend in my life, thank you. You guys keep me grounded. To all my friends in Hull (including those who have moved away), you have always understood my passions and allowed me to be myself throughout life – even if it has meant that I have missed some parties along the way. Thank you for always being there for me, I promise more parties will be attended now (hopefully!). To those I have met along the way, through work and study – you are all stars. We may live miles away or even an ocean away, but I know you are all a phone call or voice note away. I am incredibly lucky to have you all in my life, and I cannot thank you enough for your support.

I am immensely grateful to my family for their unwavering support throughout this journey. To Dad, Adam, Anne, Grandma, Hanna, and Noah, thank you for the weekly 5pm calls on a Sunday. They served as a constant reminder of the love and encouragement I have received from you throughout. A nod towards Dad, Adam, and Hanna for getting me through the COVID pandemic. The competitive cooking enabled me to find a break when we all needed it most, and this can be a constant reminder that I won! To Anne, thank you for always putting me up, even when it is a last-minute call. My PhD journey began from Liverpool with you and David by my side, and I will always cherish the days spent in Huyton.

A special thank you to my dad for the continued support through every decision I make; it means everything to me. I know mum would be proud of everything me and Adam have achieved in life – and that is down to your unwavering support.

To my Mum, this thesis is dedicated to you. Though you are missed every day, I will raise a glass in celebration of your unwavering belief in me. In the limited years we had together, you instilled in me the qualities that have carried me through this PhD. You always told me I could achieve anything I set my mind to, and I now realise how right you were. Thank you, mum and dad for always believing in me, from the early days of playing football to the completing of this PhD. Your belief in me has been my greatest source of strength, and I will be forever grateful.

List of Figures

Figure 2.1

Keyes' (2005) Dual Continua Model of Mental Health.....20

Figure 3.1

The Ecological Model of Human Development.....48

Figure 4.1

Structural Organisation of the Cases.....65

Figure 4.2

Flow Chart of Study One Data Collection.....70

List of Tables

Table 2.1

Mental Health Awareness Programmes.....35

Table 5.1

Gender Demographics of Participants.....88

Table 5.2

Breakdown of Participant Involvement.....89

Table 6.1

The Development Process of the Intervention Resources.....132

Table 6.2

Content of the Wellbeing and Mental Health Podcasts.....135

Table 6.3

Content of the Wellbeing and Mental Health Infographics.....136

Table 6.4

Judo Environmental Recommendations.....138

Table 6.5

Cycling Environmental Recommendations.....139

Table 6.6

Timeline of Intervention Delivery and Evaluation143

1 **Chapter One: Introduction**

2 The wellbeing and mental health of athletes has not always been at the forefront of
3 research; however, there has been a recent heightened interest due to a range of athletes
4 speaking about their experiences (e.g., Simone Biles, Adam Peaty, and Naomi Osaka). For
5 some people, it may have been surprising, that athletes struggled with their wellbeing and
6 mental health, as elite athletes have previously been perceived as mentally tough (Gould et
7 al., 2002). Furthermore, athletes have been found to have numerous characteristics that are
8 associated with positive wellbeing and mental health, including confidence, competitiveness,
9 optimism, the ability to set and achieve goals, the ability to control anxiety (Gould et al.,
10 2002), high levels of motivation (Rees et al., 2016), resilience, and the ability to cope with
11 adversity (Rees et al., 2016). However, although athletes can possess several characteristics
12 associated with positive wellbeing and mental health, they can also experience a unique set of
13 demands throughout their career that may make them vulnerable to lowered wellbeing and
14 poor mental health, which include, but not limited to, overtraining, injury, and career
15 transitions (Rice et al., 2016).

16 The spotlight on the welfare of athletes, especially in the UK, became brighter when
17 the Duty of Care in Sport Report (Grey-Thompson, 2017) was released, which indicated that
18 the wellbeing and mental health of athletes was a concern. The empirical data at the time
19 suggesting that athletes are at risk of wellbeing and mental health concerns, at a rate which is
20 comparable to the general population (Gorczyński et al., 2017; Rice et al., 2016). The
21 subsequent growth in literature has highlighted numerous factors that can negatively affect
22 athlete's wellbeing and mental health, including for example, injury (e.g., Coyle et al., 2017),
23 transitions (e.g., Kuettel et al., 2020), maladaptive coping strategies (e.g., Nixdorf et al.,
24 2013; Nixdorf et al., 2016), low social support (e.g., Prinz et al., 2016), exclusive athletic
25 identity (e.g., Doherty et al., 2016), poor performance (e.g., Doherty et al., 2016; Gulliver et
26 al., 2012), low mental health literacy (e.g., Coyle et al., 2017), finances, result-focused
27 mindset, and feelings of isolation (Sauvé et al., 2022).

28 The extant literature has indicated that determinants of elite athlete's wellbeing and
29 mental health include individual, environmental, and cultural factors. As such, there has been
30 a call to explore athletes' wellbeing and mental health from an ecological perspective (Purcell
31 et al., 2019; 2022). That is, researchers may utilise a perspective that considers the
32 environmental context and the influences of the environment on human development,
33 including a number of levels / systems (i.e., microsystem, mesosystem, exosystem, and
34 macrosystem). One such perspective is the bioecological model (Bronfenbrenner, 1995),

35 specifically the Process, Person, Context, Time (PPCT) model, which offers the opportunity
36 to gain a deeper understanding of processes across an athlete's life / career that affect their
37 wellbeing and mental health. In particular, this theoretical model considers the multiple levels
38 of influence on development including the individual, their environments, and the time period
39 in which the individual exists. Consequently, the current thesis seeks to extend the current
40 literature pertaining to athletes' mental health and wellbeing, by utilising a bioecological
41 lens, which can inform an evidence-based and context driven intervention.

42 There have been several interventions designed to protect and / or enhance the
43 wellbeing and mental health of elite athletes (see Breslin et al., 2022; Prior et al., 2022 for
44 reviews), through differing means. Many have focused on psychoeducation to increase
45 mental health knowledge of athletes and their support staff, reduce stigma, and improve help-
46 seeking behaviours (e.g., Bapat et al., 2009; Sebbens et al., 2016; Vella et al., 2021), while
47 others have targeted specific mental health concerns, including eating disorders (e.g., Becker
48 et al., 2012), and / or developing coping skills / strategies (e.g., Fogaca et al., 2021; Gabana et
49 al., 2017). There is evidence that such sport-specific interventions can decrease the stigma of
50 mental illness and improve mental health knowledge and help-seeking behaviours. Although,
51 there remains the need for further research within elite athlete samples (Gavrilova &
52 Donohue, 2018), and more understanding of how interventions effect wellbeing and mental
53 health. Furthermore, some of the interventions have improved mental health literacy among
54 parents and coaches, for the purpose of enhancing athlete wellbeing and mental health by
55 ensuring those in the athlete's environment have the accurate knowledge to provide
56 appropriate support for their athletes (see Breslin et al., 2022).

57 Despite the positive outcomes associated with previous interventions, notably there
58 are a lack of theoretically informed interventions (Breslin et al., 2022). As such, there is a
59 need to develop a theoretical informed intervention to overcome the limitations of the
60 previous interventions. Furthermore, context specific interventions need to be developed and
61 implemented through a PPCT lens as aforementioned interventions have not considered the
62 interaction of the individual, environment, and time elements that affect athletes' wellbeing
63 and mental health. As such, the current thesis had an overarching aim of exploring the
64 processes that affect the wellbeing and mental health of athletes, through a PPCT lens. This
65 exploration aimed to inform the design, implementation, and evaluation of a context specific
66 and theoretically informed intervention for the purpose of enhancing wellbeing and mental
67 health within the performance sport setting.

68 **1.1 Thesis Structure**

69 The thesis comprises of six chapters, which follow the current introduction chapter.
70 Firstly, chapter two will provide a critical review of the wellbeing and mental health
71 literature. The review includes how wellbeing and mental health have been defined and
72 conceptualised in the wider psychology and sport literature, the prevalence of wellbeing and
73 mental health amongst the athlete population, the factors that affect athlete wellbeing and
74 mental health, and interventions that have targeted factors affecting athlete wellbeing and
75 mental health. Chapter 3 includes a detailed overview of the theoretical model underpinning
76 the programme of work. Specifically, the chapter details the bioecological model
77 (Bronfenbrenner et al., 1995), which guided Study one, and informed the intervention in
78 Study two (Chapter 6). Next, Chapter 4 details the chosen methodology (i.e., collective case
79 study), the data gathering methods, and the cases utilised throughout both Studies. Within
80 Chapter 5, Study one is presented, which aimed to explore the processes that affect athlete
81 wellbeing and mental health, and how these processes interacted with the person, context,
82 and time. Chapter 6, details Study two, in which the development, implementation, and
83 evaluation of the theoretically informed, evidence-based, multi-level and multi-component
84 intervention is presented. Finally, Chapter 7 provides the general discussion whereby the
85 theoretical, methodological, and applied contributions of the thesis are critically examined.
86 The chapter also contains future directions and limitations of the thesis, and concludes with a
87 series of personal reflections, which represent my journey throughout the PhD process.

88 **Chapter Two: Literature Review**

89 **2.1 Introduction**

90 The topic of wellbeing and mental health within sport has received an expansion of
91 academic interest in recent years, with empirical evidence showing that athletes can be
92 susceptible to lowered wellbeing and poor mental health (e.g., Poucher et al., 2021; Rice et
93 al., 2016). This growing interest gained further traction in the UK, after the Duty of Care in
94 Sport review (Gray-Thompson, 2017) emphasized the need to examine, and support further
95 athletes' wellbeing and mental health because they are prone to several concerns, particularly
96 during certain periods of the competition cycle (e.g., injury, deselection, and early career
97 termination). Furthermore, the review noted a concern surrounding the environment of some
98 sporting governing bodies in the UK, associated with the need for a win at all costs. Research
99 has highlighted environmental factors can affect athletes' wellbeing and mental health, for
100 example stigma-towards help-seeking, lack of social support from significant others,
101 perceived pressure to be successful, abusive coaching practices, lack of communication with
102 their organisation, and the inability access to resources (e.g., Kuettel & Larsen, 2020;
103 Henriksen et al., 2020; Poucher et al., 2023). The empirical evidence has highlighted factors
104 that occur at an individual and environmental level, which interact and fluctuate over time
105 (Giles et al., 2020). As such, it is indicated that there are complex processes rather than static
106 standalone factors that affect wellbeing and mental health. Thus, there is a need to explore
107 further the complex processes that occur at these levels and the current thesis aims to do just
108 this. Furthermore, utilising this knowledge, the thesis aims to develop, implement, and
109 evaluate a multi-level intervention to enhance athletes' wellbeing and mental health.

110 Hence, the aim of this literature review is three-fold: first, it will present the definition
111 and conceptualisations of wellbeing and mental health; second, it will review critically the
112 factors proposed to affect the wellbeing and mental health of elite athletes; finally, the
113 efficacy of interventions designed to support the wellbeing and mental health of athletes
114 within performance/elite sport will be reviewed. This will provide the conceptual
115 underpinning to the following programme of work.

116 **2.2 Wellbeing and Mental Health Definitions and Conceptualisations**

117 The following section reviews the literature that has explores the various definitions
118 and conceptualisations of wellbeing and mental health.

119 **2.2.1 Wellbeing Traditions and Definitions**

120 Wellbeing is a complex and multi-faceted construct (Dodge et al., 2012; Ryan &
121 Deci., 2001) that has primarily been explored through two traditions, namely hedonic and
122 eudaimonic.

123 **2.2.1.1. Hedonic Wellbeing.** The hedonic approach to wellbeing has focused mainly
124 on the individual's happiness, pleasure, and life satisfaction (Diener, 1984; Diener et al.,
125 1999; Keyes, 2007; Ryan & Deci, 2001) and was developed from the philosophical view that
126 these (i.e., happiness and life satisfaction) were the goal for the individual (Lundqvist, 2011).
127 The approach has also been labelled by some as subjective wellbeing (SWB; Diener & Ryan,
128 2009), which is an umbrella term used to describe the individual wellbeing experience,
129 concerning the individual's judgement of their affect and life satisfaction (i.e., both pleasant
130 and negative affect) (Diener & Ryan, 2009). Therefore, through this tradition, wellbeing
131 would be judged on the presence of a pleasant affect / mood (e.g., joy, pride, happiness), the
132 absence of negative affect / mood (e.g., sadness, anxiety, worry), and life / domain
133 satisfaction (e.g., satisfaction with work, family, health) (Ryan & Deci, 2001; Keyes, 2007).

134 **2.2.1.2. Eudaimonic Wellbeing.** Moving away from, and challenging the hedonic
135 viewpoint and happiness being a focal point, the eudaimonic approach understands and
136 describes wellbeing as focusing on the individual's meaning and functioning (Ryan & Deci,
137 2001). From this perspective, rather than happiness being the goal for the individual,
138 wellbeing is achieved when they possess a purpose, find meaning in what they are doing, and
139 are fully engage in those activities (Ryan & Deci, 2001). The eudaimonic approach has also
140 been described as psychological wellbeing (PWB; Ryan & Deci, 2001), which has six
141 different aspects: autonomy (i.e., independence and regulation of own behaviour and
142 thoughts); personal growth (i.e., continued realisation and development of personal
143 potential); self-acceptance (i.e., awareness and acceptance of strengths and weaknesses); life
144 purpose (i.e., finding meaning, purpose, and direction in life); environmental mastery (i.e.,
145 ability to create or choose their own environment); and positive relatedness (i.e., experiencing
146 trusting relationships other, which include empathy and affection) - which all promote
147 wellbeing (Ryff & Keyes, 1995; Ryff & Singer, 2008) - and these facets are seen to be central
148 and important for the positive functioning of the individual (Keyes, 1998).

149 In addition to subjective and psychological wellbeing, Keyes (2002) argued that there
150 is also a need to understand individual's wellbeing within their social worlds, as they are
151 embedded within social communities. Thus, Keyes (1998; 2002) operationalized and
152 validated five dimensions of social wellbeing, which were developed from sociological

153 theory and psychology. These dimensions include social acceptance (i.e., positive perceptions
154 of others including trusting others and thinking others are capable of kindness), social
155 actualization (i.e., belief that society has potential and are hopeful of the future of society),
156 social contribution (i.e., belief that they are a vital and valued member of society and
157 contributes to society), social coherence (i.e., the perceptions of the quality of the social
158 world and making sense of their social world), and social integration (i.e., feeling part of the
159 community and feeling of belonging).

160 Additionally, to capture wellbeing within sport, there has been arguments that
161 researchers need to understand wellbeing on a global and context-level (Lundqvist, 2011). As
162 such, Lundqvist (2011) proposed a theoretical model to capture wellbeing at the global and
163 context-level (i.e., sport specific). The integrated model includes the global-level wellbeing
164 and is representative of the traditional hedonic and eudaimonic wellbeing conceptualizations.
165 Whereas the contextual level (i.e., sport-related wellbeing) focuses on the athlete within the
166 sporting world, which includes subjective wellbeing in sport (SWB-S) comprising sport
167 satisfaction and sport-related affect. Moreover, psychological wellbeing in sport (PWB-S)
168 should explore/examine self-acceptance as an athlete, positive relation to coach and
169 teammates, autonomy in sports practice, sport environment mastery, purpose in sport, and
170 personal growth as an athlete. Next, social wellbeing in sport includes social acceptance,
171 social actualization, social contribution, social coherence, and social integration in sport. The
172 model enables researchers to consider the different aspects of wellbeing an elite athlete may
173 experience (Lundqvist, 2011). Due to the different levels, it is beneficial to know the factors
174 at the global and contextual levels that affect wellbeing and how they interact. For example, it
175 has been found that global and sport-specific wellbeing influence each other (Lundqvist &
176 Sandin, 2014). As such, there is scope for the model to guide researchers to understand the
177 relationships between the global and context specific levels of wellbeing.

178 Although they have been cited as different and opposing traditions, researchers have
179 argued that hedonic and eudaimonic are distinct but are overlapping concepts (Huta & Ryan,
180 2010), and therefore wellbeing consists of psychological, subjective, and social components
181 (Huppert & So, 2009; Keyes et al., 2002). As such, there is an acceptance that wellbeing is
182 multifaceted and complex, which has contributed to a lack of consensus regarding its
183 definition (Dodge et al., 2012; Lundqvist, 2011; Pollard & Lee, 2003).

184 **2.1.1.3 Wellbeing Definitions.** Among the many, definitions of wellbeing have
185 included “a global assessment of a person’s quality of life according to his own chosen
186 criteria.” (p. 478 Shin & Johnson, 1978), and “...feeling satisfied and happy, well-being

187 means developing as a person, being fulfilled, and making a contribution to the community”
188 (Shah & Marks, 2004, p. 2). However, authors have argued that these definitions have simply
189 consisted of descriptions (Dodge et al., 2012; Lundqvist, 2011). As such, Dodge and
190 colleagues (2012) attempted to define wellbeing by informing their definition through models
191 and theories. One example is Headey and Wearing's (1992) equilibrium model of wellbeing.
192 The model proposes that an individual's subjective wellbeing is stable most of the time and
193 can be impacted by their stock levels (i.e., social background, personality, and social
194 network) and income flows (i.e., favourable events and adverse events). That is, an individual
195 SWB is impacted by their personal characteristics, and can be affected by the life events they
196 experience (Dodge et al., 2012; Headey & Wearing, 1991; 1992). As such, they defined
197 wellbeing “as depending on prior equilibrium levels of wellbeing and of life events, and also
198 on recent events.” (1992, p.95). Moreover, Cummins's (2010) theory proposes that if the
199 individual experiences no challenge, their wellbeing will remain at a stable point (i.e., similar
200 to equilibrium). Though, if an individual faces a significant challenge that they are not able to
201 manage, their SWB will decrease from their stable set point. However, if they have the
202 appropriate defence the individual will not see their SWB fall significantly (Cummins, 2010;
203 Dodge et al., 2012).

204 Thus, informed by the preceding theories and models, Dodge et al. (2012) proposed a
205 new definition of wellbeing which recognized a set point for wellbeing, the need for balance
206 (or equilibrium), and the role of challenges and resources. As a result, they stated wellbeing
207 was "the balance point between an individual's resource pool and the challenges faced"
208 (Dodge et al., 2012, p 230). That is, stable wellbeing occurs when the individual has the
209 resources (psychological, social, and physical) to meet their environment's demands
210 (psychological, social, and physical). If the resources or demands do not match, either way,
211 wellbeing will suffer. Hence, too many or too few demands for the individuals' available
212 resources will result in lowered wellbeing. The authors argue that this definition has several
213 strengths, including simplicity (i.e., definition is clear and effective to understand), universal
214 application (i.e., can be applied individuals of different ages, culture and gender), and a basis
215 for measurement (i.e., can be used to develop wellbeing questionnaires in specific
216 environment) (Dodge et al., 2012). Due to the strengths of the definition, it was used to
217 inform the following programme of work, especially as it takes into the account the
218 individuals' resources and their interaction with environmental demands.

219 Importantly, the use of the definition will be integrated into the thesis as it can capture
220 the athlete's wellbeing in all aspects of their lives. That is, exploring and understanding

221 athlete wellbeing within their sporting context and at a global level (i.e., their other aspects of
222 life) (Lundqvist, 2011). As such, Lundqvist's theoretical model informed the viewpoint of the
223 thesis to explore athletes' wellbeing holistically.

224 **2.2.2 Mental Health**

225 Mental health is defined as "a state of wellbeing in which the individual realizes his or
226 her abilities, can cope with the normal stressors of life, can work productively and fruitfully,
227 and can make a contribution to his or her community" (WHO 2005, p.2). The definition
228 encompasses the main components of the Dodge definition, including the ability (resources)
229 to cope with the stressors (demands), which highlights that mental health encompasses
230 wellbeing as a central tenet. Moreover, Keyes (e.g., 2002; 2005) proposed that mental health
231 and mental illness are closely related, but independent dimensions. He conceptualised mental
232 health as positive functioning and high wellbeing, whilst mental illness, as the presence of
233 disorders. As such, the Keyes dual continua model of mental health (see figure 2.1)
234 illustrates that individuals may experience mental health and mental illness simultaneously,
235 with an individual experiencing a certain level of positive functioning and wellbeing (i.e.,
236 mental health) whilst also experiencing symptoms of a mental illness / disorder. As such,
237 there is a consensus that mental health is not merely the absence of mental illness but also
238 encompasses the presence of wellbeing (Keyes, 2002; 2005; see Nixdorf et al., 2023).

239 **Figure 2.1**240 *Keyes' Dual Continua Model of Mental Health*

241

242

243

244

245

246

247

248

249

250

251

252

253

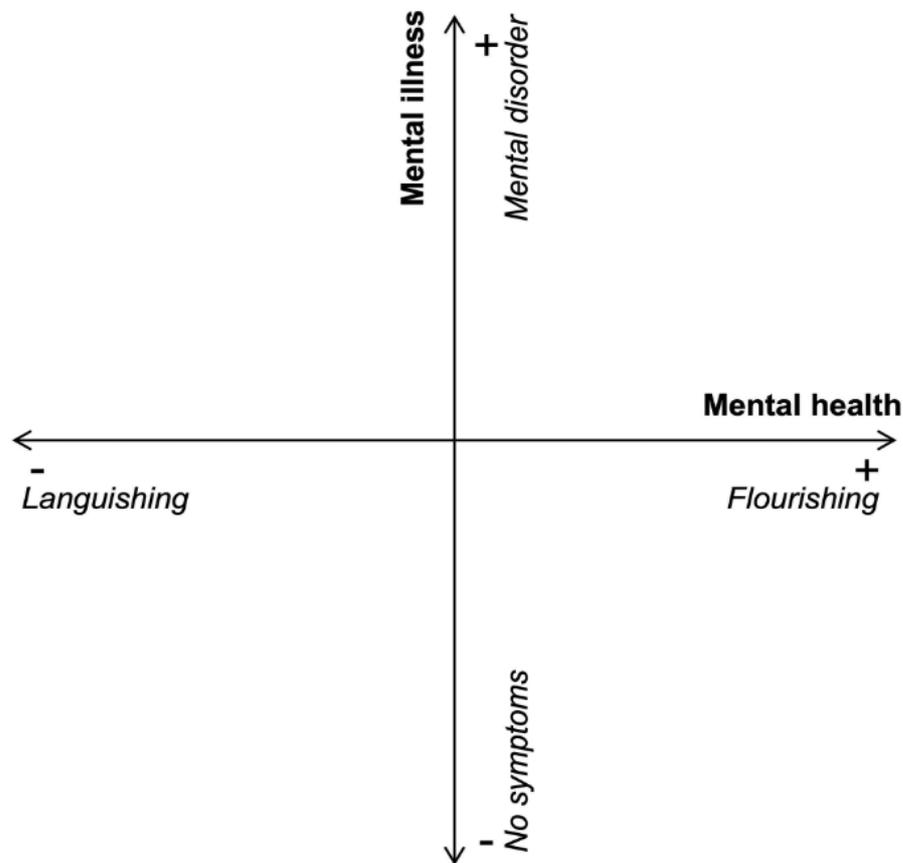
254

255

256

257

258

259 *Note.* Reprinted from *The Routledge Handbook of Mental Health in Elite Sport* (Nixdorf et
260 al., 2023 p.5)

261

262

263

264

265

266

267

268

269

270

271

Although the Keyes continuum has been embraced in the sporting literature, to recognise the complexity of mental health in sport, Henriksen et al. (2020) called for a sport-specific definition of mental health. This was due to the perceived over-simplicity of the WHO definition and its inability to recognise the unique environment that sporting individuals exist within. Although Henriksen and colleagues (2020) argued that the WHO definition represents the holistic view of mental health, that is, mental health is not merely the absence of mental illness; they believed that athletes experience a full range of emotions that needs to be represented within the definition. Furthermore, they argued that mental health is context specific, which may include individual (e.g., race, gender, ethnicity), environmental (e.g., national, organizational, sport specific), and developmental (e.g., transitions) contexts.

272 Finally, they discussed that the definition should recognize that mental health in sport is
273 related but can be separate from performance (Henriksen et al., 2020).

274 Aligned with the comments from Henriksen et al (2020), Kuettel and Larsen (2020)
275 defined elite athletes' mental health as "...a dynamic state of wellbeing in which athletes can
276 realize their potential, see a purpose and meaning in sport and life, experience trusting
277 personal relationships, cope with common life stressors and the specific stressors in elite
278 sport, and can act autonomously according to their values" (pg. 253). The definition enables
279 mental health to be explicitly conceptualised within sport, providing a stronger foundation for
280 researchers to advance knowledge in this area. Although this definition has not been utilised
281 widely, and the WHO definition remains at the forefront of mainstream and sport-related
282 research, it has at least, highlighted the value of considering the context of the individual
283 when exploring mental health.

284 Importantly, the conceptualisation of mental health by Keyes informed the current
285 thesis, understanding that mental health is a presence of wellbeing and that athletes can also
286 experience mental ill-health simultaneously. Moreover, the thesis considered the argument
287 made by Henriksen and colleagues (2020), taking into account the contextualised experience
288 of mental health for athletes. As such, Henriksen et al's suggestions informed the use of a
289 theoretical underpinning (see Chapter 3), which provides the opportunity to explore the
290 complexity of athletes' mental health.

291 Among the terms of wellbeing and mental health it is important to acknowledge that
292 other terms have been used interchangeably to describe the wellbeing and / or mental health
293 of individuals. Notably, thriving and flourishing have emerged as the two most prominent
294 terms (Huppert & So, 2013; Keyes, 2002).

295 ***2.2.3 Flourishing and Thriving***

296 Flourishing, just like wellbeing, has been described and defined differently by
297 different researchers, including "a combination of feeling good and functioning effectively"
298 (Huppert & So, 2013 p.838), which captures hedonic and eudaimonic components of
299 wellbeing. Furthermore, Keyes (2002) proposed that positive mental health is achieved when
300 an individual exhibits including high subjective wellbeing and be functioning psychologically
301 and socially. Consequently, an individual is described as flourishing if they exhibit both
302 hedonic and eudaimonic components of wellbeing. On the other hand, if an adult has
303 incomplete mental health, they are described as languishing and therefore exhibit low scores
304 on subjective, psychological wellbeing, and social scales.

305 Flourishing has been a recent popular term in sport, which researchers have used to
306 profile athletes, to understand how flourishing athletes manage their mental health (Pankow
307 et al., 2021; Kuettel et al., 2021). Moreover, the research has supported the work of Keyes
308 (2002), with the results stating that athletes can experience below average wellbeing and no
309 experience of mental illness symptoms, which supports that absence of mental illness does
310 not mean complete mental health (Kuettel et al., 2021).

311 Thriving has been used interchangeably with flourishing, however there are suggested
312 differences between the two terms. The term thriving has been described and defined
313 differently across several domains in research due the multifaceted nature of thriving, which
314 can manifest differently across individuals (Brown et al., 2017). As such, there has been
315 several definitions including, but not exclusively: “a sustained high level of functioning and
316 performance that is not necessarily dependent on the occurrence of a potentially traumatic
317 event” (Sarker & Fletcher, 2014, p. 47); “the psychological state in which individuals
318 experience both a sense of vitality and a sense of learning” (Spreitzer et al., 2005, p. 538);
319 and “the state of positive functioning at its fullest range – mentally, physically, and socially”
320 (Su et al., 2014, p.256). Recognising the descriptions and definitions created confusion,
321 Brown and colleagues (2017) attempted to develop a robust definition that represent the
322 reoccurring themes within the research, which are development and success including
323 physically, psychologically, and socially. As such, Brown et al. (2017) defined thriving as
324 “the joint experience of development and success” (p.168). The authors proposed the broad
325 definition enables the term to be used globally (i.e., thriving across all areas of lives) and
326 specific scenarios (i.e., thriving in sport but not in academia).

327 Thriving has been a term utilised in sport to describe athletes who experience sporting
328 success and wellbeing together (Brown et al., 2017; McHenry & Zakrajsek, 2023). Thus, an
329 athlete needs to be succeeding in sport and experiencing high levels of wellbeing to be
330 described as thriving in sport (Brown et al., 2017). An exploration by Brown et al. (2018) of
331 the term in elite sport found that thriving was considered to involve athletes being optimistic,
332 self-aware to improve, have holistic development, and a sense of belonging. The authors
333 argued that these themes were similar to psychological and social wellbeing, that is, the
334 eudaimonic tradition. Although the characteristics are similar to flourishing (e.g.,
335 experiencing high psychological and social wellbeing), the authors argued the aspect of
336 striving to perform in the sporting domain separated the term thriving from flourishing.
337 Specifically, Brown et al., (2017) argued that thriving and flourishing are different even
338 though they are conceptually similar. That is, thriving is seen to include both wellbeing and

339 performance, whereas flourishing is more concerned with the psychological, social, and
340 emotional wellbeing; thriving also considers performance.

341 ***2.2.4 Summary of Definitions***

342 The research has highlighted the use of various descriptions and definitions of
343 wellbeing. (Dodge et al., 2012; Lundqvist, 2015). Dodge and colleagues developed a new
344 definition, which was underpinned by aforementioned theories (e.g., Cummings et al., 2010;
345 Headey & Wearing, 1991; 1992). Due to the strengths of the definition (i.e., the simplicity
346 and ability to use with specific contexts), it has informed the thesis, which includes the
347 exploring the demands and resources athletes experience. Moreover, the programme of work
348 was informed by Keyes's (2002; 2005) conceptualisation of mental health, which highlights
349 that individuals need to experience high wellbeing to experience positive mental health.
350 Additionally, the context specific considerations from Henriksen and colleagues (2020),
351 enabled understanding of the complexity of athletes' mental health including individual,
352 environmental, and cultural factors, which accompanied the theoretically underpinning of the
353 thesis.

354 ***2.2.5 Measurements of Wellbeing and Mental Health***

355 The complex nature of wellbeing, the varying traditions / approaches of examining
356 the construct, and the multiple definitions provided, have led to challenges in developing a
357 comprehensive / accepted method of measuring wellbeing (Linton et al., 2016). Accordingly,
358 comparing findings across studies within the extant literature has been problematic. Among
359 the many measures are the Mental Health Continuum Short-Form (MHC-SF; Keyes, 2006),
360 Warwick–Edinburgh Mental-Wellbeing Scale (WEMWBS; Stewart-Brown et al., 2009),
361 WHO-5 (World Health Organization, 1998), Emotional Wellbeing Scale (Şimşek, 2011),
362 Social Wellbeing Scale (SWS; Keyes, 1998), and Ryff's Scales of Psychological Wellbeing
363 (PWB; Ryff & Keyes, 1995). With such an array of measures available and being used, it is
364 difficult for researchers to understand which measurements to choose when examining
365 wellbeing and mental health. To gather the data they need, researchers need to understand
366 what they want to measure; that is, if they wish to measure on component of wellbeing (e.g.,
367 subjective, emotional, social, psychological), or if they wish to use a measure that captures
368 the hedonic and eudaimonic traditions and choose appropriate measures to do so.

369 Moreover, in recent sport psychology literature it has been highlighted that there is a
370 need for the development of sport-specific measures of athlete wellbeing and mental health
371 (Giles et al., 2020), as it has been argued to be inconsistently measured in research

372 (Lundqvist, 2011). The emphasis is due to the need to effectively support athletes, by having
373 measures that account for the complex individual, situational, and environmental factors that
374 can influence athletes' wellbeing and mental health (Giles et al., 2020). Consequently, to
375 develop and produce meaningful data there is a need for a context-specific measurement to
376 capture the experiences of athletes (Giles et al., 2020; Lundqvist, 2011), which has been
377 endeavoured by the International Olympic Committee (IOC; Gouttebauge et al., 2021).

378 One measure developed by the IOC is The Sport Mental Health Assessment Tool
379 (SMHAT-1), which provides sport medical physicians screening tools for athletes who are at
380 risk for mental health symptoms and disorders, through a three-step process. That is, (i) triage
381 with the athlete psychological strain questionnaire to ensure the issue is sport specific; (ii)
382 assessed across six disorder-specific tools; and (iii) clinical assessment to obtain additional
383 information. Unfortunately, however, due to the lack of validated measures in sport, the
384 SMHAT-1 assesses athletes via non-sport-specific measurements as it measures the athlete's
385 symptoms through disorder-specific (i.e., anxiety, depression, sleep disturbance, alcohol
386 misuse, substance misuse, and disorder eating) screening tools. Nevertheless, there have been
387 adaptations of validated measures into the sport domain, specifically, the Sport Mental Health
388 Continuum – Short Form (Sport MHC-SF; Foster & Chow, 2019). The authors adapted the
389 MHC-SF (Keyes, 2006) to create a wellbeing measure for the sporting environment,
390 translating the measure into a sport-specific context. Specifically, Foster and Chow (2019)
391 combined the sport SWB (i.e., a sense of happiness and sport satisfaction; Ryan & Deci,
392 2001), sport PWB (i.e., effectively daily function and personal growth in sport; Ryff, 1989),
393 and sport social wellbeing (i.e., the degree of a person's function in sport; Keyes, 1998). The
394 Sport MHC-SF, which has been utilised within recent research (e.g., Bertollo et al., 2021;
395 Bird et al., 2021; Nikander et al., 2022; Pankow et al., 2021; Pankow et al., 2022; Simons &
396 Bird, 2022), addresses the issues of the lack of valid and reliable context specific
397 measurements. However, some sport psychology literature has still opted to use the global-
398 measure alternative (e.g., Rose et al., 2023).

399 **2.2.5.1 Qualitative Measures.** In recent years, wellbeing and mental health have
400 increasingly been explored through qualitative means (e.g., Coyle et al., 2017; Sauvé et al.,
401 2022; Uzzell et al., 2022). The desire to utilise such approaches has arisen because
402 quantitatively measuring athlete wellbeing and mental health can be difficult as factors can
403 fluctuate and change across time, which can be limited by events of altered mood (Giles et
404 al., 2020). Thus, the use of qualitative measures (e.g., self-report diaries) may provide
405 researchers with meaningful data that captures athletes' experience of wellbeing and mental

406 health, particularly how and why they may change across a short period of time. As such,
407 there is a strength to exploring wellbeing and mental health using qualitative methods as it
408 can begin to illustrate why factors may interact and change over time. However, to strengthen
409 such research it is advantageous to use a theoretical model that would allow researchers to
410 explore the complex processes that affect wellbeing and mental health, rather than factors in
411 isolation. Moreover, within qualitative research, it provides an opportunity to explore the
412 meaning the participants has assigned to a phenomenon in-depth (Smith & Sparkes, 2016a).
413 That is, qualitative research enables researchers to explore rich and important viewpoints of
414 the targeted population to provide an insight that cannot be capture by quantitative measures,
415 including an in-depth understanding of emotions and behaviours. As such, the current thesis
416 will use qualitative methods to explore in-depth the processes that affect athletes' wellbeing
417 and mental health.

418 **2.3 Prevalence of Athlete Wellbeing and Mental Health**

419 The following section will critically review the literature pertaining to the prevalence
420 of athlete wellbeing and mental health. The literature on a whole has examined wellbeing
421 symptoms, psychological distress, and specific mental ill-health concerns (i.e., general
422 anxiety disorder, depression, substance misuse / abuse, and eating disorders). There has been
423 limited research that has examined prevalence of athlete's wellbeing. However, recently the
424 research has begun to examine wellbeing levels as part of their prevalence studies across
425 different samples in sport and nationalities (e.g., Kuettel et al., 2021; Leyland et al., 2022;
426 Nicholls et al., 2020). Within one study of UK Olympic and Paralympic athletes 81% of their
427 sample reported a positive sense of wellbeing (Leyland et al., 2022), which is higher than
428 their Danish counterparts (i.e., 78%; Kuettel et al., 2021). However, such comparisons must
429 be taken with caution as the studies used different measures and interpretations (Kuettel et
430 al., 2021; Leyland et al., 2022). That is, Leyland and colleagues used clinical cut-off points
431 within their samples. Meanwhile, Kuettel and colleagues' wellbeing scores were reported as
432 high if the athlete scored above the sample mean.

433 Nicholls and colleagues (2020) found psychological wellbeing among professional
434 rugby league players across the sample was higher than a comparable sample of the UK
435 general population (Ng Fat et al., 2017). However, the scores did highlight that 35% of the
436 sample scored below the average score for psychological wellbeing (Nicholls et al., 2020).
437 Moreover, Danish athletes have been found to have slighter higher wellbeing scores (i.e., M

438 = 26.3; Kuettel et al., 2021) compared to the general population in Denmark (i.e., M = 25.8;
439 Koushede et al., 2019).

440 Additionally, in comparison to the general population, athletes have been found to
441 score significantly higher for distress compared to the community samples scores, with
442 17.7% of athletes reporting 'high to very high psychological distress, compared to 9% of the
443 community norms (Purcell et al., 2020). Elite athletes in the United Kingdom (UK) have
444 reported higher psychological distress compared to other nationalities, with a 24% of UK
445 sample (Leyland et al., 2022) experiencing psychological distress compared to Australian
446 samples, which ranged from 16.5% (Gulliver et al., 2015) to 17.7% (Purcell et al., 2020).
447 Leyland and colleagues (2022) argued the significant difference between the nationalities
448 may be attributed to the inclusion of a Paralympic athletes and their unique stressors
449 compared to Olympic athletes.

450 **2.3.1 General Anxiety Disorder and Depression**

451 A broad range of studies / reviews have shown that athletes can experience mental
452 health concerns (Reardon et al., 2019; Rice et al., 2016). 244 Australian elite athletes
453 completed a survey to examine symptoms of depression, generalized anxiety disorder, and
454 social anxiety (Gulliver et al., 2015). The study revealed that 46.6% of participants met the
455 criteria of mental health concerns, with 23.6% of male and 30.5% of the female athletes
456 identified as having a potential depressive disorder (Gulliver et al., 2015). Gouttebarga et al.
457 (2015) examined the prevalence of mental health concerns across 253 male participants (149
458 current and 104 former football players). The prevalence of anxiety and depression was 26%
459 for current players and 39% for former players, which indicates that retiring from the sport
460 may increase athlete vulnerability to anxiety and depression symptoms.

461 **2.3.2. Substance Misuse / Abuse**

462 Athletes can also be vulnerable to substance misuse / abuse (Reardon et al., 2019;
463 Rice et al., 2016), which may occur due to a need to relieve stress, pain, and negative
464 emotions (Reardon et al., 2019). For example, hazardous drinking is higher in elite athletes
465 than in non-athletes and non-elite athletes (O'Brien et al., 2005). The study by O'Brien and
466 colleagues (2005) examined 427 students, which revealed that those students who were also
467 elite athletes had a higher rate of hazardous drinking (59%) compared to non-elite athletes
468 (51%) and non-athletes (31%). Moreover, it has been found that athletes can have risky
469 consumption of alcohol when away from their regular season sport (Dietze et al., 2008). As
470 an example, across 583 Australian Football League (AFL) players, it was found that high-risk

471 drinking was low (2%) compared to the general population (15%); however, the high-risk
472 drinking significantly increased towards the end of the season (54%) and during the off-
473 season (47%; Dietze et al., 2008). The use of alcohol within sport has been explored at
474 length, and its misuse can be present due to social hierarchy (i.e., alcohol used to create a
475 social hierarchy), status (i.e., alcohol used to gain reputation), and reciprocity (i.e.,
476 established athletes putting their new counterparts through similar experiences) (Harris et al.,
477 2022).

478 Alcohol abuse has been examined across different cohorts (e.g., nationalities)
479 including current and former elite athletes. As an example, a study among athletes identified
480 that there was a prevalence of 22% for adverse alcohol use across a 12-month period, which
481 was linked with career dissatisfaction (Goutterborge et al., 2018). Research has suggested
482 several factors may be related to the alcohol abuse (and other common mental health
483 concerns), including low social support, adverse life events, career dissatisfaction
484 (Goutteborge et al., 2017), and being a team sport player (Zhou et al., 2015).

485 In terms of other substance abuse, Waddington et al. (2004) surveyed 706 English
486 professional footballers, to examine the use of supplements, and their experience and
487 attitudes towards drug testing, and recreational drugs in football. The results revealed that
488 71% of the participants believed that recreational drugs were being used by professional
489 footballers, with 45% indicating they knew players who had taken drugs (Waddington et al.,
490 2004). Moreover, Dunn and Thomas (2012) found that 8% of the participants had engaged in
491 illicit drug use the previous year. Athletes, who were more likely to engage in illegal drug use
492 were profiled to be male, older, and reported knowing others who were using drugs.

493 **2.3.3. *Eating Disorders***

494 Across studies focusing on eating disorder, there has been a focus on anorexia
495 nervosa, bulimia nervosa, binge eating disorders, and disordered eating (Reardon et al.,
496 2019). Of the studies that have focused on disorder eating, it has been found that between 6-
497 33% of athletes can experience symptoms of clinical or subclinical disordered eating. This is
498 displayed across different nationalities and level of athletes including French high-level
499 athletes (32.9%, Rousselet et al., 2017), Norwegian elite athletes (13.5%, Sundogt-Borgen &
500 Torstveit, 2004), and American student-athletes (6.3% clinical and 26.1% subclinical,
501 Anderson & Petrie, 2012).

502 An early study that examined the prevalence of eating disorders in elite athletes,
503 compared Norwegian athletes (n = 1620) and general population controls (n = 1696).

504 (Sundgot-Borgen & Torstveit, 2004). The screening, via subscales of the Eating Disorder
505 Inventory (EDI) and a clinical interview, identified that 13.5% of athletes met subclinical and
506 clinical eating disorders criteria. The number of athletes who met the threshold was
507 significantly more ($p < 0.001$) than the general population (4.6%). The evidence also
508 indicated that female athletes (20%) were significantly more prone to eating disorders than
509 male athletes (8%). Furthermore, the study concluded that athletes competing in a sport
510 where weight or leanness is important had a higher vulnerability for eating disorders than
511 other sports (Sundgot-Borgen & Torstveit, 2004).

512 A more recent, large-scale study across 340 athletes within 37 sporting disciplines
513 (Rousselet et al., 2017) revealed that 32.9% of the athletes ($n = 112$) had eating disorders.
514 Aligned with previous results (i.e., Giel et al., 2016; Sundgot-Borgen & Torstveit, 2004),
515 female athletes who competed in a lean sport were the most likely to have disordered eating.
516 However, it is important to note that for male athletes, the study found that 16% were
517 symptomatic of disordered eating. Moreover, the male athletes who competed in weight class
518 sports were more likely to experience disorder eating compared to athletes competing in
519 endurance or ball games. Furthermore, it has also been found, that the athletes who fitted the
520 criteria for pathology of an eating disorder, may be more likely to score higher on depression
521 and anxiety compared to athletes who did not present eating disorder symptoms (Giel et al.,
522 2016).

523 **2.3.4. Summary of Prevalence**

524 Across the research, due to the complexity of the different terms there has been a
525 range of measures used to report the prevalence of wellbeing and mental health amongst
526 athletes. However, the research has consistently reported that athletes can experience a range
527 of mental ill-health symptoms including anxiety, depression, substance misuse / abuse and
528 eating disorders. There are several factors that may cause athletes to experience a range of
529 symptoms with the concerns listed. As such, there is an opportunity to use qualitative
530 measures to explore processes that may cause athletes to experience a range of symptoms, to
531 understand how to aid and protect athletes in elite sport.

532 **2.4 Factors Affecting Athletes' Wellbeing and Mental Health**

533 A range of factors have shown to both hinder or protect the wellbeing and / or mental
534 health of athletes.

535 ***2.4.1 Protective Factors Affecting Athlete Wellbeing and Mental Health***

536 Factors inherent within elite sport that are seen to impact positively on wellbeing and
537 / or mental health, include, but are not limited to, positive recovery strategies (e.g., Nixdorf et
538 al., 2013) and coping strategies (Coyle et al., 2017; Kuettel & Larsen, 2020), career
539 satisfaction (e.g., Li et al., 2021), positive sporting relationships and social support (e.g.,
540 Coyle et al., 2017; Doherty et al., 2016; Gulliver, Griffiths, & Christensen, 2012; Pankow et
541 al., 2021), and a trusting and mastery-oriented sport climate (Kuettel & Larsen, 2020). Each
542 are discussed in detail below.

543 At an individual level, the skills and strategies of the individual athlete can provide
544 them with protection for the wellbeing and mental health, including positive recovery
545 strategies (Nixdorf et al., 2013). Moreover, Pankow (2021) found athletes experiencing
546 optimal wellbeing (i.e., positive mental health) across a season employs strategies to manage
547 and maintain their wellbeing and mental health including pre-season planning (e.g., their
548 social and academic schedule), looking for positives (e.g., shifting their focus away from
549 injuries), reflecting on their season (e.g., understanding how they appraised their season) and
550 taking a break from sport (e.g., spending time away from team). Furthermore, career
551 satisfaction has been a cited factor that positively impacts athlete wellbeing and mental
552 health. That is, athletes more satisfied with their sporting career were more likely to
553 experience fewer general anxiety disorder (GAD) symptoms (Li et al., 2021). Moreover, on
554 an individual level, it has been shown that a negative relationship can occur between athlete
555 identity and sport wellbeing (Ballesteros et al., 2022), and athletes who are able to balance
556 education and employment can experience perceived higher wellbeing because of its role in
557 developing a multi-dimensional identity (Sauvé et al., 2023).

558 Within sporting environments being part of a trusting and mastery-oriented sport
559 climate can be advantageous for athletes and their wellbeing and mental health (Kuettel &
560 Larsen, 2020). Moreover, positive sporting relationships and social support has been
561 perceived to be inherent to the athletes' wellbeing and mental health (e.g., Coyle et al., 2017;
562 Doherty et al., 2016; Gulliver, Griffiths, & Christensen, 2012; Pankow et al., 2021). The
563 coach-athlete relationship has been found to be protective of athlete wellbeing (Lundqvist &
564 Sandin, 2014; Sauvé et al., 2022; 2023) and mental health (Coyle et al., 2017), with trust and
565 confidence being important characteristics within the relationship (Lundqvist & Sandin,
566 2014). Pankow (2021) highlighted the coach-athlete interaction was a particularly important
567 source of support for athletes, and that effective communication, having an empowering
568 coach-athlete relationship, and receiving coach support were deemed vital for the protection

569 of athlete mental health. Away from the coach, other members of the athlete's entourage can
570 be fundamental for their wellbeing; including athletes having positive experiences with their
571 sport psychologists to protect their wellbeing (Kavanagh et al., 2017; Sauvé et al. 2022).
572 Social support from significant others is pertinent at crucial time periods, including injury
573 (Doherty et al., 2016). That is, the social support can be crucial in aiding those with
574 depression find a turning point in their mental health journey (Doherty et al., 2016).
575 Moreover, Kuettel and colleagues (2021) found within their sample those athletes who have
576 reported positive perceived social support, from parents, coaches, and friends have
577 experience positive mental health (i.e., optimal wellbeing). The positive relations away from
578 sport, including family and friends were seen as important for psychological wellbeing of
579 elite orienteers, as the relationship providing them with trust, security, and a separation from
580 sport (Lundqvist & Sandin, 2014).

581 ***2.4.2 Risk Factors of Wellbeing and Mental Health***

582 Synthesis of the available literature indicates a range of factors that could increase
583 athlete vulnerability to lowered wellbeing and poor mental health outcomes (e.g., Kuettel &
584 Larsen, 2020; Poucher et al., 2021; Rice et al., 2016). These factors, which will be discussed
585 in more detail below, include sporting stressors such as career and life transitions (e.g., Kilic
586 et al., 2019; Kuettel et al., 2022; Newman et al., 2016), maladaptive coping strategies (e.g.,
587 Nixdorf et al., 2013; Nixdorf et al., 2016), career dissatisfaction (e.g., Gouttebauge et al.,
588 2017), low mental health literacy (e.g., Coyle et al., 2017), low social support (e.g., Prinz et
589 al., 2016), injury (e.g., Coyle, 2017), exclusive athletic identity (e.g., Doherty et al., 2016),
590 poor performance (e.g., Doherty et al., 2016; Gulliver, Griffiths, & Christensen, 2012),
591 organisational drive for performance (Sauvé et al., 2023); and mental health stigma (e.g.,
592 Biggin et al., 2017).

593 Athletes experience a range of stressors, which include life stressors and unique to
594 sport that are disadvantageous to their wellbeing and mental health (e.g., Doherty et al., 2016;
595 Kilic et al., 2017; Kilic et al., 2019; Newman, et al., 2016). Such negative life stressors can
596 include bereavement, relationship breakdowns, and injuries (Newman et al., 2016). When
597 exploring the experiences of athletes who have been diagnosed with depression, Doherty et
598 al. (2016), found those athletes perceived they had an inability to deal with life stressors and
599 reported more adverse life events. The latter was also found to lead to a higher number of
600 symptoms relating to common mental disorders across other studies (Kilic et al., 2017; Kilic
601 et al., 2019).

602 One unique stressor common among athletes is injury (Putukian, 2015; Souter et al.,
603 2018) and injury is associated with symptoms of psychological distress (Gouttebarga et al.,
604 2017; Kilic et al., 2017). Injured athletes can experience a higher number of depressive
605 (Appaneal et al., 2009; Gulliver et al., 2015) and generalised anxiety symptoms (Gulliver et
606 al., 2015; Junge & Feddermann-Demont, 2016) compared to non-injured athletes.
607 Additionally, athletes (both current and former) who had experienced higher number of
608 severe injuries and surgeries experienced more symptoms of common mental disorders,
609 including depression, anxiety, and alcohol abuse (Gouttebarga et al., 2017). Research focused
610 on specific injuries, such as concussion (i.e., Kilic et al., 2019), found that it can lead to
611 distress and a maladaptive relationship with alcohol (Newman et al., 2016).

612 Moreover, on a personal level, athletes that were perceived to have an exclusive
613 athlete identity are also more susceptible to depression (compared to those with a multi-
614 dimensional identity) across their sporting careers (Doherty et al., 2016). Male athletes who
615 had self-disclosed their depression whilst still performing in their sporting careers, perceived
616 that they held an exclusive athlete identity, which led to an unhealthy relationship with their
617 sport and the high number of demands. Additionally, an exclusive athletic identity is
618 perceived to be factor in an inability to cope with life stressors, and thus being less able to
619 deal with distress symptoms they may experience (Doherty et al., 2016). Moreover, an
620 exclusive or strong athletic identity can lead to a need of excellence (Doherty et al., 2016)
621 and performance success, which can encourage enhanced sense of self (Newman et al.,
622 2016). Thus, when athletes experience performance failure it can be an accelerator for
623 feelings of depression and anxiety (Gulliver, Griffiths, & Christensen, 2012; Newman et al.,
624 2016).

625 The athletes' skills and knowledge can hold the potential to be a risk factor for their
626 wellbeing and mental health, including their knowledge regarding wellbeing and mental
627 health concerns. Mental health literacy (MHL) is defined as "knowledge and beliefs which
628 aid their recognition, management, or prevention" (Jorm, 2000, p. 396) and includes different
629 components: recognizing specific disorders; knowledge and beliefs about risk factors;
630 knowledge and beliefs about professional help; attitudes towards help-seeking; and
631 knowledge of how and where to seek mental health information (Jorm, 2000). It is noted that
632 an improvement in MHL can improve help seeking amongst athletes, due to the changes in
633 the individual's knowledge, targeting self-management strategies, challenging stigma, aiding
634 others, and help-seeking behaviours (Gorczynski et al., 2021). In their study of divers, Coyle
635 et al. (2017) indicated that the athletes had limited MHL and were not confident where to

636 seek help for poor mental health. As such, the failure to seek support can be influenced by a
637 lack of knowledge and confidence to do so. Moreover, low literacy may be due to the
638 participants' limited experiences of poor mental health (Coyle et al., 2017). That is, if the
639 athletes had not had any personal experience, they had no foundation for literacy.
640 Consequently, a hindrance in seeking help may lead to the manifestation and maintenance of
641 mental health concerns. Of interest, if the athletes had negative experience accessing
642 professional help, that would act as a barrier for returning to a professional and / or seeking
643 another professional, whilst busy schedules can also be a hindrance for athletes seeking help
644 for their mental health (Castaldelli-Maia et al., 2019).

645 Additionally, research has also found that finances, result-focused mindset, and
646 feelings of isolation are perceived to be detrimental to athlete wellbeing (Sauvé et al., 2022),
647 whilst changes to needs satisfaction throughout the season were related to the athlete's
648 overall wellbeing (Amorose et al., 2009). That is, if psychological basic needs are met then
649 their wellbeing is perceived to be higher, and vice versa. Furthermore, athletes' wellbeing
650 may be further comprised if they are within a sporting system promoting the pursuit of results
651 has been perceived to negatively affect wellbeing (Sauvé et al., 2023).

652 Within a sporting system receiving a lack of social support has been found to
653 negatively impact the wellbeing and mental health of athletes (e.g., Prinz et al., 2016; Sauvé
654 et al., 2022; Sauvé et al., 2023). Coaches can thwart athletes' wellbeing due to the control
655 they can impose over an athlete's life, in particular pushing athletes to train through injuries
656 (Sauvé et al., 2022). Athletes who have experienced poor mental health have tended to have
657 experienced a lack of social support (Gouttebarga et al., 2015; Gouttebarga et al., 2017).
658 Moreover, athletes who have experienced conflict and low social support with their coaches
659 and / or management can experience low mood (Prinz et al., 2016) and burnout (Gouttebarga
660 et al., 2015). Also, a lack of social support from teammates can lead to experiencing
661 symptoms of anxiety and depression (Gouttebarga et al., 2015). A key time where social
662 support appears to be particularly critical, is the junior-senior transition. This period is shown
663 to be risk factor for athletes - with depression, anxiety, and stress scores progressing in age
664 across youth players moving through this transition (Kuettel et al., 2022). The sport
665 psychologist plays an important role in athletes' life sporting career and wider life; however,
666 Sauvé and colleagues reported that athletes can have problematic relationship with the sport
667 psychologist that can be disruptive to their wellbeing if there is a narrow focus on the athlete
668 performance (Sauvé et al. 2022).

669 Finally, public (i.e., stigma perceived to be embedded within society) and personal
670 stigma (i.e., individual's own stigmatised attitudes) towards mental health are a major theme
671 in literature, and is particularly prominent in the male athlete mental health literature
672 (Castaldelli-Maia et al., 2019; DeLenardo & Terrion, 2014; Gulliver, Griffiths, &
673 Christensen, 2012; Gucciardi et al., 2017; Wahto et al., 2015). It has been highlighted that
674 stigma is higher in athletes compared to non-athletes (Kaier et al., 2015), with athletes and
675 coaches indicating that stigma related to mental health is a significant barrier for athletes
676 seeking support (Biggin et al., 2017). Such attitudes can be driven by factors including
677 organisations having motivations to be profitable, sporting environments driving for success,
678 and a wider media critique of failure (Bauman, 2016). These factors can lead to athletes
679 perceiving seeking help as a weakness and not being classed as mentally tough (Bauman,
680 2016).

681 Mental toughness can be described within sporting environments by behaviours that
682 have been underpinned by unrelenting standards (Coulter et al., 2016), and if a player has
683 been labelled as mentally tough then it can carry some form of social status within a club
684 (Coulter et al., 2016). This can lead to a need to project the image of strength and hide
685 fragilities (Doherty et al., 2012), especially among males who can have high levels of
686 hypermasculinity (i.e., the reinforcement of male stereotypes including strength and
687 toughness) (Jones, 2016). Those athletes who projected hypermasculinity had more negative
688 perceptions of mental ill-health, which led to a lack of seeking help for any concerns
689 experienced (Jones, 2016). As such, it is of benefit to decrease mental health stigma via
690 interventions to facilitate athletes seeking help when they experience a period of distress.
691 However, it is interesting to note, that a recent study (i.e., Brid et al., 2021), has shown that
692 higher levels of mental toughness was associated with less stigma towards help seeking
693 amongst Division 1 student-athlete. Furthermore, the study also found a positive relationship
694 between the public stigma and personal stigma; thus, as the perceived public stigma increased
695 so did the self-stigma. As such, there is scope for research to explore further, how public and
696 personal stigma regarding mental health may influence the athletes' help seeking behaviours
697 and mental health.

698 **2.4.3. Section Summary**

699 Across the literature it is important to acknowledge that there are factors that athletes
700 experience that are personal (e.g., skills and knowledge), environmental (e.g., proactive
701 coaching behaviours), and cultural (e.g., mental health stigma). Therefore, it is important to

702 explore the factors that affect wellbeing and mental health through a lens that allows
703 researchers to understand how these factors may interact. The current body of literature
704 highlights discrete factors but does not consider the interactions that may occur between the
705 person, environment, and culture. As such, it would be advantageous to use an ecological
706 lens that would allow researchers to understand the interactions. The bioecological model
707 (Bronfenbrenner, 1995) may fill the gap as it considers factors as processes, which are
708 influenced by the person, environment (and culture), and time. Taking into account the
709 processes into consideration will enable the thesis to employ a context-specific intervention
710 that can target different levels (i.e., individual, environmental, and cultural).

711 **2.5 Wellbeing and Mental Health Interventions**

712 As elite sport can pose a threat to athletes' wellbeing and mental health, there has
713 been a recent upsurge of interventions that have aimed to improve the wellbeing and mental
714 health outcomes of athletes. To achieve the intended outcomes the body of interventions have
715 aimed to improve mental health awareness, improve mental health literacy, and address
716 stigma. The following section will explore critically, those interventions / programmes that
717 have been implemented and evaluated in the sport context.

718 **2.5.1 Mental Health Awareness Interventions**

719 To achieve the intended outcomes the body of interventions have aimed to improve
720 mental health awareness by improving mental health literacy, addressing stigma, and
721 improving help-seeking behaviours. The interventions have been delivered by different
722 modes including face-to-face and online. The following section will explore critically, those
723 interventions / programmes that have been implemented and evaluated in the sport context.

724 A recent systematic review (i.e., Breslin et al., 2022) examined the effect of sport-
725 specific mental health awareness programmes on wellbeing and mental health across many
726 stakeholders, including athletes, coaches, officials, and parents (see Table 2.1.). The relevant
727 studies regarding athletes will be explored within the next section.

728 **Table 2.1**729 *Mental Health Awareness Programmes. Note: adapted from Breslin et al., (2022) systematic review.*

730

Study	Sample	Delivery Mode	Outcomes
Ajilchi et al. (2019)	Amateur basketball players	Six face-to-face mindfulness sessions	Improvements in emotional intelligence and mental toughness.
Bapat et al. (2009)	Senior and junior athletes, parents, and coaches.	Three face-to-face workshops	Reduction in stigma. Increased mental disorders knowledge and confidence to help others.
Breslin et al. (2017)	Coaches	One face-to-face educational workshop	Improvements in mental health knowledge and intentions to help.
Breslin et al. (2018)	Student-athletes	Face-to-face multicomponent program	Increased mental health and illness knowledge. Increased intentions to support someone with mental health concerns.
Chow et al. (2020)	Student-athletes	Four face-to-face workshops	Improved mental health literacy, helping seeking attitudes, and reduced self-stigma.
Donohue et al. (2015)	Student-athletes (n = 7)	12 face-to-face meetings (some meetings included significant others in the athlete's lives)	Depressive assessments scores reduced. Drug use decreased. Improved social relationship scores.
Donohue et al. (2018)	Student-athletes (n = 74)	12 face-to-face meetings (some meetings included significant others in athlete's lives)	Improvement in mental health, mood, and factors interfering with sport performance. Improved relationships and happiness with others.
Dowell et al. (2021)	12-15 years old rugby league players	Four face-to-face sessions and psychoeducation website.	Anxiety and depression (marginally) symptoms reduced. Sig. improvements in prosocial behaviours and ability to manage negative emotions.
Dubuc-Charbonneau & Durand-Bush (2015)	Student-athletes	7-9 individual resonance performance model sessions	Decreased levels of stress and burnout. Wellbeing levels significantly increased.

Fogaca (2021)	Student-athletes	8-week face-to-face intervention (mental skills training and social support)	Improved mental skills and decreased levels of anxiety. Reduced levels of depression (not sig.)
Glass et al. (2019)	Student-athletes	Six face-to-face mindfulness-based sessions	Sig. increase in life satisfaction. Small but not sig. decrease in depressive symptoms.
Gross et al. (2018)	Female student-athletes	7-week intervention face-to-face Mindfulness-Acceptance-Commitment (MAC). Psychological skills control group.	MAC approach reduced substance use, psychological symptoms (i.e., anxiety and eating concerns), and emotional distress. Improved sport performance.
Gulliver et al. (2012)	Elite athletes	Online psychoeducation webpages. Sources of help for mental health concerns.	No sig. effect for help-seeking attitudes. Decreased stigma for anxiety and depression.
Hurley et al. (2018)	Parents	One face-to-face workshop	Increases in depression literacy, anxiety literacy, help-seeking knowledge, and confidence in helping others.
Laureano et al. (2014)	Student-athletes	Six face-to-face sessions including psychoeducation workbook. Information developed from need-analysis of population.	Improved coping including problem-focused, managing negative emotions and thoughts. Improved happiness.
Longshore & Sachs (2015)	Coaches	Mindfulness training. One facilitator led session. 6-week home programme including educational materials and 20 mins per day exercises.	Decreased anxiety and adverse emotions. Qualitative data highlighted positive impact on anxiety and stress, emotions, and personal life.
Liddle et al. (2019)	Adolescent males, parents, and coaches.	Multi-level and multi-component programme. Face-to-face MHL and resilience athlete workshops and internet-based modules. Face-to-face parent MHL workshop. Face-to-face coach self-determination workshop.	Athletes = increased attitudes towards help-seeking. Reduced stigma. Improved depression and anxiety knowledge. Parents = improved depression and anxiety knowledge. Increased confidence to assist others. Participants increased wellbeing, resilience, depression and anxiety literacy, and help-seeking attitudes.

Mohammed et al. (2018)	Injured student-athletes	Mindfulness based stress reduction. 8-week meditation practice.	Decreased anxiety and stress across intervention. Decreases in depression and tension.
Pierce et al. (2010)	Club leaders	Face-to-face mental health first aid. Sport specific mental health presentations.	Increased confidence to recognise mental health symptoms. Increased confidence to assist others with mental health concerns.
Sebbens et al. (2016)	Coaches and support staff	Face-to-face 4-hour mental health in sport workshop. Provided supplement information pack of resources.	Increased knowledge of depression and anxiety. Increased confidence to help others with mental health concerns.
Sekizaki et al. (2016)	Male school aged athletes	Online cognitive-based intervention (4 weeks). One group education class and online work.	Increased depression scores for control group. Intervention group depression scores remained the same. No significant difference for general health questionnaire.
Shannon et al. (2019)	Student-athletes	Facilitator led instructional workshop and home-directed mindfulness programme.	Indirect effect on stress and wellbeing.
Slack et al. (2015)	English football league referees	Mental toughness education training. Four individual and two group workshops.	Improved mental toughness attributes, behaviour, and cognition measures.
Tester et al. (1999)	Children and adolescents	Life skills programme over two years.	Increased self-esteem and confidence. Improved social relationships.
Van Raalte et al. (2015)	Student-athletes	Online interactive website.	Enhanced mental health referral knowledge.
Vella et al. (2021)	Adolescent males, parents, and coaches	Multi-level and multi-component (follow on from Liddle et al., 2019) intervention. Face-to-face MHL and resilience athlete workshops and inter-based modules. Face-to-face parent MHL workshop. Face-to-face coach self-determination workshop.	Increased depression and anxiety literacy. Improved help-seeking attitudes and confidence to seek mental health information. Improved wellbeing.
Vidic et al. (2018)	Student-athletes	Facilitator led six mindfulness sessions.	Decreased stress levels. Perceived benefits across different life areas including enhanced focus, improved calmness, increased awareness, and being more present-oriented.

732 **2.5.1.1 Face-to-face Interventions.** One of the first mental health awareness
733 programmes aimed to provide a curriculum-based programme to increase mental health
734 knowledge, alongside resilience and wellbeing, and an understanding of the feasibility of
735 their programme (Breslin et al., 2018). One hundred student-athletes were invited to either
736 the intervention or control group during a class session. The programme (i.e., State of Mind
737 Ireland; SOMI) was delivered via experienced tutors to 56 participants, using video clips and
738 athlete case studies, who had sought help for their mental health. The programme also
739 included a group discussion about the WHO's physical activity targets, an introduction to
740 mindfulness practices, and a promotion of "Five Ways to Wellbeing" (Breslin et al., 2018).
741 The control group received a seminar on child physical health. Mental health knowledge
742 increased in the intervention group from baseline ($M = 21.74$, $SD = 3.0$) to post-intervention
743 ($M = 23.4$, $SD = 2.2$), which was a larger increase compared to the control group.
744 Furthermore, during the three months follow-up period, compared to the control group,
745 athletes within the intervention group showed greater intention to engage with someone with
746 a mental health concern. However, there was not a significant improvement in wellbeing and
747 resilience, which the authors argued may have been due to the content of the intervention
748 providing awareness rather than coping strategies. The qualitative evaluations within the
749 study, also found that the scheduling of the program was perceived to be convenient due to it
750 being in students' scheduled class time. Therefore, it may be advantageous for future
751 interventions to be delivered at a time and place beneficial for the target population.

752 Fogaca (2021) developed an intervention that taught athletes coping skills to improve
753 their mental health and performance in sport. Additionally, the study considered
754 environmental processes, and as such it aimed to improve social support from coaches and
755 captains. Two teams were assigned to the intervention group and three teams to the control
756 group. The intervention group received five face-to-face team sessions, four captain sessions,
757 and two coaches' sessions. The team sessions focused on mental skills to cope within sport
758 and general life, which included: (i) attributions and self-talk; (ii) arousal and anxiety; (iii)
759 mindfulness and acceptance, and (iv) growth mindset. Captains received session leadership
760 styles and how they impact performance and wellbeing, by providing social support. The
761 coach's sessions focused on communicating mental health related issues with athletes,
762 including identifying signs of anxiety and depression and providing emotional and tangible
763 social support. The results indicated the athletes improved their mental skills and decreased
764 levels of anxiety compared to the control group. However, regarding depression there was no
765 significant result.

766 Face-to-face interventions within the sporting environment are beneficial as
767 researchers can organise the delivery of sessions around training sessions and at appropriate
768 timings (e.g., Breslin et al., 2018; Liddle et al., 2019). However, interventions delivered in
769 person can be difficult to deliver as researchers have to consider the organisations timelines,
770 which may include finding an appropriate time and place for the intervention to be delivered
771 (Fogaca, 2021; Liddle et al., 2019). As such, to overcome the barriers of timings and
772 organisations restrictions, online interventions can provide an accessible resource that can be
773 accessed by hard-to-reach populations and are cost-effective (Gulliver et al., 2012b; Van
774 Raalte et al., 2015).

775 **2.5.1.2 Online Interventions.** One internet-based intervention (randomized
776 controlled trial) was delivered to 59 young elite athletes, designed to increase their mental
777 health help-seeking attitudes (Gulliver et al., 2012b). Delivered across two intervention
778 weeks, participants received information, which included: the prevalence of mental disorders;
779 symptoms of depression and general anxiety disorder; treatments (e.g., medication and
780 cognitive behavioural therapy); myths about depression and generalized anxiety disorder; and
781 help-seeking information. The results showed athletes experienced an increase in literacy
782 regarding depression and anxiety, which was also maintained at a 3-month follow-up. The
783 intervention also had a positive impact on reducing the stigma associated with anxiety,
784 although it did not impact the stigma relating to depression. However, there was no effect on
785 improving mental health help-seeking attitudes, intentions, or behaviours compared a control
786 group (Gulliver et al., 2012b).

787 Van Raalte and colleagues (2015) created and evaluated a psychoeducation training
788 website. The study aimed to improve mental health referral knowledge and mental health
789 referral efficacy in student athletes. The website included exercises to improve referrals for
790 athletes experiencing substance abuse, eating disorders, depression, and anxiety to ultimately
791 improve wellbeing and mental health across athletes. To achieve the intended outcomes the
792 athletes were provided information of mental health resources, screening tools, helplines and
793 hotlines for disorders, overviews of mental health concerns, and referral tips. The study
794 included 197 student-athletes who were randomly assigned to the experimental condition or
795 control condition, however, information on the number in each condition was not shared. The
796 results revealed that the website led to an increased mental health referral knowledge and
797 efficacy compared to the control group.

798 Additionally, a more recent online intervention aimed to increase help-seeking
799 attitudes, intentions, and mental health literacy (Jones et al., 2022). The intervention focused

800 on crucial timing in an athlete's careers (i.e., injury), which included three educational videos
801 including: (i) the athlete response to injury; (ii) help-seeking and social support; (iii) signs /
802 symptoms of depression. The results indicated that online intervention (and educational
803 videos) can improve mental health literacy and help-seeking attitudes and intentions.
804 Furthermore, the intervention was designed to aid athletes at a critical time for athletes,
805 which highlights the importance of delivering interventions, which addresses a context
806 specific process for athletes. Additionally, the use of the educational videos highlights the use
807 of different modes of communication can be beneficial when delivering important
808 information to athletes, which is important for future interventions.

809 The use of online interventions enables athletes to develop their knowledge and
810 intention to seek help within their own time. To overcome the barrier of athletes having a
811 lack of time to seek help for their wellbeing and mental health (Gulliver et al., 2012a), online
812 interventions may provide a basis for improving the intentions to seek help. Moreover, online
813 interventions may minimise the effect of stigma within an environment. The ability to access
814 knowledge anonymously enables athletes access information they may not wish to do so
815 publicly, in a cost-effective way (Jones et al., 2022). Although the research has provided
816 some promising evidence that the interventions can provide some impact via different modes
817 including face-to-face and online. This impact can be limited due to the interventions being
818 atheoretical. Consequently, Breslin et al. (2017) called for interventions to be underpinned by
819 a theoretical lens to ensure the impact of the interventions to be significant and long-lasting.

820 **2.5.1.3 The Inclusion of Theory.** Shannon et al. (2019) reintroduced the SOMI to a
821 new cohort of student-athletes, through a lens of the self-determination theory (SDT; Ryan &
822 Deci, 2000) as there was a lack of theory-based mental health interventions being
823 implemented in sport (see Breslin et al., 2017). Two hundred and thirty student-athletes
824 participated in the study (intervention group = 108; control group = 130), which was
825 developed with the aim of improving wellbeing. The intervention consisted of a mental
826 health workshop, and a mindfulness program to be completed at home. In line with the SDT,
827 the workshop was developed with an autonomy-supportive style, allowing participants to
828 experience instructional feedback and open-ended questions. The workshop included
829 discussions of common stressors, self-management tools of mindfulness, and vignettes of
830 athletes' experiences. The section on mindfulness included an introduction to an online app,
831 which the student-athletes could use at home across 14 daily sessions. The results showed
832 that when using mindfulness as a mediator, the intervention and control groups did not
833 significantly differ in the outcomes ($p > 0.05$). However, when the using competence as a

834 mediator, the intervention group were more competent in managing their mental health.
835 Furthermore, competence indirectly affected mindfulness, stress, and wellbeing (Shannon et
836 al., 2019). Therefore, the researchers proposed that even though mindfulness does not
837 directly affect various outcomes, engaging with the training may develop the athletes'
838 competence to manage their wellbeing and mental health, which ultimately may improve
839 their stress and wellbeing.

840 The SOMI programme has been evaluated across different populations (i.e., athletes
841 and non-athletes), with the authors also applying the Integrated Behaviour Change Model
842 (IBCM; Hagger & Chatzisarantis, 2014) to the programme (Breslin et al., 2021). This
843 particular study (i.e., Breslin et al., 2021) included university students (200 participants) who
844 were assigned to the intervention group (athletes =101, nonathletes = 45) and control group
845 (54 athletes = 37, nonathletes =16). In the same way to the previous study, the participants
846 were invited to attend the workshop during class time, and alongside the established
847 curriculum (i.e., SOMI; Breslin et al., 2018; Shannon et al., 2019), new themes were
848 introduced into the programme (i.e., signs and symptoms of stressors; how to self-manage
849 symptoms; identify self-management resources and strategies). The program also included
850 introductions to mindfulness, athlete mental illness examples, group discussions, and open-
851 ended questions. The IBCM components targeted the attitudes (e.g., benefits of self-
852 managing stress), subjective norms (e.g., athlete case studies championing mental health),
853 and perceived behavioural control (e.g., self-help resources made available). The intervention
854 showed promise, with the intervention group significantly improving their motivation
855 towards attitudes, perceived behavioural control, and self-management intentions compared
856 to the control group. However, there are a lack of results which highlight the effect of the
857 interventions on their participant's wellbeing and mental health.

858 Another theory-driven intervention, the ahead-of-the-game programme (AOTG), was
859 a multi-level, multi-component intervention, delivered to community sports clubs (Vella et
860 al., 2018). The programme was targeted at intrapersonal, interpersonal, organizational, and
861 community levels to increase athletes' mental health literacy, help-seeking intentions,
862 attitudes, and to enhance resilience and wellbeing. The program also adopted a community-
863 based participatory research (CBPR) framework, which allowed the researchers to work with
864 the stakeholders to design and implement the intervention. The multi-component
865 intervention, which was developed from participants' focus groups, included: (i) a brief (i.e.,
866 45 mins for convenience) mental health literacy program; (ii) an internet-supported resilience

867 intervention; (iii) parent mental health literacy program; and (iv) an internet-supported coach
868 education program.

869 The brief mental health program (i.e., 45 mins), named "help out a mate" (HOAM),
870 aimed to educate adolescent males on different topics, including mental health and illness,
871 myths surrounding mental health and illness, anxiety and depression, how to seek reliable
872 information, and providing helps to others. All attendees received an information card to
873 supplement the topics discussed, which listed the key steps on providing help, and key mental
874 health resources. The internet-supported resilience intervention targeted psychological skills
875 to help athletes cope with life stressors via a 45-minute educational workshop and six
876 internet-based modules. The workshop discussed challenges, obstacles, adversity, and
877 building core skills to cope, followed by the internet component. The internet modules were
878 designed to be 10-15 minutes long and included problem-solving, controlling the
879 controllables, managing their thoughts, emotional regulation, and teammate support. The
880 programme has been evaluated across different samples, which has found to improve
881 athlete's mental illness knowledge, their intentions to help others, and reduce stigma towards
882 mental illness (Liddle et al., 2019). In a more recent sample, the intervention led to
883 improvement in anxiety and depression literacy, increased intentions of seeking help,
884 confidence to seek mental health information, and resilience (Vella et al., 2021).

885 Moreover, the brief mental health literacy HOAM program delivered by trained
886 volunteers with mental health lived experience significantly increased MH knowledge
887 (Liddle et al., 2021). The male sport participants (intervention group $n = 47$, waitlist control
888 group $n = 55$), who received a 45-min education workshop aimed to manage mental health
889 and self-help resources. To elicit help-seeking behaviour change, the authors underpinned the
890 workshop with the integrated behaviour change model (Hagger & Chatzisarantis, 2009,
891 2014), addressing attitudes (e.g., discussing myths about mental illness), subjective norms
892 (e.g., discussing the important role of supporting teammates), and perceived behaviour
893 control (e.g., practising skills through role-play). The results showed that the participants
894 improved their attitudes to help-seeking and the workshop improved the participants'
895 knowledge of common mental health concerns (i.e., anxiety and depression) compared to the
896 control group. Some of this knowledge (i.e., anxiety literacy) was maintained after one
897 month. However, it was also noted that the depression literacy scores declined after one
898 month of the workshop for the intervention group. Hence, although this study was deemed to
899 be robust by underpinning their work with behaviour change theory, the results did not show
900 sustained intentions to seek help or provide help to others over time.

901 The inclusion of theory does show benefits, including significant changes in variables.
902 However, a brief intervention can lead to lack of sustained results over time. As such there is
903 a need for interventions to be underpinned by theory and to be longitudinal.

904 ***2.5.2 Critique of Interventions***

905 One of the main critiques across most of the interventions that have aimed to improve
906 wellbeing and mental health is that they have failed to do so or failed to measure perceived
907 change. The interventions have increased wellbeing and mental health knowledge, help-
908 seeking intentions, and reduced stigma, but there has been limited reports on the outcomes on
909 the wellbeing and mental health of athletes. However, it can be argued that the improvement
910 of knowledge, confidence, and intentions can lead to improved wellbeing and mental health.
911 Nonetheless, there is a need for interventions to understand the perceived impact on
912 wellbeing and mental health and be more explicit in the outcomes. The limited impact may
913 be due the lack of theoretical underpinning of the interventions. The inclusion of theory
914 within programmes can positively impact the intervention outcomes, however it must be also
915 longitudinal as it has been shown that brief programmes can lack sustained impact (e.g.,
916 Liddle et al., 2021).

917 Moreover, the results of interventions are tentative because of methodological
918 concerns, which includes the use of unvalidated MHL measures to assess the impact of the
919 interventions on wellbeing and mental health knowledge. Some (n=6) of the studies used the
920 Anxiety Literacy Questionnaire (A-Lit) and Depression Literacy Questionnaire (D-Lit)
921 (Breslin et al., 2022) thereby failing to use the validated Mental Health Literacy Scale
922 (MHLS), which assesses all aspects of MHL (O'Connor & Casey, 2013). Furthermore, Breslin et
923 al. (2022) highlighted studies (n=13) that did not report effect sizes of their measured
924 outcomes and lacked long-term follow-ups. Moreover, many of the studies only use
925 quantitative measures to evaluate their interventions and which does not take into account the
926 athlete's perceptions of the intervention on their wellbeing and mental health. Therefore, it is
927 challenging to understand if the results are significant and meaningful. There is an
928 opportunity to move away from the use of different measures and utilise qualitative measures
929 to gather rich and meaningful data to understand why an intervention may be effective in
930 enhancing wellbeing and mental health.

931 Furthermore, across interventions, there was a lack of information regarding who was
932 delivering the intervention (Prior et al., 2022). Therefore, future interventions should ensure a
933 clear understanding of who is facilitating the intervention and how it has been delivered, to

934 ensure practitioners can translate them to the applied setting. Moreover, as athletes have
935 important relationships with a range of individuals in their entourage, there is an argument to
936 bringing various stakeholders into the intervention to provide holistic support (Prior et al.,
937 2022). This would be beneficial as the stakeholders across the environment can all play a
938 protective role in athletes' wellbeing and mental health. Additionally, Prior et al. (2022) also
939 commented that research must align to applied settings to ensure it is impactful away from
940 research. Therefore, future interventions may benefit from developing interventions alongside
941 the relevant stakeholders, which has been emphasised by the previous research (e.g., AHOG;
942 Vella et al., 2018, 2021).

943 Consequently, future interventions should consider their targeted population to deliver
944 to their needs, which may include the time it is delivered and how it is delivered (i.e., face-to-
945 face vs online). The intervention should be context specific, which targets the individuals but
946 also the environment, to ensure that processes that affect wellbeing and mental health are
947 appropriately addressed. Finally, the intervention needs to be underpinned by a theoretical
948 lens that allows the researcher to deliver a context-specific and multi-level intervention,
949 which also takes into account the timing of the intervention delivery.

950 **2.6 Future Directions**

951 There are many limitations within the wellbeing and mental health in sports literature
952 that researchers should consider and address when moving forward. Firstly, within sport
953 psychology literature, there have been multiple terms used for wellbeing, and there has not
954 been a consensus when examining and exploring athlete wellbeing. Accordingly, using the
955 Dodge et al. (2012) definition may be an advancement for research as it provides a clear and
956 simple operational definition which can be used across different domains. This also may
957 allow researchers to further understand the factors affecting the wellbeing and mental health
958 of participants directly rather than being measured as an additional outcome. As such, this
959 Dodge et al. (2012) definition has been adopted for the current thesis.

960 Moreover, although researchers have explored the risk and protective factors of
961 athletes' wellbeing and mental health, there is a lack of knowledge of the interactional
962 relationship of these factors within the athlete's ecology. To do this, there is a need to
963 employing an ecological approach to explore athletes' wellbeing and mental health.
964 Addressing this would allow researchers to explore the relationship, but critically implement
965 and deliver a multi-level intervention to target the range of processes holistically and increase
966 the likelihood of improving the wellbeing and mental health of their participants.

967 Finally, while there are growing number of studies that have explored factors
968 affecting wellbeing and mental health, very few have explored them over an extended period.
969 Studies have not explored how and why athletes' wellbeing and mental health have been
970 affected over time (e.g., a competition cycle). Future research needs to capture how the
971 factors may change at key times for athletes, which will inform how best to support athletes
972 across a competition cycle. Consequently, it is beneficial to explore the complex processes
973 that interact and fluctuate over time that affect wellbeing and mental health, rather than static
974 factors. Furthermore, the use of qualitative research over a period would allow for an in-
975 depth understanding of how processes may affect the wellbeing and / or mental health of
976 athletes. As such, there is a need for longitudinal and qualitative research, which informs an
977 evidence-based intervention.

978 As a result, Study one of the thesis aimed to explore the complex processes that affect
979 athletes' wellbeing and mental health. Furthermore, utilising this knowledge, Study two
980 aimed to develop, implement, and evaluate a multi-level intervention to enhance athletes'
981 wellbeing and mental health.

982 **Chapter 3: The Bioecological Model: Wellbeing and Mental Health in Elite Sport**

983 **3.1 Introduction**

984 The use of theory in research is essential to explain, predict, and understand a
985 phenomenon. In this case, using theory to explain, predict and understand the processes that
986 impact athlete wellbeing and mental health will enable researchers and practitioners to devise
987 and implement more effective interventions. Specifically, in terms of the current thesis, there
988 is a need to seek / develop and apply a comprehensive and holistic theory that can be utilised
989 to explain, predict, and understand wellbeing and mental health within the high-performance
990 sport setting. An extensive body of research (e.g., Eriksson et al., 2018; Kuettel & Larsen,
991 2020; Sturgeon, 2006; Rice et al., 2020) has shown that determinants of wellbeing and mental
992 health include individual, environmental, and cultural factors. In the sport setting, these
993 individual factors may include risk behaviour, ineffective coping, and performance failure;
994 while environmental factors can include teammate interactions, deselection, and overtraining;
995 and the cultural factors consist of stigma towards help-seeking and the inability to show any
996 weaknesses (e.g., Hammond et al., 2013; Kuettel & Larsen, 2020; Rice et al., 2016).

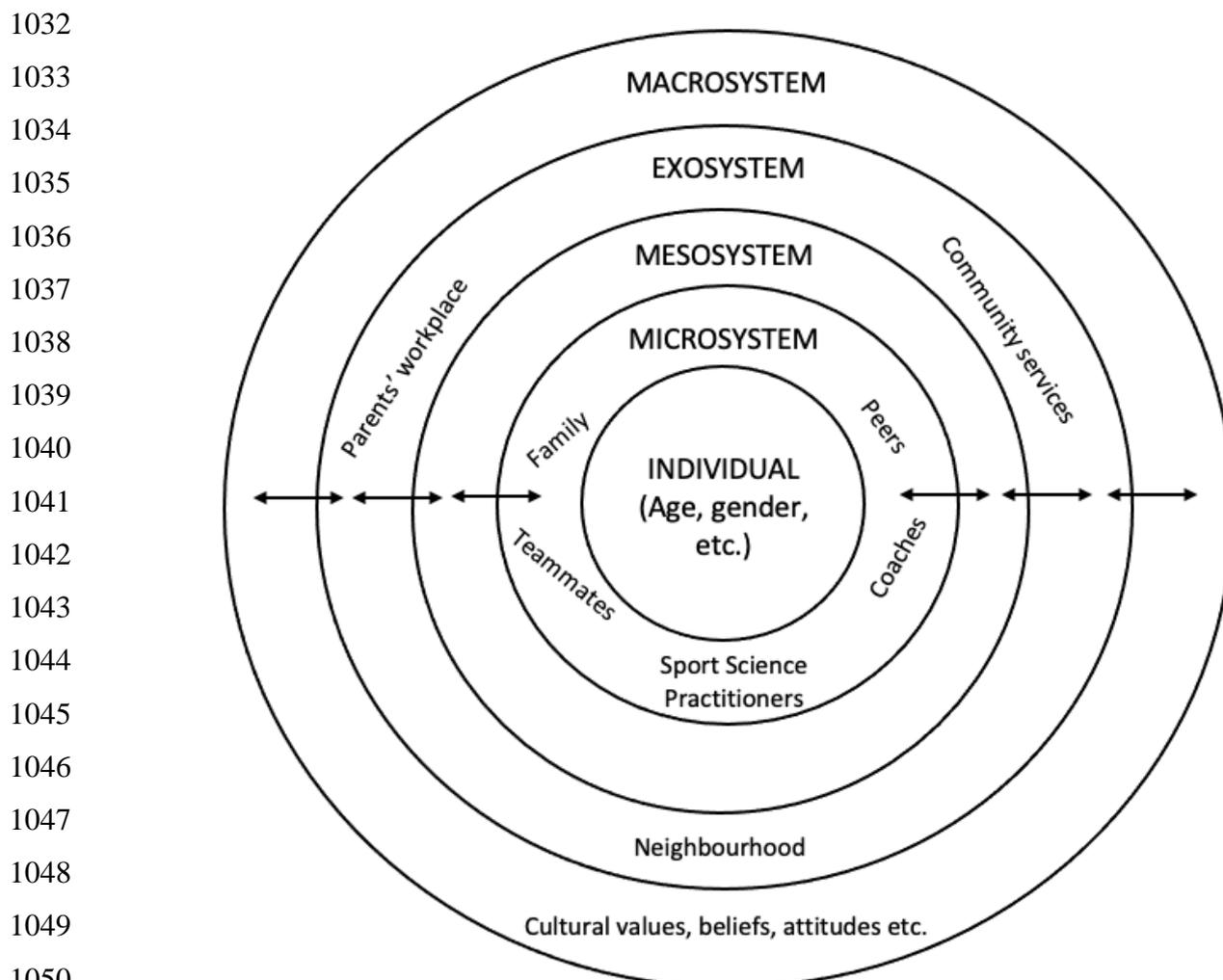
997 Thus, although research focusing on sport has identified / explored a multitude of
998 factors that can individually affect athlete wellbeing and mental health, researchers have
999 rarely considered fully, their collective, interactional, nuanced, and complex impact on
1000 athletes. For example, two athletes may experience the same setting differently due to
1001 interaction of individual (e.g., coping strategies) and environment factors (e.g., teammate
1002 relationships) and thereby have differential wellbeing and mental health outcomes.
1003 Therefore, it would be advantageous to apply a bioecological lens to explore the multi-
1004 layered and complex individual, environmental, and cultural determinants of wellbeing and
1005 mental health, which can inform an effective intervention.

1006 **3.2 Background**

1007 An ecological approach considers an individual's development (including
1008 psychological development) to be influenced by their environments (Bronfenbrenner 1975,
1009 1977). This chapter will explore and explain the bioecological model (Bronfenbrenner, 1995)
1010 and justify its use in relation to the current programme of work. A discussion regarding
1011 Bronfenbrenner's work, will be included, leading to a full explanation of the process, person,
1012 context, time (PPCT) model, which is the specific model chosen to underpin this thesis.

1013 **3.2.1 Ecological Model of Human Development**

1014 The earliest version of the bioecological model was called the ecological model of
1015 human development (EMHD; Bronfenbrenner 1975, 1977), which placed the importance of
1016 the context (i.e., near and far environments) on an individual's growth throughout their life
1017 (Rosa & Tudge, 2013). Bronfenbrenner deemed the context was essential to advance
1018 developmental psychology, as beforehand, experiments were conducted in controlled
1019 environments away from the real-world context that individuals develop within. Thus,
1020 Bronfenbrenner examined individual development within settings that represented their
1021 actual world (Lerner, 2005), developing his bioecological model to discover, explore, and
1022 understand how the individual's environmental context may facilitate / inhibit their
1023 development – in order to establish policies and programmes which would enhance human
1024 development further (Lerner, 2005). This work led to the EMHD encompassing a nested
1025 system of ecological levels (described below) which illustrated the importance of, and the
1026 relationship / interaction between, the individual, and real-world context (Bronfenbrenner
1027 1979; Lerner, 2005). The ecological levels and nested system (see figure 3.1) of EMHD,
1028 include a microsystem, a mesosystem, an exosystem, and a macrosystem (Bronfenbrenner,
1029 1979).

1030 **Figure 3.1**1031 *The Ecological Model of Human Development*

1052 **3.2.1.1 Microsystem.** The microsystem comprises the nearest system of the
 1053 individual (Bronfenbrenner, 1975, 1977, 1979; Shelton, 2019), that includes the physical
 1054 setting (i.e., the object and symbols in the environment) within which the individual
 1055 experiences different activities and relationships with significant others. The objects and
 1056 symbols can hinder or facilitate the activities that occur in the environment (Shelton, 2019).
 1057 For example, the development of a child may be bolstered if they have a physical
 1058 environment where they are free to explore and play with a range of toys, as this may enable
 1059 them to develop a range of skills that aid them when entering new environment (e.g.,
 1060 nurseries). Applying this to sport, if a team setting includes symbols and signs such as ‘win at
 1061 all costs’ and ‘no gain with no pain’, these may hinder athletes having relationships where
 1062 they can seek support from others, due to not wanting to show any weakness. This may

1063 hinder the activity of creating a reciprocal relationship with a trusted person in the
1064 environment to discuss their wellbeing and mental health.

1065 Another significant activity in the microsystem that is central to an individual's
1066 development, is their relationships (and interactions) with family, teachers, coaches,
1067 teammates (etc..) (Shelton, 2019). Bronfenbrenner assumed the impact of these relationships
1068 would change over time as all individuals grow and develop in the reciprocal dyad (Shelton,
1069 2019). For example, an athlete who enters a new sporting environment (e.g., a national
1070 sporting organisation) begins to build relationships with different people in that setting. Over
1071 time, those relationships will change and differentially influence their physical and mental
1072 development.

1073 In turn, relationships are affected by three characteristics including affect, power, and
1074 reciprocity (Bronfenbrenner 1975, 1977, 1979; Shelton, 2019). The affect of the relationship
1075 relies on how the two people in the dyad feel towards each other, and how the relationship
1076 can be emotionally defined, which may be positive and warm or negative and cold (Shelton,
1077 2019). As such, it is assumed that if the affect of the relationship can be described as positive
1078 and warm, then that will be advantageous in the development of the individual; whereas a
1079 relationship will be adverse for the individual's development if it is perceived to be negative
1080 and cold (Shelton, 2019).

1081 The second characteristic of the relationship is power, which describes the influence
1082 each person in the dyad has on the other, and which can impact how an individual may
1083 develop in their microsystem (Shelton, 2019). For example, one person may have more
1084 control in the relationship, which may limit the other individual's development, in
1085 comparison to if there is an equal balance of power (Bronfenbrenner, 1979; Shelton, 2019).
1086 As such, within the microsystem, the power dynamics among relationships is vital, especially
1087 when looking at the coach and athlete dyad, and the role of autonomy in the environment.
1088 That is, a relationship in which an athlete has a balanced power relationship with their coach,
1089 and experiences autonomy, is more likely to elicit positive development, that includes,
1090 wellbeing and mental health (Kuettel & Larsen, 2020).

1091 Thirdly, reciprocity considers the activities and interactions that occur in the
1092 relationship(s), which include how the two people in the dyad interact through conversations
1093 and activities, and how often this interaction occurs (Shelton, 2019). This may consist of how
1094 the two people share information, communicate, and listen to each other's views.
1095 Importantly, this includes how social support within the athlete's microsystem may impact
1096 psychological development via effective / ineffective communication, and whether the dyad

1097 is affecting the wellbeing and mental health of athletes positively / negatively respectively.
1098 Hence, these three characteristics allow researchers and practitioners alike to understand why
1099 people may develop differently depending on what kinds of relationships they engage in
1100 (Shelton, 2019).

1101 **3.2.1.2 Mesosystem.** Outside the microsystem is, according to Bronfenbrenner, the
1102 mesosystem, which includes the interactions between two or more microsystems in which the
1103 individual participates (e.g., the school communication with home environment; university
1104 and national sporting organisation). One example of this interaction in relation to sport, may
1105 be the staff in the national sporting organisation communicating with the athlete's support
1106 team at the university, which may allow the athlete to receive extensions for academic work
1107 deadlines around competitions. This interaction can, therefore, influence the relationships in
1108 both environments and ultimately impact how the athlete may develop. If the individual
1109 enters a new microsystem (e.g., a new sporting team), this is called an ecological transition
1110 (Bronfenbrenner & Morris, 2006), and so their mesosystem will expand. When entering a
1111 new microsystem, it requires the individual to adapt to their new setting, and experience the
1112 new activities and relationships (Shelton, 2019). As such, according to the model, once an
1113 individual enters a new environment, factors within this setting will either support them in
1114 adapting to these changes and encourage development or may halt their development due to a
1115 lack of support. For example, if a sporting organisation has a supportive model to welcome
1116 new athletes (e.g., induction procedures), which supports them settling into their new
1117 programme, then the athlete may adapt well to their environment. Whereas, an athlete may
1118 experience distress, if an organisation does not have induction procedures in place and fails to
1119 support the athlete adapt to their new surroundings. Therefore, an ecological perspective
1120 highlights the importance of ecological transitions, and can be applied to explain how
1121 entering, transitioning, and exiting a sporting performance pathway, may affect the
1122 development, wellbeing, and mental health of athletes (Kilic et al., 2019; Kuettel et al., 2021)

1123 **3.2.1.3 Exosystem.** The next layer is named the exosystem, which are settings, and
1124 the relationship of those settings with the developing person and their mesosystems (Shelton,
1125 2019). A setting within an individual's exosystem is an environment in which the individual
1126 is not directly involved but which can impact the person indirectly (e.g., their parent's
1127 workplace / coach's home life). To further explain, if the coach experiences stressors at home,
1128 which they are unable to manage effectively, this could impact the athlete's development via
1129 ineffective communication and unhelpful actions. Furthermore, a setting within an exosystem
1130 may hold power over decisions about what resources are available to individuals within the

1131 mesosystem (Bronfenbrenner, 1979; Shelton, 2019). For example, an umbrella organisation
1132 may choose how much money may be available for the sporting NGB that the individual
1133 participates within, and therefore they will only have access to certain resources (e.g.,
1134 coaching hours, sport science practitioners, gym time). Such decisions can impact the
1135 individual's development (Shelton, 2019). Moreover, it has been argued that the setting
1136 within the exosystem may have more developmental power / influence on an individual, if
1137 there are fewer intervening steps between the people who are deciding / communicating the
1138 resources allocation, and said individual (Shelton, 2019). As such, an individual may develop
1139 with more competence if they are able to inform policies within the organisations, and
1140 influence those who allocate resources. Accordingly, Shelton (2019) argued that a
1141 developmentally supportive ecosystem includes an exosystem setting that is knowledgeable
1142 about the people that the policies affect. For example, if athletes have a voice within
1143 decision-making policies within their environment that aid their physical and psychological
1144 development, this may lead to the athlete experiencing autonomy. This feeling of control may
1145 positively impact their own development, wellbeing, and mental health.

1146 **3.2.1.4 Macrosystem.** The outer level of the bioecological model, that is furthest
1147 away from the individual, is called the macrosystem, and considers the impact of the broader
1148 culture (e.g., society) or subcultures (e.g., nature of the sports) on their development.
1149 According to Bronfenbrenner (1979) the macrosystem does not directly cause or limit
1150 development, but it does influence the individual's beliefs and values, which can influence
1151 their engagement in activities, and in turn, enhance or stunt their development. As such, if an
1152 individual has been a witness to constant beliefs that athletes need to be 'tough' then they
1153 may begin to embed this into their own beliefs and assumptions. Consequently, this solidified
1154 belief may lead to an individual's decision not to seek help for their wellbeing and / or mental
1155 health. This is of particular importance in sport, as different cultures among high-
1156 performance athletes exist; including their organisational culture (i.e., NGB), their sporting
1157 culture (e.g., the culture of Judo / Cycling), and their wider culture (e.g., society they live
1158 within in), which in turn can affect the individual's development, and ultimately impact their
1159 wellbeing and mental health.

1160 **3.2.2 Person, Process, and Time**

1161 Although the EMHD provided a lens to appreciate the role of the context within
1162 individual development, Bronfenbrenner (1995) believed it was still incomplete, and
1163 identified the need to incorporate and consider further, the role that the individual's

1164 characteristics had on their development. Thus, the model evolved by capturing the
1165 interactive effects of the environment, and the biological, psychological, and behavioural
1166 characteristics of the person, on individual development (Bronfenbrenner & Ceci, 1994;
1167 Eriksson et al., 2018). In addition, Bronfenbrenner established the need to further understand
1168 human development by investigating specifically how developmental outcomes may change
1169 over time. The latter aspect of time was added to the EMHD through a supplementary outer
1170 level, labelled the chronosystem (Bronfenbrenner & Ceci, 1994). Finally, the individuals'
1171 closest interactions (e.g., face-to-face interactions with family members) noted in the original
1172 model (within the microsystem) were considered by Bronfenbrenner, to be far more pertinent
1173 than he once thought. He labelled this: *process*. Collectively, these 3 considerations and
1174 additions to the EMHD, informed Bronfenbrenner's more recent Bioecological model,
1175 colloquially known as the Process - Person - Context – Time (PPCT) model (Bronfenbrenner,
1176 1995; Bronfenbrenner & Evans, 2000; Bronfenbrenner & Morris, 2006)

1177 **3.2.3 The Bioecological Model of Development**

1178 In essence, the bioecological model of development evolved from the EMHS,
1179 whereby person, process, and time was not emphasised, to produce further scientific
1180 knowledge (Lerner, 2005). The four components work as a joint function to aid development
1181 throughout the individual's life (Bronfenbrenner & Evans, 2000).

1182 **3.2.3.1 Process.** Bronfenbrenner proposed that human development takes place
1183 through processes (Lerner, 2005). As such, the first 'P' of the model is 'process', which are the
1184 activities that the developing person engages in and is described as the core of the model and
1185 the primary mechanism for individual development (Bronfenbrenner & Morris, 2006;
1186 Bornstein, 2012; Lerner, 2005; Shelton, 2019). The main processes of interest in the model
1187 are the proximal processes, which happen in the immediate environment and are defined as
1188 "particular forms of interaction between organism and environment" (Bronfenbrenner &
1189 Morris, 1998, p. 994). Bronfenbrenner explicitly states that proximal processes are the central
1190 tenet of the model and the main factor for promoting and predicting human development
1191 (Bornstein, 2012; Bronfenbrenner, 1995; Bronfenbrenner & Morris, 1998, 2006). As such
1192 development occurs with the individual interacting in activities with significant others.
1193 Proximal process can occur in the absence of others, with the person interacting with objects
1194 and symbols (i.e., semiotic system), which include parent-child interaction, mentor-child
1195 interaction, studying, conversing, arguing, coping with stress, and dealing with emotions
1196 (Bronfenbrenner, 1995; Bronfenbrenner & Morris, 1998, 2006; Shelton, 2019).

1197 As these processes are the driver for individual development, they lead to competence
1198 (e.g., positive outcomes in academic performance / feelings of love) or dysfunction (e.g.,
1199 poor outcomes in academic performance / feeling of neglect). To allow for competent
1200 development, defined as the "demonstrated acquisition and further development of
1201 knowledge, skill, or ability to conduct and direct one's behaviour across situations and
1202 developmental domains" (Bronfenbrenner & Evans, 2000, p. 118), the interactions between
1203 persons, objects, or symbols need to happen on a regular basis to be effective, and they need
1204 to take place over a long period where the processes become more complex (Bronfenbrenner
1205 & Morris, 1998; Mercon-Vargas et al., 2020). Interacting with others, objects, and symbols
1206 (i.e., the processes) lead to increasing ability, skills, and motivation to engage in activities,
1207 enabling the individual to become more competent in completing the activities by themselves
1208 (Bronfenbrenner & Morris, 2006). For example, Bronfenbrenner (2005) argues that to
1209 develop intellectually, emotionally, socially, and morally, an individual will engage in
1210 activities with different persons. They will then develop strong connections with those
1211 persons who are committed to the wellbeing of the developing individual (Bronfenbrenner,
1212 2005; Bronfenbrenner & Evans, 2000). Therefore, if individuals have strong interactions with
1213 others, this will lead to greater competence within their life. Whereas, if there is a lack of
1214 engagement with processes, including interactions with others, then it is more likely to lead
1215 to dysfunction, which is defined as "the recurrent manifestation of difficulties in maintaining
1216 control and integration of behaviour across situations and different domains of development"
1217 (Bronfenbrenner & Evans, 2000, p. 118). As such, the individuals may have not acquired the
1218 ability and / or skills to adapt to their environments, which can lead to development problems
1219 including lack of attentiveness, poor academic achievement, and withdrawal (including
1220 sporting activities) (Lerner, 2005).

1221 Bronfenbrenner and Evans (2000) also propositioned that the different exposures to
1222 proximal processes may be a factor in a competent or dysfunctional development. This can
1223 include the duration (i.e., how long is the exposure to the process), interruption (i.e., the
1224 process being interrupted or consistent), frequency (i.e., how often does the process occur),
1225 timing (i.e., when does the process occur), and intensity (i.e., the strength of the exposure to
1226 the process), which can all influence the development of the individual (Bronfenbrenner &
1227 Evans, 2000). For example, a child may experience competent development as their parent
1228 may respond quickly to their child in distress (i.e., timing), which is consistent behavioural
1229 response from the parent (i.e., interruption and intensity). If the exposure to parental
1230 responsiveness for the child in distress is brief, infrequent, and unpredictable then it is

1231 predicted that the child will experience dysfunctional developmental outcomes
1232 (Bronfenbrenner & Evans, 2000; Bronfenbrenner & Morris, 2006).

1233 Research has shown that proximal processes are potent predictors of human
1234 development (Bronfenbrenner & Morris, 2006). However, while engaging in such processes
1235 may change the person, the processes alone are not enough to explain why two individuals
1236 experiencing the same proximal processes may completely differ in their development.
1237 Therefore, it is also important to understand how the person's characteristics, time, and
1238 environment interact with proximal processes (Bornstein, 2012; Bronfenbrenner 1995;
1239 Bronfenbrenner & Evans, 2000; Bronfenbrenner & Morris, 2006; Lerner, 2005).

1240 **3.2.3.2 Person.** The person component of the model is distinguished by three types of
1241 individual characteristics, which can be pervasive in affecting development (Bronfenbrenner
1242 & Morris, 2006), by influencing how the person engages with the processes. The three
1243 characteristics include demand, biological resources, and dispositions / force, which can
1244 impact the “operation of the proximal processes” (Bronfenbrenner & Morris, 2006;
1245 Bronfenbrenner, 1995; Bronfenbrenner & Morris, 1998; Bronfenbrenner & Morris, 2006;
1246 Lerner, 2005; Shelton, 2019). That is, the three characterises can influence how the person
1247 can interact with the processes. Demand characteristics may include attractiveness,
1248 hyperactivity, and demographics such as age, gender, and ethnicity, and they can invite or
1249 discourage the individual’s reactions from their social environment, which can hinder or
1250 facilitate the development (Bronfenbrenner & Morris, 1998; 2006; Rosa & Tudge, 2013). For
1251 example, a female and a male may receive different attention from the individuals within the
1252 environment (e.g., more empathy shown to females), which may impact how individuals may
1253 engage in the activities (e.g., seeking help) that can ultimately lead them to competence /
1254 dysfunction in their emotional and social development. This may be of particular of
1255 importance for males who feel they need to portray hypermasculinity (Jones, 2016), which
1256 may affect their intentions to seek support.

1257 The biological resource includes skill, knowledge, experience, and ability (including
1258 physical/cognitive disabilities), which can influence how the person interacts with the
1259 processes in their environment, and ultimately impact their development (Bronfenbrenner &
1260 Morris, 2006). It is argued that these resources affect the psychological growth of the
1261 individual (Bronfenbrenner & Morris, 2006). For example, the person may have a disability,
1262 chronic illness, and / or injury (Bronfenbrenner & Morris, 2006) that limits their ability to
1263 engage with activities that may facilitate their development. For example, within sport, an

1264 injured athlete may not be able to engage with the normal processes they experience as their
1265 injury hinders them, including spending time away from their sporting environment.

1266 Finally, the disposition / force characteristics are considered to be the most critical
1267 personal influence on the individual's development (Rosa & Tudge, 2013). These
1268 characteristics can either be classed as developmentally generative or disruptive, which can
1269 sustain the individual's interaction with the proximal processes (Bronfenbrenner & Morris,
1270 2006). For example, developmentally generative characteristics such as curiosity, readiness, or
1271 tendency to engage with the proximal processes and others in the environment, can
1272 encourage development (Bronfenbrenner & Morris, 2006). Conversely, disruptive
1273 disposition/force characteristics such as impulsiveness, violence, explosiveness,
1274 unresponsiveness, shyness, and tendency to withdraw from activities, can cause the
1275 individual to negatively / disengage with the proximal processes, leading to a lack of
1276 development / dysfunction (Bronfenbrenner & Morris, 2006). For example, someone who
1277 tends to withdraw may have difficulty engaging with peers, and therefore, may be unable to
1278 develop socially, compared to someone who has a tendency to engage. This social
1279 development may aid individuals in their wellbeing, by being able to seek help from their
1280 peers.

1281 All three domains of Person characteristics are essential to consider when explaining
1282 human development, as they are unique among individuals. Thus, within a specific context,
1283 two people may experience the same proximal process but may interact with the process
1284 differently because of their person characteristics. Specifically, the unique person
1285 characteristics explain why individuals engage in the certain activities, roles, and relations in
1286 each environment (Lerner, 2005), which allows researchers to understand why two people
1287 may experience different developmental outcomes. For instance, two athletes in the same
1288 environment receiving the same messaging from a coach may react differently due to their
1289 characteristics (e.g., tendency to engage) and, in turn, may perceive and interact with the
1290 proximal processes in the environment very differently and experience a range of different
1291 outcomes regarding their development, wellbeing and mental health.

1292 **3.2.3.3 Context.** As noted, in the EMHD, Bronfenbrenner (1979) depicted the context
1293 of development by a series of systems (Bornstein, 2012), including the micro-, meso-, exo-
1294 and macro-system. Within the PPCT model, the microsystem remained the same, including
1295 the interactions, roles and relations experienced by the developing person. Building on the
1296 interactions with others, symbols, and objects within the immediate environment, the PPCT
1297 also noted the microsystem includes the person characteristics of the other people in the

1298 environment, and how they can impact the individual's interactions with the processes in the
1299 setting thereby in turn, affecting development. The belief systems of others in the
1300 environment are thought to play a significant role within these interactions. Furthermore, the
1301 individual's physical setting can improve or hinder development, which includes solo
1302 activities including studying and hobbies (Bronfenbrenner & Morris, 2006). For example, the
1303 physical environment an individual operates in may provide opportunity and calmness for
1304 them to do further studying. This may be of particular importance for athletes who want to
1305 expand their identity, and so they may have a physical setting in their sport that provides
1306 opportunity where they can engage in the process of studying.

1307 Within the PPCT, the mesosystem was unchanged from the EMHD and, therefore it is
1308 the relationships and processes between the two microsystems containing the developing
1309 person (Bronfenbrenner, 2005; Bornstein, 2012). This may include the relationship between a
1310 home setting and an academic setting. With a PPCT lens, there can be an understanding of
1311 how parenting within the home (the process) may affect a developmental outcome within
1312 their other microsystem (i.e., an academic setting), which may include academic
1313 performance. Similarly, the exosystem remained unchanged which includes settings that does
1314 not involve the developing person, but has indirect effects on their development
1315 (Bronfenbrenner, 2005). This may include a coach's / parent's workplace, but also may
1316 include a peer's family environment, where they may be experiencing a period of distress,
1317 leading to actions and behaviours that can affect the individual's development. Furthermore,
1318 an individual's exosystem can include power settings, wherein decisions are made regarding
1319 the resources available for environments which involve the developing person. As such, the
1320 decision makers in sporting environments may ultimately impact the process of interaction
1321 with a sport psychologist (e.g., the process) thus, influencing the athlete's psychological
1322 development, including their overall wellbeing and / or mental health.

1323 The most distal level, the macrosystem, encompasses the culture and available belief
1324 systems, within the participant's ecosystem. The macrosystem within the PPCT highlights
1325 how cultural and subculture and their values and practices can exert influence on the
1326 developing individual (Bronfenbrenner & Morris, 2006; Rosa & Tudge, 2013). That is, the
1327 macrosystem can influence the psychological development throughout time, and leads to
1328 changes throughout the persons ecosystem, affecting the micro-, meso-, and exosystems
1329 (Bronfenbrenner, 1979).

1330 Researching athlete wellbeing and mental health from the bioecological perspective
1331 would allow researchers to understand the differences between development outcomes

1332 between individuals and the two cases. Bronfenbrenner detailed how the culture in which the
1333 developing person operates, can affect their person characteristics, including personality,
1334 skills, and knowledge. Thus, the individuals are affected by their wider culture, with the
1335 macrosystem offering an ideology of how to acquire the skills to develop. Moreover, beliefs
1336 of others within the macrosystem are passed on from others to the developing person. For
1337 example, the coach who has operated in a sporting culture for many years as an athlete and
1338 then as a coach, may pass on their beliefs of the culture to their current athletes, including
1339 being mentally tough and not showing weaknesses - thus potentially negatively impacting the
1340 developing athlete's wellbeing and mental health.

1341 **3.2.3.4 Time.** Finally, the bioecological model also incorporates time, for which the
1342 EMHD did not account (Bronfenbrenner & Morris, 2006). This allows for the fact that
1343 historical events can alter human development, and the individual's growth can be shaped by
1344 different events that occur over their lifetime (Bronfenbrenner, 1995). As such, the property
1345 of time includes microtime (the ongoing episodes of the proximal processes), mesotime (how
1346 often the proximal processes occur over days and weeks), and macrotime (understanding
1347 societal changes and historical events). This may include how often an athlete interacts with
1348 their coach during the week and how that constant interaction across the week (i.e., micro-
1349 and mesotime) may aid or hinder their development depending on whether the coach-athlete
1350 dyad is positive or negative. Whereas, in terms of the macrotime this may include
1351 understanding how major events such as the COVID-19 pandemic (which the participants
1352 were experiencing at the time of the current thesis) can affect how individuals interact with
1353 the processes, for example being able to interact with their coach. Within the current study,
1354 the notion of time is particularly important when trying to understand how wellbeing and
1355 mental health are affected at different times of the competition cycle (e.g., team selection)
1356 and transitional periods (e.g., entering the performance pathway and retirement).

1357 **3.3 Conclusion**

1358 The PPCT is still evolving; but the model currently allows researchers to understand
1359 how proximal processes lead to dysfunction or competence in development (including
1360 wellbeing and / or mental health). The impact of the processes on development are influenced
1361 by the person characteristics (e.g., age, gender, tendency to engage), the environmental
1362 context in which the individual exists, and time. As such, it is an exceptionally suited
1363 theoretical framework to understand the rich multi-layered processes that affect wellbeing
1364 and mental health in sport, and how two organisations (i.e., contexts) may influence the

1365 outcomes. The exploration of the processes can inform a context specific intervention to
1366 enhance wellbeing and mental health.

1367 **Chapter 4: Methodology Chapter**

1368 **4.1 Introduction**

1369 This chapter will detail the ontological and epistemological orientations of the
1370 research project, outline the chosen methodology, and discuss critically the research design.

1371 **4.2 Research Philosophy**

1372 This programme of work was informed by a relativist ontology, which considers
1373 various subjective realities that exist around a phenomenon (Killam, 2013). The ontology
1374 enables us to understand our own beliefs of reality, answering "what is the form and nature of
1375 reality, and therefore what is there that can be about it?" (Smith & Sparkes, 2016a, p.2).
1376 Thus, a relativist ontology considers reality from an individual's culture, experience, and
1377 perceptions (Killam, 2013). As two individuals within the same environment may perceive
1378 the reality of a situation very differently, to understand the processes that affect the wellbeing
1379 and mental health of athletes in performance sport, the programme of work aimed to explore
1380 the multiple realities of the participants' lifeworld within the sporting system.

1381 Moreover, to explore those realities, the researcher also needs to understand how they
1382 understand that reality (epistemology) (Rehman & Alharthi, 2016), and answer "what is the
1383 nature of the relationship between the knower and would-be knower and what can be
1384 known?" (Smith & Sparkes, 2016a, p.2). Thus, the work was informed by a constructivist
1385 epistemology, which considers multiple truths within the environment that are co-constructed
1386 from the participant's social context (Crotty, 1998; Killam, 2013). This epistemology framed
1387 my understanding and construction of knowledge, which respected that individuals'
1388 experiences are subjective and influenced by the others around them, which the researcher
1389 then interprets. Aligned with my epistemology orientation, Study one aimed to elicit a
1390 detailed and holistic understanding of the perceived processes within the that affect athletes'
1391 wellbeing and mental health. Furthermore, utilising this knowledge, Study two aimed to
1392 develop, implement, and evaluate a multi-level intervention to enhance athletes' wellbeing
1393 and mental health.

1394 **4.3 Researcher and Practitioner Positionality**

1395 Across the PhD journey, exploring and explaining my positionality is important. As a
1396 research-practitioner, I understand positionality as how my beliefs, assumptions, and previous
1397 experience have influenced my decision making throughout the research. Positionality of the
1398 researcher can affect the research, as it impacts the understanding of a topic and the

1399 interpretation of the findings (Bourke et al., 2014; Holmes, 2020). Therefore, I utilised
1400 reflexivity to provide an insight regarding my influence on the thesis.

1401 Being reflective throughout the PhD allowed me to understand my values and beliefs
1402 that have been shaped by various factors (e.g., age, gender, sexuality, and life history) and
1403 how these may influence the research (Bourke et al., 2014; Holmes, 2020). I am a white,
1404 heterosexual, cis-gender female. When I started the thesis journey, I had only begun to
1405 explore qualitative research in my master's degree. After taking time away from formal
1406 education, I moved to Wales to pursue a PhD to explore wellbeing and mental health in sport.
1407 At the beginning of the thesis, I was inspired to complete the research due to completing my
1408 MSc. research project in Rugby League and the implications of the Million Pound Game. The
1409 match was a concept where players and support staff could lose their contracts in a one-off
1410 relegation game. Developing this research allowed me to recognise athletes' stressors and
1411 how vulnerable they can be to lowered wellbeing and mental health concerns, and I wanted
1412 athletes' stories to be heard. However, I had little experience in both judo and cycling sports
1413 – the focus of the current thesis. Therefore, I was a naïve researcher entering both cases, with
1414 limited assumptions of each sport. As such, I recognised that I may have an outsider
1415 perspective, with limited relatability to athletes and coaches. Thus, it was made clear from the
1416 initial point that I would spend time with both cases (detailed below) to establish rapport and
1417 develop an understanding of each sport.

1418 As the project developed, the COVID-19 pandemic began, ultimately impacting my
1419 positionality and the thesis. The pandemic resulted in personal reflections and my own beliefs
1420 about wellbeing and mental health, which were also shifted by engaging in the reading of
1421 theoretical underpinnings (i.e., bioecological model). My personal mental health journey
1422 during this time allowed me to understand that factors (i.e., personal, environmental, and
1423 cultural) alone may not impact athletes' wellbeing and mental health, rather it is how these
1424 factors interact to influence mental health and / or distress. This was further developed by my
1425 own journey with counselling (for the second time) during the COVID-19 pandemic, which
1426 was triggered by having time to slow down and reflect on my own life history, including the
1427 loss of my mother at aged 19. I recognised during this period, I was not being my authentic
1428 self throughout the research journey, wearing a mask about my own wellbeing and mental
1429 health. This was greatly influenced by the shame of not being able to cope whilst also
1430 researching how to aid athletes with feeling comfortable to seek support for their wellbeing
1431 and mental health. Reflecting at the time, I have a belief that in academia I needed to work
1432 hard and work many hours, whilst recognising, accepting, and dealing with the pressures of a

1433 PhD journey. Thus, the wider belief systems within the culture in which I was working (i.e.,
1434 academia) was affecting my beliefs to seek help, and my tendency to withdraw from help was
1435 ultimately impacting my wellbeing and mental health.

1436 As such, during my journey I began to portray the “real” Georgia, who was not
1437 always thriving in life, and recognised that periods of distress are normal. Being more
1438 authentic enabled me to come back from the pandemic shutdown into maintaining and
1439 developing a body of work that could be important in the real sporting world, including the
1440 delivery of an intervention. Moreover, going through my journey of distress, I engaged with
1441 the athletes from a new angle. That is, building rapport with athletes during the pandemic, I
1442 knew I needed to maintain the relationships via patience due to understanding their
1443 circumstances during a time of uncertainty. Although I believe this was achieved before the
1444 pandemic, researching during this period developed these soft skills further.

1445 Developing as a researcher and as a person throughout, I realized my passion for
1446 being an applied practitioner – wanting to work in the field of sport psychology. Thus, I
1447 began my accreditation training with The British Association of Sport and Exercise Science
1448 (BASES) and became a Sport and Exercise Psychologist in Training (SEPiT). As this
1449 separate but connected journey began, it was important to reflect on my professional
1450 philosophical approach (Poczwadowski, 2004). As part of this process, I wrote my
1451 positionality statement for my training, which included that individuals should be treated
1452 holistically and responsible for their development; the humanistic theoretical paradigm
1453 allows this development to achieve individual potential (Hill, 2010). Moreover, I believe that
1454 as a sport and exercise psychologist in training, I should aid participants in developing
1455 themselves, including enhancing their self-knowledge and autonomy. This includes
1456 supporting them to grow and develop to achieve their personal goals and personal fulfilment.
1457 As such, I believed it was important for athletes to have a voice throughout the research,
1458 including an intervention that was underpinned by their thoughts and opinions.

1459 **4.4 Case Study Methodology**

1460 Guided by my ontology and epistemology orientations, and my positionality, a case
1461 study methodology was adopted to address the research aims and understand / explore the
1462 subjective realities of individuals within a sport in detail, extend the literature base, and
1463 develop a line of inquiry to inform an intervention. The case study methodology is used to
1464 explore and understand a phenomenon within a real-life context in depth (Crowe et al., 2011;
1465 Yin, 2018) and explores the phenomenon from multiple perspectives, including various

1466 stakeholders (Crowe et al., 2011; Simons, 2014). Furthermore, the use of case studies to
1467 inform the design and delivery of interventions may enable them to succeed more (Sibbald et
1468 al., 2021). This is of particular importance for the current thesis as the results of Study one
1469 informed and guided the multi-level intervention.

1470 Case studies have been employed in research to understand a 'case' in-depth, which
1471 can be one setting (e.g., training centre), a group of people (e.g., athletes), or an organization
1472 (e.g., national governing body), in the real world (Simons, 2014; Stake, 2005; 1995), using
1473 various data sources (Baxter & Jack, 2008), which can provide insight into diverse contexts
1474 (Sibbald et al., 2021). Through multiple sources of evidence, the case study methodology
1475 enables the subjective voice of various stakeholders to be heard throughout the research,
1476 allowing them to tell their stories (Baxter & Jack, 2008). Bringing the subjective voice into
1477 the case study is beneficial to understanding the case's complexity. As such, within the
1478 current thesis, the use of a case study methodology enabled a range of stakeholders (i.e.,
1479 athletes, coaches, sport science and medicine practitioners, performance directors and CEOs)
1480 perceived understanding of processes affecting athletes' wellbeing and mental health to be
1481 represented. Furthermore, their beliefs and thoughts informed an intervention that is suitable
1482 and beneficial for their context. Additionally, case studies provide insight to understand how
1483 and why interventions work, highlighting the conditions / mode of deliver that is more likely
1484 to be successful and / or unsuccessful (Paparini et al., 2020). As such, the case study method
1485 is appropriate for the current thesis.

1486 Additional benefits of using case studies are that there is an opportunity to explore a
1487 complex phenomenon in-depth over an extended period, allowing researchers to understand
1488 changes in the case, and the effect of these changes on the phenomenon in question (Simons,
1489 2014). This was particularly important for the current thesis, which aimed to understand how
1490 processes affecting wellbeing and mental health changed through the competitive cycle, and
1491 (as it turned out) the wider context of the COVID-19 pandemic. Moreover, it explicated
1492 aligned with the desire to draw upon the PPCT and ensure that time was accounted for when
1493 understanding factors influencing wellbeing and mental health.

1494 Case study methodology has been approached differently by different researchers,
1495 with two prominent names in the field being Robert Yin (e.g., 2009, 2018) and Robert Stake
1496 (e.g., 1995, 2005) adopting slightly different views. Both approaches vary in their
1497 theoretical underpinnings, Yin's approach is grounded in post-positivism, whereas Stake's
1498 approach is grounded in a constructivist paradigm (Sibbald et al., 2021). As such, in line with
1499 my own theoretical underpinnings Stake's approach was chosen, which includes different

1500 types of case studies, for example intrinsic (i.e., undertaken to understand a particular
1501 individual case), instrumental (i.e., gaining an understanding of a particular issue), and
1502 collective (i.e., understanding two or more case to explore a particular issue) (Crowe et al.,
1503 2011; Simons, 2014; Stake, 1995; 2005). The aim of the current thesis was to explore more
1504 than one case to gain insight into perceived processes that affect wellbeing and mental health;
1505 as such, a collective case study was chosen.

1506 The collective case study specifically entails the researcher exploring and comparing
1507 each case to see if processes are prominent across both (Simons, 2014), and understand the
1508 phenomenon more intimately (Sibbald et al., 2021). Hence, the current thesis used a
1509 collective case study, to understand more than one case (e.g., two or more), and provide
1510 opportunities to understand similarities and differences across those cases (i.e., the
1511 organisations) for the purpose of developing, implementing, and evaluating a multi-level
1512 intervention to enhance athletes' wellbeing and mental health. This would facilitate
1513 understanding how environmental processes affecting wellbeing and mental health may differ
1514 and / or be similar across two organisations. Moreover, in line with case study methodology
1515 multiple data collection sources (i.e., observational field notes, reflexive diary, interviews,
1516 and self-report diaries) were incorporated throughout this programme of work. Study one
1517 used observational field notes, reflexive diary, interviews, and self-report diaries to explore
1518 the perceived processes that affect athlete wellbeing and mental health, whilst Study two used
1519 reflexive diaries, interviews, and an online survey to evaluate the benefits, challenges, and the
1520 perceived efficacy of the multi-level intervention that aimed to enhance athletes' wellbeing
1521 and mental health.

1522 However, it must be noted that case studies with small organizations, make
1523 participants easily identifiable in case reports (Simons, 2014). This is particularly important
1524 when discussing sensitive topics that may highlight organizational shortcomings. Thus,
1525 ensuring steps are taken to protect participants' voices is needed. To alleviate this concern,
1526 steps were taken including anonymising the participants in written reports attached to the
1527 thesis, including executive summaries returned to the national organisations. As such. The
1528 organisations would only receive a summary of the themes rather than data extracts.
1529 Furthermore, case study methodology has been criticised for the use of small sample sizes,
1530 difficulty to generalise the findings to larger populations, and subjected to researcher bias
1531 (Sibbald et al., 2021; Stake, 1995; 2005). To overcome the shortcoming, Stake (2005)
1532 expressed that to make the research more rigorous the researcher needs to be transparent
1533 about assumptions and methods via the importance of reflexivity. The importance of rigour

1534 and transparent research is discussed further when ensuring the quality of data (see section
1535 4.9).

1536 **4.5 The Cases**

1537 The programme of work was conducted within two sporting NGBs within Wales,
1538 United Kingdom, namely Welsh Judo and Welsh Cycling - both included athletes competing
1539 at a national and international level and are under the umbrella organisation of Sport Wales.
1540 The cases were invited to take part in the programme of work as Sport Wales were seeking to
1541 understand how to enhance Welsh performance athletes' wellbeing and mental health. This
1542 was encouraged as there was greater attention being paid to wellbeing and mental health,
1543 because of prominent reports (e.g., Grey-Thompson, 2017). As such, sports across Wales
1544 were invited to take part in the research, with Welsh Cycling and Judo volunteering to be part
1545 of the programme of work.

1546 Firstly, it is important to understand how Sport Wales operates and how they oversee
1547 the two sporting NGBs (see figure 4.1). Sport Wales is an organisation that develops and
1548 promotes sport and physical activity with the aim of developing a healthier nation (Sport
1549 Wales, 2023). Furthermore, they provide grants (e.g., National Lottery Funding) across the
1550 nation to support sports with certain needs (e.g., facilities and equipment) and have created a
1551 vision to have an active nation for everyone, which is lifelong and enjoyable (Sport Wales,
1552 2023). Concerning performance sport, as a national organisation, they provide grants for
1553 athletes, which help with the cost of competition within their sport. Furthermore, they
1554 provide sport science and medical practitioners (e.g., soft tissue therapy, performance
1555 psychology, performance nutrition, and sports medicine) to sports, that enable athletes to
1556 thrive, which have been requested by the athlete's sporting organisations (e.g., Welsh Judo
1557 and Cycling). That is, the NGBs submit to Sport Wales the number of practitioners they need
1558 within their sport to aid their athlete's performance. The sport and medical practitioners are
1559 employed by Sport Wales and work within the national institute of sport based in Cardiff,
1560 which is equipped with training and competition facilities. To support sports that are located
1561 away from the Welsh capital, the practitioners frequently visit the specific NGB's facilities /
1562 sporting environments.

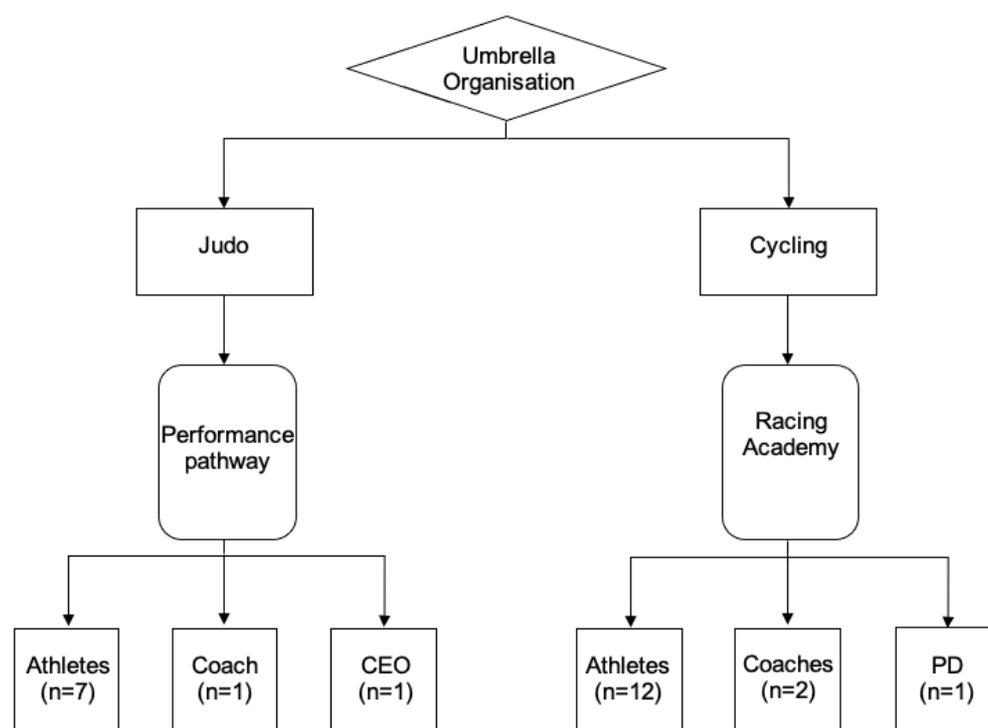
1563 Sport Wales also works in partnership with universities (via The Welsh Institute of
1564 Performance Sport; WIPS) to conduct multi-disciplinary applied sport science projects, that
1565 aim to enhance the performance of Welsh athletes. WIPS provide the opportunity to conduct
1566 research that can support the development of athletes across medal winning sports in various

1567 disciplines (e.g., psychology, performance analysis, biomechanics, strength & conditioning).
 1568 The WIPS partnership provided the opportunity for the current thesis to be completed with
 1569 Swansea University, as there was an identified need by the leadership team within Sport
 1570 Wales to understand the processes that affect the wellbeing and mental health of athletes. As
 1571 such, the research was completed with Welsh Judo and Welsh Cycling, who volunteered to
 1572 be part of the project.

1573 **Figure 4.1**

1574 *Structural Organisation of the Cases*

1575



1576 **4.5.1. Welsh Judo**

1577 The first case of the thesis was Welsh Judo, an NGB situated in Cardiff, Wales, which
 1578 delivers a Talent Cymru performance programme that identifies and develops talented Welsh
 1579 judo players for the Commonwealth and Olympic Games (Welsh Judo Association, 2019).
 1580 The NGB's vision is to create an athlete-centred talent development model, with the
 1581 performance objectives of creating a pathway for athletes of Welsh Judo clubs to the British
 1582 Judo Centre of Excellence (Welsh Judo Association, 2020).

1583 To invite athletes onto their programme, potential judo players identified by club
 1584 coaches, are then assessed by Welsh Judo in four performance areas (i.e., performance
 1585 behaviours, technical/tactical ability, physical capability, and competition results). In

1586 addition, the athletes are assessed via technical, tactical, physical, and lifestyle assessments
1587 (Welsh Judo Association, 2020). Firstly, the technical and tactical assessment focuses on the
1588 physical literacy skills and core competencies needed for judo. Secondly, the physical
1589 assessment targets the athlete's ability to handle their sport's demands, including the five key
1590 areas of functional movement screen, strength, power, endurance, and gymnastic ability.
1591 Third, lifestyle assessment is a process to understand the needs of the athletes (e.g., stress,
1592 work, education). Through the assessments, if the potential player is identified as suitable for
1593 the programme, they become entitled to either bronze, silver, or gold level support.

1594 The bronze level is the entry into the Talent Cymru programme. The athletes accepted
1595 onto the programme are based at their home clubs but are provided the opportunity to attend
1596 training at the national training centre once a week. The silver level involves athletes training
1597 full time at the national training centre in Cardiff, many relocating from their homes. At the
1598 time of the thesis three of the seven athletes in the squad were living within the centre during
1599 the week, whilst others commuted to their homes nearby and / or lived in university
1600 accommodation. Athletes at the silver level receive an Individual Development Plan (IDP),
1601 which includes sports science educational group workshops (i.e., sport psychology, nutrition,
1602 and physiology). Moreover, the players receive athlete player awards (APA), which provide
1603 financial support (up to £10,000) for food, accommodation, and attendance at tournaments
1604 (i.e., entry, accommodation, flights, and transfers).

1605 To move up to the gold level, the athlete must meet the target of obtaining a Junior
1606 European Cup medal or above, with progression assessed during a formal performance
1607 review every six months. Gold-level athletes receive bespoke performance programmes that
1608 includes sports science and medicine support for two years -provided by Sport Wales. As
1609 with the silver athletes, the gold level players receive the APA that involves financial
1610 subsistence. Participants involved in the thesis, were players at either the silver (n=5) or gold
1611 level (n=1) of the programme, and so were full-time athletes, with some (n = 4) also engaging
1612 in educational and vocational training. Critically, and of note, just before the start of the
1613 research project, the head coach of Welsh judo completed suicide, which understandably
1614 affected the context of this case.

1615 ***4.5.2 Welsh Cycling***

1616 The second case was Welsh Cycling, based in Newport, Wales. With values of
1617 "inspiring, integrity, and excellence", the NGB has the aim of "fulfilling the potential of
1618 cycling across the nation" (Welsh Cycling, 2021). Welsh Cycling aims to encourage more

1619 people to cycle while also delivering a performance programme to maximise their riders'
1620 potential and engender international success (e.g., Commonwealth Medals). The performance
1621 programme in cycling aims to develop an effective pathway from youth to senior level
1622 (including road, track, and cross-country mountain bike athletes), which allows appropriate
1623 race exposure, develops riding skills, and provides relevant cycling experience to progress in
1624 the pathway via coaching and sport science support. Welsh Cycling has the vision of its elite
1625 riders being selected for the British Cycling programme, gaining contracts with professional
1626 teams, and winning medals at European and World Championships and Olympic,
1627 Paralympic, and Commonwealth Games (Welsh Cycling, 2021).

1628 The focus of the thesis is the Wales Racing Academy, where the riders were selected
1629 if they have competed nationally and internationally. Moreover, these riders were selected as
1630 they held the potential to be selected for the British Cycling Olympic programme, could gain
1631 a professional contract (or had received one), and/or had the potential to win a medal at the
1632 Commonwealth Games. The academy provides tailored one-to-one coaching and regular
1633 training sessions focusing on tactics, skills, and race craft. Moreover, the athlete attends the
1634 national sporting institute in Cardiff (i.e., Sport Wales) to receive a weekly tailored sessions
1635 of strength and conditioning and to access physiologists, who are employed by Sport Wales.
1636 Nutritionists and sport psychologists also visit the velodrome once a week to provide tailored
1637 advice for athletes and coaches. A performance analyst provides real-time video feedback for
1638 cyclists during each indoor track session, and cyclists can receive additional medical support
1639 and physiotherapy as required.

1640 **4.6 The Research Process**

1641 ***4.6.1 Research Design of Thesis***

1642 Both studies within the thesis used a collective case study methodology to achieve the
1643 research aims. That is, Study one aimed to explore the complex processes that affect
1644 wellbeing and mental health across two cases, whilst understanding how the process, context,
1645 and time interreact with the processes. Importantly, the collective case study enabled the
1646 research to explore difference and similarities across the cases. Furthermore, utilising this
1647 knowledge, Study two aimed to develop, implement, and evaluate a multi-level intervention
1648 to enhance athletes' wellbeing and mental health.

1649 ***4.6.2 Gaining Entry***

1650 Once the university ethics committee (Swansea University, Faculty of Science and
1651 Engineering) had approved the project, I was able to contact the key sports involved in the

1652 research. The access to the sports was supported and enabled by Sport Wales and WIPS who
1653 provided key contact details and network opportunities with the organisations. I contacted
1654 (via email) the performance director of Welsh Cycling and the CEO of Welsh Judo to arrange
1655 an initial discussion about the research project. These conversations were held, in November
1656 2019, at the national cycling velodrome, Newport, and the national institute for sport, Cardiff,
1657 where judo is based, respectively. The initial informal discussions were to explain the aims,
1658 duration, and design of the research project with an emphasis on the intention to complete an
1659 evidence-based intervention within their respective sports, which would aim to protect /
1660 enhance the wellbeing and mental health of their athletes. After identifying that the target
1661 population was high-performance / elite athletes, it was agreed that I would be allowed access
1662 to all cycling athletes within the Wales Racing Academy and the judo athletes at the silver
1663 and gold level of the performance programme. This target population was selected as the
1664 evidence indicated that the performance / elite athletes may be (more) susceptible to lowered
1665 wellbeing and poor mental health outcomes than their lower standard counterparts (e.g., Rice
1666 et al., 2016).

1667 Moreover, it was agreed with the judo CEO and cycling PD, that coaches, and sport
1668 science practitioners would be given the opportunity to explore the processes which they
1669 perceived affected athlete wellbeing and mental health, thus, allowing an exploration of the
1670 construct from differing perspectives. Concluding the individual discussions with the CEO
1671 and PD, I then provided the opportunity for them to ask questions regarding the research,
1672 with both stakeholders happy to engage with the research project and for them to introduce
1673 me to their head coaches and athlete group. Of note, regardless of such support from the CEO
1674 and PD, it was made clear by me and the CEO / PD that the coaches, sport science
1675 practitioners, and athletes would not be obliged to take part in the project (i.e., participation
1676 was voluntary).

1677 Within judo, I met the sport science and medicine practitioners and the coach in the
1678 national sporting centre, which led to informal discussions about the project, where I identified
1679 the research aims, research design, data collection periods, and the project's timeline. I then
1680 met with, and repeated this information to all the judo athletes with their sport psychologist
1681 after a strength and conditioning session whilst they were on their “downtime”.

1682 Within cycling, I was introduced to the coaches and athletes at one of their track
1683 sessions while they were training. This opportunity allowed for informal discussions with the
1684 coaches and athletes trackside, which were supported by the sport science and medicine
1685 practitioners. Moreover, the sport science and medicine practitioners attached to the judo

1686 players were situated at the national centre; thus, informal discussions were had over their
1687 break and lunch within the café. Once introduced to athletes, coaches, and sport science and
1688 medicine practitioners within each sport, I provided another opportunity for them to ask
1689 questions about what the research studies would entail. These discussions were more formal
1690 and took place in group meetings, both at the judo training centre and national velodrome
1691 respectively. As all stakeholders (i.e., CEO, performance director, coaches, athletes, and sport
1692 science practitioners) had now had the opportunity to understand fully, and discuss the
1693 programme of work, they were formally invited to participate in the project.

1694 Specifically, after introducing the project to all potential participants in the manner
1695 detailed above, they were contacted via email with a detailed information sheet, which
1696 restated the details of the project, and identified that each individual had the opportunity to be
1697 involved in different data collection opportunities (i.e., to be observed, to take part in
1698 interviews, and to be part of a focus group – see below for further details). Hence, all
1699 potential participants within the Wales Racing Academy and the full-time national
1700 programme of judo - which included the CEO, performance director, athletes, coaches, and
1701 sport science practitioners - were asked to respond via email, identifying they were happy to
1702 take part in the study, and specify the data collection method(s) they would like to be
1703 involved with (i.e., as few / as many as they would like).

1704 ***4.6.3 Ethical Considerations***

1705 There were various actions taken to protect all potential participants. All individuals
1706 participating in the research were provided with an information sheet, which detailed the
1707 research process and outlined the support they could access throughout the study. That is, due
1708 to the need to discuss their wellbeing and mental health, and therefore, the potential of
1709 experiencing distress (e.g., Rice et al., 2016), all potential participants were provided with
1710 mental health charity information (e.g., Samaritans and Mind) and the research team contact
1711 details, in case they needed to access support. Moreover, they were also reminded that
1712 participating in the project was voluntary, and they could withdraw from the programme of
1713 work without the need to provide a reason. Furthermore, all data were anonymised (e.g., no
1714 name attached) to ensure confidentiality, including interview/diary extracts in the thesis,
1715 academic articles, and reports returned to their sport. Of note, it was expressed that they
1716 would be able to abstain from being included within the observation data if they wished,
1717 which one athlete asked to (who ultimately did not complete an interview and / or diary).
1718 Therefore, they were made aware when I was in the environment and reminded that they

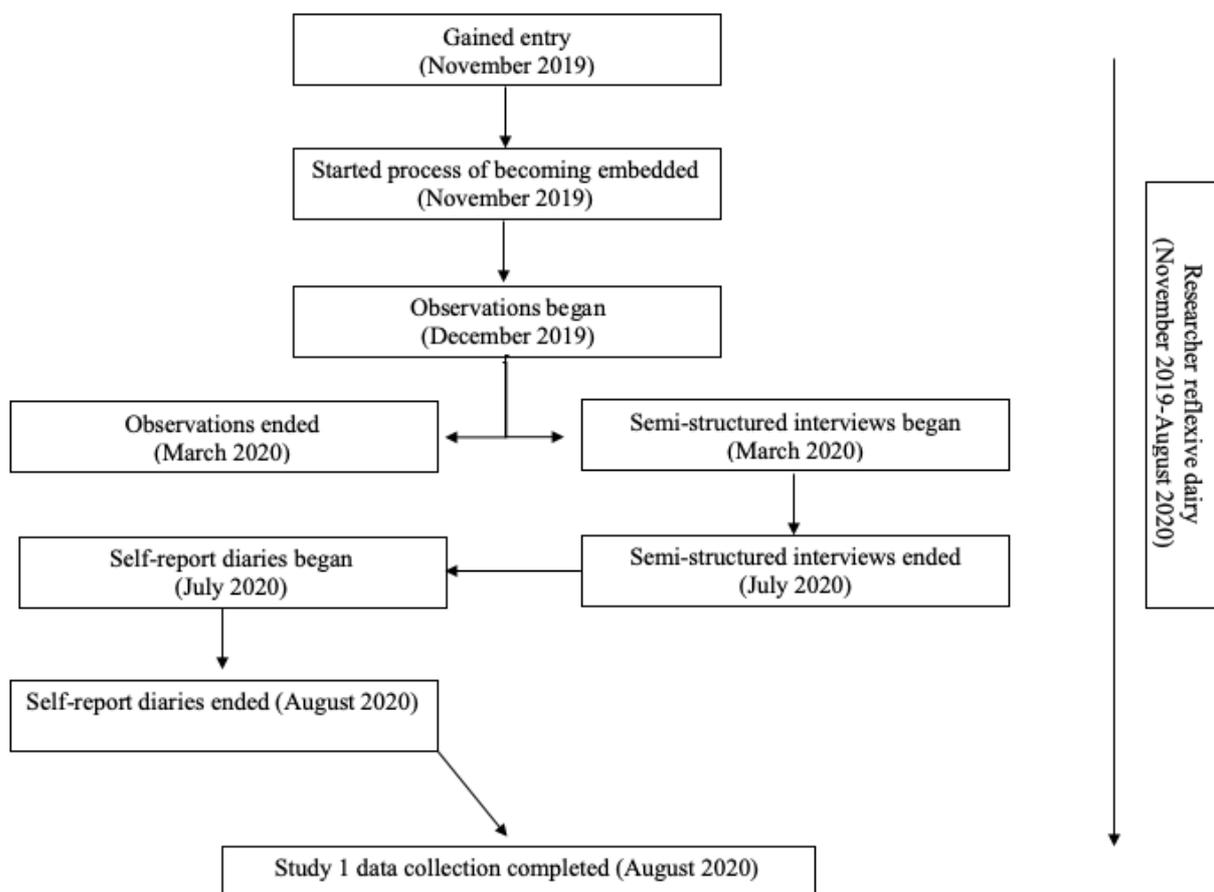
1719 would not be involved in the observation and any dissemination of the project. Finally,
 1720 informed written consent was given by those participants happy to proceed with the data
 1721 collection. Only one participant was under 18, so parental / guardian consent was collected
 1722 for that individual. Across Study one, 22 participants were involved, which included athletes
 1723 (n=12), coaches (n=3), sport science and medicine practitioners (n=4), a chief executive
 1724 officer, and a performance director. Across Study two, all athletes and coaches were invited
 1725 to access all the intervention resources. During the intervention evaluation only judo athletes
 1726 (n=4) and the judo CEO provided feedback.

1727 4.7 Data Collection

1728 In line with the case study methodology (Stake, 1995; 2005), different methods of
 1729 data collection were utilised to address the research aim of Study one and Study two. Data
 1730 collection for Study one took place from December 2019 until September 2020, which
 1731 include observations, interviews, self-report diaries, and researcher reflexive diary. The
 1732 process of data collection for Study one is presented within Figure 4.2.

1733 Figure 4.2

1734 *Flow chart of Study one data collection*



1735

1736 In addition, to address the research aims of Study two, methods included interviews,
1737 an online evaluative survey, and reflective researcher diary. The intervention was developed
1738 from May 2021-September 2021 and delivered from November 2021 until January 2022, and
1739 evaluated from November 2021 – May 2022.

1740 *4.7.1 Becoming Embedded*

1741 The first and arguably the most important of this longitudinal research design, was the
1742 process through which I became embedded within Sport Wales, Welsh Judo and Welsh
1743 Cycling - beginning November 2019. This period of becoming embedded was important to
1744 build rapport with a range of stakeholders. Researchers who are embedded, are perceived to
1745 be ‘in residence’ within the organisation (Marshall et al., 2014), and can begin to understand
1746 the context of the organisations (Potts et al., 2022) to produce knowledge and facilitate
1747 change by developing trusting relationships (Ward et al., 2021). I took time to build
1748 relationships with a wide range of stakeholders including athletes, coaches, and sport science
1749 practitioners. Within Sport Wales I spent time with the sport science practitioners within the
1750 Welsh Institute of Sport, including hours spent informal talking and rapport building during
1751 coffee hours and mealtimes. I had the opportunity to be involved in multidisciplinary
1752 meetings (MDT) involving sport science practitioners, and which also involved researchers
1753 from other universities to discuss the latest research projects. Due to the nature of the thesis
1754 being within sport psychology, I naturally spent more time with the sport psychology team
1755 within the institute. Therefore, I made time to spend days shadowing other roles including the
1756 physiologist and strength and conditioning coaches, to one build a rapport with them but also
1757 understand how their job may play a role in the athletes’ wellbeing and mental health. This
1758 took place from November 2019 until March 2020, when COVID-19 restrictions began
1759 interrupting the ability to meet physically. Nevertheless, I continued to maintain relationships
1760 by join meetings virtually to sustain my relationships and communicating (via emails and
1761 video calls) with individual practitioners.

1762 As well as engaging with practitioners, I also began to visit the sports from December
1763 2019, spending time within the judo and cycling environments. I visited each case site twice a
1764 week, spending with them within their training and seeing athletes and coaches having
1765 informal discussions at their respected training centres. I perceived it was easier to build
1766 rapport within judo as most of their athletes spent a lot of time at the national centre;
1767 therefore, I was able to create rapport by being with them away from training, drinking

1768 coffees, and eating meals together. Furthermore, I was able to see the athletes in the gym,
1769 where I helped with warm-up games before their strength and conditioning session began. On
1770 the contrary, the cycling athletes would leave for home after their training sessions at the
1771 velodrome, which meant I was not able to spend time with them in their downtime.
1772 However, I would see them during their training sessions and the cycling athletes would
1773 attend weekly strength and conditioning sessions at the national centre where I would be able
1774 to speak with them in the corridor and / or see them in them in the gym. This period of
1775 becoming embedded enabled me to be ready for a period of observations. It must be noted
1776 that the process of becoming embedded was a continuing process throughout the research
1777 programme of work.

1778 **4.7.2 Observations**

1779 The observations took place from December 2019 to March 2020 when the research
1780 was interrupted due to COVID-19 pandemic. Observations allow the researcher to capture
1781 events, such as social interactions, that occur within an environment (Simpson & Tuson,
1782 2003). Moreover, observations enable researchers to understand organisations' sporting
1783 environment, behaviours, and power structures (Thorpe & Olive, 2016). This understanding
1784 of organisations is gained from observations which capture the dynamic social setting in
1785 which the case occurs, including the physical environment (Mulhall, 2003). Observations can
1786 follow either a structured or unstructured process (Mulhall, 2003). Structured observations
1787 aim to capture and record predetermined behaviours chosen by the researcher. Whereas
1788 unstructured observations do not begin from an explicit position of determined behaviours
1789 and aim to understand the behaviour and interactions within an environment (Mulhall, 2003;
1790 Simpson & Tuson, 2003). That is, within unstructured observations, I would not go into the
1791 environments with pre-determined behaviours. The observations of interactions were
1792 particularly important for Study one due to the theoretically underpinning of the thesis, and
1793 the understanding that the interactions within the environment being important for
1794 development. Instead, I would take time to interpret the environment's behaviours,
1795 interactions, and actions. For example, I observed how the judo and cycling athletes
1796 interacted with their own teammates, their coaches, and their practitioners. This included
1797 making an observation that the judo athletes had good interactions with their teammates,
1798 which highlighted a topic to discuss in interviews. As such, in line with my constructivist
1799 paradigm, unstructured observations were chosen for Study one.

1800 One main strength of observations is that the researchers can observe themes that may
1801 not arise within interviews as there may be processes within the environment, which impact
1802 wellbeing and mental health, that a participant may feel improper / impolite to mention (e.g.,
1803 mistreatment) or, of which they are unaware (Simpson & Tuson, 2003). Moreover,
1804 observations provide an opportunity for the researcher to notice everyday events and / or that
1805 the participant may not perceive as important to raise (Simpson & Tuson, 2003; Thorpe &
1806 Olive, 2016). Therefore, the observations can supplement the other forms of data collected in
1807 the thesis.

1808 After a period of becoming embedded within both cases, the observations within
1809 Study one aimed to explore the behaviour and interactions of participants in each case, and
1810 the general activities that occurred. Data were obtained in field notes via a mobile device, to
1811 ensure it was acquired as soon as possible (e.g., within the close-by café), which allowed for
1812 my reflections to be detailed. To capture elements of the relationships and day-to-day
1813 operation of the judo and cycling environments, the observations took place before the
1814 COVID-19 pandemic lockdown. During the observations, I was focused on attending to the
1815 interactions between athlete and their peers, athletes and coaches, athletes and sport science
1816 and medicine practitioners and how these interactions may affect their wellbeing and mental
1817 health (i.e., reflecting the PPCT). While in each environment, I took the role of 'observer as
1818 participant' (Thorpe & Olive, 2016), as I was marginally involved in each environment, and
1819 my role as an observer was known to participants (Mulhall, 2003). As such, all stakeholders
1820 understood why I was in the environment, and I completed small tasks to be involved in their
1821 practices.

1822 The judo observations occurred within the dojo (i.e., practice arena), the strength and
1823 conditioning gym, the Sport Wales café, and the general areas of the national centre. The
1824 cycling observations were primarily conducted at the velodrome (i.e., practice arena) and the
1825 strength and conditioning gym. I would observe how the athletes responded to their training,
1826 interacted with their entourage, and spent some of their downtime between training. I also
1827 observed the coaches and sport science and medicine practitioners within the environment to
1828 see how they supported, and responded to the athletes, particularly if any athlete showed
1829 periods of overt distress. For example, I would stand with the coaches to note the timings of
1830 the team pursuit squad in cycling, and then I would join warm-up games with the judo
1831 players during their strength and conditioning sessions. Although observations allow
1832 researchers to consider the environment in greater depth, they do not allow for the detailed
1833 experiences of the participants to be heard; therefore, within the current thesis, observations

1834 were used alongside the other chosen methods (i.e., a reflexive diary, semi-structured
1835 interviews, and self-report diaries).

1836 **4.7.2. Reflexive Diary**

1837 Reflexive diaries allow researchers to keep up-to-date reflections on their research
1838 process and gain a greater understanding of the impact that their values, views, and beliefs
1839 have on the research design (Holmes, 2020; Nadin & Cassell, 2006). That is, it has allowed
1840 me to understand my positionality as a researcher from the beginning, and my growth into a
1841 practitioner-researcher throughout the journey, and the impact this growth has had on the
1842 project (see further positionality statements in Chapter 5 and 6). Also, reflections were used
1843 during observation, interviews, and the self-report diaries. Hence, I completed a reflexive
1844 diary, guided by Gibbs (1988), to document my interactions with the cases across the
1845 programme of work.

1846 Reflexivity enables the researcher to understand their influence the research, when
1847 collecting and analysing the data (Darawsheh, 2014). During the observations I reflected on
1848 how my position of the researcher may be influencing the research. First, I was understanding
1849 where I was standing / sitting whilst taking observations, and how I was playing the role of
1850 ‘observer of participant’. Reflecting on the role I recognised that during the initial stages I
1851 would be reluctant to join in and stayed on the sides, which was influenced by anxiety of
1852 being a naïve researcher. Moving forward I was able to become a better observer within both
1853 environments, by engaging more comfortably with the participants. Secondly, as data
1854 collection continued, I reflected throughout the interviews. After each interview I would
1855 reflect to understand how I was asking questions, how those questions were being received,
1856 and how the participants were throughout the interview. Third, I reflected on the questions
1857 asked within the participant self-report diaries. Whilst receiving responses, I reflected on
1858 whether the questions were provoking the insights I wanted to capture through the research,
1859 which led to probing athletes further within their answers.

1860 **4.7.3 Semi-structured Interviews**

1861 Interviews permit the researcher and the participant, via a conversation, to obtain,
1862 develop, and construct knowledge on a phenomenon (Brinkman, 2013; Smith & Sparkes,
1863 2016b). This knowledge is created via the participants detailing their accounts, perspective,
1864 experiences, and insights about the phenomenon (Smith & Sparkes, 2016b). The subjective
1865 views of the participants are then understood and explored via structured, semi-structured, or
1866 unstructured interviews (Brinkman, 2013). The current thesis utilised semi-structured

1867 interviews with the use of an interview guide through which data were collected, that could
1868 be used to address the research aims of both studies (Smith & Sparkes, 2016b).

1869 Although a guide was developed for Study one and two, the semi-structured
1870 interviews enabled me as the researcher to have the flexibility of gaining rich knowledge
1871 about a phenomenon by developing questions from the participants' responses. Interviewing
1872 was chosen to elicit the participants' perspectives of their environment (Smith & Sparks,
1873 2016b) and to develop an understanding of the processes in the participants' lifeworld that
1874 they perceived to affect athletes' wellbeing and mental health. Although interviews allow for
1875 an in-depth understanding of participants' experiences, semi-structured interviews rely on
1876 participant recall and retrospective memories; thus, all athlete participants were provided
1877 with a pre-interview guide (see appendix) which can encourage greater memory recall (see
1878 Hill et al., 2010).

1879 The interviews were conducted either face-to-face or online (due to COVID-19
1880 restrictions). Face-to-face interviews were conducted at the national centre in Cardiff, in a
1881 quiet room or in the canteen, at a time convenient for the participants. Online interviews,
1882 either on Zoom or Microsoft Teams, were chosen primarily over telephone interviewing.
1883 Although online interviews give you partial view of the participant, they do allow the
1884 researcher to observe participants facial expressions, which telephone interviews do not offer
1885 (Saarijärvi & Bratt, 2021). Moreover, the online interviews enabled accessibility /
1886 convenience, as the interview could be conducted at a time convenient to the participant,
1887 from their own home. It must be recognised that limitations such as silence on video calls and
1888 delay in communication due to network issues, may cause anxiety for participants (de Villiers
1889 et al., 2022). Therefore, when I was when conducting online interviews, I would take time to
1890 recognise how participants handled silence and delays, ensuring I gave them enough time to
1891 relay their answers. Although the mode changed to online, all interviews (i.e., face-to-face, or
1892 online) began with rapport-building questions such as 'can you tell me about your journey to
1893 a Wales racing academy rider?' or 'can you tell me a little bit about yourself?'. These
1894 questions allowed me to build a relationship with each participant and put them at ease before
1895 exploring the factors they perceived affected wellbeing and mental health (Study one) and
1896 their perceptions of the multi-level intervention they received (Study two).

1897 Within Study one, semi-structured interviews were conducted with twenty-eight
1898 participants, including the CEO of judo, the performance director of cycling, judo athletes
1899 (n=6), cycling athletes (n=5), a judo coach, cycling coaches (n=2) and sport science
1900 practitioners (n=12) within the two cases. During Study one interviews took place between

1901 March 2020 and August 2020. Existing wellbeing and mental health literature was used to
1902 inform questions for the interview guide (Corbin & Strauss, 2007), including the definition of
1903 wellbeing utilised for this programme of work: 'the balance point between an individual's
1904 resources pool and the challenges faced' (Dodge et al., 2012, p.230). Hence, the interview
1905 schedule (see appendix) consisted of exploring the process experienced by participants in
1906 their sport that affected their wellbeing and / or mental health. This was followed by
1907 exploring the resources they to aid protect their wellbeing and mental health. The interviews
1908 were broadly based on the data from the contextual observations completed. That is, within
1909 the interviews I would be able explore further some of the processes I had observed, such as
1910 the positive interactions with their sport science practitioners. Moreover, the interviews were
1911 informed by the PPCT model (Bronfenbrenner, 1995), to ensure I explored how the processes
1912 they experienced were affected by the person characteristics (themselves and others), their
1913 environments, and temporal periods (e.g., different periods of the competition cycle).
1914 Furthermore, building on from the observations, I would ask questions to the participants
1915 about what I had observed, and understand their perceptions of their observations. To clarify,
1916 I observed how the judo athletes spent a lot of time together and perceived that they had a
1917 good relationship. When discussed with some athletes, they would highlight how teammates
1918 can be a positive but sometimes negative influence on their wellbeing and mental health.

1919 In Study two, semi-structured interviews were conducted with four judo athletes and
1920 the CEO of judo to understand their perceptions of the intervention, including the perceived
1921 effect of the intervention on the targeted processes found within Study one. The interview
1922 schedule (see appendix) explored each component of the multi-level intervention (i.e.,
1923 podcast, infographics, and environmental recommendations), and perceived effect on their
1924 wellbeing and mental health. In particular, the PPCT model informed the schedule by
1925 exploring how the environment (recommendations) may impact their wellbeing and mental
1926 health. Moreover, the interview explored if there were specific time periods that the resources
1927 would be beneficial for athletes' wellbeing and mental health. Additionally, the interview
1928 explored the perceived strengths and limitations of the overall intervention (i.e., what could
1929 be improved).

1930 ***4.7.4 Self-report Diary***

1931 The diaries were completed (only) for Study one in the summer of 2020 (i.e., July
1932 2020 – August 2020) following observations and interviews due to wanting to explore
1933 further, processes that were affecting wellbeing and mental health as athletes were

1934 experiencing them. The self-report diaries were also beneficial to use as they were completed
1935 at the end of the first UK lockdown. The interviews represented processes that the athletes
1936 could recall which they perceived affected wellbeing and mental health, and the observations
1937 reflected my interpretations of the processes affecting wellbeing and mental health. Thus,
1938 self-report diaries were used to supplement and bring in data that was not dependent on
1939 participant recall.

1940 Self-report diaries have been used via different modes (e.g., written, audio, or video)
1941 to capture participant insight and understand experiences of a certain phenomenon (Day,
1942 2016). They provide the opportunity to collect data regarding the participants' experiences,
1943 behaviours, and emotions close to the event of interest. This allows researchers to triangulate
1944 data collected from other retrospective methods (e.g., interviews), thereby increasing data
1945 rigor and strengthening the ability to address their research aims (Day, 2016). Diaries have
1946 been used effectively in sport psychology research to report daily emotions, thoughts, and
1947 behaviours (Day, 2016; Didymus & Fletcher, 2012). Thus, the current thesis utilised self-
1948 report diaries to capture athletes' day-to-day demands and their perceived impact on
1949 wellbeing and mental health, and so to capture experiences within a close temporal proximity
1950 of the events that occur. This temporal proximity is a strength when using diaries in
1951 conjunction with interviews (Day, 2016; Didymus & Fletcher, 2012).

1952 The current thesis used an interval-contingent schedule (Day, 2016); where the
1953 participating athletes were asked to complete the diary at regular and predetermined daily
1954 intervals (i.e., 6 pm each evening) across a 14-day period, which began on a Monday
1955 evening. Each evening, the athletes were sent three questions which encouraged them to
1956 consider the factors they perceived to affect their wellbeing and mental health during that day
1957 (see appendix) via a WhatsApp message, which the participants would answer via a
1958 WhatsApp voice message. Audio dairies were chosen over written diaries to make the
1959 process convenient for the athletes and achieve high completion (Crozier & Cassell, 2015).
1960 Although there are strengths to using daily diaries, there are also limitations, including the
1961 possibility of high participant dropout (Day, 2016). In response, text messages were sent as a
1962 daily prompt to athletes at 6 pm each evening to provide a reminder (Didymus & Fletcher,
1963 2012), which enabled the participants ($n = 4$) to complete all their diary inputs. However, it
1964 must be noted that one participant only completed one week of data, as the participant kept
1965 forgetting to do the diary after being reminded each day, and rather than sending a direct
1966 voice note they would record directly on their phone and send across the audio file.

1967 4.8 Data Analysis

1968 The interviews and self-report diaries were transcribed verbatim during the data
1969 collection, and observations were written verbatim. All data across Study one and Study two
1970 data were analysed using reflexive thematic analysis and its six-phase analytic process
1971 (Braun & Clarke, 2021; 2022). Moreover, I analysed the interviews first, which informed the
1972 questions within the self-report diaries. As such, the self-report diaries were analysed after
1973 the initial codes and themes were generated from the interviews. The observations and
1974 researcher reflexive diary informed both of these data collection periods and supported the
1975 data analysed from the participants. Aligning with my research paradigm, I was able to gain a
1976 deep understanding of the participants' experiences via an unstructured and organic data
1977 analysis process (Braun & Clarke, 2019; 2021; 2022). While I followed the six-phase analytic
1978 process, it must be noted that the process was iterative. Firstly, after I had completed each
1979 interview, they were transcribed as close to the event as possible to allow me to become
1980 immersed in the data transcription (and audio file). I decided to use both media formats
1981 (paper and electronic) to develop further insights and interpretations of the datasets, which
1982 may have been missed by just reading the transcripts alone. This process allowed me to
1983 familiarise myself with the data, making me more critically engaged with the dataset. To
1984 become further critically engaged, I asked questions throughout my observations (e.g., "Am I
1985 linking this with previous research?"; "Wellbeing is constructed in different ways for
1986 participants"; "The participants experience the environment differently in terms of their
1987 wellbeing and mental health").

1988 The immersion in the transcripts allowed me to further question my role as the
1989 researcher in the data collection process, and to see how I came across to the participants
1990 (e.g., how did my role as the interviewer ensure the participants felt comfortable answering
1991 questions?), and if further elaboration was needed through follow-up interviews to elicit more
1992 information / data. Once I read the transcripts, codes were constructed via inductive and
1993 deductive orientations. The codes were initially generated inductively then deductively to
1994 illustrate the participants' perceived processes affecting wellbeing and mental health (Study
1995 one) and the perceived impact of the intervention (Study two), which included generating
1996 codes which reflected the theoretical assumptions which underpinned the research.

1997 That is, I used inductive coding as a starting point to understand the experiences and
1998 perspectives of the participants (Braun & Clarke, 2019; 2021; 2022). This allowed me to gain
1999 a deeper understanding of the processes affecting the athlete's wellbeing and mental health.
2000 As I began to evolve as a researcher, where I gained a deeper understanding and appreciation

2001 for the bioecological theory (Bronfenbrenner, 1995; Bronfenbrenner & Ceci, 1994;
2002 Bronfenbrenner & Morris, 2006), I began to code deductively. As such, I started coding in
2003 relation to the process, person, context, and time, interpreting the data with a theoretical lens
2004 (Braun & Clarke, 2019; 2021; 2022).

2005 Codes were completed on the word document of each transcript, using the comment
2006 function to track the codes generated, and would allow for deletion and revision of codes
2007 when I followed the iterative process. The next step was to begin the initial themes
2008 generation, developed from the group codes, capturing the pattern of meaning across the
2009 dataset. As the initial theme generation was occurring, I would routinely revisit the codes to
2010 understand how codes may relate to each other or if differences were shown across the
2011 datasets. I again adopted a deductive and inductive approach during the theme generation,
2012 producing themes driven by the data. For Study one this included the (i) development of
2013 trusting relationship; (ii) the negative perceptions of self; (iii) attitudinal changes towards
2014 wellbeing and mental health; and (iv) the expansion of a resource pool. The themes in Study
2015 two included (i) increased confidence of help-seeking behaviours; (ii) the ability to recognise
2016 symptoms of wellbeing and mental health concerns; (iii) an opportunity for increased
2017 knowledge of wellbeing and mental health concerns; (iv) preventive measures of wellbeing
2018 and mental health concerns; (v) the benefits of podcasts (flexibility of listening, easy and
2019 informal listening, and the control and ownership); (vi) the benefits of the infographics
2020 (concise information, accessibility of critical information, and supporting different ways of
2021 learning); and (iv) the challenges of the resources.

2022 Once the initial themes were generated, I reviewed all the themes, which led to me
2023 questioning whether they were representative of the data. This included asking reflective
2024 questions, such as, "Is this a theme?" and "Does the theme represent the codes?" (Byrne,
2025 2021). Once this process was completed with the remaining themes, the final phase was
2026 defining and naming themes for the final write-up, which included various changes
2027 throughout the iterative process.

2028 **4.9 Ensuring Quality of Data**

2029 As the research was underpinned by a relativist approach, to ensure trustworthiness of
2030 the thesis I used criteria that were appropriate for the case study methodology, rather than
2031 using a universal approach (Levitt et al., 2017; Smith & McGannon, 2018; Sparkes and
2032 Smith, 2009). As such, in line with Stake's (1995) case study methodology they were several
2033 strategies taken to ensure trustworthiness and quality of the data (Crowe et al., 2011). The

2034 strategies included: clearly identifying cases; method triangulation; readers having a
2035 vicarious experience; use of sufficient data sources; highlighting the intended audience; and
2036 the researcher positionality is available for readers.

2037 First, the cases that are part of the study must be clearly identified. Therefore, two
2038 NGBs who volunteered to be part of the research, were introduced throughout the research
2039 including that they performed at a high level (i.e., national, and international competitions)
2040 and were part of the same umbrella organisation. To ensure that adequate attention had been
2041 paid to both environments, ample time was spent embedded with each case. Furthermore,
2042 method triangulation (Simmons, 2014) occurred to address the research aims of exploring the
2043 perceived processes that affect wellbeing and mental health and evaluating a multi-level
2044 intervention (Stake, 2005), including using observations, interviews, and self-report diaries to
2045 optimise understanding of the learning from the cases. Once the data has been analysed, the
2046 data must be presented so the case study is easy to read, creating a story for the reader to have
2047 a vicarious experience.

2048 To ensure the quality of the presentation, each study utilised the range of data
2049 collection methods to provide an in-depth story of the wellbeing and mental health of
2050 athletes. As such, various viewpoints were selected to highlight the multiple experiences and
2051 realities in the sporting environment, whilst ensuring these were represented in sufficient data
2052 and the sources were chosen well. This was achieved by engaging in conversations with my
2053 supervisory team, which highlighted those areas of the case study that needed to be
2054 improved. Moreover, Stake's (2005) criteria stated that the nature of the intended audience
2055 should be apparent. The current intended audience was the NGBs (including their CEO, PD,
2056 athletes, and coaches), wellbeing and mental health researchers, and sport psychologists. The
2057 current case studies highlighted a number of applied implications, limitations, and future
2058 directions for the intended audience.

2059 Additionally, within the case study methodology, the researcher needs to understand
2060 their position in the data collection and analysis (Stake, 2005), whilst ensuring that I was
2061 neither over, nor under interpreting the findings. As such, I kept a reflexive diary throughout
2062 the process, keeping a diary of notes to understand how I perceived the research (e.g.,
2063 perceptions of the organisations, organisational procedures, and my experiences within the
2064 organisations).

2065 **Chapter 5: Perceived Processes that Affect Elite Athletes' Wellbeing and Mental**
2066 **Health (Study one)**

2067 **5.1 Introduction**

2068 As highlighted within the introductory chapter, wellbeing is a complex and multi-
2069 faceted construct (Dodge et al., 2012; Lundqvist, 2011), which historically has been
2070 conceptualized through hedonic and eudaimonic traditions (Diener, 1984; Diener & Suh,
2071 2009; Keyes, 2007; Ryan & Deci, 2001). The hedonic approach has primarily focused on an
2072 individual's happiness, pleasure, and life satisfaction (Diener, 1984; Diener & Suh, 2009;
2073 Keyes, 2007; Ryan & Deci, 2001). Conversely, the eudaimonic approach proposes that
2074 wellbeing is driven by an individual's meaning and functioning (Ryan & Deci, 2001).
2075 Furthermore, Keyes (2002) later proposed that the eudaimonic perspective should include
2076 social wellbeing, which comprises: social coherence; social acceptance; social integration;
2077 social contributions; and social actualization (Keyes, 1998).

2078 The complex nature of wellbeing has led to many definitions (Dodge et al., 2012;
2079 Lundqvist, 2011; Uzzell et al., 2021). However, one definition which is increasingly utilised
2080 within sport psychology research (e.g., Hill et al., 2021) is by Dodge et al. (2012) who, after
2081 completing a critical and comprehensive review of the literature, stated that wellbeing is, "the
2082 balance point between an individual's resource pool and the challenges faced" (p 230). That
2083 is, stable wellbeing occurs when the individual has the resources to meet the challenges, they
2084 experience. Furthermore, if the challenges outweigh the resources, then an individual's
2085 wellbeing will be affected negatively. Additionally, if an individual does not experience
2086 enough challenges, then their wellbeing can be affected negatively. Conversely, mental
2087 health has been defined as "a state of wellbeing in which the individual realizes his or her
2088 abilities, can cope with the normal stressors of life, can work productively and fruitfully, and
2089 is able to make a contribution to his or her community" (WHO 2005, p.2). This definition has
2090 been utilised across domains, developing a global understanding of mental health. Hence, it is
2091 understood that mental health is not simply the absence of mental ill-health but also the
2092 presence of wellbeing (Keyes, 2002; 2005).

2093 Epidemiological evidence has signalled that elite and high-performance athletes can
2094 experience low wellbeing and poor mental health (Rice et al., 2016). Studies have found that
2095 elite athletes can experience high wellbeing (e.g., Leyland et al., 2022). However, athletes
2096 can experience higher scores for psychologically distress (e.g., Leyland et al., 2022), this is
2097 higher compared to the general population (Purcell et al., 2020). Moreover, research has

2098 reported that elite athletes can experience symptoms of poor mental health (Gulliver et al.,
2099 2015), including anxiety and depression (e.g., Foskett & Longstaff, 2018; Gouttebarga et al.,
2100 2015; Gouttebarga et al., 2017; Gulliver et al., 2015; Schall et al., 2011), substance misuse
2101 and abuse (e.g., Dietze et al., 2008; Harris et al., 2022; O'Brien et al., 2005), and disordered
2102 eating (e.g., Byrne & McLean, 2002; Giel et al., 2016; Reardon et al., 2019; Rousselet et al.,
2103 2017; Sundgot-Borgen & Torstveit, 2004). The research shows that athletes can be
2104 susceptible to wellbeing and mental health concerns, which can be affected by a range of
2105 factors.

2106 **5.2 Factors Affecting Athlete Wellbeing and Mental Health**

2107 Many factors have been found to impact athlete wellbeing and mental health
2108 positively and negatively. This includes positive relationships (i.e., social support) in and out
2109 of their sport, which protect wellbeing (Lundqvist & Sandin, 2014). The relationships can
2110 include with the coach (Sauvé et al., 2022; Simons & Bird, 2022), teammates (Katagami &
2111 Tsuchiya, 2017), and support team (Sauvé et al., 2022). Conversely, athletes' wellbeing is
2112 compromised if they have limited support from significant others (Katagami & Tsuchiya,
2113 2017; Sauvé et al., 2022; Simons & Brid, 2022). Furthermore, athletes tend to report high
2114 levels of wellbeing if they experience self-acceptance as an athlete, autonomy in life and
2115 sport, environmental mastery, purpose in life and sport, and personal growth (Lundqvist &
2116 Sandin, 2014). However, other factors can negatively impact athletes' wellbeing, including
2117 an inflexible training environment, a result-focused mindset, and feelings of isolation (Sauvé
2118 et al., 2022). Research that has focused on factors that affect athletes' mental health
2119 specifically, has found a range of similar factors. For example, positive social support has
2120 been found to be correlated with fewer symptoms of depression (Sullivan et al., 2020) and is
2121 considered a protective factor for athlete mental health (Kuettel & Larsen, 2020). Other
2122 protective factors include feelings of autonomy, mental health literacy, setting purposeful
2123 goals, feeling of competence, basic needs and career satisfaction, and recovery (Kuettel &
2124 Larsen, 2020).

2125 The unique stressors inherent within elite sport can include (but are not limited to)
2126 overtraining, injury, and performance failure, can also leave athletes vulnerable to poor
2127 mental health outcomes (Rice et al., 2016). Other risk factors related to athlete mental health
2128 include aesthetic sport stressors, adverse life events, ineffective coping, maladaptive
2129 personality traits, basic needs, and career dissatisfaction (Kuettel & Larsen, 2020).
2130 Furthermore, within the sporting environment the coach-athlete relationship has been shown

2131 to be a predictor of depression across samples, including student-athletes (Powers et al.,
2132 2020). The culture of sport has been criticized, as it has led to the stigma of mental health in
2133 sport, which has been a barrier for athletes seeking help when in periods of distress, thereby
2134 exacerbating poor mental health outcomes (e.g., Gulliver et al., 2012; Kuettel & Larsen,
2135 2020; Purcell et al., 2019). However, various other barriers are also perceived to stop athletes
2136 from seeking support, including the fear of deselection, limited mental health knowledge,
2137 negative past experiences, lack of time, inaccessible support, and the fear of consequences. In
2138 contrast, athletes are more likely to seek help if they receive social support, have an
2139 established relationship with a mental health provider, have knowledge of mental health
2140 services, and have access to support (Gulliver et al., 2012).

2141 Although there are many descriptive and epistemological studies regarding factors
2142 affecting wellbeing and mental health (e.g., Kuettel & Larsen, 2019; Foskett & Longstaff,
2143 2019), there remains a need to understand in detail the highly contextual and individualized
2144 reasons why athletes may experience poor and/or positive wellbeing and mental health
2145 symptoms (Henriksen et al., 2020). Moreover, there have been calls for factors affecting
2146 wellbeing and mental health to be explored through a more holistic, temporal, and contextual
2147 manner (Purcell et al., 2019). This is apparent as athletes can experience a range of factors
2148 that are individualised to them but also factors that occur within their sporting environments
2149 and organisations, and further at the macro-level of culture (both sport and wider). For
2150 example, at an individual level, factors may include the athlete's ineffective coping (Kuettel
2151 & Larsen, 2020); at an environmental level, the coach-athlete relationship (Simons & Bird,
2152 2022); at the organisational level, the organisation's finances, and support (Poucher et al.,
2153 2021); and at a cultural level, the stigma of mental health (e.g., Castaldelli-Maia et al., 2019).
2154 Additionally, it is advantageous to understanding any temporal factors that may affect
2155 athletes' wellbeing and mental health, including their competition cycle and different
2156 transitions (e.g., junior-to-senior or moving into the performance centre). Furthermore, it has
2157 been shown that the COVID-19 pandemic led to athletes experiencing symptoms of anxiety
2158 (Knowles et al., 2021), and so it is important to understand how different temporal periods of
2159 an athlete's life course can influence their wellbeing and mental health. Exploring the
2160 complexity of wellbeing and mental health processes across various temporal periods that can
2161 affect athletes may be best achieved by exploring wellbeing and mental health research in
2162 sport throughout a bioecological perspective (Bronfenbrenner 1995).

2163 **5.3 The Bioecological Model of Development**

2164 A model at the forefront of ecological research is the Bioecological Model of
2165 Development (1995), which was established from the EMHD (Bronfenbrenner, 1979). The
2166 bioecological model of development, which is commonly known as the Process –Person-
2167 Context – Time (PPCT) model aims to understand the effects of the characteristics of the
2168 person (i.e., biological, psychological, and behavioural), their environment (i.e., microsystem,
2169 mesosystem, exosystem, and macrosystem), and time on the development of an individual
2170 over a life span (Bronfenbrenner, 1998; Bronfenbrenner & Ceci, 1994; Eriksson et al., 2018).

2171 The process aspect of the model represents the interactions that the individual
2172 experiences with different people, symbols, and objects within their environment. These
2173 interactions, which happen within the microsystem, are called proximal processes
2174 (Bronfenbrenner & Morris, 2006), and are seen as the driving force of the individual's
2175 development (Mercon-Vargas et al., 2020). The interactions may include the time spent with
2176 significant others within their immediate environment (e.g., parents, coaches, teammates),
2177 and with objects within the environment such as mantras, which are printed on the walls
2178 within their physical environment. The different types of interactions are only seen to be
2179 influential to an individual's development when they occur regularly and over a period
2180 (Bronfenbrenner & Morris, 2006). The extent to which these proximal processes impact the
2181 individual's development, and in this case, their wellbeing and mental health, is influenced by
2182 the person, context, and time (Mercon-Vargas et al., 2020).

2183 Three types of person characteristics can affect how an individual may interact with
2184 the processes; namely, force (e.g., motivation, persistence, and temperament), biological
2185 resources (e.g., past experiences and intelligence), and demand characteristics (e.g., age and
2186 gender) - which can foster or disrupt the functioning of the proximal processes. To explain
2187 further, consider an athlete is a young adult (i.e., demand characteristic) who has angry
2188 temperament (i.e., force characteristic) and has experienced previous poor support for their
2189 wellbeing and or mental health (i.e., biological resources). Due to their person characteristics,
2190 they may be less likely to interact with their coach and / or organisational support if they
2191 were suffering from poor wellbeing and or mental health.

2192 The environments that individuals exist and operate within have the potential to
2193 influence the impact of the processes and the influence on development. Within the model the
2194 individual is situated in a nested set of systems (i.e., micro-, meso-, exo-, and macro- system).
2195 The microsystem comprises the individuals' interactions (i.e., the proximal processes) with
2196 others in their closest environments (e.g., home or sporting environment), including

2197 relationships with their teammates, coaches, sport science practitioners, and family. The
2198 mesosystem involves the interactions between two or more environments the individual
2199 resides within. For example, this may include how the athlete's home environment and
2200 sporting environment, as if an athlete is having a disruptive home life this may influence their
2201 performance and development within their sporting environment.

2202 The exosystem is a setting where the individual is not directly involved, but it can
2203 impact the individual indirectly (e.g., parents' workplace / coach's home life). For example,
2204 the parents' workplace (e.g., experiencing distress) may affect the parent's behaviour which,
2205 in turn, may impact the athlete's wellbeing and mental health. Finally, the impact of the
2206 macrosystem considers the broader culture or subcultures (e.g., group shared beliefs and
2207 society), for example, how the wider sporting setting promotes mental health beliefs. That is,
2208 the culture of sport may promote the idea of mental toughness over protecting athletes'
2209 wellbeing and or mental health.

2210 In addition, Bronfenbrenner established the importance of investigating how human
2211 developmental outcomes may change over time. Thus, the aspect of time was added to the
2212 model representing the significant life changes and historical events that occur for the
2213 individual and how they can impact human development. As such, the property of time
2214 includes microtime (the ongoing episodes of the proximal processes), mesotime (how often
2215 the proximal processes occur over days and weeks), and macrotime (understanding of events
2216 in the wider culture and society). For example, the COVID-19 pandemic was a significant
2217 period of time for the sporting world and has shown to have impact on wellbeing and mental
2218 health outcomes (Knowles et al., 2021).

2219 **5.4 The Current Study**

2220 Although, previous research has explored factors that impact wellbeing and mental
2221 health of athletes, they have failed to consider the complex interaction of such factors. There
2222 is a need to understand the contextual nature of wellbeing and mental health, including
2223 individual (e.g., race, gender, religion, ethnicity), environmental (e.g., national,
2224 organisational, sport-specific), and the developmental context (e.g., age, career phases, and
2225 transitions) (Henriksen et al., 2020). Applying a bioecological lens enables researchers to
2226 understand the multi-layered and interactive determinants of wellbeing and mental health.
2227 Furthermore, applying the model will enable an understanding of how / whether critical time
2228 periods (e.g., athlete's performance cycle), person characteristics, and different contexts can
2229 affect different processes (e.g., interacting with key personal), and in turn, impact the

2230 wellbeing and / or mental health of athletes. Thus, the current study aimed to explore the
2231 complex processes (in accordance with the PPCT model) that affect the wellbeing and / or
2232 mental health of athletes.

2233 **5.5 Method**

2234 ***5.5.1 Methodological Approach and Philosophical Underpinnings***

2235 This study was informed by a relativist ontology, which considers the subjective
2236 realities of a phenomenon, which are developed from an individual's experiences, culture, and
2237 perceptions (Killam, 2013). Additionally, this program of work was informed by a
2238 constructivist epistemology, which proposes that multiple subjective truths are co-constructed
2239 between the participant and the researcher (Crotty, 1998).

2240 Guided by these philosophical underpinnings, a case study methodology (Stake,
2241 2005) was utilised to explore the processes that affect elite athletes' wellbeing and / or mental
2242 health, while respecting the multiple realities of the participants' world within the sporting
2243 system. The case study methodology is used to explore and understand a phenomenon in
2244 depth, from within a real-life context through multiple perspectives (Crowe et al., 2011;
2245 Simons, 2014, Yin, 2018). This allowed for the current research to understand complex and
2246 detailed processes from various stakeholders, aiming to provide a detailed exploration of
2247 processes affecting wellbeing and / or mental health.

2248 Specifically, to explore and gain a greater understating of the processes that affect the
2249 wellbeing and / or mental health of athletes a collective case study methodology was
2250 employed (Crowe et al., 2011; Simons, 2014; Stake, 2005). That is, the collective case study
2251 allows researchers and practitioners alike to understand the contextual and individualized
2252 processes affecting athlete wellbeing and / or mental health within two sporting cases, at
2253 certain temporal periods, and if these processes are similar and / or different across the sports.

2254 ***5.5.2 Procedure***

2255 Following ethical approval for the study from the University's ethical board, sports
2256 were contacted to participate. Convenience sampling was used within the study, which
2257 included the main funded sports (i.e., medal potential sports) within Sport Wales being
2258 emailed the aims of the study. Both the CEO of Welsh Judo and Cycling PD were willing for
2259 their organisations to be approached to participate in the research. The study's aims were
2260 explained to the CEO and PD in person, and the opportunity to ask questions was given. At
2261 the conclusion of the conversation, access to the athletes, coaches, and sport science
2262 practitioners within both NGBs was granted in order to introduce the aims and nature of the

2263 study and request participant volunteers. Subsequently, time was spent each of the
2264 environments (i.e., at competitions and training) where potential participants were able to
2265 discuss the project further. Those who showed a willingness to participate received an email
2266 with a reminder of the key points and an opportunity to ask further questions before offering
2267 informed consent to agree to take part in the study. They were also asked to identify if they
2268 were willing to be involved in specific, or all, data collection points.

2269 **5.5.3 Participants**

2270 Twenty-nine participants across the two NGBs volunteered to take part in the study,
2271 which is a good proportion of the available sample. This included 88% of individuals within
2272 judo (i.e., athletes, coaches, and CEO) participated in the study. Moreover, 60% of
2273 individuals with cycling (i.e., athletes, coaches, and PD) participated in the study. The sport
2274 science practitioners were not included in the percentages as they were employed by Sport
2275 Wales, and not the NGBs specifically. The participants included judo athletes (n=6), cycling
2276 athletes (n=6), a judo coach, cycling coaches (n=2), sport science practitioners (n= 12), a
2277 CEO (i.e., judo), and a PD (i.e., cycling). The breakdown of the gender demographics for
2278 athletes, coaches, and leadership is represented in Table 5.1. The sport science practitioners
2279 within Judo who volunteered to be participants included two sport psychologists (female)
2280 (i.e., one psychologist was specifically for an Olympic athlete), a physiologist (male), a
2281 physiotherapist (female), a performance advisor (male), a sport therapist (male), and a
2282 nutritionist (male). Within cycling, the sport science practitioners included a sport
2283 psychologist (male), a physiologist (male), a performance advisor (male), a performance
2284 analyst (male), and a nutritionist (female).

2285 **Table 5.1**2286 *Gender demographics of participants*

Demographics	Judo		Cycling		Full sample	
	<i>n</i>	%	<i>N</i>	%	<i>n</i>	%
All Participants						
Female	7	46.7	2	15.4	9	32.1
Male	8	53.3	11	84.6	19	67.9
Athletes						
Female	4	66.7	1	16.7	5	41.7
Male	2	33.3	5	83.3	7	58.3
Coaches						
Female	0	0	0	0	0	0
Male	1	100	2	2	3	100
CEO / Performance Director						
Female	0	0	0	0	0	0
Male	1	100	1	100	2	100
Sport Science Practitioners						
Female	3	42.9	1	20	4	33.3
Male	4	57.1	4	80	8	66.7

2287 **5.6 Data Collection**

2288 In line with the case study methodology (Stake, 1995; 2005), multiple data collection
 2289 methods were utilised, allowing a detailed and in-depth understanding of the processes that
 2290 affect the athletes' wellbeing and / or mental health. Hence, data were collected from athletes,
 2291 a performance director, a CEO, and sport science practitioners via observations, individual
 2292 interviews, and self-report diaries. Additionally, a reflective diary was utilised throughout the
 2293 study. Of note, not all participants agreed to be involved in all data-gathering methods. Thus,
 2294 a breakdown of the participants and their participation in different methods is listed below in
 2295 Table 5.2.

2296 **Table 5.2**2297 *Breakdown of participant involvement*

Participant	Observations		Interviews		Self-report diaries	
	<i>n</i>	%	<i>N</i>	%	<i>n</i>	%
Athletes	12	100	11	91.7	6	50
Coaches	3	100	3	100	N/A	N/A
CEO / Performance Director	2	100	2	100	N/A	N/A
Sport Science Practitioners	12	100	12	100	N/A	N/A

2298

2299 **5.6.1 *Becoming Embedded***

2300 Stage 1 included becoming embedded within both NGBs and Sport Wales, which was
 2301 achieved by attending training (i.e., twice a week) and where possible, competition days (i.e.,
 2302 one for cycling). I also spent time with athletes in their downtime (e.g., mealtimes) and
 2303 attended formal activities including multidisciplinary meetings, which allowed me to spend
 2304 time with stakeholders and to understand how the team of practitioners work together to
 2305 support the athletes. The period of becoming embedded occurred over five months
 2306 (November 2019 - March 2020) before the COVID-19 pandemic halted the in-person
 2307 meetings. Approximately during this time, I spent 300 hours across the environments,
 2308 including Sport Wales, Welsh Judo, and Welsh Cycling.

2309 Of note, due to the location of athletes within the NGBs (i.e., judo athletes primarily
 2310 based within the national centre), spending time with the athletes in their downtime was
 2311 predominantly achieved within judo. The Stage1 process enabled me to build rapport with the
 2312 necessary range of stakeholders and enabled me to understand how each case operated
 2313 (e.g., how the practitioners were embedded within the sport). As such, I began building
 2314 relationships with individuals and once rapport was constructed, I began to complete
 2315 informally observation of the interactions between stakeholders and the general activities that
 2316 may affect wellbeing and mental health.

2317 **5.6.1 *Observations***

2318 After spending time within each environment to build an established rapport and a
 2319 developed understanding of the sports, I was able to begin formal unstructured observations
 2320 (Mulhall, 2003). Importantly, I expressed to individuals throughout both cases, that they
 2321 would be able to abstain from being included in the observation data if they so wished. As a

2322 result, one individual did not consent to the observations. Thus, they were informed that I
2323 would only observe the environment and no individual directly.

2324 Observations were used to understand the structure of each case, the context and
2325 language of each sport, training and competition schedules, the interpersonal relationships
2326 within the NGB, and processes they may have affected the athlete's wellbeing and mental
2327 health. All observational data were obtained in field notes and recorded via a mobile device
2328 as close to the events as possible (e.g., within the privacy of a close-by meeting room), which
2329 allowed the recollections to be as accurate as possible. I conducted observations mainly at the
2330 two NGB training venues, including the gym sessions and mealtimes of judo, due to most of
2331 the athletes eating and staying at their national centre. I was able to spend more time within
2332 the judo environment, which led to more observations being undertaken within that case.
2333 However, for cycling, as all athletes would head straight home after training, observations
2334 took place during training only, two times a week.

2335 Unstructured observations were chosen for the current study, as such I did not begin
2336 observing determined behaviours, rather, I used them to understand the behaviour and
2337 interactions within an environment, whilst making note of my interpretations (Mulhall, 2003;
2338 Simpson & Tuson, 2008). Taking the role of 'observer as participant' (i.e., marginally
2339 involved and my role as an observer was known; Thorpe & Olive, 2016; Mulhall, 2003), I
2340 observed the behaviours of participants in the environments, and focused on the interactions
2341 between the athlete and a range of stakeholders and consider how these processes may affect
2342 wellbeing and mental health. The observations continued for four months (i.e., from
2343 December 2019 to March 2020), when the COVID-19 pandemic forced the national
2344 lockdown and brought the observations to an end. Nevertheless, the four months allowed me
2345 gain rich data regarding the processes that held the potential to impact the wellbeing and
2346 mental health of the athletes and were utilised to inform / contextualise the subsequent
2347 interviews.

2348 **5.6.2 Reflexive Diary**

2349 A reflexive diary, guided by Gibbs (1988), was used to reflect on activities I had
2350 observed during the period of becoming embedded, which would be completed after
2351 interactions, formal, and informal data collection episodes. Furthermore, I used the reflexive
2352 diary to note how the theoretical model (PPCT) influenced my observations and thoughts
2353 regarding processes affecting athletes' wellbeing and mental health. For example, I was
2354 reflecting on whether I was asking the questions that adequately explored the processes that

2355 affect athlete wellbeing and mental, and how the person, context, time may have interacted
2356 with those processes (e.g., I was reflecting on how the judo teammates were a cohesive
2357 group, however, throughout the interviews it had become clear that at certain times team
2358 conflict affected wellbeing and / or mental health, especially coming into key periods of the
2359 competition cycle).

2360 *5.6.3 Semi-Structured Interviews*

2361 Twenty-eight participants completed semi-structured interviews, which were used to
2362 explore in detail the processes perceived to affect the wellbeing and mental health of athletes
2363 in high-performance sport. The participants included eleven athletes, three coaches, a
2364 performance director (i.e., cycling), a CEO (i.e., judo), and twelve sport science practitioners.
2365 Prior to the interview, the participants received (via email) an overview of what the interview
2366 would explore and the key areas we discuss. Moreover, to facilitate athletes' recall of factors
2367 that they considered to affect their wellbeing and mental health, they were provided with an
2368 interview preparation booklet (see Hill et al., 2010). The booklet provided statements that
2369 included: "Think of a time over the past few months, when you were feeling really good,
2370 positive and full of energy" and "Think of a time over the past few month when you were not
2371 feeling so good. Instead, you were feeling really stressed, a bit low, and not yourself".
2372 Consider the factors which may have led to such feelings before attending the interview.

2373 The interviews were broadly based on the data from the contextual observations
2374 completed. That is, within the interviews I would be able explore further some processes I
2375 had observed, such as the positive interactions with their sport science practitioners.
2376 Additionally, the interviews were informed by the extant literature, including the PPCT
2377 model (Bronfenbrenner, 1995), thereby enabling an exploration of the processes that may
2378 affect the wellbeing and or mental health, and how the person characteristics, environmental
2379 contexts and time-phase / line may have affected the processes (e.g., different periods of the
2380 competition cycle).

2381 A pilot interview with an athlete and a sport psychologist was completed, which led to
2382 amendments to the guide before conducting the formal interviews (i.e., developing an
2383 introductory section of the interview to understand how participants contextualized
2384 wellbeing) and allowed me (i.e., a neophyte researcher) to become comfortable collecting
2385 interview data. The interviews began in March 2020 and were conducted face-to-face at a
2386 convenient time and place for the participants (e.g., a meeting room or canteen). Due to
2387 COVID-19 restrictions, interviews were then completed online (n = 24) until July 2020,

2388 either on Zoom or Microsoft Teams. The interview process was iterative, which included
2389 continually analysing to allow the earlier interviews to inform the later ones. The interviews
2390 ranged from 38 to 105 minutes and were audio recorded and transcribed verbatim.

2391 **5.6.4 Self-Report Diaries**

2392 The diaries were completed in the summer of 2020 (i.e., July 2020 – August 2020)
2393 following observations and interviews. The diaries aimed to provide further insight
2394 concerning the processes of wellbeing and mental health, nearer to the time in which the
2395 processes were occurring, to supplement the retrospective data gained from athlete
2396 interviews. All athlete participants were invited to complete a daily diary for two weeks. A
2397 diary booklet was sent to each participant (appendix), which included detailed information
2398 regarding why the diary was being utilised, how long the participants would have to complete
2399 the diary, and how they would complete it. If the athlete participants were happy to take part
2400 in this aspect of the study, they returned written informed consent.

2401 An interval-contingent schedule was utilised (Day, 2016; Wheeler & Reis, 2001).
2402 That is, the participating athletes were asked to complete the diary at regular and
2403 predetermined intervals (i.e., every day) across a 14-day period, which began on a Monday
2404 evening. Each evening, the athletes were sent four questions via a WhatsApp message which
2405 aimed to identify their daily demands and resources, to which the athletes would reply via a
2406 WhatsApp audio message. The questions were (i) Has anything affected your wellbeing
2407 positively today? (e.g., did something make you happy, energised, or relaxed) (ii) If yes -
2408 why do you think it affected you in this way? (iii) Has anything affected your wellbeing
2409 negatively today? (e.g., did something make you sad, lethargic, or stressed), (iv) If yes - why
2410 do you think it affected you in this way? (v) Did you do anything to address these feelings,
2411 and improve your wellbeing (vi) If so – what did you do? / If not – why not?

2412 Audio dairies were chosen over written diaries to make the process convenient for the
2413 athletes and achieve higher retention (Crozier & Cassell, 2015). Although there are strengths
2414 to the use of daily diaries, such as capturing important happenings close to an event
2415 (Almeida, 2005), noting the importance of the events, and offering a deeper insight into the
2416 participant's perspectives (Day & Thatcher, 2009), there is the possibility of high participant
2417 dropout (Day, 2016). Thus, text messages were sent as a daily prompt to athletes at 6 pm
2418 each evening to provide a reminder (see Didymus & Fletcher, 2012). Additionally, I replied
2419 to each diary completion by providing positive feedback (e.g., "Thank you very much for
2420 your message today/summarizing the events of the day"?) and where necessary, probing for

2421 further elaboration and/or clarification (e.g., "How did you find this certain demand?"). This
2422 level of support and feedback was chosen to allow the athletes to feel that they were being
2423 heard, and to gain in-depth data (Day & Thatcher, 2009). The diary was the final stage of the
2424 data collection / Stage 2 period.

2425 **5.7 Data Analysis**

2426 The interviews and self-report diaries were transcribed verbatim during the data
2427 gathering, and observations were written at the end of each day of data collection. All data
2428 were then analysed using reflexive thematic analysis via its six-phase analytic process (Braun
2429 & Clarke, 2022). Thus, aligning with the case study research paradigm, this approach led to a
2430 deep understanding of the participants' experiences via an unstructured and organic data
2431 analysis process rather than a structured coding process (Braun & Clarke, 2019; 2021; 2022).

2432 All data were transcribed as close to the event as possible so that I became immersed
2433 in data transcription (and audio file). Deep familiarization of the data was then gained via
2434 reading and listening to both data formats (i.e., written transcription and audio recording) to
2435 develop initial insights and interpretations of the datasets. Thereafter, codes evolved via
2436 inductive and deductive orientations. Initially, data were analysed inductively to broadly
2437 identify any perceived processes affecting wellbeing and mental health. The datasets were
2438 also analysed deductively, including the procurement of codes concerning the perceived risk
2439 and protective processes of wellbeing and / or mental health. These were completed on a
2440 word document of each transcript, using the comment function to track the codes generated,
2441 and therefore allow for deletion and revision of codes during the subsequent the iterative
2442 process.

2443 The next step was to begin the initial themes generation, developed from the group
2444 codes, capturing the pattern of meaning across the dataset. As the initial theme generation
2445 occurred, they were routinely revisited to understand how codes may have related to each
2446 other or if differences were shown across the datasets. Again, during the theme generation, a
2447 deductive and inductive approach produced themes driven by the data and previous theory,
2448 which captured the risk and protective processes of athletes' wellbeing and mental health.

2449 Once the initial themes were generated, all themes were reviewed, which led to
2450 questioning and reflecting if they were representative of the data. Once this process was
2451 completed with the remaining themes, the final phase was defining and naming themes for
2452 the final write-up, which included various changes throughout the iterative process. The

2453 themes included the development of trusting relationships, perception of self, attitudinal
2454 changes towards wellbeing and mental health, and the expansion of a resource pool.

2455 **5.8 Ensuring Quality of Data**

2456 Due to my relativist philosophical orientation, the study implemented Stake's criteria
2457 for assessing the quality of a case study (Crowe et al., 2011; Stake, 1995), rather than
2458 utilising universal criteria (Levitt et al., 2017). As such several steps were taken to ensure the
2459 quality of the data, which included: using unique cases to ensure maximum learning; the
2460 cases were chosen and defined adequately; triangulation within data gathering; creating a
2461 vicarious experience for the readers; data sufficiently sources; highlighting the intended
2462 audience; and providing the researchers positionality. Although the current study was a
2463 collective case study, each case was unique (e.g., the type of sport), but they possessed some
2464 similarities, to ensure cross-comparison across the cases could occur. As such, two
2465 comparable cases are presented (i.e., Welsh Judo and Welsh Cycling), who volunteered due
2466 to being a high-performance sport and were both receiving support from Sport Wales. To
2467 achieve method triangulation the study utilised the range of data collection methods to
2468 provide an in-depth story of the wellbeing and mental health of athletes including using
2469 observations, interviews, and self-report diaries to optimise understanding of the learning
2470 from the cases. Once data were analysed the data sources were chosen appropriately to
2471 ensure a story of the case were provided and the reader had a vicarious experience, including
2472 use quotations effectively. To ensure the case study presented a story that addressed the
2473 research aims, I utilised my supervisory team to challenge and critique the written case study.
2474 Additionally, within the case study methodology criteria, the researcher needs to understand
2475 their position in the collection and the analysis. As such, I became reflective throughout the
2476 process, keeping a diary of notes to understand how I perceived the research (e.g., my
2477 experiences within the organisations and how the organisations may affect wellbeing and
2478 mental health).

2479 **5.9 Results**

2480 Data analysis led to the development of four prominent perceived processes that
2481 affected athlete wellbeing and mental health, which were influenced by the person, context,
2482 and time. The processes included: (i) the development of trusting relationships; (ii) negative
2483 perceptions of self; (iii) attitudinal changes towards wellbeing and mental health; and (iv) the
2484 expansion of a resource pool.

2485 **5.9.1 The Development of Trusting Relationships**

2486 One main perceived process evident in both cases was the presence, or absence, of
2487 development of trusting relationships within the athletes' immediate environment, which
2488 occurred via reciprocal interactions. The athletes in both organisations had various daily
2489 interactions with individuals within their microsystems, which were perceived to hinder or
2490 facilitate their wellbeing and mental health. The participants particularly discussed the
2491 importance of athlete relationships with sports science and medicine practitioners (including
2492 sport and clinical psychologists), the coaching team, and teammates. Within judo, all athletes
2493 perceived that their wellbeing and mental health was protected due to relationships across all
2494 three sources of significant others. Whereas in cycling, the athletes perceived high-quality
2495 relationships with their coaches and teammates supported their wellbeing and mental health,
2496 though noted the lack of interactions with their sport science and medicine practitioners, this
2497 was perceived as detrimental to their wellbeing and mental health. The following section will
2498 explore further this process of developing trusting relationships with the significant others.

2499 **5.9.1.1 Sport science and medicine practitioners.** Across the two cases, it was
2500 evident that the athletes had very different relationship dynamics with their designated sport
2501 science and medicine practitioners, which was perceived to impact the wellbeing and mental
2502 health of the athletes differentially. Such a different process was highlighted in one of my
2503 reflections after a couple of months embedded in both cases:

2504 I have spent some time with both cases, and it is obvious that they receive very
2505 different support from their [sport science and medicine] practitioners. In judo, they
2506 can see their practitioners each day they are in the national centre – and can have
2507 informal conversations down the corridors, at mealtimes, and during their downtime.
2508 Whereas in cycling, they [athletes] come into the velodrome and go straight home
2509 afterward, with only the performance analyst being a constant presence ... They only
2510 see their other practitioners when they go to Cardiff for their gym session and when
2511 the practitioners are able to travel together to see them at the velodrome. Albeit they
2512 have developed a good rapport, there is something about the relationships within judo
2513 that show having time together can be important for their wellbeing and / or mental
2514 health. [30/01/2020]

2515 The judo athletes emphasized that they had developed a facilitative relationship with
2516 their designated sport science practitioners due to their proximity, and ability to spend time
2517 with them in the national centre. These relationships were developed through weekly
2518 activities (**i.e., meso-time**) in their microsystem. For example, athletes spent challenging gym

2519 sessions with their practitioners each week, where they considered that the sport science
2520 practitioner team provided extensive physical and emotional support. One athlete explained
2521 that they collectively created a supportive climate within those weekly gym sessions, which
2522 had elicited trusting relationships, and in turn, was responsible for enhancing their wellbeing:

2523 Practitioners joining in the sessions... it motivates you, instead of just doing it on
2524 your own...but you've got the practitioners, and they proper push you like... it's
2525 brilliant. It creates more of a team environment, and you can feel more comfortable
2526 with them. And I never thought they would do that, thought they'd just be standing on
2527 the side, pushing you.

2528 The importance of developing trusting relationship through weekly activities (**i.e., meso-**
2529 **time**) for the protection of the judo players' wellbeing was something I observed:

2530 Today the athletes were pushed to their limits in the gym, grinding out a tough
2531 session. However, the practitioners joined in on the session today, and this just
2532 seemed to give all the athletes a boost of energy they did not have before. They
2533 struggled, but once the practitioners joined in and started competing with them, it was
2534 like the mood was just lifted; you could see it in their demeanour – their heads were
2535 higher, their laughs were a bit louder, and their mood was just seen to be given a
2536 boost. However, the real added value from the sessions is seeing the relationships
2537 develop between the practitioners and athletes. Being able to see the practitioners put
2538 their bodies through the tough sessions and give it 100% (and even see one of them
2539 throw up!!) broke down the barriers between 'us' and 'them.' They seem to become
2540 more comfortable with each other and build that relationship that is so important
2541 when they may experience a period of distress. [06/02/2020]

2542 Of importance, one critical relationship for the judo athletes was with the lead sport
2543 psychologist. The sport psychologist explained how she utilised proximity, to create frequent
2544 informal interactions, which enabled the development of a trusting relationship:

2545 I know where they [the judo players] base themselves. They base themselves in the
2546 café, so I'll tactically walk past, see them and be like, "Hi" and go in and have those
2547 informal chats...and [as a result] I feel there has definitely been more of a shift to
2548 them coming to me rather than me going to them which is huge.

2549 Due to the constant reciprocal interactions with the sport psychologist, the judo players felt
2550 they had consistent support, and that the sport psychologist was there when they needed her.
2551 Hence, they were able to build the trusting relationship, that engendered social support, and
2552 which was perceived as positive for their wellbeing. As such, summarised by a judo player:

2553 I will just go to [sport psychologist] and vent to her [as] I'm quite a negative person,
2554 so I see everything from a negative point of view. Whereas she's like, "Look, you
2555 were here, and now look where you are." So, you look at it from a different
2556 perspective... My wellbeing goes up.

2557 Another judo athlete commented on the benefit having access to the sport psychologist can
2558 lead to informal discussions that can ultimately support their wellbeing, without having to
2559 have a formal psychology session:

2560 I mean [the psychologist] pretty good, she's a really positive person and she is a nice
2561 person, she'll chat to you about anything. That can help your wellbeing, that can make
2562 you feel better. You don't need to talk about constant psychological things, it's just
2563 about being able to talk to someone and she's the person to talk to kind of thing. She's
2564 the psychologist but she's also like not someone that you'd go into a room with a note
2565 board and a pen, 'Oh yeah, you've got this wrong with you, do this, do some
2566 psychological skills training', we don't want that, we want someone that sometimes
2567 all it is a chat and it'll fix it.

2568 Overall, the relationship between the sport psychologist and the judo athletes was
2569 considered as "vital" to their wellbeing and mental health – which was facilitated by the sport
2570 psychologist's requirement / assurances to provide confidentiality. It was revealed that
2571 confidentiality increased trust and a willingness to self-disclose when the players' wellbeing
2572 was particularly low, or if they had mental health concerns. This was of particular importance
2573 when the athletes perceived they could not confide in their teammates due to confidentiality
2574 concerns:

2575 I think the only person I could trust was [sport psychologist] because obviously it's
2576 her job, and I would want it confidential... and so it would probably be just [her] that
2577 I would speak to if I did need to speak to anyone.

2578 Alongside the sport psychologist, the support team of practitioners were perceived to
2579 be vital for the protection of the judo athlete's wellbeing and / or mental health. Indeed, when
2580 a judo athlete did come into training experiencing a period of distress, the practitioners
2581 instantly recognized this and supported the athlete, who felt confident to confide in the
2582 members of staff. This event was captured in one of my reflective notes:

2583 I sat with a couple of members of their support team and was engaged in conversation
2584 with all the players. A player has just come into the café of the centre and sat with the
2585 rest of their teammates. The player looked a bit tense, with shoulders slumped, and sat
2586 down quietly; that was not their normal demeanour. Instantly two support staff

2587 members asked, 'are you okay?' the player looked up and said to the sport
2588 psychologist, 'can we go for a walk and talk about it?' Within 10 minutes, they were
2589 back, and you could tell the player had been crying but looked a lot less tense and sat
2590 down a little bit more animated and joined in conversations with others. I could just
2591 tell that having 10 minutes to talk to somebody and receiving the emotional support
2592 they needed enabled them to feel supported. [13/02/2020]

2593 Accordingly, the process of developing trusting relationships enabled the receipt of effective
2594 social support, in which the practitioners showed authentic interest and emotional support,
2595 which maintained or enhanced athlete wellbeing. As explained by one of the judo players:

2596 Personally, I find them [sport science practitioners] really helpful. They constantly
2597 have a smile on their face, constantly saying, 'how are you?' I think they're really
2598 good... they're really aware and really switched on. They do notice if you've had a
2599 bad day, they'll definitely go up to you and say, 'are you okay?'. I mean, I couldn't
2600 really ask for anything more it makes you feel like someone's there to help and
2601 support you.

2602 Consequently, the judo athletes generally felt comfortable speaking with the
2603 practitioners attached to their sport and recognized the informational support (e.g., how to
2604 recover and rehabilitate efficiently) they received from each practitioner allowed them to get
2605 to know the staff on a professional and personal level. This enabled the deeper / higher
2606 quality relationship to develop, which led to further emotional support, and the protection of
2607 their wellbeing. One of the players reflected on this aspect further:

2608 To be honest, [the support] that I'm getting is key... I mean, it's essential. So, if I was
2609 to lose any of it, that would be quite severe... if I couldn't speak to anyone about any
2610 of my questions, then it would be bad... I can talk to anyone in the team about
2611 anything as well... They're really professional and, you know, they help you on a
2612 professional level as well as a personal level. There's not a person on that team that I
2613 couldn't talk to about anything that is really helpful.

2614 The process of developing trusting relationships was particularly important at certain
2615 times. For example, when players experienced long-term injuries, the informational and
2616 emotional support provided by the sport science practitioners was deemed essential for their
2617 wellbeing. One of those affected athletes explained why the practitioners had been
2618 responsible for maintaining their wellbeing during the difficult rehabilitation period:

2619 I went for surgery, which was quite severe. I know people who have had surgeries
2620 who now can't lift their arm above ninety degrees.... I think [the support] was

2621 essential for my injury recovery, especially if I want to maintain being an elite
2622 athlete... in terms of rehabilitation, the wellbeing throughout that was pretty good, as
2623 I had been given everything [informational and emotional support] and I had zero
2624 setbacks physically or mentally.

2625 One judo athlete summed up the positive impact that the process of developing
2626 trusting relationships had on them and their wellbeing / mental health: "I don't think there's
2627 anymore that the staff could do... Like, if they did any more, they'd be wiping our arses."

2628 However, it must be noted that a one of the judo athletes still perceived that seeking support
2629 for their wellbeing and mental health concerns was an indication that they were "weak" or
2630 "not tough" due to the stigma within the society of the **macrosystem** associated with mental
2631 health. As one athlete in judo disclosed:

2632 I think if someone came up to me... and asked me about something, I'd think, 'You're
2633 testing me.' 'Are you trying to catch me out?'...If someone kept speaking to me like,
2634 'Are you... you alright? You alright? You know, you've got people to speak to.' I'd be
2635 like, 'I'm definitely not coming to you know, you think I'm a lunatic.'

2636 **5.9.1.2 Absence of Relationships with Sport Science Practitioners.** In contrast,
2637 some of the cycling athletes perceived they lacked access to sport science and medicine
2638 support, and therefore they did not have the opportunity of time or proximity to build trusting
2639 relationships with those practitioners. This was due to the location of the NGB (**i.e., the**
2640 **athlete's exosystem**), which was positioned away from the national centre (and the hub for
2641 sport science practitioners) and so, as indicated, the practitioners were not on site daily. The
2642 lack of access to the sport science and medicine practitioners and the inability to build
2643 trusting relationships with them, was perceived to be a concern for their wellbeing and / or
2644 mental health, especially as the cyclists had to actively seek support (formally request) when
2645 they needed it. One athlete highlighted this concern:

2646 I don't know what the situation is with one-to-one stuff. But I'd say it would probably
2647 be easier to go and accept the help if it was offered to you rather than to go and have
2648 to seek it out when struggling.

2649 Furthermore, an athlete perceived it would be easier to talk to the professionals if they
2650 explicitly knew they could speak to them when they had concerns:

2651 Rather than it being left up to you to go and wonder if they'd help me if I went and
2652 reached out to them... if somebody says like 'if you're struggling with this, you can
2653 come and talk to us.'... it's almost like if they offer, they want you to come and talk to

2654 them, and they want you to come and talk about your mental health... it shows that
2655 they're willing.

2656 This process was exacerbated by factors within the athlete's **exosystem**, as due to
2657 budgetary constraints, Sport Wales (the umbrella organisation) limited the number of hours
2658 offered by the sport science and medicine practitioners to the cyclists. One athlete
2659 interviewed was frustrated at only being able to access certain services for a limited number
2660 of sessions when struggling with their wellbeing and / or mental health:

2661 We had a psychologist, and I spent a bit of time seeing them, but after a while, they
2662 sort of were like, you know, you're only entitled to a certain amount of sessions...
2663 You're allowed to see a psych, but you're not allowed to get more than X amount of
2664 sessions a month...you wanted me to take advantage of all of this stuff you're
2665 offering, but you're also telling me at the same time, 'we can't offer you that much of
2666 it', so it's frustrating and impacts you.

2667 A cycling coach also recognised that the resources within the athlete's exosystem impacted
2668 the interactions with practitioners (especially the sport and clinical psychologists) and thus
2669 they were unable to provide extensive support for their athlete's wellbeing and / or mental
2670 health:

2671 The challenge is always who's eligible for support and if they can get one-to-one
2672 support, and there are not many of them. And also, the fact that the clinical psych [in
2673 the umbrella organisation] is obviously only part-time...So it is, it's very hard for
2674 them to get that type of support. And we have had a few in the last couple of years
2675 that have needed support with their mental health, and it's not really been available to
2676 them.

2677 The challenge of building trusting relationships was further compounded when there
2678 were policy changes within the Sport Wales organisation (i.e., **athlete's exosystem**) during
2679 the research / data collection period. While out of the athlete's control, such changes impacted
2680 the athletes directly and, in turn, their wellbeing and / or mental health. The change included
2681 Sport Wales moving away from supporting all the high-performance athletes to requiring the
2682 NGB's to request, and justify, access to any sport science support for their athlete. As
2683 explained by one strategic lead within Sport Wales:

2684 At the moment ...we invest our support from practitioners to sports...[where] it's
2685 highly probable that they will medal at the next Commonwealth Games. However, we
2686 are shifting to a new model...in the future, the sport will be expected to clearly

2687 articulate what it is that they want to work on, and then we will allocate practitioners
2688 in relation to that.

2689 The cycling coach perceived that this shift in policy further impacted and limited his athlete's
2690 access to one-to-one support from sport science and medicine practitioners, leading to more
2691 concerns regarding athlete wellbeing and mental health:

2692 You know, a lot of the athletes we work with, do need that one-to-one support [for
2693 their wellbeing] ... it's now moving back again to this very limited number that can get
2694 that one-to-one support...it's just generic group sessions, education, and workshops,
2695 basically. It's all about performance questions, you'll come to us [umbrella
2696 organisation] with a question, and we'll look at the resources we can put behind it. We
2697 want all these athletes to get better. They all need different things 'cause they're
2698 individuals. Make that into a question!

2699 **5.9.1.3 Relationship with Coaches.** The athletes of both cases reported that the
2700 support received from their trusting relationship with their coach was critical for protecting
2701 their wellbeing and mental health. Specifically, it was highlighted in judo that over time the
2702 relationship built, which then enabled their coach to be a source of support. In this case, their
2703 relationship with the coach particularly developed over the COVID lockdown period, due to
2704 the athlete group having more time to speak (albeit remotely) and discuss key issues and
2705 expectations with the coach. Hence, additional time, facilitated an effective and high-quality
2706 coach-athlete relationship, which was developed from a reciprocal partnership, which
2707 supported wellbeing and /or mental health for both parties. One player offered the following
2708 summary of this point:

2709 When he [the coach] was here [in the centre], he even admitted that he was a bit
2710 grumpy at times. But we've had meetings about behaviours, and I think that we've all
2711 understood that it's both of us. Both player and coach need to work on things.
2712 Speaking to him now, I think he's a lot happier, I feel like I can talk to him about
2713 stuff. He's been messaging me a lot, like, "Keep it going, you're doing really well", so
2714 yeah, I think when we go back [post-covid], it's going to be different... we'll be able
2715 to support each other.

2716 Overall, it was noted that the coach-athlete relationship among the judo players needed time
2717 to build to allow for open communication, especially for those athletes who had experienced
2718 a range of new coaches throughout their time in the sporting program:

2719 We haven't really had a stable [the same] coach, for I don't know how long. It has
2720 been hard [to become close] because we have not had a long-term coach, so we are

2721 constantly changing how the program is, the way the coaching styles are.... you need
2722 some kind of stability and routine, and we haven't had that.

2723 Nevertheless, with the current coach in post for a period of time, this had allowed the athletes
2724 to understand their coach and to become more comfortable and develop trust with each other.
2725 This complimentary relationship facilitated conversations about mental health, as one athlete
2726 described:

2727 I think now that I know him, he's a smart man and that he would be able to have a
2728 conversation about mental health. It may not be given back to you in a sense like
2729 someone else would, like the psych, but I think you would be okay to have a
2730 conversation with him about something like that, I don't see any reason why you
2731 shouldn't.

2732 Within cycling, the perceived trust from frequent interactions within the coach-athlete
2733 dyad also allowed those athletes to have autonomy over their training programme and the
2734 confidence to discuss their choices with their coaching team. As one of the athletes
2735 explained, by having autonomy and making sure they reduced their training load when
2736 needed, they were able to protect their wellbeing and mental health:

2737 Obviously, as I've gotten to know [coach] and we've kind of built a relationship of
2738 trust over the last sort of 18 months...I feel more at ease with him. I feel like I find it
2739 easier to sort of assert my ideas and what I want. I had a conversation with him and
2740 said, I appreciate that [training during lockdown]; it's like a big deal 'cause we need to
2741 be in good physical condition. But then also, if that's at the sacrifice of good mental
2742 health, I'd rather be in a worse place physically and then build on it when we come
2743 out of lockdown".

2744 Alongside building reciprocal communication and enabling athlete autonomy, the trust in the
2745 relationship allowed the cycling and judo participants to communicate openly with the coach
2746 when in need of support, who was informed enough to then refer the athletes towards
2747 appropriate professionals as needed:

2748 I think that I've got kind of that relatively open and honest relationship with XXXX
2749 [coach], which I guess is key because if you can't be honest about your situation with
2750 your coach, then there's just not really a lot of point...I might just not be feeling in the
2751 right place, then I need to be able to tell him that, so I feel like I could be open and
2752 honest with him enough that I could go to him, and then he would be able to point me
2753 in the right direction of someone to speak to.

2754 Moreover, the **person** characteristics of all coaches facilitated the interactions to be
2755 positive, creating a functional environment where their wellbeing and / or mental health were
2756 protected. For example, one athlete explained their cycling coach showed empathy towards
2757 them during key times of their competition (i.e., high training loads), which allowed them to
2758 feel confident asking for time off, away from their sport, to protect their wellbeing and/or
2759 mental health:

2760 I wasn't training effectively. The weather was rubbish, and I just kind of like a
2761 downward spiral. I was on the phone with my coach, just going like; I just want some
2762 time off. That was one of my lowest times. I think probably [speaking to my coach]
2763 made me a bit better. He basically just said we'll go for one more week of training,
2764 and then you can have a week off. And I think that was good because it was like a
2765 light at the end of the tunnel then.

2766 Accordingly, several cycling athletes perceived that having a coach who was understanding
2767 of their concerns and capable of demonstrating empathy, allowed them to feel able to disclose
2768 when experiencing distress, which protected their wellbeing. This was perceived to be aided
2769 by the coach, as they had previously performed highly at the same sport:

2770 Because he has done it [competed in cycling] he's very good at understanding and just
2771 kind of helping you not to stress out too much...so, I always feel comfortable 'cause
2772 no matter what it is, even if it seems like a massive issue, he'll just kind of make you
2773 feel like it's not that big of a deal...That impacts wellbeing positively, just because it
2774 means that there's nothing that I can't really go and speak up about. It's not like I have
2775 to keep it to myself, and it is just kind of sharing the load.

2776 **5.9.1.4 Teammates.** The interactions with participants' teammates were seen to be
2777 key for their wellbeing and / or mental health. Building trusting relationships with teammates
2778 was evidently important for athletes' wellbeing and / or mental health – and when there was
2779 no / little trust in the relationship, this led to periods of distress. This was evident for some
2780 athletes in judo who stated they feared their personal information would be discussed with
2781 others, including staff in the organisation. Thus, several athletes stated they would not
2782 disclose personal information to their teammates. This was considered to prevent the players
2783 from seeking support from their peers, which could (at times) lead to or exacerbate wellbeing
2784 and mental health concerns:

2785 They [teammates] can't be trusted. If there's something I see as important to me, I just
2786 wouldn't tell them because they will tell somebody, and it's going to piss me off. So
2787 why would I give them a reason?... If I tell somebody something, usually in

2788 confidence, I expected that to stay in confidence...It causes more problems in terms
2789 of our group functioning.

2790 As echoed by another judo athlete:

2791 You want to tell someone [about mental health concerns], but you don't want the
2792 whole team knowing, but it just does get around...I do think we should all be able to
2793 trust each other, and if one thing gets said it shouldn't go around the whole team,
2794 which is a thing that does happen...and that can upset you [and get you down].

2795 Furthermore, some of the judo athletes interviewed, due to the competitive nature of
2796 the sport and internal competition, they did not disclose information when struggling with
2797 their wellbeing – for there was concern that their teammates may use that information as an
2798 advantage when competing:

2799 I don't know, just, for myself I feel like they might use it [wellbeing concern] to their
2800 advantage, but that's just how I think. It's not like they would do it, I don't think they
2801 would, but I just feel like they'd use that as an advantage.

2802 Additionally, a small number of the judo athletes proposed that conflict in the group
2803 caused by the lack of trusting relationships with teammates and the nature of the sport caused
2804 negative affect, which led to lowered wellbeing "obviously it [the conflict] gets you down, I
2805 don't know, personally I start stressing about it and go and have a cry (laughter)". Although
2806 they had positive relationships with others within the environment, the conflict among
2807 teammates still led to lowered motivation, which was considered to increase the likelihood of
2808 poor wellbeing: "if people are arguing... it impacts everyone, even if it's just two people
2809 arguing, it impacts everyone... you're tired, and there's just like no motivation to be there
2810 really." Within cycling, it was perceived that during the majority of the year / competition
2811 cycle, the athletes interviewed recognised their teammates as an important source of social
2812 support, particularly for **persons** who were of a young age:

2813 I'm one of the youngest in the squad, so I will get advice and wisdom from the older
2814 riders. That was really helpful for my wellbeing... It's really handy to have them in the
2815 atmosphere... especially if you are going through difficult times.

2816 Another cycling athlete reinforced that the relationships built with their teammates enabled
2817 them to receive social support, which was an important source of protection for their
2818 wellbeing and/or mental health, especially when their family was not available:

2819 I know if the family weren't home or something like that and I needed someone, I
2820 know that one of the team would always help and will have something good to say,

2821 and you'd always, always be in good spirits after having a chat with at least one of
2822 them.

2823 Furthermore, some of the cycling athletes identified that they could speak about
2824 performance and personal concerns to their teammates due to their shared experiences. That
2825 is, the ability to understand each other within their contexts alleviated their apprehensions
2826 and enhanced their wellbeing:

2827 I'm quite close to a few of the team, so I can happily talk to them about most things.
2828 Most of the time it's, literally, just getting it off your chest, and even someone saying,
2829 "Oh, yeah, I have that, as well", you just feel better then. I guess that's it, really. Yeah,
2830 you just feel a bit less tense, a bit more relaxed, a bit more smiley. It's good.

2831 Moreover, sharing experiences at times of their career, such as during the COVID-19
2832 restrictions, evolved the trusting relationship further. That is, the participants perceived they
2833 felt they were not isolated when experiencing unexpected situations and could share their
2834 feelings with each other:

2835 I was like having a chat with my teammate a couple of weeks ago about like how they
2836 felt in lockdown, and they were very much like stressing because it seems like
2837 everyone else is just cracking on with things, and I'm here like really struggling with
2838 what I'm doing, and I was like "I feel the same as you" so actually I'm not by myself
2839 thinking about this.

2840 However, there were key periods of **meso-time** when some athletes reported they
2841 would experience difficulties in their relationships with teammates. Namely, when there was
2842 competition among teammates for selection to attend tournaments / events, which in turn,
2843 was perceived to affect the participants' wellbeing and / or mental health negatively, as it led
2844 to the athletes being reluctant to disclose their concerns. Furthermore, the individual
2845 characteristics of the participant's **person** (e.g., athletes who are more reluctant to seek help),
2846 perceived that competing with their teammates for a place on the performance team led to an
2847 unwillingness to speak openly to their peers, for fear of their problems being used against
2848 them as a competitive edge:

2849 I'm really close to a lot of the people on the team, but I probably wouldn't talk to them
2850 about that stuff [wellbeing and mental health concerns]. If I say to one of them about
2851 how I'm feeling, it's like they're the people I need to displace to get a place in the
2852 team. They know that; I know that, so you know, it's like as much as they want to
2853 help, they're in a situation where they need to sort out their space [on the team] as
2854 well.

2855 Overall, and in summary, the process of building a trusting relationship and,
2856 therefore, the social support received from their sport science and medicine practitioners,
2857 coaches, and teammates were perceived to be critical for the athletes' wellbeing and / or
2858 mental health.

2859 *5.9.2 Negative Perceptions of Self*

2860 It was reported by some of the athletes within the study / cases had begun to develop
2861 negative perceptions of self, which included body image and weight concerns. This process
2862 was facilitated from the athletes' interactions within their environment (i.e., physical setting)
2863 and exposure to certain “beliefs” within their sports (i.e., macrolevel). For example, the belief
2864 of needing to be lean for their sport, the need to manage weight, and the need to compare
2865 their selves to others. Accordingly, due to the interactions within the culture of judo, which
2866 included weight management reminder posters for competition, some of the athletes saw
2867 weight management as a risk to their mental health, "I guess the other one that I worry about
2868 a lot and...a demand on my mental health, it's probably like weight." Some of the cycling
2869 athletes' negative perceptions of body image and weight were suggested to be a major reason
2870 for episodes poor mental health, "I think one obviously big topic in our sport is sort of like
2871 body image and like how lean or how light you are." An athlete's concerns regarding
2872 increased feelings of guilt for overeating due to their negative body image, was captured in
2873 their daily diary:

2874 Today's negative stuff, and sometimes this is after usually after a big day, my appetite
2875 hits me...I kind of feel guilty for eating so much. I am not the most confident in my
2876 body image, and I think sometimes if you eat quite a lot and you have not done
2877 much riding you think 'argh' this is going to affect me really badly and I am going to
2878 put on weight and stuff.

2879 Furthermore, the process of developing negative perceptions of self was affected by
2880 **time**, which included the larger time scale (i.e., macrotime) COVID-19. During the
2881 restrictions, the sport of cycling began to implement virtual races (i.e., on the platform Zwift)
2882 for national and international races, such as the Tour de France. Throughout this period,
2883 negative perceptions regarding weight became more apparent for some athletes. One athlete
2884 perceived the virtual races aggravated their negative perceptions of their weight, thereby
2885 worsening their mental health. Specifically, the ability to directly compare the cyclists'
2886 weight on the Zwift platform, drove these negative thoughts to their competitors:

2887 Since lockdown happened, obviously, everybody's racing virtually on Zwift...and it's
2888 very much looking at watts per kilo, and I'm not heavy by any stretch of the

2889 imagination but I'm quite tall, which means I'm naturally heavier than other people
2890 would be and it's all like, oh well I can't do six watts per kilo, so should I lose weight
2891 and things. Like very much a comparison thing to others as well.

2892 Similarly, another rider found displaying their weight to others on this platform, led to pre-
2893 occupation and comparisons of weight to others, leading to lowered wellbeing:

2894 With the current quarantine and lockdown, we are doing a lot of the virtual racing. I
2895 am looking a lot more at my weight than I was before...I am comparing myself to
2896 others... In one of the races, I was trying to match my teammate and get better than
2897 him...I want to get myself as light as I can, my watts by kilo a little bit higher. So that
2898 would be a negative pressure...as you're watching that weight... I've just looked at it
2899 more and more.

2900 However, when the environment used technology (e.g., wellbeing and performance
2901 monitoring apps) in a positive and safe manner the athletes felt more self-aware, which
2902 enabled them to manage their wellbeing positively:

2903 My team have an app and you have to do one in the morning and then one in the
2904 night...it asks what time you went to sleep and the quality of your sleep, how fatigued
2905 you feel, how motivated you feel. From a wellbeing perspective, I've definitely
2906 noticed that things like, you know, if I went to bed at like 1am and I got up at 8, like I
2907 don't feel very motivated to train that day because I've not had enough sleep...I
2908 definitely feel like everything's gone to plan in terms of like, I've got up, done my
2909 training I've had a good diet, I've, you know, drunk enough water, I've slept well,
2910 I've recovered, I'd definitely finish that day feeling a lot better than If I'd had a
2911 rubbish training session, if I've had a shit diet and ate pizza instead.

2912 The preoccupation of weight was also present within judo. In particular, there were
2913 specific times during the competition cycle when there was a need to cut weight to qualify for
2914 a weight classification, leading to a number of athletes becoming anxious and pre-occupied
2915 with food leading up to performances. In turn, this was often considered to impact their
2916 wellbeing negatively:

2917 I think, for us, and the sport that we do, general weight management is a
2918 problem...and that can get stressful for anyone. I still do cut weight, but usually then
2919 that makes travel more miserable. I like to prep, but that [weight cutting] puts
2920 demands on everything. Like it stresses everything. If you were to ever have a
2921 relationship and they were like, you want to go out for food", you're like "I can't
2922 because I've got to cut weight. "...it can get you down.

2923 This preoccupation for one judo player would lead to confrontations with family members, a
2924 refusal to eat, and ultimately a detrimental effect on wellbeing and / or mental health, and
2925 their performance:

2926 I would absolutely just starve myself and call my gran, and it was like, 'Have you got
2927 food?' and I was like, 'No, I'm not eating'. She'd be like, 'No, you need to eat
2928 something'...I'd refuse to eat and it caused problems in the end, they'd be saying
2929 you've got to eat and I'd be like, 'I can't', it wasn't good for me at all...I failed
2930 weight... I just, I don't know, I think I just left then. I was just like, 'I can't be
2931 bothered.

2932 However, it must be noted when managed well, and athletes were advised and
2933 supported to move weight categories, they can benefit from managing their weight, which
2934 ultimately impacted their wellbeing and mental health positively:

2935 I've found moving up so much easier...I think I've got my weight over now, because I
2936 much prefer being over than under, 100%. I feel I can lose that weight easily, so it's
2937 good... I feel much better...When I'm going to competition, I don't have to worry
2938 about what I'm eating, I can just relax and just worry about the fight and going on...
2939 so it's good, much better.

2940 ***5.9.3 Attitudinal Changes Towards Wellbeing and Mental Health***

2941 Within both NGBs, athletes experienced critical incidents which had impacted their
2942 attitudes towards wellbeing and mental health and their ability to develop their personal
2943 resources. Some athletes perceived there was a culture of mental toughness in the two sports
2944 (especially for males), which had led to a lack of disclosure of mental health concerns, as one
2945 male cyclist expressed:

2946 I think there's a lot of people that probably have a lot more underlying mental health
2947 obviously that they hide I think...I think like a lot of people suffer without saying
2948 anything just to prove the fact that they're strong enough to get on with it and
2949 everything, so. You can't show weakness, yes like you just sort of, and you get like
2950 exploited for it I think, so, you know.

2951 However, within cycling, vicarious experience of mental ill-health (e.g., eating
2952 disorders) allowed some of the athletes to become more comfortable being open and honest
2953 about their concerns:

2954 I think I saw my teammate go through problems, and now I'm a lot more open to it
2955 like. It isn't just toughness you know, like anyone can have a problem and I think you

2956 have to all be a unit together and realize when someone's just having a bad day...feel
2957 comfortable to like to cry in front of your mates or whatever...it makes such a bond
2958 between you...I think definitely now that we're all at that level, you know, I think I'm
2959 not at that level with everybody in there, but definitely, a fair few of them that are
2960 like, you know, I feel happy to just break down to and it would be fine...I think it is
2961 nice you can do that instead of having to you know, pretending everything is okay.

2962 Similarly, a small number of the cyclists had witnessed a teammate experience a mental ill-
2963 health episode. In turn, this had improved their understanding and increased their willingness
2964 to discuss mental health and seek support, which facilitated the maintenance and protection
2965 of some of the athlete's wellbeing and mental health:

2966 I would say its [mental health] discussed between us now after having seen it
2967 [teammate's poor mental health] and everything...an athlete was on this program last
2968 year, and I was really really close to him, I see him on a daily basis really and I think
2969 like I saw him go through that and now I'm a lot more open to it like...like anyone
2970 can have a problem.

2971 A tragic incident, in which the head coach of the judo died by suicide, acted as a
2972 powerful catalyst for the process of attitudinal change within that NGB and instigated mental
2973 health to be spoken about more among the group:

2974 I think it's [mental health] definitely... spoken about more. I think if it didn't happen
2975 [coach suicide], I don't think it would be spoken about as much. But in that sense, we
2976 opened up a bit more, and we've spoken about it [mental health] quite a bit, and we
2977 feel comfortable, so that's quite good.

2978 Hence, as a result of this shift in attitude, more of the athletes felt increasing comfortable
2979 discussing mental health and seeking support if required; thereby protecting their mental
2980 health:

2981 [Mental health] is ...a lot more open and acceptable. Mental health is a really big
2982 thing that people are talking about. So people are more accepting of it, so I am more
2983 comfortable talking about it and more open to seeking help...that helps when you are
2984 struggling.

2985 It must also be noted that positive attitudinal changes in the wider **macro** culture of
2986 society also made athletes perceive it was more acceptable to disclose concerns, which
2987 increased some judo players' confidence to speak more openly about mental health within the
2988 performance setting:

2989 I think it is good to get the conversation going about those things [mental health
2990 concerns]. There's a lot of stigma, that it's weak or whatever, or it's like cringey or, as
2991 some people would say, it's like not masculine or 'gay'. I think it's getting much better
2992 in society now, so I think there's no reason why we can't do that in sport... I do think
2993 it's getting better... I think that it's important that we move away from that mentality
2994 for sure, because it will save a lot of people.

2995 *5.9.4 The Expansion of a Resource Pool*

2996 The interviewed athletes developed a several resource strategies to aid with the range
2997 of processes they experience throughout their lifespan. The protection of the athlete's
2998 wellbeing and / or mental health was more likely to happen due to the **person** having
2999 sufficient skills and resources, which included developing their own identity away from sport
3000 and effective coping strategies. As one athlete described:

3001 I think it's really important as a person and wellbeing to not cut off from society and
3002 be an athlete only person. It's easy to just train and just do that, but it will catch up
3003 with you when you start to miss things or you need a break from judo, because you
3004 will not a hundred percent have a good time constantly, it's impossible. Everyone has
3005 a bad day and I think that's why they do encourage people to go to uni to give you
3006 that break. If you have a bad day, okay, I'm done with that now, let's go to uni and
3007 only think about uni instead of judo, 'I had a rubbish session this morning, okay, let's
3008 cut that out, block it out, go to uni because I've got to do it'.

3009 Additionally, one athlete expressed that individuals learn from their experiences in sport,
3010 which enables them to develop their own skills and strategies as they become more emotional
3011 intelligent:

3012 Emotional maturity and emotional intelligence... so being able to recognise how you
3013 feel, to develop their own personal and growth to recognise I feel sad today, I'm
3014 depressed or I'm not okay today but it's not that bad... then [you are able] to seek
3015 support.

3016 Furthermore, the skills, knowledge, and experience of a cyclist enabled the individual to
3017 engage in effective strategies to deal with negative perceptions of self, including writing
3018 down irrational emotions and thoughts.

3019 I would actually write down when I thought my chimp was coming and when I'd get
3020 really irrational [thoughts]...a lot of it was like mainly over like the cycling
3021 perspective...like the confidence of like I'm not good enough or this person's better
3022 than me...writing all that down, it kind of does help wellbeing...because it kind of

3023 like makes you rationalize it or I can look at it at a later point and rationalize it which
3024 sometimes you can't do when you're in that moment.

3025 Within both cases, the athletes had developed some coping strategies which supported
3026 their wellbeing and mental health. Some judo players proactively organised and planned their
3027 time during their training days/weeks to ensure their lives were highly structured. This
3028 approach was considered to support their wellbeing considerably by affording a sense of
3029 control, order, and purpose, and then, in turn, satisfaction once the planned activities were
3030 completed:

3031 I'd say for me - to have good wellbeing it is massively [about] a routine. I don't like
3032 randomness, going into a day with no plans. I like structure in order for me to feel
3033 satisfied and good. "Yeah, okay, done this, brill. What are we doing now?", a lot of
3034 time management. If I don't set a plan, I'll probably just sit unless I'm forced to do
3035 something... So, personally, plain and simple, for me to have good wellbeing, it's
3036 structure, organisation, and planning.

3037 This was also evident in cycling, where many athletes created a structure to their day.
3038 This sense of control over their day also led to them achieving targets, which elicited a sense
3039 of mastery / productivity, leading to the positive affect:

3040 I quite like having like a structure to stick to. And if I feel like I've been
3041 really productive, then I'll often be in a good mood. So, I like to set out a list of
3042 things to do, and I get them all done I'll be like mega, that's good.

3043 In both cases, several athletes employed distractions / escapism strategies at times to
3044 maintain their wellbeing and/or mental health. These strategies, which included engaging
3045 with hobbies and physical activity, enabled time away from the demands of their sport. It was
3046 proposed that by doing so, they increased their capacity to manage personal and sporting
3047 stressors at a later date:

3048 I have quite a few hobbies...I play games, so obviously Xbox and things which I like
3049 to do. I love cycling, I have a proper road bike... cycling, especially around this area,
3050 you've got such beautiful views and things where you can just...cut off from the
3051 demands and the stress and everything, you can just go up and ride and you don't
3052 think of anything apart from what you're doing right there and then.

3053 Similarly, another athlete explained to manage their wellbeing, they distracted themselves
3054 from the stressors by walking:

3055 I feel like when I'm inside thinking, it stresses me out more. So, you can just walk and
3056 like I've got park [near me], so I just walk around that and then put my headphones in
3057 and just chill for a bit.

3058 **5.10 Discussion**

3059 The current study, theoretically underpinned by the bioecological model
3060 (Bronfenbrenner 1995; Bronfenbrenner & Morris, 2006), aimed to explore the processes
3061 perceived to affect the wellbeing and mental health of elite athletes. The key results indicated
3062 that the development of trusting relationships, negative perceptions of self, attitudinal
3063 changes towards wellbeing and mental health, and the expansion of a resource pool affect
3064 athletes' wellbeing and mental health positively and negatively. Importantly, the processes
3065 were impacted by the person, context, and time. That is, the influence of the processes on
3066 athletes' wellbeing and mental health was dependent on the characteristics of the person
3067 (themselves and others), their environment, and the time it is occurring. For example, the
3068 development of trusting relationships with teammates was positive for the majority of the
3069 competition cycle. However, during the team selection periods, the relationship was
3070 negatively affected, which led to negative consequences for the athlete's wellbeing and / or
3071 mental health.

3072 Aligned with previous research (e.g., Kuettel & Larsen, 2020, Rice et al., 2016), the
3073 processes reflected some of the factors that are perceived to impact elite athletes' wellbeing
3074 and mental health, such as supportive relationships, body image concerns, mental health
3075 stigma, coping resources. Previous research within this area has focused on the risk and
3076 protective factors of wellbeing and mental health across different populations (e.g., Hill et al.,
3077 2021; Kuettel & Larsen, 2020; Pankow et al., 2021). However, the current study shows that a
3078 standalone risk or protective factor may not tell the whole story, and there is a need to
3079 understand the complexity and interaction (between person and environment) of each
3080 process.

3081 One such process was the development of trusting relationships. It was evident that
3082 developing trusting relationships with sport science practitioners, coaches, and teammates
3083 was crucial for athlete wellbeing and mental health, for they engendered social support (e.g.,
3084 DeFreese & Smith, 2014). The findings indicated a need for frequent reciprocal interactions
3085 with sources of support for athletes to perceive the relationship protects their wellbeing and
3086 mental health. To date, little research has focused on the influence of the athlete-sport science
3087 practitioner dyad and its impact, although it has shown that it can be positive for athlete

3088 wellbeing (Sauvé et al., 2022). The practitioners are therefore a critical part of the athlete
3089 ecology and part of the system that is important for supporting athlete wellbeing and mental
3090 health (Wagstaff & Quartiroli, 2023). As such, it may be advantageous for NGBs to employ a
3091 systems-led approach that enables a range of stakeholders to contribute to the protection and
3092 maintenance of athletes' wellbeing and mental health. This would enable stakeholder to build
3093 a mentally health environment and organisation (Maher, 2022; Wagstaff & Quartitoli, 2023).

3094 The collective case study explored comparisons between both NGBs, and it
3095 highlighted that frequent interactions with their practitioners were a central tenet of building a
3096 trusting relationship, thus protecting the athlete's wellbeing and mental health. The time spent
3097 with their practitioners was possible due to the proximity of each sport. That is, cycling was
3098 based away from the main centre that housed judo and the practitioners, and as such the
3099 cyclists perceived they had an absence of a relationship. Whereas the proximity of judo and
3100 the amount of time spent with their practitioners removed the concept of "us and them," and
3101 created an environment where they could develop trusting relationships. This finding is not
3102 surprising, as frequent interactions are necessary within a relationship to lead to competent
3103 functioning (Bronfenbrenner, 1995; Bronfenbrenner & Morris, 2006). Furthermore, in terms
3104 of practitioners, a notable relationship in the protection of athlete wellbeing and mental health
3105 was the sport psychologist-athlete dyad, which was attributed to confidentiality. The current
3106 study extends previous research that has emphasised that an open and genuine relationship
3107 with a sport psychologist, which upholds confidentiality is critical to creating a safe space for
3108 athletes to seek support and develop appropriate skills (Tod et al., 2022).

3109 Another key relationship was between the coach and the athlete. The findings
3110 highlighted that a positively impactful relationship develops with time, and consists of trust,
3111 understanding, empathy, and is complementary. The coach-athlete relationship has been
3112 widely researched and has shown to be critical to athlete wellbeing (e.g., Simons & Brid,
3113 2022). Within cycling, the coach's characteristics were important in developing trust, such as
3114 showing compassion and competence. Previous research has shown that antecedents,
3115 including benevolence and competence, can lead to consequences comprising willingness to
3116 cooperate, perceived performance, and commitment to the leader (Zhang & Chelladurai,
3117 2013). On the other hand, the judo coach initially exhibited not being approachable to the
3118 athletes. However, the judo athletes had experienced a high turnover of coaches (i.e.,
3119 exosystem influences), so they needed time to build a relationship with the coach, to get to
3120 know him. Once the influence of time had impacted the relationship, the athletes perceived
3121 the coach was trustworthy and supportive (i.e., showing compassion), which ultimately

3122 positively impacted their wellbeing and mental health. The current research indicates that the
3123 antecedents (i.e., benevolence and competence; Zhang & Chelladurai, 2013) can also lead to
3124 the protection of wellbeing and mental health, and as such, future research may focus on
3125 specific person characteristics of coaches and their impact on athlete wellbeing and mental
3126 health.

3127 As seen with the judo athlete-coach relationship dyad, the current study highlighted
3128 that time was a crucial factor in developing the relationship and eliciting the emotional
3129 support needed to protect wellbeing and mental health. Therefore, the current study supports
3130 previous research that indicates that the coach-athlete relationship evolves and matures over
3131 time. The relationship has been shown to develop from a dyad where a coach provides
3132 instructions to a more personal-based relationship (e.g., interpersonal emotion regulation)
3133 (Philippe et al., 2011). As such, the current research indicates allowing the dyad time to
3134 develop into a personal-based relationship that can positively affect wellbeing and mental
3135 health of athletes. Moreover, the relationship required quality reciprocal interactions between
3136 athlete and coach means that new members of a squad may be vulnerable to lowered
3137 wellbeing and / or mental health symptoms, as they may have limited interactions and lack
3138 the supportive dyad needed to experience positive mental health (Pankow et al., 2020). Thus,
3139 additional resources are needed for athletes who are newly transitioned onto a performance
3140 programme or within an environment. Furthermore, it may be a priority of a sport
3141 psychologist to ensure a new athlete can spend time with their coach to accelerate the process
3142 of developing the supportive dyad.

3143 Of note, the findings highlighted that in some instances, there was a reciprocal
3144 partnership, with the coach and athlete supporting each other. The findings further reinforce
3145 previous work (e.g., Jowett, 2017; Jowett et al., 2010, Jowett & Shanmugam, 2016;
3146 Poczwardski et al., 2006) which proposes that the coach and athlete are mutually
3147 independent, meaning that behaviour and feelings of one can affect the other (Jowett, 2017),
3148 which can encourage high levels of wellbeing for both parties (Jowett & Poczwardski, 2007).
3149 The closeness, commitment, complementary, and co-orientation were apparent across many
3150 relationships within the current study, ensuring they were of high- quality, and meaning both
3151 members experienced higher satisfaction and wellbeing.

3152 Away from the coach-athlete dyad, the presence / absence of trusting relationships
3153 with teammates was seen as a process that could positively and negatively impact athlete
3154 wellbeing and mental health. Athletes in the current study, across both NGBs, were seen to
3155 have positive relationships with their teammates, which led to receiving emotional support,

3156 which helped maintain wellbeing. However, the relationships were affected negatively during
3157 specific periods of the performance cycle, when there was an opportunity for team selection.
3158 Furthermore, it was perceived that a lack of trust affected the relationship between
3159 teammates, which negatively impacted on wellbeing. The findings further support the
3160 literature, which has found trust is difficult to build when the athletes are naturally within a
3161 competitive world, and when they may be progressing within the group to be selected within
3162 a squad (Vealey, 2017).

3163 As such, there is a need to ensure athletes have other strands of social support and
3164 minimise conflict when it does arise. Accordingly, there is a need to aid athletes to employ
3165 these strategies when conflict may arise including improving awareness of each members
3166 behaviour and personality, regulating emotions of athletes, self-reflection with the squad
3167 (Wachsmuth et al., 2022), and enable the players to be accountable for the team culture
3168 (Vealey, 2017). Moreover, there is a need during meso-time periods (e.g., team selection) for
3169 practitioners, and in particular, sport psychologists to spend more time with athletes to utilise
3170 their resources. This is particularly important as athletes can face a number of normative
3171 transitions (e.g., transition for junior-to-senior and entry to a high-performance setting) and
3172 non-normative transitions (e.g., injury and deselection) (Stambulova et al., 2009; Wylleman
3173 et al., 2004). In particular, the current study mirrors the transition literature, in which if
3174 athletes do not have the resources to meet the demands of the transitional period, then they
3175 may experience an unsuccessful transition (Stambulova et al., 2009) and can experience
3176 fluctuations in their mental health (see Morris et al., 2023). Consequently, supporting athletes
3177 throughout transitions (both normative and non-normative) and understanding the gaps
3178 within their resources (Morris et al., 2023) would enable them to maintain their wellbeing
3179 and mental health.

3180 Across both cases, the sporting context led to the athletes perceived body image and
3181 weight concerns affecting their wellbeing and mental health. Within judo, weight cutting was
3182 one of the main concerns, which is not surprising as it has been cited elsewhere, as a
3183 problematic process for athletes, including expediting physical-ill health (see Thomas et al.,
3184 2021). Moreover, as seen in previous research, body image concerns are a significant factor
3185 that can affect wellbeing and mental health, with eating disorders being a reoccurring factor
3186 of elite athletes' mental health (e.g., Gulliver et al., 2015; Reardon et al., 2019), and in
3187 particular, has been seen to be worsened for some athletes in COVID-19 (Buckley et al.,
3188 2021). Across cycling, their negative perceptions of body image and weight concerns may be
3189 explained through the perceived and accepted norms of athlete body image (Sundgot-Borgen

3190 & Torstveit, 2010). However, a unique finding, due to the study being completed at the major
3191 time period (i.e., the height of the first UK pandemic lockdown), was the negative impact of
3192 virtual platforms within cycling, which encouraged body weight comparisons. As such, the
3193 context of a high-performance sporting environment, influenced the switch to the racing
3194 platform to allow their athletes to compete at a high-level whilst in the lockdown period,
3195 ultimately influencing the pre-occupation of body image and weight concerns. The platform
3196 enabled elite athletes to compete in realistic and serious competitions (Westmattmann et al.,
3197 2021), though the weight comparison to other elite athletes led to poor body image and a pre-
3198 occupation with their weight in some of the cyclists (see Buckley et al., 2021; Hardie et al.,
3199 2022)

3200 The broader research has continued to show that body image and weight concerns can
3201 damage athletes' wellbeing and mental health (e.g., Bartland-Sanda & Sundgot-Borgen, 2012;
3202 Buckley et al., 2021; Sundgot-Borgen & Torstveit, 2004). However, the current study has
3203 highlighted that the new popular platform can increase the risk. Therefore, NGBs and
3204 practitioners alike need to be aware of limiting weight comparison while utilising virtual
3205 racing. Alongside this, nutrition and body image education should be prominent, and sporting
3206 organisations (supported by practitioners and coaches) should monitor for any body image
3207 concerns, within a safe space for athletes (Hardie et al., 2022).

3208 Finally, across the results for both NGBs, athletes experienced critical incidents which
3209 affected their understanding and attitudes toward wellbeing and mental health, which
3210 coincided with the perception of mental health stigma across the wider culture and society
3211 (i.e., macrosystem). The data highlighted that some of the athletes perceived that mental
3212 health stigma is still prominent in sport. This was particularly prevalent for males (i.e., person
3213 characteristics) and can be worsened when there are team selection periods (i.e., time), as
3214 they do not want to disclose due to fear of deselection, which solidifies the view of stigma in
3215 the literature (e.g., Bauman, 2016; Gucciardi et al., 2017; Poucher et al., 2021). Moreover,
3216 the critical incidents included the death by suicide of a coach and athletes seeing their
3217 teammate struggle with an eating disorder. These experiences made the athletes more aware
3218 of their mental health, which increasingly led to a positive attitude change. The internal shift
3219 in culture may be explained by how exposure to suicide can make people aware that suicide
3220 is real and can happen to those around them (Miklin et al., 2019). Therefore, the athletes
3221 appeared to become more willing to engage in conversations about mental health due to their
3222 experiences. However, there remains a need to create an internal shift for organisations
3223 before tragic incidents occur. Thus, organisations' priority must be to create an environment

3224 that can break down stigma and barriers for athletes (e.g., lack of mental health literacy,
3225 negative attitudes towards help-seeking, and time constraints; Castaldelli-Maia et al., 2019).
3226 This may include providing mental health literacy training, allowing for everyone in the
3227 environment to improve their awareness of wellbeing and mental health, and reducing the
3228 stigma. Furthermore, to alleviate the barrier of time constraints, resources to support
3229 wellbeing and mental health concerns need to be readily available and sustainable.

3230 To alleviate the negative consequences of processes athletes experience, several
3231 participants had organically developed and expanded a resource pool to ensure they could
3232 protect and maintain their wellbeing and mental health. As such, the current findings extend
3233 previous studies that have explored athlete coping resources (e.g., Cumming et al., 2012;
3234 Lequizamo et al., 2021; Pankow et al., 2021). In particular, it was apparent that individuals
3235 developed skills as they emotionally matured (e.g., Cumming et al., 2012), as they
3236 understood what resources they needed to employ to manage their wellbeing and / or mental
3237 health. Consequently, there is a constant need to ensure athletes are developing and
3238 expanding their resource pool to match the demanding processes they encounter. However,
3239 the results presented within the study have highlighted that the skills and knowledge of an
3240 athlete only is insufficient in protecting their wellbeing and mental health. There is a need to
3241 ensure they have the opportunity to develop trusting relationships and are within an
3242 environment that has open communication on the topic of wellbeing and mental health.

3243 **5.12 Applied Implications**

3244 The research highlighted that relationships with significant others including, sport
3245 science practitioners, coaches, and teammates can be a critical protective factor of athlete
3246 wellbeing and mental health. Therefore, it is beneficial for organisations to utilise a system-
3247 led approach, which enables the range of stakeholders to foster wellbeing and mental health
3248 (e.g., Maher, 2022; Wagstaff & Quartiroli, 2023). That is, a system-approach allows for an
3249 understanding of the interactions between the individual, team, and organisational levels and
3250 highlights the importance of having a range of stakeholders as part of the process to a foster
3251 mentally healthy environment (Maher, 2022; Wagstaff & Quartiroli, 2023). To upskill all
3252 stakeholders, it is beneficial to offer regular and ongoing mental health literacy training,
3253 which is developed and delivered taking into account cultural factors of the organisation, for
3254 athletes, coaches, and sport science practitioners, to improve awareness of low wellbeing and
3255 poor mental health, address stigma, and remove barriers to help-seeking behaviour
3256 (Gorczynski et al., 2021). Leading with a system-led approach may allow athletes to spend

3257 sufficient time with a range of stakeholders to develop trusting relationships. One example
3258 may be the organisation to employ mental health contributor meetings, which Maher (2002)
3259 augured enables stakeholders to recognise their role within the environment to support
3260 athletes' wellbeing and mental health. These meetings would empower practitioners and
3261 coaches to work together to review how they are all contributing and collaborating to foster
3262 wellbeing and mental health within their environment (Maher, 2022).

3263 Negative perceptions of self were detrimental for athlete wellbeing and mental health.
3264 In particular, the results emphasised how preoccupation of body weight and body image
3265 concerns can lead to athletes experiencing distress, which the culture of sport can impact. As
3266 a result, NGBs should offer targeted multidisciplinary provision that includes nutrition and
3267 psychology education to support athletes who experience body image and weight concerns.
3268 Any athlete with indicators of body image disturbance should be encouraged to seek support
3269 from a clinical sport psychologist.

3270 Moreover, the data suggested that mental health stigma could adversely impact male
3271 athletes' wellbeing and mental health. Therefore, organisations and practitioners must
3272 continue breaking down the stigma still evident within the sport. This may include openly
3273 discussing mental health within the environment, which may be aided by using resources like
3274 the podcasts and infographics discussed within the intervention. For example, organisations
3275 may refer athletes to context-specific resources, which is followed up with a group session to
3276 discuss the resource's content. This may allow athletes to feel more comfortable discussing
3277 mental health in sport if they see the whole environment involved in the conversations.
3278 Furthermore, mental health stigma can influence athletes seeking support at key times of the
3279 competition cycle (e.g., selection periods). Thus, it is vital for NGBs to recognize key times
3280 when their athletes may become more vulnerable to mental health symptoms across all these
3281 recommendations. These critical times may include selection, junior-to-senior transitions,
3282 athletes moving away from home, and injury. Additionally, the person's resource pool plays
3283 an important role in protecting athlete wellbeing and mental health. That is, ensure athletes
3284 have appropriate access to a sport psychologist to develop coping strategies to protect their
3285 wellbeing and mental health.

3286 The research has emphasised there are complex and interrelated processes and, as
3287 such, there is a need to target multi-layered factors that affect athletes' wellbeing and mental
3288 health. Previous research has suggested (see Purcell et al., 2019), using ecological
3289 frameworks to implement wellbeing and mental health interventions is crucial because there
3290 are a range of factors / process that occur at different levels. As such, it would be

3291 advantageous to create a multi-level intervention that can target the athlete and the
3292 individuals within their environment, and the organisational procedures and processes, which
3293 may nourish or malnourish wellbeing and mental health (Henriksen et al., 2020).

3294 **5.13 Limitations and Future Directions**

3295 Although the implications and points made in the current study have been reached
3296 from a collective case study, it must be noted that both NGBs were within the same country
3297 comprising a homogenous sample. Therefore, using the bioecological model to explore
3298 wellbeing and mental health across countries and cultures would be highly beneficial. The
3299 strength of the bioecological model is that it allows the researcher to understand how the
3300 person, context, and time may impact the processes and interactions. As such future research
3301 should focus on cultural and sport diversity.

3302 Moreover, the development of trusting relationships with sport science practitioners
3303 was a prominent finding within the current research. Although the research explored the
3304 practitioner's perspective on the relationship, their view was limited within the study due to
3305 the athletes' voices being prominent within the data. As such, future research should explore
3306 sport science practitioners' perspective of the relationship and their understanding of the
3307 influence they bring into the dyad. Furthermore, an area for future research may explore how
3308 each relationship within the results may interact and affect the other relationships. For
3309 example, suppose athletes have a good relationship with others in the environment (i.e., sport
3310 science practitioners and coaches). In that case, these interactions may minimise the impact
3311 of conflict when experienced in a teammate relationship. This, in turn, may ultimately protect
3312 the athletes of wellbeing and mental health. As such, it may be advantageous to explore the
3313 interactions between the range of relationships found in the current study.

3314 A major strength of the research was that I could become embedded within the NGBs
3315 and use multiple methods to explore processes among the sample across both cases.
3316 Furthermore, although the sample can be considered small across the two cases, the sample is
3317 information rich as it was a high proportion of each environment (i.e., only one athlete did
3318 not consent to observational data). Moreover, of note, one athlete in judo and six in cycling
3319 did not complete the interviews or self-report diaries. Therefore, future research may need to
3320 consider ways of engaging and maintaining engagement with participants within a
3321 longitudinal study.

3322 Furthermore, the COVID-19 pandemic could not be ignored in the limitations. The
3323 mass social isolation affected the data collection, particularly the observational data and the

3324 ability to stay embedded to keep athletes engaged. As such, although I was able to maintain
3325 relationships through hard work, there were times I was not able to uphold engagement due
3326 to the time-pressures of completing research. Thus, future work using embedded researchers
3327 needs to consider ways of maintaining engagement in a field that is time-pressured, which
3328 may include developing meaningful relationships virtually when not able to engage in person.

3329 **5.14 Conclusion**

3330 The study aimed to explore processes that affect athletes' wellbeing and mental health
3331 through a bioecological lens. The data highlighted that the development of trusting
3332 relationships, negative perceptions of self, attitudinal changes towards wellbeing and mental
3333 health, and expansion of a resource pool were processes that were perceived to affect
3334 athletes' wellbeing and mental health. Employing a bioecological lens emphasised how these
3335 processes are influenced by the characteristics of the developing (person), their
3336 environmental context, and the time periods in which the processes occur. For example, the
3337 development of trusting relationships with sport science practitioners are influenced by their
3338 sporting environment policies and procedures (i.e., the hours allocated the practitioner is
3339 allocated to the sport). Moreover, the relationship was influenced by the time they were able
3340 to spend with their practitioners to experience reciprocal interactions, which enabled them to
3341 develop a trusting relationship and receive the associated social support. If an athlete was
3342 open to seeking support and could spend sufficient time with their practitioners, their
3343 wellbeing and mental health were positively impacted. Consequently, there is a need for
3344 interventions that aim to protect / enhance athletes' wellbeing and mental health to be multi-
3345 level. That is, interventions need to consider the individual athletes, the environment (i.e.,
3346 others within the environment and the contexts policies), and time.

3347 **Chapter Six: A Multi-Level Intervention to Enhance the Wellbeing and Mental Health**
3348 **of Athletes**

3349 **6.1 Introduction**

3350 Discussions regarding the importance of athlete wellbeing and mental health are
3351 becoming more prominent, especially with the recent disclosures from prominent athletes
3352 (e.g., Simone Biles, Ben Stokes and Naomi Osaka) regarding their mental ill-health (Keal et
3353 al., 2022; Walker et al., 2022). Such discussions in traditional media have been matched with
3354 increased interest within academic literature. The literature has indicated that various factors
3355 can affect athletes' wellbeing and mental health positively and negatively (see Rice et al.,
3356 2016). Athletes may become vulnerable to poor wellbeing due to a range of unique stressors
3357 they face in their career, including injury (e.g., Gouttebarga et al., 2017; Rice et al., 2016),
3358 deselection (Blakelock et al., 2016), and career retirement (Gouttebarga et al., 2015).
3359 Furthermore, depending on the athlete's sport, there may be an increased risk for eating
3360 disorders and body image concerns (e.g., Coyle et al., 2017). This finding was reinforced in
3361 Study one, which found that the process of negative perception of self, some athletes
3362 experienced body image concerns due to the nature of their sport, including the need to be
3363 lean and the weight-cutting process.

3364 Risk factors can be further exacerbated if an athlete does not seek help for their
3365 wellbeing and mental health due to negative past experiences of psychological support, low
3366 mental health literacy, and hypermasculinity (Castaedlli-Maia et al., 2019). Mental health
3367 stigma is also a prominent barrier for athletes seeking support when they require help for
3368 their concerns (Castaldelli-Maia et al., 2019). The findings of Study one further highlighted
3369 that beliefs and attitudes can be a barrier to help-seeking, with some athletes having negative
3370 perceptions towards seeking help as there is a perceived need to display mental toughness,
3371 especially among males; however, it was perceived there was an attitudinal change in relation
3372 to wellbeing and mental health. Based on these findings, it is apparent that an intervention
3373 that highlights the importance of discussing wellbeing and mental health, would be
3374 advantageous. This would have to target individual knowledge and the environment they
3375 participate within, enabling a safe space for all to talk.

3376 In contrast, several factors have been found to protect athletes' wellbeing and mental
3377 health (see Kuettel & Larsen, 2020). In terms of safeguarding wellbeing, experiencing
3378 positive relationships (Sauvé et al., 2021; Simons & Bird, 2022), self-acceptance as an
3379 athlete, personal growth, and finding a purpose in life and sport (Lundqvist & Sandin, 2014)

3380 have all been found to have a positive impact. Specifically, the availability of high-quality
3381 social support is known to buffer the wellbeing and mental health of athletes (as seen in
3382 Study one), including preventing depressive symptoms (Sullivan et al., 2020); which was
3383 even more prominent during the COVID-19 pandemic (Rogers & Werthner, 2022). Indeed,
3384 the COVID-19 pandemic has been found to have a considerable impact on the mental health
3385 of elite athletes, including increased levels of psychological distress and anxiety (Carnevale
3386 et al., 2022). The pandemic also proved, as seen in Study 1, to be a critical time during which
3387 athletes were preoccupied with negative thoughts of self, due to the changes in technology
3388 uses within the sport. Still, some were able to protect their mental health during this time due
3389 to the use of varying coping strategies (e.g., cognitive restructuring; Leguizamo et al., 2021;
3390 Carnevale et al., 2022). As such, due to the continued impact of the pandemic, an
3391 intervention that promotes the knowledge and development of coping resources would be
3392 highly beneficial.

3393 Hence, alongside evidence indicating that low levels of wellbeing and poor mental
3394 health among elite athletes are increasingly prevalent (see Rice et al., 2016), there has been a
3395 call to intervene early to support athletes within the performance setting (Currie et al., 2021;
3396 Purcell et al., 2019; 2022). Interventions targeting to improve athlete wellbeing and / or
3397 mental health have taken different approaches, including targeting mental health literacy,
3398 reducing stigma, and intentions to seek help (e.g., Breslin et al., 2018; Gulliver et al., 2012),
3399 focusing on individual athletes and single mental health conditions, such as eating disorders,
3400 (e.g., Wood et al., 2019). The intervention literature has detailed how programmes of work
3401 can help reduce their desired outcomes, including reducing stigma and increasing the desire
3402 to seek help (e.g., Bapat et al., 2009; Breslin et al., 2017; Chow et al., 2020; Gulliver et al.,
3403 2012; Liddle et al., 2019).

3404 ***6.1.2 Face-to-Face vs Online Interventions***

3405 There has been some discussion regarding the mode of intervention delivery,
3406 including face-to-face and online interventions (e.g., Gulliver et al., 2012; Van Raalte et al.,
3407 2015). Many interventions have taken the face-to-face approach, delivering workshops and
3408 seminars (e.g., Breslin et al, 2018, Liddle et al., 2019), which provide promising results,
3409 including increased mental health knowledge (Breslin et al., 2018; Liddle et al., 2019),
3410 improved help-seeking behaviours (Breslin et al., 2018; Breslin et al., 2021; Liddle et al.,
3411 2019), and decreased stigmatising attitudes (Liddle et al., 2019). The SOMI intervention
3412 utilised face-to-face sessions as it was perceived to be advantageous to deliver to student-

3413 athletes during their scheduled class session, leading to the high attendance of participants
3414 (Breslin et al., 2018). The ability to deliver face-to-face, allows the researchers to present
3415 within the sport setting around training sessions (Liddle et al., 2019); however, face-to-face
3416 workshops have been perceived to be lengthy in time (e.g., Liddle et al., 2019) and can be
3417 delayed and / or paused due to having to work with the organisation's timeline (Fogaca,
3418 2021).

3419 On the contrary, some have taken their intervention online to create an accessible
3420 resource that can be accessed anonymously and cost-effectively (Gulliver et al., 2012; Van
3421 Raalte et al., 2015). Accessing the intervention anonymously may be beneficial for athletes
3422 who perceive stigma surrounding wellbeing and mental health support, while slowly adding
3423 to the attitudinal changes towards wellbeing and mental health seen in Study one. Moreover,
3424 the vast use of mobile phones has made the internet accessible for individuals, making it
3425 possible for participants to access an intervention at ease (Andersson, 2018) and seek
3426 knowledge of mental health concerns (Andersson & Titov, 2014). Furthermore, there is the
3427 advantage of participants being able to self-refer for wellbeing and mental health (Andersson
3428 & Titov, 2014).

3429 Web-based interventions have shown promise for athletes as their hectic schedules
3430 can be a barrier to seeking help for wellbeing concerns (Casealdelli-Maia et al., 2019), and
3431 they provide an opportunity to view the information privately and in their own time (Van
3432 Raalte et al., 2015). Moreover, delivering online has allowed researchers to reach their
3433 participants away from a traditional face-to face workshop-based intervention, which as
3434 indicated above, has proved problematic for individuals within the performance sport setting.
3435 Such interventions have included websites providing information about a series of mental
3436 health symptoms and sources of help and offered interactive modules (i.e., Griffiths et al.,
3437 2004); webpages providing prevalence rates of mental health concerns, detailed information
3438 about concerns, and evidence-based treatments (i.e., Gulliver et al., 2012); and platforms
3439 dedicated to finding support, mental health facts, having mental health-related conversations,
3440 and how to refer to professional support (i.e., Van Raalte et al., 2015). These web-based
3441 interventions have generally been shown to be effective in enhancing mental health referral
3442 knowledge (VanRaalte et al., 2015), increasing depression and anxiety literacy (Gulliver et
3443 al., 2012), and reducing stigmatising attitudes towards depression (Griffiths et al., 2004).

3444 **6.1.3 Community Informed Interventions**

3445 The results of one online intervention (i.e., VanRaalte et al., 2015) benefited from a
3446 website that the target population had provided views and opinions on, informing how the
3447 intervention would be implemented. Community-informed interventions are considered to
3448 lead to community ownership and engagement (Vella et al., 2018). That is, the authors sought
3449 the opinions of their audience and expertise (i.e., coaching, athlete, and mental health
3450 experts) to ensure the website was tailored to the needs of athletes (VanRaalte et al., 2015).
3451 The insights may have been critical for the intervention as the results highlighted those
3452 participants in the intervention group had increased mental health referral knowledge.
3453 Moreover, the Ahead of Game intervention supports community-informed interventions
3454 (Vella et al., 2018; 2021). The multi-component programme (in-person) aimed to enhance
3455 mental health literacy by working side by side with the community members to define the
3456 research and implement the intervention (Vella et al., 2018, 2021). That is, Vella and
3457 colleagues worked collaboratively with the targeted population to strengthen the intervention,
3458 hoping for meaningful change for their participants via community ownership. The
3459 intervention improved depression and anxiety literacy among participants, intention to seek
3460 help, resilience and wellbeing (Vella et al., 2021). Thus, it appears beneficial to include the
3461 targeted population in the design period of interventions to ensure it is suitable for their needs
3462 and elicit improved knowledge and, in turn, wellbeing and mental health.

3463 **6.1.4 Multi-component Interventions**

3464 As highlighted by Vella et al. (2018; 2021), multi-component interventions have been
3465 shown to increase mental health knowledge (Breslin et al., 2022). Breslin and colleagues
3466 (2018) delivered The State of Mind Ireland (SOMI) Pilot Program to 56 athletes. The multi-
3467 component programme included a session promoting mental health, delivered via case studio
3468 videos and athlete examples of seeking help. Also, the experienced tutors introduced the
3469 “Five Ways to Well-being” and mindfulness practice. The control group (n = 44) received an
3470 unrelated seminar on child physical health. The findings revealed that knowledge of mental
3471 health and intentions to offer support to others (i.e., struggling with mental health) increased
3472 more post-intervention compared to the control group.

3473 In particular, the studies that focused on increasing awareness helped improve
3474 participants' attitudes towards mental health (e.g., Chow et al., 2020). The face-to-face
3475 intervention delivered to student-athletes comprised of sessions covering mental health
3476 literacy (i.e., education and creating awareness), empathy (i.e., expressing empathy to others),

3477 counter stereotyping (i.e., contradicting common stereotypes of mental illness), and contact
3478 (i.e., learning from a real-life story). The post-intervention measures revealed MHL, stigma,
3479 and intentions all improved, with the changes being maintained at the follow-up (i.e., one
3480 month; Chow et al., 2020). This could be particularly important for the current two cases as
3481 Study one showed the importance of attitudinal changes towards mental health could protect
3482 athlete wellbeing and mental health. Accordingly, as there is a need to continue improving
3483 attitudes towards wellbeing and mental health, there is a need to create a context-specific
3484 intervention that increases individual's awareness of wellbeing and mental health. Several
3485 interventions comprise multi-components; however, there remains a need to explore further
3486 multi-components and to understand how they may be best delivered to participants, and the
3487 impact of such programmes on wellbeing and / or mental health.

3488 ***6.1.5 The Current Study***

3489 Despite some evidenced benefits of wellbeing and mental health interventions, there
3490 have been differences in the level of intervention effectiveness (see Breslin et al., 2022).
3491 Many have tried to impact wellbeing and mental health via mental health awareness
3492 programmes, but many have failed to consider how their participants' environment may
3493 impact their health. Therefore, educating all individuals about wellbeing and mental health
3494 may be beneficial, but if there are insufficient procedures (e.g., lack of resources), then
3495 increasing knowledge may be of minimal impact. Thus, it is essential that interventions not
3496 only target the individual's knowledge (and others within the environment) but address
3497 environmental processes that may be of influence. Furthermore, as seen within Chapter three
3498 and Study one, there is a need for an intervention to address the processes, context, and
3499 timelines of the intended population. Study one highlighted that processes, including the
3500 development of trusting relationships, negative perceptions of self, attitudinal changes
3501 towards wellbeing and mental health, and the expansion of a resource pool, could either
3502 positively or negatively affect the wellbeing and mental health of athletes due to the person,
3503 context, and time.

3504 There has been a growing number of wellbeing and mental health interventions,
3505 leading to critique across the research area, including the lack of well-designed projects
3506 (Breslin et al., 2022). The interventions are similar across the literature, including the lack of
3507 evidenced retained knowledge, lack of control groups, and a lack of theoretical underpinning;
3508 however, this is slowly improving (Breslin et al., 2022). Currently, it is unclear if an
3509 intervention is more effective to have a facilitator to guide the participants or if participants

3510 can guide themselves through the intervention. It must also be noted among the existing
3511 interventions, there is a lack of understanding of who has facilitated the delivery, including
3512 their experiences and qualifications (Prior et al., 2022). Therefore, for best translation to other
3513 applied settings, there is a need to acknowledge the details of the intervention that are usually
3514 missed, including the details of the facilitator and the feasibility of delivering the intervention
3515 (e.g., time and resources needed). As such, it is important as a researcher to utilise reflective
3516 methods to understand the process of designing, delivering, and evaluating an intervention.

3517 The findings from Study one, synthesised with the broader literature, led to a
3518 recognition that developing an online intervention, which was informed by the intended
3519 community and consisted of multiple components delivered via different modes, was needed.
3520 Moreover, as previously argued, there is a need for such interventions to be underpinned by
3521 theory, such as the PPCT. To address this need, this study aimed to design, implement, and
3522 evaluate a multi-level and multi-component evidence-based intervention to enhance elite
3523 athletes' wellbeing and mental health. The intervention aimed to enhance athlete wellbeing
3524 and mental health by targeting the processes (i.e., development of trusting relationships,
3525 negative perception of self, attitudinal changes towards wellbeing and mental health, and the
3526 expansion of a resource pool) highlighted within Study one. Further, in line with Prior et al's.
3527 (2022) recommendations, reflections are integrated across the design, implementation, and
3528 evaluation of the intervention to improve future interventions within the area.

3529 ***6.2.1 Philosophical Underpinnings and Methodology***

3530 The current study was underpinned by a relativist ontology (i.e., there are various
3531 subjective realities) and a constructivist epistemology (i.e., there are multiple truths, which
3532 are co-constructed), and informed my choice of research methodology (Crotty, 1998; Kilman,
3533 2013). As such, Stake's case study methodology was utilised due to his work being grounded
3534 in the constructivist paradigm and, in particular, a collective case study. The collective case
3535 study methodology was used to evaluate the multi-level intervention's efficacy in enhancing
3536 athlete wellbeing and / or mental health. Collective case studies also offer the opportunity to
3537 understand the challenges of implementing an intervention (Paparini et al., 2020; Sibbald et
3538 al., 2021) and provide evidence regarding the conditions required for the intervention to
3539 succeed within a real-life context (Paparini et al., 2021). As a result, this explanatory lens
3540 enabled the current study to evaluate in-depth the multi-faceted and multi-level intervention
3541 and the perceived effects. Further, collective case studies draw upon multiple sources of
3542 evidence, allowing various stakeholders to offer their opinions of the perceived benefits and

3543 critiques (Baxter & Jack, 2008). All of which can inform future research and the applied
3544 work of practitioners in this field.

3545 ***6.2.2 The Wellbeing and Mental Health Intervention Development***

3546 The literature has provided insights into how interventions can be effective in the area
3547 of athletes' athlete wellbeing and mental health. As such, the current intervention was
3548 informed by previous literature (e.g., Van Raalte, 2015; Vella et al., 2021) by developing an
3549 online, multi-component, and multi-level intervention. Moreover, the intervention was
3550 informed by Study one, which highlighted key processes that should be targeted to enhance
3551 the athletes' wellbeing and mental health. The processes were (i) the development of trusting
3552 relationships; (ii) negative perception of self; (iii) attitudinal changes towards wellbeing and
3553 mental health, and (iv) expansion of a resource pool. Therefore, in line with Gorczynski et al.
3554 (2021), the intervention targeted a specific population based on their identified needs. As
3555 such, the intervention needed to educate athletes and their entourage about topics that would
3556 address the above processes.

3557 Furthermore, there was a need to address environmental and organisational processes
3558 (see section 6.2.3.3). However, to further gain audience 'buy-in' and to strengthen the
3559 potential impact of the intervention, various stakeholders (i.e., athletes, coaches, performance
3560 directors, CEO, and sport science stakeholders) were included in the designing and refining
3561 the intervention. Such discussions, similar to those undertaken by Vella and colleagues
3562 (2018; 2021), were held between June 2021 and August 2021. The discussions provided
3563 stakeholders (i.e., sport science practitioners, judo CEO, cycling PD, and athletes) with
3564 opportunities to share their thoughts pertaining to content, mode, and delivery of the online
3565 and multi-component intervention. The development of the intervention and the resources is
3566 detailed further in Table 6.1.

3567 Firstly, discussions were held with the team of sport psychologists and the clinical
3568 psychologist to explain the aims of the intervention (based on Study one data) and the
3569 intention to complete a longitudinal intervention that would enhance the wellbeing and
3570 mental health of athletes through addressing the four processes from Study one. Following
3571 the discussions with the stakeholders, podcasts were deemed suitable to provide educational
3572 information. Podcasts are becoming increasingly popular within the scientific field
3573 (MacKenzie, 2019). This would also ensure that the online material could be used whilst
3574 COVID-19 guidance was still in place and benefiting from the perceived perks of online
3575 interventions (e.g., accessing material anonymously). The stakeholder's discussion also led to

3576 the desire to provide information in a visual form to supplement the educational podcasts to
3577 aid those who would not listen to a podcast.

3578 Throughout the development phase, ensuring the proposed intervention resonated
3579 with the athletes and coaches was essential. As such, informal conversations were conducted
3580 with the cycling PD, the judo CEO, the athletes, and the coaches. The PD and CEO were part
3581 of one informal conversation each (due to their time constraints). I communicated with four
3582 judo athletes via email and WhatsApp to gather their thoughts and contributions.
3583 Additionally, a cycling athlete provided feedback via WhatsApp voice notes. Of note, other
3584 cycling athletes were contacted via email to give feedback, but only one replied with their
3585 thoughts. The stakeholders of each were invited to discuss the proposed plan and offer
3586 thoughts regarding the use of podcasts and their content.

3587 Furthermore, in line with the PPCT, the discussions also enabled the understanding of
3588 when was best for the intervention to be released, which was deemed to be the end of the
3589 2021 year and early into 2022 – as the Commonwealth Games were fast approaching for both
3590 cases. Through such informal conversations, it was ascertained that the athletes would
3591 welcome the intervention / podcast to be delivered by informed guests and experts, including
3592 their own sports science and medicine practitioners. As such, various practitioners and
3593 experts in relevant fields were approached to establish if they would like to be part of the
3594 education podcasts. The informal conversations among the stakeholders solidified the
3595 intervention components.

3596 As such, the community-informed intervention was refined to include an educational
3597 podcast series and infographics developed from the processes highlighted in Study one.
3598 Moreover, as the environment is an important influence on the processes highlighted, a series
3599 of tailored environmental recommendations were provided for both cases. The three
3600 components of the intervention are discussed in further detail below.

3601 **Table 6.1**3602 *The development process of the intervention resources*

3603

Development process	How does this PPCT influence the process?
Discussions with the sport and clinical psychologists were held to consider how the intervention may be implemented effectively. The consultation informed the idea of providing the intervention content through educational resources (i.e., podcast series and infographics).	In Study One, the sport science and medicine practitioners were deemed an important factor for protecting the athlete's wellbeing and mental health. As such, they were deemed key stakeholders within the athlete's microsystem (i.e., context) who understood how the athletes would respond to learning opportunities.
Discussions with the judo CEO and cycling PD were the next stage of the development. The conversations were held to consider whether the proposed intervention needed refinement, and how it would be (best) delivered. During this process, the environmental recommendations were also discussed with the respective leads.	The environment (i.e., context) is an important influence of the processes highlighted. Thus, it was decided to provide tailored recommendations to target the four processes highlighted in Study 1, ensuring the intervention was delivered at a macrosystem level. In addition, the time aspect of the model was considered, as the most beneficial time to provide an intervention was established (i.e., before the Commonwealth Games).
Communication began with athletes. Discussions were held via WhatsApp to ascertain the athlete's interest regarding taking place in the intervention and whether they had any feedback regarding its implementation.	There was a need to consider the 'developing person' aspect of the model. Hence, the athletes were deemed the (most) significant stakeholders in the development of the intervention.
Engagement with collaborators began to develop the podcast educational series.	Collaborators within the athlete's microsystem were used to deliver the information to the athletes, because the development of trusting relationships with practitioners in their environments was identified (within Study One) as critical to wellbeing and mental health.
The podcasts and infographics were developed once all stakeholders provided feedback on the intervention. The environmental recommendations were also discussed with the organisational leads.	

3604 **6.2.3 Intervention Design**

3605 The intervention included six educational podcasts, six wellbeing and mental health-
3606 related infographics, and a series of environmental recommendations. As indicated, all three
3607 components were driven by Study one, the broader literature and community conversations.

3608 **6.2.3.1 Educational Podcast Series.** Podcasts are digital audio content accessed
3609 through an individual's mobile phone and / or laptop (Hew, 2009). They have been utilised to
3610 enhance knowledge across different domains, including the field of kinesiology (McNamara
3611 et al., 2021) and education (e.g., Cho et al., 2017). Educational podcasts enable individuals to
3612 feel more in control of their learning, as they can listen to the information when they wish to
3613 and multiple times (Abdulrahman et al., 2018; Drew, 2017; Kay, 2012; Shaw & McNamara,
3614 2021), with the ability to focus on critical concepts in a concise manner (Abdulrahman et al.,
3615 2018), and therefore, they provide new opportunities to gain further knowledge of topics
3616 (McNamara & Haegele, 2020). They have also proved beneficial for practitioners in sport
3617 due to the flexibility and convenience of listening to informative podcasts while engaging in
3618 the busy life of sport (Shaw & McNamara, 2021). Moreover, other cited benefits of the
3619 podcast for practitioners and athletes alike include listening to sections that are meaningful to
3620 them and being able to engage with authentic information (i.e., from expert guests) compared
3621 to the time needed to engage in reading about the topic (Shaw & McNamara, 2021).
3622 Furthermore, according to Ó Caoilte et al. (2023), podcasts that include mental health content
3623 can enable individuals with poor mental health, low levels of education, and lower income to
3624 access important information to learn about their mental health.

3625 However, there may be a tendency to listen to informational podcasts whilst
3626 completing other tasks, which may decrease the focus of the individuals on the information
3627 they hear and only listen passively (Shaw & McNamara, 2021). Furthermore, podcasts can be
3628 perceived as non-theoretical compared to written literature; consequently, it was important to
3629 ensure the podcasts for the current study included speakers / guests who were perceived by
3630 athletes to be 'experts', theoretically informed, and knowledgeable about the topic being
3631 discussed.

3632 Based on this and the needs of the athletes, the educational podcast series aimed to
3633 target the four processes highlighted in Study one (see Table 6.2) and enhance wellbeing and
3634 mental health by increasing individuals' knowledge of wellbeing and mental health topics
3635 related to their sporting environment. The topics included: (i) What is wellbeing? What is
3636 mental health?; (ii) Weight and performance: the athlete perspective; (iii) Weight and

3637 performance: the coach perspective; (iv) The importance of rest; (v) Nutrition and the
3638 importance of rest; (vi) Managing conflict. The first podcast was released on 1st November
3639 2021, and the final was released on 5th January 2022.

Table 6.2*Content of the wellbeing and mental health podcasts*

Podcasts	Aims	Content	Invited speaker(s)	Processes Addressed
What is wellbeing? What is mental health?	To provide and explore the language / terminology used for wellbeing and mental health. Exploring how to start a conversation regarding wellbeing and mental health.	<ul style="list-style-type: none"> • Discussion of MH definition. Providing knowledge of the mental health continuum • Understanding how to notice changes in others/ • Recognising signs and symptoms of wellbeing and mental health in sport 	Mental health expert in sport researcher (male) and Sport Wales performance nutritionist (female)	<ul style="list-style-type: none"> • Development of trusting relationships • Expansion of resource pool • Attitudinal changes
Weight management and performance: The athlete perspective	To provide knowledge the role of nutrition in sport. To discuss the topic of body image in sport.	<ul style="list-style-type: none"> • Providing knowledge in relation to the role and power of food in sport. Discussions regarding power to weight ratio. • Making comparisons to others • Preparing food and the body for the competition cycle, including travel and injury, and understanding the importance of refuelling • Providing mental health charity information 	Sport Wales performance nutritionists (1 female, 1 male) and Sport Wales clinical psychologist (female)	<ul style="list-style-type: none"> • Expansion of resource pool • Negative perception of self • Attitudinal changes

Weight management and performance : The coach perspective	To provide knowledge to individuals in the athlete's microsystem regarding nutrition, and how to aid athletes.	<ul style="list-style-type: none"> • Discussing the role of the coach with the athlete's nutrition journey • Understanding behaviour changes within athletes • Discussion of adapting training to aid athletes. 	Sport Wales performance nutritionists (2 females) and Sport Wales clinical psychologist (female)	<ul style="list-style-type: none"> • Expansion of resource pool • Negative perception of self • Development of trusting relationships • Attitudinal changes
The importance of rest	To provide knowledge around the benefits of rest, and what happens to the body during rest	<ul style="list-style-type: none"> • Discussions around the terminology around rest and explanation of wakeful rest • Discussions of what happens to the body when we are in rest period. • Providing knowledge of how to schedule rest. • Understanding the meaning of performance decompression • Exploring how the menstrual cycle may impact rest and performance. 	Sport Wales sport psychologist (female), Sport Wales performance nutritionist (female), and WIPs research assistance (expertise menstrual cycle in sport; female)	<ul style="list-style-type: none"> • Expansion of resource pool • Negative perception of self
Nutrition and the importance of rest	To provide knowledge of the role of nutrition when the body needs to rest, and to provide tips and techniques to aid recovery.	<ul style="list-style-type: none"> • Explore perceptions of rest • The importance of the nutrition when reducing the training load. • Explore the nutritional impact on sleep. • Understanding the sport-specific demands on the body and tips for travelling 	Sport Wales performance nutritionists (1 female and 1 male)	<ul style="list-style-type: none"> • Expansion of resource pool • Negative perception of self
Manging Conflict	To provide knowledge of conflict and to discussion manage conflict in the sporting environment.	<ul style="list-style-type: none"> • Discussions surrounding the term conflict and inner conflict. • Conflict management in sporting environment • Understanding emotions and conflict • Using and developing self-care. 	Sport Wales sport psychologists (2 female)	<ul style="list-style-type: none"> • Development of trusting relationships • Attitudinal changes

3693 **6.2.3.2 Infographics.** Infographics are “an innovative and engaging method of
3694 visually communicating information in a colourful and concise manner” (McCrorie et al.,
3695 2016, p.7), and have been used due to their ability to share complex information across
3696 different populations (McCrorie et al., 2016; Muir & Munroe-Chandler, 2020). Infographics
3697 aid comprehension of topics (Dunlap & Lowenthal, 2016) and can aid athletes in recalling
3698 information (especially mental health information) when needed (Muir & Munroe-Chandler,
3699 2020). There have been recommendations for producing and implementing mental health
3700 infographics (for a detailed overview, see Muir & Munroe-Chandler, 2020) which have been
3701 argued to aid athletes’ early detection of mental ill-health symptoms. These recommendations
3702 include an action-oriented title (i.e., capture the reader’s attention), and the appropriate use of
3703 colour and situational qualities (i.e., a holistic message underpinned by peer-reviewed
3704 literature). Furthermore, the authors recommended that infographics be provided to the whole
3705 team to allow everyone in the environment to openly discuss the content. The infographics
3706 should be able to provoke reflection to understand the resources (i.e., expansion of the
3707 resource pool) they may use to manage the processes that pose a threat to their wellbeing and
3708 mental health. Although these are recommendations, their impact on athlete wellbeing and
3709 mental health has not been widely examined or studied in the literature. There has been some
3710 support for using infographics to enhance the wellbeing and / or mental health of athletes,
3711 particularly the psychological wellbeing of athletes compared to their controls (Bertollo et al.,
3712 2021).

3713 On balance, due to the cited benefits of using infographics, they were chosen,
3714 alongside the podcast series, within the current study to improve the athlete’s knowledge of
3715 wellbeing and mental health disorders and symptoms. They were designed to provide
3716 contextual information for the athletes, with the idea of being accessible on their phones and
3717 within their environment. The infographics included: (i) What to do in Cardiff; (ii) What to
3718 do in Newport, (iii) Understanding depression; (iv) Understanding anxiety; (v) Understanding
3719 eating disorders; and (vi) Mental health charity information (see appendix). The choice of
3720 content was evidence-driven based on the findings from study one and brought in different
3721 research areas, including the benefits of utilising blue and green spaces for wellbeing and / or
3722 mental health (e.g., Gascon et al., 2015) to develop and expand the athletes' resource pool.
3723 Furthermore, to expand athletes' resource pool and aid in developing relationships, the
3724 infographics explored strategies for athletes dealing with isolation and details for key staff
3725 members. For a detailed overview of the infographics, please see Table 6.3.

Table 6.3*Content of the wellbeing and mental health infographics*

Infographic	Processes addressed	Aims	Content
What to do in Cardiff	<ul style="list-style-type: none"> • Expansion of resource pool • Development of trusting relationships 	To alleviate distressing symptoms linked to athlete isolation who are based in judo.	<ul style="list-style-type: none"> • Athletes were provided with ideas to help them adapt to the city of Cardiff when moving away from home. • Provided links to local practical information (i.e., tour guides, transport links, and volunteer Cardiff) • Provided performance lifestyle information
What to do in Newport	<ul style="list-style-type: none"> • Expansion of resource pool • Development of trusting relationships 	To alleviate distressing symptoms linked to athlete isolation who are based in cycling.	<ul style="list-style-type: none"> • Athletes were provided with ideas to help them adapt to the city of Newport when moving away from home. • Provided links to local practical information (i.e., tour guides, transport links, and volunteer Newport) • Provided performance lifestyle information
What is depression?	<ul style="list-style-type: none"> • Expansion of resource pool • Attitudinal changes 	To provide knowledge of the sign and symptoms of depression.	<ul style="list-style-type: none"> • Signs and symptoms were stated on the infographic (inc. symbols and words). • Provided information on when to seek help. • Mental health charity information was provided to access quickly if needed.

Infographic	Processes Addressed	Aims	Content
What is anxiety?	<ul style="list-style-type: none"> • Expansion of resource pool • Attitudinal changes 	<p>To explore of the differences between performance anxiety and generalized anxiety disorder (GAD).</p> <p>To provide knowledge of sign and symptoms of GAD.</p>	<ul style="list-style-type: none"> • Provided information on the difference between performance anxiety and GAD. • Signs and symptoms were stated on the infographic (inc. symbols and words). • Mental health charity information was provided to access quickly if needed.
Body weight and performance	<ul style="list-style-type: none"> • Negative perceptions of self 	<p>To illustrate the symptoms linked to negative of weight, body image, and relationship with food.</p>	<ul style="list-style-type: none"> • Discussion of symptoms linked to the negative perceptions of weight, body image, and relationship with food. • Pragmatic information of the Beating Eating Disorders charity (i.e., BEAT) to provide access to phone, web, and chat room support.
Mental health charity information	<ul style="list-style-type: none"> • Attitudinal changes • Expansion of resource pool 	<p>To provide access to a number of mental health charities (i.e., Samaritans, CALM, Mind, Shout, Beat, and Mental Health Matter Wales), so athletes could access help when needed.</p>	<ul style="list-style-type: none"> • Information was provided for six mental health charities (i.e., Samaritans, CALM, Mind, Shout, Beat, and Mental Health Matter Wales), which included a synopsis of the support available. • Phone, webchats, emails, and websites were provided on the infographic.

3726 **6.2.3.3 Environmental Recommendations.** According to Purcell et al. (2019; 2022),
3727 targeting both the individual and their sporting environment is necessary, as a sporting
3728 environment can nourish or malnourish athletes' mental health (Henriksen et al., 2020).
3729 Specifically, in relation to the PPCT (Bronfenbrenner, 1995; Bronfenbrenner & Evans, 2000),
3730 the individual's environmental context can impact the processes that occur. For example, the
3731 policies and staffing of NGB impacted the development of trusting relationships. Moreover,
3732 the negative perceptions of self may be improved with support from a sport psychologist
3733 within the environment. As such, in line with the findings of the collective case study,
3734 received a series of recommendations targeting processes within the environment (see Table
3735 6.4 and Table 6.5), which were delivered to the CEO of judo and PD of cycling. Of note, the
3736 recommendations were established and developed from the time spent with both sports (i.e.,
3737 data from the observations) and the interviews and self-report diaries completed with the
3738 range of stakeholders (i.e., athletes, coaches, sport science practitioners, and sporting leads).

Table 6.4*Judo Environmental Recommendations*

Environmental Recommendation	Processes addressed
Offer targeted and multidisciplinary support for player wellbeing and mental health during the weight cutting process and periods of injury.	<ul style="list-style-type: none"> • Negative perceptions of self • Expansion of resource pool
Ensure performance lifestyle support is provided for players, to effectively access and thereafter manage, personal development opportunities (i.e., education, vocational training, or work).	<ul style="list-style-type: none"> • Development of trusting relationships • Expansion of resource pool
Deliver opportunities to build trusting relationships and social support networks across the athlete group and support team, through frequent team building and social activities. Moreover, a formal peer-mentoring and / or “buddy-scheme” should be introduced, particularly for those players new to the performance pathway and / or based at the centre.	<ul style="list-style-type: none"> • Development of trusting relationships • Expansion of resource pool
Sustain current levels and quality of social support offered by coaches and the NGB leadership team, by maintaining open communication channels for the players	<ul style="list-style-type: none"> • Development of trusting relationships • Attitudinal changes towards wellbeing and mental health
Offer regular and on-going mental health education / training for athletes, coaches, and sport science practitioners, to improve awareness of low well-being and poor mental health, address stigma, and remove barriers to help-seeking behaviour.	<ul style="list-style-type: none"> • Attitudinal changes towards wellbeing and mental health • Expansion of resource pool
Ensure players have frequent access to a sport psychologist, to receive informational and emotional support, and develop coping strategies which protect their wellbeing and mental health. Access to a sport psychologist pre- and post-training camps would be particularly advantageous.	<ul style="list-style-type: none"> • Development of trusting relationships • Expansion of resource pool
Continue with a person-centred approach to delivery, which encourages the players to develop multidimensional identities.	<ul style="list-style-type: none"> • Attitudinal changes towards wellbeing and mental health • Expansion of resource pool

Table 6.5*Cycling Environmental Recommendations*

Environmental Recommendation	Processes addressed
Offer targeted multidisciplinary provision / education (especially nutrition and psychology), to support athletes who experience body image and weight concerns. Any cyclist with indicators of body image disturbance should be encouraged to seek support from a clinical sport psychologist.	<ul style="list-style-type: none"> • Negative perceptions of self • Expansion of resource pool
Ensure performance lifestyle support is provided for cyclists to develop and manage personal development opportunities (i.e., education, vocational training, or work).	<ul style="list-style-type: none"> • Development of trusting relationships • Expansion of resource pool
Deliver programmes of work to build trusting relationships and social support networks across the athlete group and the coach / practitioner support team (e.g., team-building, and social activities). Moreover, a formal peer-mentoring system should be introduced, particularly for those cyclists transitioning into the senior team.	<ul style="list-style-type: none"> • Development of trusting relationships
Ensure players have appropriate access to a sport psychologist, in order to receive informational and emotional support, and develop coping strategies which can protect their wellbeing and mental health. Access to a sport psychologist during rest periods, team selection, and performance reviews would be particularly advantageous.	<ul style="list-style-type: none"> • Development of trusting relationships • Expansion of a resource pool
Sustain current levels and quality of social support offered by coaches, by maintaining open communication channels for the players.	<ul style="list-style-type: none"> • Development of trusting relationships
Offer regular and ongoing mental health education / training for athletes, coaches, and sport science practitioners, to improve awareness of low well-being and poor mental health, address stigma, and remove barriers to help-seeking behaviour.	<ul style="list-style-type: none"> • Development of trusting relationships • Expansion of resource pool
Continue with a person-centred approach to delivery, which encourages the players to develop multidimensional identities.	<ul style="list-style-type: none"> • Attitudinal changes towards wellbeing and mental health • Expansion of resource pool

4326 **6.2.4 Intervention Delivery**

4327 All athletes and coaches within the cases were invited (via email) to access the
4328 resources but did not have to participate in the evaluation of the Study (see section 6.2.5 for
4329 more information). They were all made aware two weeks before the first podcast was
4330 released that the resources would be available on the 1st of November 2021, that included the
4331 first podcast and all the infographics. The environmental recommendations were given to the
4332 judo CEO and cycling PD before the athletes received the podcasts/infographics (see section
4333 6.2.4.3 for more information).

4334 As highlighted in the rationale of the Study, there is a need to evaluate how an
4335 intervention is delivered to the targeted population. There have been a number of studies that
4336 have been facilitator-led face-to-face (e.g., Breslin et al., 2018, 2021; Vella et al., 2021) and a
4337 small number of studies that the participants guided their way through an online intervention
4338 (e.g., Van Raalte et al., 2015). Additionally, there is a gap in the literature to understand if
4339 participants enhance their wellbeing and mental health with a facilitator guiding them
4340 through the intervention and / or if participants can achieve the same outcomes by guiding
4341 themselves through the intervention. As such, each case received all components of the
4342 intervention; however, Welsh Judo received a guided intervention, and Welsh Cycling
4343 received an information-only intervention. That is, after Welsh Judo received each podcast,
4344 they received a series of reflective questions, which they would have the opportunity to
4345 discuss with the lead researcher and the other judo athletes, with the view that the group
4346 discussion would aid their learning. The questions included: (i) What is the topic of the
4347 podcast you listened to?; (ii) What did you learn from the podcast you experienced – Key
4348 learnings?; (iii) How (if at all) will your athlete experience change as a result of your key
4349 learnings? (e.g., more comfortable to speak to others); and (iv) Do you think the podcast
4350 increased your knowledge of the topic? If not, why? If yes, why?. Importantly, after the
4351 intervention evaluation was completed, all cycling athletes had access to the same reflective
4352 questions to aid any future learning when listening to the podcasts.

4353 **6.2.4.1 Podcast Access.** The podcasts were released to the athletes and coaches
4354 weekly, which they could access privately through two podcasts apps (i.e., Apple Podcasts
4355 and Overcast). As the podcasts were specific and targeted towards the needs of both
4356 organisations, access was restricted, so only the athletes and coaches within the two sports
4357 could download the podcast to their phones. This was achieved via the cases being sent a link
4358 which was a Really Simple Syndication (RSS) feed that enabled the participants to enter into

4359 the two apps. To aid participants in accessing the podcasts, they received a step-by-step PDF
4360 guide (see appendix), which showed screenshots and text describing the required steps.
4361 Moreover, the athletes and coaches could access the podcasts on a website host (i.e.,
4362 <https://thewbandmhproject.transistor.fm/>). As podcasts were deemed convenient
4363 communication, they were split into two parts (i.e., based on timings) to ensure they were
4364 easy to listen to and less time-consuming for the athletes in their busy lives.

4365 Initially, all podcasts were going to be released weekly; however, based on athlete
4366 feedback on the intervention, participants were given a break at two points during the
4367 intervention to enable them time to listen to previous podcasts. As such, there was a two-
4368 week break between 22nd November – 6th December 2021 and between Christmas 2021 and
4369 3rd January 2022. Both parts of the podcasts were originally released together on a Monday;
4370 however, due to feedback, each part was released on two separate days. Consequently, after
4371 week one, the first part of the podcast was released on Monday at 12:00 pm and the second
4372 on Wednesday at 12:00 pm. Furthermore, once all podcasts were released, both cases were
4373 provided with a memory stick with all podcasts preloaded to ensure they could be accessed
4374 after the intervention completion.

4375 **6.2.4.2 Infographics Access.** The participants could access the infographics via the
4376 intervention website (i.e., <https://thewbandmhproject.transistor.fm/>). As well, throughout the
4377 intervention, the participants were sent a PDF copy of all the infographics, so they had access
4378 to them on their phones. Furthermore, the leadership team were provided with printable
4379 infographics, which included embedded QR codes that their members could scan. This was to
4380 ensure that the cases were able to access the infographics in their environment and / or
4381 provide the opportunity for them to introduce the information to new athletes on their
4382 programme (i.e., critical times).

4383 **6.2.4.3 Environmental Recommendations.** The recommendations were sent to the
4384 respective leader of each case via email, allowing them time to read and reflect on them.
4385 Once they were ready, I met with the leaders once (i.e., an hour online meeting) to discuss the
4386 documents and recommendations – and their ideas of how to either maintain and / or enhance
4387 the wellbeing and mental health of athletes (e.g., using the recommendations as part of a
4388 performance question). The leaders were encouraged to implement (the recommendations as
4389 they saw fit for their sport). Although we only met once to discuss the recommendations (due
4390 to their busy schedules recovering from COVID and preparing for the Commonwealth
4391 Games), I would keep the leaders updated with the intervention progress throughout.

4392 **6.2.4.4 Intervention Sustainability.** Throughout the design of the intervention, there
4393 was an intention to create sustainable resources that could be accessed after the evaluation
4394 ended. As such, both cases were provided with the podcasts and infographics on a memory
4395 stick that could be used when they perceived it was appropriate. Furthermore, all athletes in
4396 the cases could access the intervention resources but were reminded they did not have to
4397 access them and / or take part in the evaluation. As such, the athletes can access the content
4398 long after the evaluation, which may be critical when they experience lowered wellbeing or
4399 poor mental health. Furthermore, as the recommendations were passed onto the CEO and
4400 performance director of the cases, they could revisit the recommendations to continue to
4401 enhance / maintain the athlete's wellbeing and mental health.

4402 **6.2.5 Intervention Evaluation**

4403 **6.2.5.1 Participants.** All athletes and coaches within the two cases were invited to
4404 access the intervention, however, they were informed / reminded that they could access all
4405 information without participating in the Study and evaluation. As such, the intervention was
4406 available to 23 athletes and three coaches. Those individuals were informed of the
4407 intervention evaluation via emails (which included a participant information sheet), which
4408 identified the nature of the evaluation if they consented to participate (i.e., an interview or
4409 evaluation survey). If they were happy to participate in an interview, I would arrange a
4410 suitable time to meet (online or in person). One judo athlete decided to interview online, so
4411 they provided informed consent before joining the online interview. Three judo athletes and
4412 the judo CEO opted for a face-to-face interview, where they completed a consent form before
4413 completing the interview. Two judo athletes also provided evaluation via the online
4414 evaluation survey, which asked for informed consent prior to completion. No cycling athletes
4415 provided formal evaluation data. There were multiple attempts to collect data from cycling
4416 but to no avail, which was reflected throughout the intervention and came to light within the
4417 results. The timeline of the intervention is captured in Table 6.5.

4418 **6.2.6 Data Collection**

4419 To understand and explore the perceived impact and efficacy of the intervention, data
4420 were collected via semi-structured interviews, online evaluative survey, researcher reflexive
4421 diary, and informal conversations.

4422 **Table 6.6**4423 *Timeline of Intervention Delivery and Evaluation*

4424

Date	Delivery / Evaluation
1 st November 2021	Podcast 1 (part 1 & 2) released. Topic: What is wellbeing? What is mental health? Infographics released. Leads reminded of environmental recommendations
8 th November 2021	Podcast 2 (part 1 & 2) released. Topic: Weight and performance: The athlete perspective.
15 th November 2021	Podcast 3 (part 1) released. Topic: Weight and performance: The coach perspective.
17 th November 2021	Podcast 3 (part 2) released. Topic: Weight and performance: The coach perspective.
22 nd November – 6 th December 2021	Break for athletes and coaches to catch up with released podcasts.
6 th December 2021	Podcast 4 (part 1) released. Topic: The importance of rest
8 th December 2021	Podcast 4 (part 2) released. Topic: The importance of rest
13 th December 2021	Podcast 5 (part 1) released. Topic: Nutrition and the importance of rest.
15 th December 2021	Podcast 5 (part 2) released. Topic: Nutrition and the importance of rest.
20 th December 2021 – 3 rd January 2022	Break for athletes and coaches to catch up with released podcasts.
3 rd January 2022	Podcast 6 (part 1) released. Topic: Managing conflict
5 th January 2022	Podcast 6 (part 2) released. Topic: Managing conflict
10 th January 2022	Evaluation: Online Survey
23 rd February 2022 – 12 th May 2022	Evaluation: Participant Interviews

4425

4426

4427 **6.2.6.1 Semi-structured Interviews.** Five interviews were completed within judo,
4428 including four athletes and the CEO. Although a relationship had been built throughout the
4429 three-year project with the participants, time was spent at the beginning of the interview to
4430 rebuild rapport to address the time spent away from the sporting environment due to COVID-
4431 19. Once rapport had been re-established and the participants were comfortable, the
4432 interviews explored the perceived efficacy of the intervention and the considered effect on
4433 athlete wellbeing and / or mental health, their mental health knowledge, and their help-
4434 seeking behaviour. Thus, they were asked to explore how the podcasts and infographics
4435 impacted their mental health knowledge and if this learning had led to any perceived
4436 differences in their wellbeing and / or mental health. Furthermore, the interviews also
4437 explored the benefits and limitations of the resources and whether / how the podcast and
4438 infographics may have been improved. Of note, the interview with the CEO followed the
4439 same structure, focusing on the perceived effectiveness of the intervention for athlete
4440 wellbeing and / or mental health. For both athletes and CEO, there was also a focus on the
4441 environmental recommendations and the perceived impact of those. The audio interviews
4442 lasted between 20 and 44 minutes.

4443 **6.2.6.2. Online Evaluation Survey.** Only two athletes completed the online survey.
4444 The survey aimed to create an opportunity for athletes to offer data quickly if they were not
4445 able to complete an interview and preferred the opportunity to provide an anonymous
4446 evaluation. The survey first asked the athletes which podcasts they had listened to, if they had
4447 accessed the infographics, and if so, which ones they accessed. The survey also ascertained if
4448 the podcasts and infographics had improved their knowledge of the topics and why. This was
4449 followed by asking what key learnings the individuals had taken away from the podcasts and
4450 any perceived impact on their wellbeing and mental health. The participants were also asked
4451 their opinions on how the intervention components could be improved and if they would have
4452 liked to see any other topics covered. Although the survey was used to offer the opportunity
4453 for anonymous feedback, there was a lack of uptake even though multiple emails were sent.

4454 **6.2.6.3. Researcher Reflexive Diary.** The reflexive diary provided an opportunity for
4455 me to reflect on designing, implementing, and evaluating the multi-competent and multi-level
4456 intervention. During the design period of the intervention, I kept reflections on how I found
4457 the process, including noting informal conversations I had with the range of stakeholders
4458 during this period. Throughout the delivery, I reflected on various processes, including my
4459 perceptions of how the intervention was received within both cases and my considered
4460 perceptions of them receiving slightly different interventions. Furthermore, I reflected on

4461 what appeared to ‘work’ and what could be improved throughout the delivery, that included
4462 when it was important to pause the intervention to ensure athletes had the chance to listen and
4463 process the information in the podcasts. Finally, I ensured I reflected after each interview and
4464 survey feedback opportunity during the evaluation process and reflected on the process of
4465 gaining feedback concerning the intervention, including reporting my frustrations about
4466 receiving limited data. Overall, the reflexive diary was used to understand how to improve
4467 the ongoing intervention while also gaining data to ascertain its perceived impact and
4468 efficacy. Such information can aid early career researchers and applied practitioners on the
4469 facilitators and barriers of delivering wellbeing and mental health interventions within the
4470 performance sport setting.

4471 **6.2.6.4 Informal Feedback.** Informal feedback was used to capture real-time
4472 feedback to ascertain the perceived impact of the intervention on mental health knowledge,
4473 help-seeking behaviours and wellbeing and mental health. Furthermore, the feedback also
4474 aimed to collect secondary data that focused on improvements to the intervention at the time
4475 and for future iterations. I made every effort to work within the two sporting environments,
4476 so participants could discuss their thoughts informally. I would go to the judo environment
4477 two times a week, and the cycling environment was visited twice during the intervention.
4478 Furthermore, when participants received the emails regarding the weekly episode, they were
4479 invited to provide feedback via their email or WhatsApp, with one participant choosing to do
4480 so, who provided written consent via WhatsApp.

4481 **6.3 Results**

4482 The following section will present the findings of the study, focusing on the perceived
4483 impact of the intervention on the four processes, and in turn athlete wellbeing and mental
4484 health. The four processes found within Study one, i) the development of trusting
4485 relationships; (ii) the development of negative perceptions of self; (iii) attitudinal changes
4486 towards wellbeing and mental health; and (iv) the expansion of a resource pool. The structure
4487 of the results will include researcher reflections followed by participants perceptions of
4488 impact.

4489 **6.3.1 Reflections on Designing an Intervention**

4490 The reflections below represent my thoughts throughout the design process, which
4491 highlighted some key facilitators and barriers of designing the multi-level and multi-
4492 component intervention, that included the themes: the feeling of excitement and the need for
4493 collaboration.

4494 **6.3.1.1. The Feeling of Excitement.** At the beginning of the intervention, there was
4495 an undeniable excitement about bringing an intervention together with the possibility of
4496 impacting the four areas I had explored in my first study, and thus influence athletes'
4497 wellbeing and mental health. As seen in the reflection below, I wanted to make an impact
4498 from the beginning due to the challenging times (i.e., COVID-19) they had been through over
4499 the previous 18 months:

4500 I have completed discussions with stakeholders, including the athletes, coaches,
4501 leadership team, and sport science practitioners. Having these discussions have been
4502 helpful and fundamental for the intervention gaining the buy-in needed for it to be
4503 successful. I think that is critical for any future work I do going forward to bring in
4504 the people who are going to be on the receiving end and ensure they understand that
4505 you are delivering something for their benefit... This is exciting. After the up and
4506 downs of the last year, it is good to see it coming together to provide a product to the
4507 athletes, coaches, and organisations. They have had such uncertain times, and it feels
4508 good to bring something together for them. However, can I really pull this off?

4509 Although I have progressed in my understanding of wellbeing and mental health, and
4510 in particular with a strong theoretical lens, do I have the right practical skills to pull
4511 this off in the real world of athletes and practitioners?

4512 As seen above, although I had an opportunity to create something impactful, there
4513 was a fear that I would not be able to complete the intervention due to the lack of my applied
4514 skills. At this time, I had begun to complete applied work in high-performance teams and
4515 recognised that I had gaps in my applied knowledge skill set; as such, I understood that I
4516 needed supportive experts around me to aid the development and implementation of the
4517 intervention.

4518 **6.3.1.2. The Need for Collaboration.** As the design of the intervention was evolving,
4519 the magnitude of the project dawned on me as a researcher, which was captured in the below
4520 diary entry:

4521 I have recognised throughout the design of the intervention that this is way too big for
4522 a researcher to do by themselves. Even prominent previous wellbeing and mental
4523 health interventions have had a big research team with plenty of resources
4524 surrounding them. I feel that this is important for the current intervention (and future
4525 interventions) as I cannot do this alone. Right now, I am questioning, "Who really
4526 wants to hear my voice? what expertise do I have?". And as a neophyte researcher
4527 and practitioner, that is hard to sit with. I ultimately feel this intervention will benefit

4528 from other voices being on the podcasts. Reflecting on the results of the cross-case
4529 analysis, the interactions with the practitioners are fundamental for the protection of
4530 the wellbeing and / or mental health of athletes. Judo athletes love their practitioners
4531 for helping their wellbeing; they are the key to this intervention, and the cycling
4532 athletes being able to hear from experts may aid future interactions with their
4533 practitioners.

4534 Hence, there was a realisation that the intervention needed to be a collaborative effort,
4535 and that other, well-respected voices needed to be heard on the podcasts to “sell” the message
4536 and ensure engagement. Moreover, the athletes listening to their assigned practitioners may
4537 be a catalyst for the development of trusting relationships:

4538 Over the last couple of weeks, I have been meeting various individuals to refine the
4539 product. This has included meeting with the practitioners who got me excited to create
4540 an intervention that is meaningful within the sporting environments. However, I had
4541 also managed to secure the practitioners who were going to provide content, which
4542 would hopefully target some of the processes, including sport psychologists, clinical
4543 psychologists, physiologists, and nutritionists. With this excitement I went off to
4544 consult my supervisors, with nerves. The nerves were there because I realised, I
4545 wanted the intervention to be all signed off, and I guess, there is always doubt that
4546 you have completely gone in the wrong direction, and it would not resonate with
4547 anyone. Thankfully, my supervisory team saw the vision just as much as me. They
4548 were able to critically ask me questions that would make the intervention better; but
4549 also, they pointed me in the right direction for my collaboration. That is, experts in
4550 the sport psychology field who had “cracked” the podcast world. Conversations were
4551 held with individuals who had created recognised sport psychology podcasts, who
4552 offered me advice on recording, editing, and how to grab the audience. To all of them
4553 I am thankful, as PhD student it is hard to reach out to people you aspire to be;
4554 however, more importantly for interventions that aim to target processes that affect
4555 wellbeing and mental health, it is key to utilise a team a experts in a range of
4556 disciplines.

4557 The design of the intervention was finally finished, and the product was released.

4558 **6.3.2 Reflections on Implementing an Intervention**

4559 Throughout the implementation of the intervention, there was a clear mix of emotions
4560 and thoughts, relating to: (i) the lack of personal stories; (ii) the lack of progression; and (iii)
4561 the feeling of hope.

4562 **6.3.2.1 The Lack of Personal Stories.** Once I had released the podcasts, I engaged in
4563 an informal conversation with the judo coach in the café, and he congratulated me on
4564 releasing the intervention. Still, he commented on the lack of personal stories within the
4565 podcasts. I noted down the following reflection:

4566 After months of organising, preparing, and editing – the whole product has been
4567 released. It feels like a weight off my shoulders. He [the coach] mentioned that he
4568 thought I had done a great job supporting the athletes and coaches. He had listened to
4569 the first podcast, and he really enjoyed it, but he felt the podcasts lacked personal
4570 stories for his athletes to relate to. I am a disappointed and frustrated that I had failed
4571 at the first stage. I have spent all this time developing a product; have I ultimately
4572 failed? As I am taking time to reflect on the head coaches' comments, it is not failure
4573 – it is somewhere where new interventions can improve upon and further enhance
4574 athlete wellbeing and mental health.

4575 Although it was a reflection where I recognised the intervention could be improved, it
4576 was frustrating as due to the scheduling of the other collaborators (i.e., the guest
4577 practitioners), as I had to record the podcasts all before the first podcast was released.
4578 Consequently, there was little I could do to respond to this feedback.

4579 **6.3.2.2. The Lack of Progression.** As the intervention continued, there was a
4580 realisation that the months of planning and organising were not necessarily succeeding. That
4581 is, the plan for the athletes to engage in the podcasts was not apparent, which included the
4582 Judo athletes' reluctance to engage with guided reflection. The frustrations were caught in a
4583 personal reflection:

4584 After the initial frustrations of not using enough personal stories for the podcasts, I
4585 found that some of the intervention is going well. The leads have received their
4586 environmental recommendations, which have led to some good conversations about
4587 how their environments can be maintained and / or improved. However, the
4588 intervention was supposed to have guided reflective discussions with the judo
4589 athletes, with the aim of enhancing their learnings from the podcasts and infographics.
4590 I am attending the judo environment two days each week, when they had training in
4591 the evening to facilitate the conversations, but there is a lack of people listening to the

4592 podcasts. At the same time, I am trying to reach out to cycling athletes to understand
4593 if they were listening etc., and as of yet, I have no response. I feel that I planned
4594 everything well, underpinning it with the data and the theory. However, it has not
4595 gone to plan.

4596 Although there was a sense of frustration when the intervention was perceived to have
4597 “gone wrong”, there was a realisation that a sense of presence was needed to achieve buy-in
4598 during the implementation. During the time I was rolling out the intervention, I was attending
4599 judo sessions more than I was cycling (due to their location), and I recognised that the regular
4600 interactions with the judo athletes allowed them to engage with the intervention more than
4601 the cycling athletes:

4602 When I went to conduct the reflection sessions – only some listened to the podcasts,
4603 and others had not. However, I have now realised that each time I go in, they are
4604 talking about it to me; even if they had not listened to it, they were acknowledging
4605 that they were going to access the podcasts that week. What I have realised is that
4606 being present is key. I can talk to judo athletes, which has led to them engaging with
4607 me and the intervention. However, due to not seeing the cycling athletes regularly, I
4608 am unable to gain any indication that they are engaging with the intervention.

4609 **6.3.2.3 The Feeling of Hope.** While I was collecting informal feedback from the judo
4610 case, the coach mentioned one evening during training that, “Some may not be ready for it
4611 yet, but they will be”. That evening, whilst driving home – it allowed me to reflect on his
4612 comments, which were captured below:

4613 Tonight, I was speaking to the coach and realised that I had created this resource, so
4614 athletes and coaches have access when they need it. When he spoke to me about some
4615 athletes being ready for it, they will be at some point. It has made me remember that I
4616 created the intervention for ease of access and for it to be accessible when the athletes
4617 need it. That is the benefit of the intervention; do not be disheartened by it.

4618 ***6.3.3 Reflections on Evaluating an Intervention***

4619 The final reflections represent the process of evaluating the intervention, which
4620 included the theme – the relief of gaining feedback.

4621 **6.3.3.1. The Relief of Gaining Feedback.** To truly understand the perceived efficacy
4622 of the intervention, there was a need to gain data regarding the perceived impact it had on the
4623 four processes, an in turn enhance athlete wellbeing and mental health. Although I gained
4624 informal feedback to ensure the intervention was developed to the needs of the cases, once all

4625 podcasts were released, I endeavoured to collect formal evaluations, through interviews and
4626 online survey feedback, alongside continued informal conversation. However, gaining data
4627 was difficult as the athletes were preparing for the Commonwealth Games (i.e., a key time
4628 period), which was captured in one of my reflections:

4629 The final podcast came out two weeks ago, and since that point, I have been trying to
4630 collect the data I need for the research. I have been emailing, Whatsapp, and visiting
4631 in person to see if the athletes, coaches, and leadership teams would complete the
4632 evaluation for me. I am having no luck; they have said they will do the survey – but
4633 every time I log onto the survey, there are no replies. It is frustrating to have spent a
4634 lot of time on the intervention to then have nothing to show for it.

4635 Within this reflection, it is evident that I was driven by evaluation for an end-product
4636 of a scientific paper or my final PhD thesis. Critically, this view changed when I received the
4637 first piece of formal feedback from an athlete commenting, “having all the information there
4638 at hand, can be lifesaving”. Although the initial feeling was one of relief and joy that I had
4639 received some data, I soon reflected that I had forgotten the meaning and purpose of
4640 delivering a wellbeing and mental health intervention:

4641 Towards the end of this journey, I had truly forgotten the meaning of why I was
4642 completing a PhD focused on wellbeing and mental health. I came into the project to
4643 develop new knowledge and provide an intervention that may aid athletes with their
4644 wellbeing and mental health. However, as I was developing the intervention, I began
4645 to focus on the evaluation and was too concerned about finishing my thesis.

4646 Receiving the feedback “having all the information there at hand can be lifesaving”
4647 was a profound realisation that brought me back to the true meaning of this work. I
4648 had created this resource to be an aid, and to hear that it can be lifesaving, I felt
4649 deeply touched to know that I could have that impact.

4650 ***6.3.4 Participant Evaluation of the Intervention***

4651 In terms of judo, they were evaluating their “guided learning” intervention. Whereas
4652 the cyclists were asked to evaluate the intervention, in which there was no guided reflection.
4653 Across the cases, four judo athletes and the judo CEO provided their evaluation of the
4654 intervention via individual interviews, and two athletes provided anonymised feedback via
4655 the online survey. There was no formal data collected from cycling, but one athlete did offer
4656 some informal conversation. The following results, present the perceived efficacy of the
4657 intervention, and the perceived benefits and challenges of resources. The themes included (i)
4658 increased confidence of help-seeking behaviours; (ii) the ability to recognise symptoms of

4659 wellbeing and mental health concerns; (iii) an opportunity for increased knowledge of
4660 wellbeing and mental health concerns; (iv) preventive measures of wellbeing and mental
4661 health concerns; (v) the benefits of podcasts (flexibility of listening, easy and informal
4662 listening, and the control and ownership); (vi) the benefits of the infographics (concise
4663 information, accessibility of critical information, and supports different ways of learning);
4664 and (iv) the challenges of the resources.

4665 **6.3.4.1 The Perceived Impact of the Intervention.** Analysis led to the identification
4666 that the intervention showed perceived benefits of targeting four processes, and in turn
4667 enhancing the participants' wellbeing and mental health. Specifically, across the data, it was
4668 perceived to impact (i) increased confidence of help-seeking behaviours; (ii) the ability to
4669 recognise symptoms of wellbeing and mental health concerns; (iii) an opportunity for
4670 increased knowledge of wellbeing and mental health; and (iv) preventive measures of
4671 wellbeing and mental health concerns.

4672 **6.3.4.1.1 Increased Confidence of Help-Seeking Behaviours.** The intervention was
4673 perceived to influence the expansion of their resource pool by gaining knowledge of the
4674 appropriate place to seek help. This expansion was perceived to increase athlete's willingness
4675 to seek help in a time of need as one athlete commented, "I think with the information
4676 provided [it] would make me more confident and know where to go". The feeling of gained
4677 confidence was cited to be due to the infographics providing directions for where they could
4678 seek help, which was explained further via the online evaluative survey:

4679 Easy access [to the infographics] means that I will not have to go searching when I
4680 feel in a bad way mentally, and having the information there at hand can be
4681 lifesaving.

4682 The development of trusting relationships was impacted by the podcasts, as one of the
4683 athletes perceived that the podcasts enabled them to feel confident to speak to their coach
4684 regularly about how they are feeling and so not to hold back any feelings of distress:

4685 From listening to the podcasts, I'll quite often now, like see the coach once a week.
4686 Just talk to him... whether it's a talk that's gonna help me...it's just a time for me to
4687 get everything off my chest. And that way, then I find with training, my training
4688 seems to be getting a lot better. Yeah. Because I haven't got other little things on my
4689 mind...and I think listening to the podcast has got me to go, 'oh, okay, maybe talking
4690 about things helps.' Rather than just bottling it all up has definitely helped.

4691 Furthermore, it was perceived that at a crucial time of COVID-19 and when some forms of
4692 restrictions were still in place, the intervention resources specifically improved help-seeking
4693 behaviours, when there was a lack of interactions with their practitioners:

4694 We seemed to come back [from lockdown] and the practitioners distanced themselves
4695 a lot more. Like you don't see as many people...like every day...Obviously, I know
4696 that if it weren't for that [the intervention resources], I don't think there would be a first
4697 step in a sense to find support.

4698 **6.3.4.1.2 The Ability to Manage Symptoms Wellbeing and Mental Health Concerns.**

4699 Across the evaluation, athletes commented on how they perceived podcasts and infographics
4700 enabled them to expand their resource pool and better understand how to manage their own
4701 wellbeing and mental health symptoms, aiding the process negative perception of self. Two
4702 athletes commented in the survey that “they’ve [resources] helped me manage my mental
4703 state better” and allowed others to learn “the importance of dealing with mental health as an
4704 athlete”. One athlete perceived the podcasts enabled them to recognise symptoms of their
4705 anxiety, and cope better with those symptoms:

4706 It was really beneficial for me. Especially the one about anxiety... I get a little bit
4707 apprehensive and anxious...so I found by listening to the podcast and listening to
4708 other people's experiences and like coping mechanisms, it massively helped and sort
4709 of opened up ideas I'd never even considered.

4710 This was also captured in informal data from a coach, who had used the podcasts as a
4711 resource to discuss symptoms with one of their athletes, which informed a conversation and
4712 influenced the development of a trusting relationship. The CEO also commented that he
4713 perceived the whole intervention had encouraged attitudinal changes towards wellbeing and
4714 mental health, which enabled their athletes to be more open about wellbeing and mental
4715 health:

4716 I'm just very conscious that it's, it's not a tick box where it's like we've done that. It's
4717 an evolution of how we continue to, you know, raise awareness, and we've probably
4718 done that, and I think, maybe coming out of the pandemic. I don't know whether this
4719 project accelerated or accentuated it. But there's certainly more of an openness to
4720 explore where they're at, their vulnerabilities, and their understanding of mental
4721 health.

4722 Furthermore, regarding one of the judo environmental recommendations to enhance the
4723 development of trusting relationships (i.e., ensure that performance lifestyle and sport
4724 psychology was available to athletes), one of my reflections captured some perceived impact

4725 from the recommendation. The recommendation was perceived to aid the athlete by
4726 providing the support they needed to manage their symptoms:

4727 I have just bumped into one of the athletes I have known from the project for a while,
4728 and recently when I have spoken to them, they have mentioned they are not great at
4729 the minute and are struggling with a variety of things, stressors in their personal life
4730 including an injury; so in that moment I was curious...are they getting the right
4731 support they need? They mentioned they have been given support from the sport
4732 psychology and the performance lifestyle support to help with the difficult period,
4733 which they perceived to be tough but good.

4734 **6.3.4.1.3 Opportunity for Increased Knowledge of Wellbeing and Mental Health.**

4735 The intervention overall was perceived to expand the participants' resource pools to be an
4736 opportunity for athletes to increase their knowledge of wellbeing and mental health topics, as
4737 highlighted by one athlete:

4738 I think it gave me the reasoning to research [wellbeing and mental health] more...it
4739 hasn't necessarily changed what I do, but it has allowed me to research...I think
4740 talking about one of the podcasts about sleep and stuff like that was really helpful as
4741 well cuz I already understand that aspect, but it's more solidifying the knowledge I
4742 had.

4743 Enabling the athletes to enhance their knowledge was perceived to make them feel more
4744 confident in the topics that were discussed. One athlete stated in their interview:

4745 I think it, it definitely enhanced my understanding of the topic. Cause it, again, it
4746 allowed me to research further. So for the question, I probably have increased my
4747 confidence [around the topics].

4748 Moreover, developing the knowledge, allowed them to have an awareness and
4749 understanding of themselves, and provide an expansion to their resource pool, as one athlete
4750 commented 'I believe that I have been given some more information than I previously knew,
4751 but since listening to the podcasts, it has allowed me to think and reflect on myself'.

4752 **6.3.4.1.4. Preventive Measures.** The data highlighted that the intervention was
4753 perceived to be a preventive measure that may reduce the number of wellbeing and mental
4754 health concerns going forward. One athlete perceived that the ease of access across the
4755 intervention (podcast and infographics) can aid the athletes experience and prevent
4756 specifically, athlete dropout and / or burnout:

4757 The easy access to information is very beneficial for athletes because, like I said, in
4758 events of serious or situations, I think that easy access to information can change the

4759 situation entirely... Athletes obviously are a hundred miles an hour all the time
4760 training; they don't quite realise the situation they're in until it hits rock bottom a lot of
4761 the time, so I think the easy information and getting to it straight away can solve a lot
4762 of problems. Again, solving a lot of athlete drop offs and aiding people that crash or
4763 burn out can't handle it, I think it, can prevent that.

4764 This point was also commented on by a different athlete who perceived the resource would
4765 provide the information needed in the future, without delay. This is particularly important if
4766 they do have a series of trusting relationships in the environment:

4767 I'd say it is beneficial for wellbeing and mental health 'cause obviously, like,
4768 especially like for me, if I was feeling things, I wouldn't like go out my way to
4769 research or reach out. But obviously, like you see the posters in the dojo, especially in
4770 the dojo, it's there for you, and you can understand it, and I can learn from that.
4771 Obviously, the same on my phone, obviously, like I got it on there, so just have a
4772 look, and everything is there.

4773 **6.3.5 Evaluation of the Resources**

4774 The perceived impact of the intervention on four processes, and in turn the athlete's
4775 wellbeing and mental health were influenced by the different resources available to the
4776 participants.

4777 **6.3.5.1 The Benefits of Podcasts.** The podcasts were perceived to have specific
4778 benefits for the interviewed participants, which included the flexibility of listening, easy and
4779 informal listening, and control and ownership.

4780 **6.3.5.1.1. Flexibility of listening.** One benefit of podcast is that individuals could be
4781 on the move listening to episodes, and so able to multitask during their busy schedules:

4782 If you're listening to the podcast, you can do multiple things at the same time, which
4783 is quite a useful way to receive information. So, you can kind of like do multiple
4784 things at one time to try and, as I said, not take too much of your time up in a, in a
4785 way... You don't have to dedicate time [compared to sitting down in a classroom],
4786 which is difficult for a lot of people to have that just one spare hour in the middle of
4787 the day. I think people that can do it in their own time.

4788 The ability to listen "on the go" was captured by another athlete, especially when they were
4789 implementing different resource strategies (e.g., going for a walk / run):

4790 Cause it's on your phone...I can just walk around the park and have one on and listen
4791 to it...you can listen in the car, whilst running or walking. Sometimes I listen to 'em
4792 before I get to bed, just before sleep too.

4793 **6.3.5.1.2. Easy and informal listening.** Two of the athletes highlighted that the
4794 podcasts offered the preferred opportunity to listen to the information rather than read it. One
4795 athlete articulated:

4796 I found it really informative, and I thought it was a really good way to get information
4797 across. I think it's easy for people to listen instead of reading. I think it can get to any
4798 audience, really, which is valuable.

4799 Furthermore, one athlete perceived that the use of podcasts was more enjoyable (than
4800 attending workshops and reading the written form) and a more informative format to deliver
4801 important details to athletes. That is, the information was presented in an accessible way,
4802 especially for those who were not “academic”:

4803 I think it's a brilliant way to do it, especially for me as a person that enjoys...listening
4804 to podcasts...it's good for people that don't want to get up and read a 30-page journal
4805 to learn about mental health. It's not the best way to get it to people that aren't
4806 academically inclined because they just won't understand the majority of the
4807 information that's given. Whereas the conversation, for a start, is already much easier
4808 to absorb...the informality and the casual conversation make it more approachable.

4809 Interestingly, the podcasts provided the opportunity for one athlete to experience
4810 podcasts for the first time, which was perceived to deliver stimulating information that
4811 enabled them to learn about wellbeing and mental health, and continue engaging with
4812 podcasts going forward:

4813 I mean, this is the first podcast that I've ever listened to but going forward, I think I'm
4814 gonna listen to [them] more rather than music. Because it's stimulating your brain and
4815 [you're] learning new things without even realising that you're taking it all in. So
4816 yeah, I definitely found it more beneficial.

4817 The delivery by the practitioners within the podcasts was considered to be particularly
4818 beneficial and enabled the athletes to connect with the podcasts, as one athlete commented “I
4819 feel that I have a more personal relationship with the podcast as it's Sport Wales based
4820 [staff], and being an elite athlete myself...the information allows me to resonate with it and
4821 absorb it”.

4822 **6.3.5.1.3. Control and Ownership.** The athletes perceived the podcasts made the
4823 information more accessible, compared to having the information delivered in a classroom as

4824 they were able to have the control and ownership to learn at a time / pace to suit them, but
4825 also repeat the information using the functions of pause and rewind. This was of particular
4826 importance if the athlete had struggled to understand any information, feeling in control of
4827 their learning:

4828 Some of them were a little hard to follow at times...but the information and having
4829 the people on there speaking about it is great...I think in a classroom, you don't
4830 always listen, do you? And you don't always pick everything up, but with a podcast, if
4831 you don't pick anything up, there is literally a button to rewind it.

4832 Moreover, the ability to download and store podcasts was perceived to be beneficial as the
4833 athletes would be able to access the podcasts at any time in the future. Enabling the athletes
4834 to feel in control when expanding their resource pool now and within the future:

4835 I think it's important to have those podcasts cuz they're there forever now...I don't
4836 remember everything that was listened to, but it's like now, if I ever need it, I've got it
4837 on my phone... I think that's important for now and the future.

4838 **6.3.5.2 The Benefits of Infographics.** The infographics had cited benefits, including
4839 concise information and accessibility of critical information, and supporting different ways of
4840 learning.

4841 **6.3.5.2.1 Concise Information.** The infographics provided concise information for
4842 athletes to read, which one athlete perceived was beneficial to apply to athletes' own lives,
4843 expanding their resource pool: "when you provided it clearly and concisely and simplified, it
4844 can be more easily digested and applied to their own lives". Furthermore, another participant
4845 found them to be beneficial as the information was in small snippets rather than lengthy text:

4846 I feel that they were all good; I feel like they weren't long points. It was like sharp
4847 points, and having the little photos next to them meant it wasn't just words of
4848 information. It was short, sharp like it was like everything you needed, and it wasn't
4849 like a lot of stuff either.

4850 **6.3.5.2.2 Accessibility of Critical Information.** Alongside the podcasts, the
4851 participants found the infographics valuable due to the ease of access to information, which
4852 was perceived to be important for finding critical knowledge for their wellbeing and mental
4853 health:

4854 They [the infographics] are so very valuable. It's the easiness and the accessibility of
4855 reading the infographics for me. Obviously, I can understand certain things because
4856 obviously of my position where I'm doing a scientific based degree. Whereas other

4857 people who may not have that information may be missing out on really valuable
4858 things for mental wellbeing.

4859 Furthermore, the infographics were perceived to allow for easy access to information,
4860 without having to search numerous websites:

4861 ... the infographics and just having the key sources [of help seeking] are very
4862 valuable...I do think that it's easy enough to go online and be lost in a billion
4863 searches...you get really lost. Whereas I think if that information was there ready for
4864 someone, in the dojo or on the judo social media, people would see it and have a clear
4865 pathway [to support].

4866 There was also the added benefit of accessing the information at any time in the
4867 future, which led to the athletes feeling more confident that they could return to, and use the
4868 material if they experienced distress in the future:

4869 I think it's definitely something that I could come back to come, if anything happened,
4870 any kind of situation that I was in, I wouldn't find it too strenuous or too difficult. I
4871 don't know what I would do in that situation [experiencing wellbeing and / or mental
4872 health concerns] exactly right now, but I think it would definitely be viable for me to
4873 just go and look at this [podcasts and infographics]. Because if you're alone, you can
4874 just read the infographic; I don't think that's too demanding of an individual.

4875 **6.3.5.2.3. Supports Different Ways of Learning.** Within the evaluation, it was clear
4876 that there was a benefit of having access to different resources (podcast and infographics) that
4877 presented important information. This was of particular importance for athletes who had
4878 different ways of learning, as described by one athlete:

4879 I found, I listened to the first part of the last podcast, and um, like for me, I couldn't
4880 take anything in...I can't blame you for it, like when I am listening, I'll just zone out
4881 type of thing, and I wouldn't be able to remember what was said in there. Obviously,
4882 then you brought out obviously the infographics and stuff after that, and like for me,
4883 like so much better cause there's like little bits of information and stuff...and I much
4884 prefer that compared to listening... as I'm a visual learner, like I saw like colours and
4885 stuff like that...the podcasts I zone out, but the posters have helped me a lot.

4886 [of psychology] it's invaluable, but it's like how we then provide support, post that.

4887 **6.3.5.3 Environmental Recommendations.** The environmental recommendations
4888 were delivered back to the judo CEO and cycling PD, ensuring the intervention was delivered
4889 at a macrosystem level, with the hope of the of recommendations being implemented within
4890 the athletes' ecology (i.e., micro-, exo-, and macrosystems). The perceived impact of the

4891 recommendations was limited due to a lack of formal data from the lead and the coach.
4892 However, as seen within one of my reflections in the study, athletes were perceived to
4893 manage their time away from sport due to having accesses to suitable support including
4894 performance lifestyle advisors and sport psychologists (i.e., one of the recommendations
4895 returned). The judo athletes interviewed were not aware that recommendations had been
4896 passed back to the leads, as one athlete commented “I wasn't 100% sure. No, I didn't I didn't
4897 know about them [environmental recommendations], to be fair.” One major challenge for the
4898 desired impact of the recommendations was the broader system changes at Sport Wales,
4899 which led to judo CEO not being able to deliver some of the recommendations within the
4900 intervention, for example, providing ongoing sport psychology support to their athletes:

4901 Sport Wales changing their system mid-cycle effectively... was a big problem for us. I
4902 guess effectively, we've gone from having 10 staff... I'm the nutritionist, but you can
4903 speak to me, you know. Yeah. I'm the analyst, but you can speak to me..., but we don't
4904 have that, so we've effectively gone from 10 staff to two... related it back to how the
4905 system had changed, and so now it all falls on us [CEO and Coach] to provide the
4906 support... creating the resources just for that brilliant basics.

4907 **6.3.5.4 The Challenges of the Resources.** There were some challenges that the judo
4908 athletes and CEO perceived concerning the resources, which was evident in the online survey
4909 feedback, including “possibly [offer] just one long podcast so I can just let play” and “make
4910 them easier to access.” Moreover, it was perceived by one judo athlete that there was a lack
4911 of formal opportunity for them and their teammates to share their thoughts about the resource
4912 either on-line or in person, as the planned reflective sessions did not happen (due to athletes
4913 listening to the podcasts at different times):

4914 I think you have your podcast, which you can listen to as an individual, and you can
4915 read the infographics individually as well, but I think a way to communicate
4916 that...maybe like a group chat forum kind of thing that revolves...a way we can chat
4917 about it. Maybe, a chat section that comes off the podcast in a way that people who
4918 have listened to it can voice their opinions directly after the podcast. I think that would
4919 be a good way to communicate information across [with others].

4920 The reflective sessions were due to take place each week after the athletes had
4921 listened to the podcasts. However, early on in the intervention, I recognised that the athletes
4922 were listening to the podcasts in their own time, so there was not an opportunity to get the
4923 group together to discuss their thoughts. Post-covid interactions also hindered this; that is, the
4924 athletes did not spend as much time informally within the centre as they used to before

4925 COVID. As such, this would minimise the times I could see them all together. Being unable
4926 to share thoughts with others was also commented on by another athlete during an interview,
4927 who (while recognising the challenges of COVID) would have relished the opportunity for a
4928 group discussion / lesson to help them develop their knowledge:

4929 I know we couldn't really do it because of Covid, but we could have done a lesson or
4930 something like that...like a physical task or something together, rather than sitting in
4931 a room with you just telling me as I will zone out.

4932 Furthermore, one athlete perceived there was uncertainty around the reflective booklets and
4933 discussions, and as such they did not happen:

4934 I did read through the booklets and stuff like that a few times, but again, I wasn't really
4935 sure when the conversations were gonna happen. I think a bit more structure [to aid
4936 conversations] ...not necessarily enforced, but a bit way, in a way, to kind of allow
4937 more people to jump on it.

4938 **6.3.6 Lack of Engagement in Evaluation**

4939 As mentioned throughout there is a lack of evaluation data from cycling. Although there
4940 were several strategies taken to gain formal feedback, there was a clear lack of engagement
4941 with the evaluation. The cycling athletes may have engaged with the resources, but I was not
4942 able to capture if so. As such, there may be several benefits and challenges they experienced
4943 that has not been mentioned throughout the findings. This was highlighted in one of my final
4944 reflections of the intervention:

4945 Throughout the intervention, I have been reflecting on why I had engaged the judo
4946 athletes but not cycling. Firstly, I feel that I was able to engage more with judo due to
4947 the delivery of the intervention. I was able to see them and discuss with them any
4948 questions or thoughts they may have had. Whereas, in cycling, I have only been able
4949 to get there twice throughout the intervention. Reflecting now across the PhD, maybe
4950 I have been able to create more rapport and relationships with the athletes in judo than
4951 compared to cycling. This may also reflect the time and proximity within the first
4952 study's results. Although I managed to sustain and maintain relationships, I do not
4953 believe this would have been the same quality of relationships if we had not had the
4954 break from the sport. Therefore, throughout the intervention, I feel I was not able to
4955 create a connection with the cycling athletes that may have been needed for
4956 participant engagement with the evaluation.

4957 6.4 Discussion

4958 The purpose of the study was to design, implement, and evaluate the efficacy of a
4959 multi-level and multi-component intervention which aimed to enhance athletes' wellbeing
4960 and mental health by addressing the processes highlighted in Study one (i.e., the development
4961 of trusting relationships, the development of negative perceptions of self, attitudinal changes
4962 towards wellbeing and mental health, and the expansion of a resource pool). The programme
4963 of work builds on current interventions within the literature that have targeted wellbeing and
4964 mental health. However, the current study was unique because it provided an intervention
4965 that was theoretically informed (PPCT), evidence-based, targeted (i.e., utilised information
4966 from the case to inform the nature and content of the intervention), multi-component (i.e.,
4967 podcasts, infographic, and environmental recommendations), and delivered via differing
4968 modes (guided and non-guided delivery). Therefore, this programme of work provides unique
4969 theoretical and applied information for researchers and practitioners alike. Furthermore, due
4970 to the author's reflections on the design, implementation, and evaluation process, the study
4971 offers the opportunity for researchers in the area to appreciate best practices and understand
4972 the challenges and benefits of delivering a multi-level and multi-component intervention in
4973 this setting.

4974 The findings suggest that the intervention was perceived to protect / enhance the
4975 athlete's wellbeing and mental health by impacting the four processes identified in my earlier
4976 study. In particular, the results indicated the intervention was perceived to increase
4977 confidence of help-seeking behaviours, positively impacted the ability to manage symptoms
4978 of wellbeing and mental health concerns, provided the opportunity for increased knowledge
4979 of wellbeing and mental health concerns, and provided preventive measures to protect /
4980 maintain the participant's wellbeing and mental health. However, the intervention
4981 components (i.e., podcasts, infographics, and environmental recommendations) were
4982 perceived to have benefits and challenges. Firstly, the podcasts were perceived to be
4983 beneficial due to the flexibility of listening, easy and informal listening, and the control and
4984 ownership. The infographics were perceived to be impactful due to concise information,
4985 accessibility of critical information, and supporting different ways of learning. Additionally,
4986 the environmental recommendations were perceived by the CEO to accelerate a change in
4987 attitudes towards wellbeing and mental health. However, it was clear that the athletes were
4988 not aware of the environmental recommendations being returned to their organisation.

4989 **6.4.1 Intervention Impact**

4990 The intervention was perceived to impact several outcomes, which were dependent on
4991 the different components of the intervention (i.e., podcasts, infographics, and environmental
4992 recommendations). That is, the findings highlighted the intervention had similar results to
4993 previous interventions, including perceived increased confidence to seek help (e.g., Chow et
4994 al., 2019; Liddle et al., 2019; Vella et al., 2021) by practically aiding athletes in knowing
4995 where to seek help. The ability to manage symptoms (e.g., Laureano et al., 2014), and
4996 increased knowledge of wellbeing and mental health concerns (e.g., Breslin et al., 2017;
4997 Breslin et al., 2018; Chow et al., 2019; Liddle et al., 2019; Vella et al., 2021), were perceived
4998 to enhance athletes' wellbeing and mental health as they perceived they were able to protect
4999 their own wellbeing and mental health, whilst suitably seeking support when they needed.
5000 The intervention was also perceived to be a preventive measure for significant wellbeing and
5001 mental health concerns, which is unique to the literature but may be akin to interventions that
5002 have reduced mental health conditions directly (e.g., anxiety and depression; Donohue et al.,
5003 2015; Donohue et al., 2018; Dowell et al., 2021; Fogca et al., 2021; Glass et al., 2019;
5004 Gulliver et al. 2012; Longshore & Sachs, 2015; Mohammed et al., 2018; Sekizaki et al.,
5005 2019).

5006 The impact of the intervention was influenced by targeting specific processes for the
5007 context and the use of the different components. A significant perceived benefit of the
5008 intervention was that the resources were available for access at a suitable time for the
5009 athletes, which is one of the recommendations from the IOC athlete mental health toolkit
5010 (Currie et al., 2021). Previous research has made resources available, such as informational
5011 posters and cards (e.g., Gulliver et al., 2012; Laureano et al., 2014; Sebbens et al., 2016;
5012 Vella et al., 2021). However, the current study has extended the previous literature by making
5013 an educational podcast series that can be accessed by the environment long after the
5014 intervention. The ability for athletes to access may allow for those athletes who are not
5015 comfortable seeking support publicly due to perceived stigma and mental toughness (e.g.,
5016 Bauman 2016; Gucciardi et al., 2017).

5017 **6.4.1.1 Podcasts.** In terms of the podcasts, one significant benefit was that the
5018 participants could listen to the podcasts within their own time and space, in line with Shaw
5019 and McNamara (2021), rather than being restricted to a specific day and time within a
5020 physical and / or virtual classroom. This shows that there is plausibility to create sustainable
5021 resources that the individual can access at a time to suit them rather than rely on attending
5022 traditional in-person wellbeing / mental health awareness workshops (e.g., Breslin et al.,

5023 2022; Vella et al., 2018). The flexibility of listening was benefited further by the feeling of
5024 control and ownership when listening to the podcasts, which included the ability to pause and
5025 rewind.

5026 Additionally, the podcasts were also perceived to be easy to listen to due to their
5027 informal nature, which has been cited previously (Shaw & McNamara, 2021). Throughout
5028 the project, it was found that there was a desire from the athletes to listen to and learn from
5029 the sport scientists and practitioners they associate with. This is not surprising as it was
5030 reported in Study one that the athletes perceived developing trusting relationships and
5031 receiving social support from their practitioners as critical for the protection of wellbeing
5032 and/or mental health. Moreover, as Bandura (1977) has highlighted, learning can take place
5033 via the process of role modelling, and using experts, including those with lived mental health
5034 experience, has led to increases in knowledge of mental illness and improvements in help-
5035 seeking behaviours (Liddle et al., 2021). Hence, the use of Sport Wales practitioners to
5036 deliver material within the podcasts was understandably highly advantageous and important
5037 in terms of their impact.

5038 **6.4.1.2. Infographics.** The findings of the perceived benefits of the visuals added to
5039 the sport psychology literature regarding mental health in sport infographics (i.e., Bertollo et
5040 al., 2021; Muir & Munroe-Chandler, 2020). In particular, the research expands previous
5041 research on the effect of using mental health infographics within an intervention (i.e.,
5042 Bertollo et al., 2021), as the study has provided qualitative data to understand the benefits of
5043 infographics and perceived outcomes. An important factor of the infographics was that the
5044 athletes were able to access the information on their phones (e.g., mental health charity
5045 information), which was perceived to be a preventive measure for the occurrence of serious
5046 mental health concerns. The perceived measures were due to the athletes understanding of
5047 where to seek support if they were to experience lowered wellbeing and / or symptoms of
5048 mental illness. The easy access was perceived to be beneficial as it meant that athletes did not
5049 have to go out and actively search for the correct information on the internet when
5050 experiencing distress – aiding the recall of information when needed (Muir & Munroe-
5051 Chandler, 2020).

5052 Critically, the infographics were a source of information for individuals who like to
5053 engage with materials through different forms, providing content that includes text and
5054 visuals to provide concise details (Dunlap & Lowenthal, 2016). This is important as
5055 individuals' preferred means of gaining information differ, and so having podcasts and
5056 infographics allowed all participants to process and retain new information (Pashler et al.,

5057 2009). As such, for future interventions, researchers should consider presenting information
5058 in a manner that accommodates different learning forms for their target population.

5059 **6.4.1.3 Environmental recommendations.** Throughout the evaluation period, there
5060 was limited data regarding the impact of the environmental recommendations. The lack of
5061 data captured within the study may be how the recommendations were implemented, with
5062 only me meeting the respective leads once to discuss the recommendations. As such, it may
5063 be best to consider environmental recommendations that are grounded in organisational
5064 psychology approaches (e.g., positive organisational psychology in sport, Wagstaff et al.,
5065 2011). For example, it may be beneficial to focus the environmental recommendations on the
5066 organisation's strengths rather than their weaknesses (Wagstaff et al., 2012) to ensure they
5067 can influence the wellbeing and mental health of individuals within the organisation.
5068 Moreover, the athletes interviewed were unaware that their organisation had received the
5069 recommendations. As such, as seen in the previous research (i.e., Hill et al., 2021), leaders
5070 need to demonstrate transformational leadership (e.g., motivating and inspiring others;
5071 mentoring; and role modelling) to ensure they are developing an environment that enables
5072 their staff members to influence the processes positively that affect the athlete's wellbeing
5073 and mental health and to ensure athletes that they are aware of suitable strategies that are in
5074 place.

5075 **6.4.2 Challenges of the Intervention**

5076 A significant difference between the two cases was that I received no formal data
5077 from cycling. This is not to say that individuals within the case did not listen to the podcasts
5078 and / or the infographics, as some informal conversations did generate data which revealed
5079 that cyclists and their coaches were listening to the podcasts. However, the lack of
5080 engagement with the evaluation process may have been due to the delivery of the
5081 intervention. Firstly, the delivery mode of the intervention meant that the cycling athletes
5082 received no guided reflection questions after each podcast, as the judo athletes did. Secondly,
5083 due to my attendance at the judo environment each week to facilitate the reflective discussion
5084 (albeit these did not happen), the presence of an intervention facilitator in their physical
5085 training environment allowed judo coaches and athletes to have more informal discussions
5086 about the project. Hence, I was able to create a social presence even though the resources
5087 were online.

5088 Social presence can help develop a sense of community, create a connection with the
5089 instructor, and feel at ease within the learning environment (Aragon, 2003). Although time

5090 was spent developing rapport with both cases and managing these relationships throughout
5091 the first study, it cannot be underestimated that the return to sport post-COVID may have
5092 prevented a social presence in cycling, as the athletes were focused on returning to their
5093 regular national and international competitions in the lead up to the Commonwealth Games.
5094 This is particularly important when considering the development of trusting relationships.
5095 The intervention has highlighted the need for the intervention facilitator and the athletes to
5096 have reciprocal interactions to enable the participant to assign meaning to the intervention
5097 and have positive outcomes on their wellbeing and mental health. As such, the power of
5098 social presence and the development of trusting relationships (between facilitator and
5099 population) appears to be vitally important for future interventions that wish to secure
5100 engagement and have an impact.

5101 ***6.4.3 The Development of the Intervention***

5102 A significant part of the intervention included the athlete, coach, and practitioners'
5103 thoughts and voices throughout the project's design. Similarly, Vella et al. (2018) used their
5104 communities' voices to meet their participants' needs and expectations. Therefore, some of
5105 the perceived benefits may have been due to the intervention being meaningful to them.
5106 However, while the intended target audience did engage with the development of the
5107 intervention, some athletes did not necessarily engage with the resources, highlighting the
5108 challenges of creating an intervention informed by the intended community. Therefore, the
5109 current intervention may have lacked community ownership, whereas previous interventions
5110 had succeeded (e.g., Vella et al., 2018; 2021). As such, there is a continued need to develop
5111 community-informed interventions to achieve the intended outcomes for the target
5112 population, ensuring they keep their participants engaged throughout.

5113 A final finding of the project is how athletes may benefit from hearing more personal
5114 stories about wellbeing and mental health to make them relatable. Sharing personal accounts
5115 of experiences of mental health as part of an intervention has shown to be a factor in reducing
5116 stigma towards mental health and illness (Spagnolo et al., 2008). There has been a recent
5117 growth of athletes speaking out in the media about their experiences around mental health; as
5118 such, there may be benefits of using examples from the media (e.g., vignettes) and / or
5119 inviting athletes to openly discuss their experiences within NGBs. Therefore, there may be an
5120 opportunity for the action-research methodology to allow continuous feedback to create a
5121 new resource throughout the intervention. However, it must be noted that scheduling was a
5122 fundamental challenge to developing the podcasts and releasing them to the participants. Due

5123 to the collaborative nature of the intervention, there was a need to work with researchers and
5124 sport science practitioners to organise the production of the podcasts. Therefore, the podcasts
5125 were produced prior to the release of the intervention, which meant that the conversations
5126 could not be edited or re-recorded to bring in personal stories.

5127 **6.4.4 Applied Implications**

5128 The current study has provided some further support that multi-level and multi-
5129 component interventions can lead to perceived benefits. By addressing the processes (specific
5130 to the target population), the intervention was perceived to impact wellbeing and mental
5131 health positively by increasing knowledge, increasing confidence to seek help, and providing
5132 preventive measures. To achieve these benefits, the findings highlighted that there are key
5133 implications for the design, delivery, and evaluation of future interventions within research
5134 and applied sport psychology.

5135 A central tenet when designing the intervention was the collaboration and
5136 communication with the targeted audience. The successful implementation of the programme
5137 of work relied on working with a range of experts (i.e., sport science and medicine
5138 practitioners, supervisory team, and sport psychology podcast hosts). Collaborating with the
5139 practitioners was of importance as there were processes (e.g., negative perception of self) that
5140 were beyond the realm of a neophyte sport psychologist. As such, it is recommended applied
5141 sport psychologists engage in collaboration with others when addressing the complex
5142 processes of wellbeing and mental health.

5143 To ensure that sport psychologists and others are able to collaborate, NGBs may
5144 adopt a systems-led approach to foster wellbeing and mental health within their environment
5145 (Maher, 2022; Wagstaff & Quatiroli, 2023). This may include mental health contributor
5146 meetings (see Wagstaff & Quatiroli, 2023) that enable staff in the athlete's entourage are
5147 able to communicate their skills and abilities to be able to support athletes and each other
5148 when fostering wellbeing and mental health, including designing, developing, and
5149 implementing resources across the organisation. As such, there is a need for all staff within
5150 the organisation to receive ongoing wellbeing and mental health education to ensure they feel
5151 comfortable providing initial support for athletes. Moreover, the design of the study enabled
5152 the intervention to provide sustainable resources. Providing an educational resource that can
5153 be accessed at any point in the athlete's future is perceived to act as a preventative measure
5154 for wellbeing and mental health concerns. Therefore, it is recommended that NGBs offer
5155 resources that resonate with the target audience that can be used when athletes need them in a

5156 timely manner. Furthermore, there is a need to provide resources that can be accessed by
5157 different types of learners (e.g., audio / visual resources).

5158 Importantly, the current findings have emphasised that practitioners need to be
5159 present throughout the design and delivery of interventions within an elite setting. First, the
5160 current intervention was informed by processes that were specific to the environment and
5161 their athletes. As such, there is a need for presence before delivering the intervention to
5162 ensure that the sport psychologists understand the processes that need to be targeted. Second,
5163 the intervention was perceived to be more potent within judo as I was present throughout the
5164 delivery and evaluation. Thus, NGBs need to continue to invest in sport psychologists who
5165 are able to develop trusting relationships with individuals who can design and implement
5166 wellbeing and mental health interventions that can be impactful within their environment.

5167 ***6.4.5 Limitations and Future Directions***

5168 The study has shown the benefits of delivering an intervention away from the
5169 traditional workshop methods (i.e., face-to-face and online). However, some challenges led to
5170 several limitations that should be addressed in future interventions. Firstly, as the athletes
5171 accessed the intervention privately, it was impossible to measure the number of individuals
5172 listening to each podcast, as they could access it in several ways. Therefore, future
5173 interventions may benefit from enlisting a podcasts website, providing detailed analytics.

5174 Secondly, although the findings were based on a few athletes, the evaluation gathered
5175 rich information to understand the perceived benefits and efficacy of the intervention.
5176 However, the lack of engagement with the data collection across the intervention was
5177 problematic. There was an attempt to provide an opportunity for participants to contribute
5178 anonymous data via the online survey. The survey aimed to give the athletes a quick and
5179 flexible platform; however, only two participants shared their thoughts through the form. To
5180 gather more data, the intervention facilitator must be present within the environment to
5181 provide opportunities for their target population to offer formal data. On the note of the
5182 facilitator being present, the current intervention found better engagement with the resources
5183 from the judo players as they received the guided reflection, which meant I would be present
5184 within their environment to aid those conversations. In contrast, the cycling athletes received
5185 an information-only intervention, which led to a lack of social presence. Therefore, for future
5186 interventions, the facilitators must ensure they have been present during the implementation
5187 so that athletes can feel a presence and connection to the resources.

5188 Community-informed research has started to inform wellbeing and mental health
5189 interventions (e.g., Vella et al., 2021), with the current intervention seeking the participant's
5190 voice to inform the design and implementation, which may have played an important role in
5191 the perceived efficacy of the intervention. As such, researchers would benefit from
5192 developing work programmes with their targeted population at the forefront of the research
5193 so the population feels it is specifically for them. This may also be beneficial for the
5194 evaluation of future interventions. That is, asking athletes how the intervention should be
5195 evaluated, including different data collection methods, which may lead to ownership and
5196 meaning in the evaluation period. As such, this may be achieved by Action Research
5197 methodology (e.g., Kemmis & McTarggart, 2000; McNiff, 2017), which would allow the
5198 participant's voice to be heard throughout the process to create change in targeted outcomes.
5199 This approach also increases empowerment, which may improve engagement further
5200 (Kemmis & McTarggart, 2000; McNiff, 2017).

5201 Thirdly, although the results show the perceived benefits of the intervention, it was
5202 only delivered to performance athletes within two NGBs in Wales, United Kingdom.
5203 Furthermore, the data was only collected from a small number of participants from one sport.
5204 Therefore, the programme of work needs to be delivered and evaluated across different sport
5205 organisations, performance levels, and cultures to ascertain if the content and mode of
5206 delivery suit athletes in different sporting environments.

5207 Fourth, the intervention aimed to have reflective learning periods, where athletes
5208 could discuss their learnings from the podcasts and infographics. However, this part failed to
5209 transpire due to athletes not listening to the podcasts. Namely, I would attend the training
5210 centre each week to get the athletes to sit informally in the café to discuss their learnings.
5211 Unfortunately, this did not happen because athletes would listen to the podcasts at different
5212 times; however, the sustainability of the resources is a perceived strength. The space for
5213 formal discussion could have been improved by working closer with the leaders of the NGB
5214 to organise a time after their gym sessions (for example), which could have influenced the
5215 engagement with the podcasts. The sessions may have also allowed those who struggled to
5216 listen to the episodes due to their learning style to experience peer-learning when talking with
5217 others. That is athletes, acquiring knowledge through teaching each other and learning
5218 throughout the process (Topping, 2005).

5219 Fifth, there were some challenges for athletes trying to access the resources. All the
5220 individuals within the cases received an information booklet with a step-by-step guide on
5221 accessing the podcasts and infographics. However, when informally talking to athletes, I had

5222 to show them how to access the episodes. This difficulty was also captured in the formal
5223 feedback about the infographics, sent directly to the athletes by email and situated on the
5224 private podcast website. Thus, access issues may be one factor for the lack of engagement
5225 from athletes. Accordingly, for future researchers that endeavour to have multi-components
5226 as part of their intervention, it would be beneficial to have an introductory workshop,
5227 webinar, and / or video outlining the intervention. The introduction could include how to
5228 access the resources, information on completing the reflective learning booklets, and the
5229 voluntary evaluation process.

5230 Finally, although much of the evaluation also focuses on the impact of podcasts and
5231 infographics, the environmental recommendations played a minor role. However, according
5232 to the PPCT, the environment plays a major role in the development processes. Accordingly,
5233 it is crucial to consider the environment when delivering such interventions, which are also
5234 evaluated to understand their impact.

5235 **6.5 Conclusion**

5236 The study aimed to design, deliver, and evaluate a multi-level and multi-component
5237 intervention to enhance athletes' wellbeing and mental health across two NGBs. By
5238 addressing the processes presented in Study one, the intervention was perceived to positively
5239 impact athlete wellbeing and mental health by increasing confidence in help-seeking
5240 behaviours, managing wellbeing and mental health symptoms, increasing knowledge of
5241 wellbeing and mental health concerns, and acting as a preventive measure. The efficacy of
5242 the intervention was perceived to be influenced by the different components. That is, the
5243 podcasts were informative due to the flexibility of listening, easy and informal listening, and
5244 the control and ownership that could aid the audience to listen in their own time and revisit
5245 when needed. The infographics were perceived to provide concise information, accessible
5246 critical information, and supported different ways of learning. The CEO perceived the
5247 environmental recommendations to play a small role in creating an opportunity for athletes to
5248 openly discuss their wellbeing and mental health. However, there was limited data regarding
5249 the impact of the environmental recommendations, as athletes were unaware of their
5250 existence. Although the findings provide some positive insights, they should be held
5251 cautiously as the intervention was only completed with a small sample. Therefore, moving
5252 forward, there is a need to develop more interventions with alternative delivery modes that
5253 suit the hectic lifestyles of elite athletes alongside the lead facilitator to create a social
5254 presence among the participants to improve engagement.

5255 **Chapter 7: General Discussion**

5256 **7.1 Introduction**

5257 The aims of the current thesis were to explore the complex processes that affect
5258 athletes' wellbeing and mental health. Furthermore, utilising this knowledge, Study two
5259 aimed to develop, implement, and evaluate a multi-level intervention to enhance athletes'
5260 wellbeing and mental health. Study one consisted of a collective case study, which explored
5261 the processes that affected athletes' wellbeing mental health, and how these processes were
5262 influenced by person, context, and time. Within Study two, an intervention was designed,
5263 implemented, and evaluated which aimed to enhance athlete wellbeing and mental health, by
5264 targeting the processes revealed in Study one. The intervention included a series of podcasts,
5265 infographics, and environment recommendations. This final chapter of the thesis will provide
5266 a general discussion that will critically reflect on the theoretical, methodological, and applied
5267 contributions of this programme of work to the literature. This is followed by limitations of
5268 the body of work and suggestions for future research are provided. I also provide a reflexive
5269 account of the research journey highlighting key design decision points throughout the thesis.
5270 Finally, my personal reflections, which explore my role as a researcher and a practitioner,
5271 with the aim of providing recommendations for early career researchers-practitioners
5272 working in wellbeing and mental health.

5273 **7.2 Theoretical Contributions of the Thesis**

5274 One of the strengths of the current thesis was the use of the bioecological model
5275 (Bronfenbrenner, 1995, 2005; Bronfenbrenner & Evans, 2000; Bronfenbrenner & Morris,
5276 2006), underpinning the whole program of the work. There is a growing base of research,
5277 which has shown that athletes experience many factors that can affect their wellbeing and
5278 mental health. However, the findings of Study one confirm that there are processes that affect
5279 the wellbeing and mental health of athletes, which interact with the individual, context, and
5280 time. For example, the data set highlighted the process of trusting relationships were positive
5281 for the athlete's wellbeing and mental health. However, the impact of the relationship was
5282 influenced by the people within the dyad, the characteristics of each person, the opportunities
5283 to interact with each other in the environment, and the amount of time spent with each other.
5284 Time was also considered important within the relationships during specific time periods.
5285 That is, the relationship between teammates was hindered during team selection, which
5286 stopped the athletes seeking help from their peers. As such, it has highlighted that processes
5287 (or factors) do not happen in isolation, as they are affected by person characteristics, the

5288 environment they happen within, and the time at which they are occurring, which are all
5289 important to consider in research and in the applied world when exploring wellbeing and
5290 mental health in sport.

5291 Although there have been calls to understand and intervene with athlete wellbeing and
5292 mental health in sport from an ecological perspective (Purcell et al., 2019, 2022), exploring
5293 the processes from a bioecological lens (i.e., PPCT model) is evidently advantageous when
5294 understanding how to enhance athlete wellbeing and mental health. Clearly, there is a need to
5295 consider individual differences, environmental context, cultural shifts, and the wider society
5296 our athletes live in, whilst also considering the time periods within which the individual is
5297 existing. This is, of course, a challenging endeavour and one that requires a holistic view of
5298 athletes' wellbeing and mental health.

5299 That is, the model can be applied to explore the needs of each individual within the
5300 environment, which would allow researchers / practitioners to understand their characteristics
5301 (i.e., demand, biological resources, and dispositions / force). Developing an understanding of
5302 the individual holistically, would enable the environment to put in place appropriate support
5303 and resources to aid their wellbeing and mental health. Moreover, the model is valuable to
5304 explore group level dynamics. That is, there is a need to understand the relationships within
5305 the environment and how they interact. For example, it is clear that some athletes may
5306 experience conflict within relationship or experience an absence of trusting relationships with
5307 different individuals. As such, applying the model to understand the interactions would
5308 ensure there is support throughout the environment, especially if they experience conflict
5309 within one relationship.

5310 Utilising the model to understand cultural shifts enables the research to explore how
5311 the wider culture may influence the athlete's environment. That is, as the positive attitudinal
5312 change towards wellbeing and mental health there is a benefit to understand how the culture /
5313 subculture that athletes are within influence their behaviours and ultimately their wellbeing
5314 and mental health, which can include the beliefs concerning seeking support. Finally,
5315 applying the model to understand the key times within the competitive season is crucial. It is
5316 evident that wellbeing and mental health of athletes can fluctuate across time. Consequently,
5317 there is scope to apply the model at different times throughout the competition cycle to gain a
5318 deep understanding of processes may change and affect wellbeing and mental health.

5319 It is not surprising that one of the key processes from Study one was the development
5320 of trusting relationships, which created social support for the athletes. The relationships were
5321 seen to be vital in the protection (or risk) of wellbeing and mental health; a finding confirmed

5322 elsewhere in the literature (see Kuettel & Larsen, 2020). Although it was important to have
5323 relationships, the key aspect within this sample, was the element of trust. The literature has
5324 shown that trust is a mediator in the coach-athlete relationship satisfaction (Li et al., 2021),
5325 and the level of trust can indicate the closeness of the coach-athlete relationship (Jowett &
5326 Cockerill, 2003). Furthermore, trust is a key trait within the effective athlete-sport
5327 psychologist dyad (Sharp et al., 2015). Once the trust was built with any practitioners and / or
5328 coach, the informal support was perceived as very beneficial for wellbeing and mental health,
5329 as the athletes felt supported. Conversely, although, some of the athletes experienced
5330 relationships that enhanced protection for their wellbeing and mental health, some athletes
5331 lacked trusting relationships with key stakeholders (i.e., sport science and medicine
5332 practitioners), which led to a perceived barrier to help-seeking behaviours.

5333 It was evident, within Study one, that trust was built through time and proximity. That is,
5334 those athletes, who were able to build trusting relationships with their sport science
5335 practitioners were able to do so through spending time with them informally and formally,
5336 which was due to the proximity of the athletes and practitioners (i.e., both parties within Judo
5337 were based at the national centre whereas the cycling athletes were not able to spend as much
5338 time informally with their sport science practitioners). This indicates that there is a need for
5339 everybody involved in a sporting environment to spend time building informal relationships
5340 with the athletes, to elicit the required trust, that will provide the vital social support needed
5341 to maintain athlete wellbeing and mental health. Critically, a practitioner or coach may not be
5342 “formally” responsible for athlete mental health, but as they (especially the coach) spend so
5343 much time with the athlete, they may be the trusted person that provides the social support,
5344 and who an athlete may seek help from first.

5345 Thus, the thesis supports the notion that athlete mental health is a multidisciplinary
5346 responsibility, which highlights the need for a range of stakeholder playing an active role in
5347 contributing to athlete wellbeing and mental health (Maher, 2022). As coaches and sport
5348 science practitioners interact daily with athletes, there are various opportunities that athletes
5349 may take to converse about the processes that are contributing to their wellbeing and mental
5350 health. As such, coaches and sport science practitioners therefore need to be comfortable /
5351 confident with their role of providing social support to athletes, and rely on “experts” (e.g.,
5352 the sport psychologist / clinical psychologist) to support them, in providing the necessary
5353 guidance to the athletes. This is critical, as referring athletes to others (e.g., external clinical
5354 psychologist) may not be the answer – when they have not formed a trusting relationship with
5355 the athlete.

5356 Moreover, interpersonal relationships with teammates were highlighted as a key process
5357 that can be protective and / or a risk towards athlete wellbeing and mental health. At most
5358 times throughout the competition cycle the athletes perceived they had trusting relationships
5359 with their teammates; however, the element of trust was absent when the level of competition
5360 increased for team selection periods. The finding expands previous research and solidifies
5361 exploring team selection / deselection as a prominent risk factor of wellbeing and mental
5362 health (e.g., Blakelock et al., 2016; Kuttel & Larsen, 2020; Wilkinson, 2021). That is, team
5363 selection is a complex process that can result in a loss of a key social support. Moreover, it
5364 points to the importance of ensuring that appropriate / additional support from trusted others
5365 is available during periods of team selection / deselection to try and mitigate any potential
5366 impact that issues in teammate relationships may have on athletes' wellbeing.

5367 It is evident that major time periods (e.g., COVID-19) and regular occurrences (e.g., team
5368 selection periods) can impact the processes. Key time periods have been found to be a factor
5369 in the role of athlete's wellbeing and mental health, (Henriksen et al., 2020). That is,
5370 transitions such as youth-senior transitions and retirement in sport can cause athletes some
5371 difficulty in their lives due to a new set of demands they experience (Morris et al., 2023).
5372 However, this thesis has gone one step further to understand why throughout the competition
5373 cycle athlete's wellbeing and mental health may fluctuate.

5374 Importantly, there is a need to understand the person. The thesis has highlighted that there
5375 is a need to understand individuals needs and ensure individuals have suitable resources to
5376 support their wellbeing and mental health. The results across both studies reported that
5377 individuals need different needs to sustain their wellbeing and mental health. That is, within
5378 Study one the findings emphasised that athletes employed different coping strategies and
5379 within Study two it was perceived that athletes needed different learning resources to aid
5380 their learning. Accordingly, the thesis has reiterated when supporting athlete wellbeing and
5381 mental health there is a need to employ a flexible approach (e.g., Van Slingerland et al.,
5382 2022). Thus, as individual needs vary across athletes and their wellbeing and mental health,
5383 there is an argument within elite sport to adopt a collaborative care model (see Van
5384 Slingerland et al., 2022), which caters for individual differences within a high-performance
5385 sporting environment.

5386 Consequently, and critically, the thesis has contributed to the sport psychology field by
5387 employing a theoretical lens that has not been previously used within the area of wellbeing
5388 and mental health in sport. Utilising the PPCT has enabled the thesis to provide new findings
5389 to the field, that has highlighted the importance of considering factors as processes, which are

5390 influenced by person, context, and time. Moreover, the theoretical contributions enabled the
5391 thesis to develop a theoretical informed intervention, which have been lacking in the area of
5392 athlete wellbeing and mental health.

5393 **7.3 Methodological Contributions of the Thesis**

5394 Throughout the thesis, the use of a collective case study enabled me to gain an in-depth
5395 understanding of a real-world concern, within the context in which it exists (Mills, 2010). Of
5396 note, the current thesis was strengthened by use of case study methodology, as it
5397 complements the PPCT model, giving the opportunity to research how the context (i.e., the
5398 sport environments) influences the processes and their impact on the athletes' wellbeing and
5399 mental health. The case study methodology enabled the use of different collection methods to
5400 gain an understanding of athlete wellbeing and mental health, whilst understanding in-depth,
5401 the differences between two organisations due to their working policies and staffing. Its use
5402 within Study one also enabled me to take an in-depth approach (Mills et al., 2010) into each
5403 case whilst appreciating and understanding the differences and similarities between the two
5404 organisations (Baxter & Jack, 2008; Stake, 1995). In particular, the collective case study
5405 facilitated a direct comparison of two sport settings, which allowed for nuance to be
5406 uncovered across the whole thesis, which is not possible when conducting a single case
5407 study. Thus, by adopting this methodology, the programme of work was able to highlight
5408 aspects of the cases and setting, that may not have been revealed through other approaches.

5409 Additionally, the use of a collective case study within Study two enabled a broad
5410 understanding of how the intervention was received within both case sites. In particular, I
5411 was able to understand why and how the intervention was able to be delivered effectively in
5412 judo but was not as successful within cycling. This has led to important implications for
5413 individuals who want to deliver an intervention within elite sport.

5414 One of the main strengths of the current thesis was being embedded within Sport Wales,
5415 Welsh Judo, and Welsh Cycling. Spending an extended amount of time with the three
5416 organisations enabled me to develop relationships with several stakeholders including
5417 athletes, coaches, sport science practitioners, the CEO, and PD. The benefit of embedded
5418 research is that the researcher can understand the importance of historical, structural, and
5419 interpersonal context (Potts et al., 2022). The prolonged period spent within the organisations
5420 meant that I was able to gain insightful data for Study one, but also develop an intervention
5421 that was informed by, and for the athletes, leaders, coaches, and practitioners. This also led to
5422 me creating a sustainable resource that could be accessed by the organisations. However, it

5423 must be noted that it was difficult to become embedded in two different sports at the same
5424 time and practitioners should be cognisant of this when attempting to do such work in the
5425 future.

5426 Conducting research that is embedded within organisations becomes challenging when
5427 there is a need to produce clear, thorough, and well analysed results in the short timeframe,
5428 for which organisations push. This was particularly apparent for the thesis, as it was difficult
5429 keep every stakeholder aware of the milestones, whilst also taking into consideration the time
5430 needed for high quality analysis to occur. As such, in conducting this body of work, I have
5431 realised the importance of managing expectations when completing academic / evidence-
5432 based work within the elite sport setting. There is need to ensure that stakeholders are aware
5433 of the results, which could lead to some insightful feedback and meaningful change for the
5434 organisations, can take time to analyse (Potts et al., 2022). The ability to keep stakeholders
5435 aware of the results was one of the most difficult challenges I faced as a neophyte researcher,
5436 and I would handle it very differently now that I have acquired further skill, knowledge, and
5437 awareness. Therefore, the research has emphasised that clear communication within
5438 embedded research can facilitate change (Cheetman et al., 2018; Ward et al., 2021); thus, a
5439 suggestion for future researchers is to take extra time to establish communication plans from
5440 the outset to ensure that all stakeholders understand realistic research timelines.

5441 Additionally, the thesis benefited from the use of longitudinal research, as it accounted
5442 for developmental changes in wellbeing and mental health over time. That is, understanding
5443 how the temporal periods of week to week, and critical time periods in the competition cycle
5444 led to different experiences of wellbeing and mental health. The use of longitudinal research
5445 enabled the implementation of a wellbeing and mental health intervention, which was
5446 developed with a range of stakeholders. Furthermore, the use of longitudinal research enabled
5447 me to evaluate the intervention over time to appreciate its ongoing impact, something which
5448 has been lacking in much of the previous literature.

5449 Finally, the co-creation of the intervention has added to the evidence based of
5450 community-informed research in the area of wellbeing and mental health in sport (e.g., Vella
5451 et al., 2021). The programme of work enabled various stakeholders to be part of the design
5452 and delivery of the intervention. That is, providing the cases with different products (i.e.,
5453 podcasts, infographics, and environmental recommendations), which was delivered at a time
5454 that was feasible for the cases. Therefore, Study two strengthens the argument of developing
5455 interventions with the targeted population, which can influence participant buy-in and to
5456 achieve the intended outcomes of the research. Nevertheless, despite such co-creation, it was

5457 still apparent that engagement of participants is a challenge, and some areas of the
5458 intervention were not as well received as others, thus co-creation is not a standalone fix.
5459 Rather, recognising co-creation as a starting point for long-term collaboration and adaptation
5460 to individual needs is important.

5461 **7.4 Applied Implications**

5462 One main finding throughout the thesis was the development of the trusting relationships
5463 with significant others, including coaches, sport science practitioners, and teammates. As
5464 highlighted in previous chapters there is a need for organisations to adopt a system-led
5465 approach (e.g., Maher, 2022), which promotes the importance of a range of stakeholders
5466 providing wellbeing and mental health support. Moreover, the social support engendered
5467 from the relationships is key to wellbeing and mental health of athletes, which is created
5468 through time and proximity. Critically, the coach with the environment will have to provide
5469 most of the social support that protects their athlete's wellbeing and mental health as they are
5470 the ones that spend the most time with the athlete. As such, there is a need for coaches to
5471 understand how to provide this support, and ideally have sport psychologists and clinical
5472 psychologists within or close to the environment who can provide them with the information
5473 they require to support the athlete.

5474 Furthermore, sport science practitioners have a pivotal role in the environment. They
5475 were perceived to be a critical source of support once the athlete had developed a trusting
5476 relationship. As mentioned, time is an important factor within the relationship but the
5477 intervention (i.e., Study two) highlighted an important implication for practitioners and that is
5478 for them to be present when delivering an intervention / strategies that can protect /enhance
5479 their wellbeing and mental health. Study two highlighted there was a buy-in from judo
5480 (where I was present) but sometimes a wall of silence from the cycling athletes and coaches.
5481 Not being in the environment, it was difficult to understand if the resources were being
5482 accessed, whereas being an intervention facilitator within the environment enabled the
5483 individuals to be reminded of the resources. The presence of the researcher enabled the
5484 athletes to ask questions and to provide thoughts about the intervention. As such, if
5485 practitioners wish that athletes, coaches, and organisations to engage with the intervention /
5486 strategies, the thesis has highlighted they need to be present within an elite environment, to
5487 develop buy-in and to achieve the desired outcomes.

5488 As time and proximity are important for social support, the findings suggested sending
5489 the athlete out of the system to see a sport psychologist / clinical psychologist may be

5490 counterproductive and should only happen if the athlete is experiencing significant periods of
5491 distress and needs specialist help. Therefore, resources and support needed for wellbeing and
5492 mental health should be readily accessible for athletes. If, at the national level of competition,
5493 sport psychologists and some clinical psychology support is not available, then it is most
5494 likely to become the job for the coach. However, the coach providing this support for athletes
5495 may become unsustainable, and detrimental for their own wellbeing and mental health (e.g.,
5496 Hill et al., 2021; Smith et al., 2020). It is crucial for coaches to receive support from sport
5497 psychologists and others within their environment to protect their wellbeing and mental
5498 health.

5499 To provide the above systems-led approach there is a need to create an environment that
5500 provides a focus on wellbeing and mental health. The current thesis showed that policies and
5501 procedures, such as the decision of the overarching organisation to develop a new strategy for
5502 the allocation of resources for the sports, can have detrimental effect on athletes' wellbeing
5503 and mental health. Although there has been a cultural shift in sport addressing the welfare of
5504 athletes, which have been driven by funded reports (e.g., Grey-Thompson, 2017), it can be
5505 counterproductive if the sports who are trying to protect their athletes are held back by
5506 decisions made away from the performance area. Consequently, there needs to be continuous
5507 conversations relating wellbeing and mental health in sport, to understand what an
5508 organisation needs to do to ensure they are playing a pivotal role in protecting their wellbeing
5509 and mental health. Particularly, ensuring there is open conversation about upcoming changes
5510 at an organisational level, so that sports can start to prepare and take steps to mitigate any
5511 potential negative outcomes would be beneficial.

5512 Moreover, the thesis has indicated that there is a need to provide sustainable resources
5513 that can be accessed for athletes. As Currie et al. (2021) recommended, a key part of the work
5514 is to ensure organisations and all staff / athletes are working to prevent wellbeing and mental
5515 health concerns. There is a need for the athletes' support system to recognise the importance
5516 of wellbeing and mental health, including removing stigma (Purcell et al., 2019) and
5517 improving mental health literacy, which the current thesis has highlighted can be done in a
5518 sustainable way. The current thesis provided sustainable resources for the athletes, which
5519 were perceived to be vital for athletes in times when they need them most. Developing
5520 sustainable resources that can be accessed virtually is important. This would allow athletes to
5521 access evidenced-based support when they are away from the performance environment (e.g.,
5522 travelling for sport, prolonged periods away from home). Providing resources through
5523 substantiable means (e.g., infographics and podcasts), enables the organisations to funnel

5524 their financial resources into the care of athletes for early intervention while also directing
5525 them to specialist mental health care if needed (e.g., Purcell et al., 2019).

5526 For athletes, it is important they receive continued education, through a variety of modes,
5527 around key processes that may affect their wellbeing and mental health, alongside developing
5528 some key strategies. The thesis highlighted the development and expansion of a resource pool
5529 for athletes is highly beneficial. This is hardly surprising as several studies has highlighted
5530 that athletes utilise a number of coping strategies to aid their wellbeing and mental health
5531 (e.g., Rice et al., 2016). However, it is important to work closely with athletes to enable them
5532 to understand what resources are beneficial for them, and how they implement them in their
5533 daily lives, which may include learning how to regulate their emotions, especially when
5534 escapism strategies are not available or suitable (e.g., away on tour). Educating athletes is
5535 important but only one step, ensuring they can subsequently implement strategies is key.
5536 Crucially, it is important that sport psychologists are a key part of the athlete's journey.

5537 Finally, the programme of work had identified that when protecting the wellbeing and
5538 mental health of athletes, policy makers, organisations, coaches, and practitioners, need to be
5539 mindful of the four processes. That is, they need to work collaboratively to ensure that
5540 athletes are exposed to: i) trusting relationships (e.g., time spent with coaches, sport science
5541 practitioners, and teammates); ii) information to support their positive body image and weight
5542 management (e.g., providing evidence-based sustainable resources); iii) positive attitudes
5543 towards wellbeing and mental health (e.g., open communication and messaging about
5544 wellbeing and mental health); and (iv) the continued expansion of resource pool (e.g., explore
5545 with athletes there coping strategies).

5546 **7.5 Reflexive Account of the Research Journey**

5547 The following section will provide an account of my research journey to highlight my
5548 key decisions throughout the research process. From the beginning of the research, the main
5549 aim was to provide an intervention that could enhance athletes' wellbeing and mental health.
5550 Accordingly, there were a number of informed decisions along the way that enabled me to
5551 achieve this aim.

5552 Firstly, to understand what to target during the intervention, there was a need to
5553 understand the factors that affect the athletes' wellbeing and mental health within the cases of
5554 judo and cycling. Thus, a qualitative approach was chosen to explore the factors they may
5555 encounter which affected their wellbeing. This was initially achieved through the athletes'

5556 subjective voice within interviews, but also supported by observation, which would then help
5557 me to understand the context provided by the participants.

5558 However, throughout my readings of papers and the initial pilot interviews, there was
5559 a recognition that previous research (e.g., Nixdorf et al., 2013; Prinz et al., 2013; Rice et al.,
5560 2016) had provided discrete factors that were deemed to affect wellbeing and mental health -
5561 apparently in isolation. For example, it was proposed that if you have a lack of social support,
5562 you are more prone to lowered wellbeing and poor mental health. But I had questions,
5563 including "what is it about social support that impacts wellbeing and mental health?", "how
5564 long does this lack of support have to occur for?", "does social support always affect all
5565 athletes' wellbeing, all of the time?", and "can this social support be repaired?". These
5566 reflections led to conversations with my supervisory team about exploring athlete wellbeing
5567 from a different theoretical perspective.

5568 This viewpoint was further developed by engaging with key researchers (e.g., Purcell
5569 et al., 2019) who were calling for an understanding of athlete mental health from within their
5570 ecology. This influenced the decision to explore Bronfenbrenner's writings (e.g., 1994;
5571 Bronfenbrenner & Ceci, 1994; Bronfenbrenner & Morris, 2006) and in particular, the PPCT
5572 model (Bronfenbrenner, 1994; Bronfenbrenner & Ceci, 1994; Bronfenbrenner & Morris,
5573 2006). The model enabled me to explore the processes that may affect athlete wellbeing and
5574 mental health, whilst also understanding how these processes are affected by their different
5575 context, and the time in which they live. These decisions would in turn, allow me to extend
5576 the literature and our understanding.

5577 As I moved through the data collection and analysis period of Study 1, it became clear
5578 that there were four main processes that were positively and negatively affecting the athletes'
5579 wellbeing and mental health. Therefore, to address the aim of the thesis, these four processes
5580 were targeted during the intervention study (i.e., Study 2). The use of the theoretical
5581 framework informed a multi-level intervention, due to the different contexts of the athlete's
5582 ecology, affecting the processes, at differing times. As such, in order help athletes improve
5583 their own wellbeing, I had to ensure that environment was refined, and that significant others
5584 within it (i.e., coaches and practitioners) had an opportunity to upskill their mental health
5585 literacy. There was also a need to (try and) influence the policies and procedures of Sport
5586 Wales, Welsh Judo, and Welsh Cycling, which were impacting athlete wellbeing and mental
5587 health. Thus, a draft of the intervention, that addressed these considerations, was created to
5588 present to my supervisory team.

5589 Once the draft proposal was discussed, it was recognised that I needed to involve the
5590 sports (athletes, support team and management) as much as possible, so they all had an input
5591 regarding any refinements needed to the intervention, and how best to implement it. This
5592 would ensure that they felt it was produced by them and for them. This decision was also
5593 underpinned by my belief that working collaboratively, is the only way to support athlete
5594 development within different environments. Accordingly, having such an iterative process,
5595 and working in partnership, allowed the intervention to have maximum impact on athletes’
5596 wellbeing and mental health. That is, and as seen with Study 2, the development process of
5597 the intervention was community-informed (e.g., Vella et al., 2018; Vella et al., 2021), and led
5598 to the decision to create an educational podcast series and infographics alongside the
5599 dissemination of environmental recommendations.

5600 To understand the impact of the intervention across the two cases, there was a
5601 research decision to deliver it differently in the sports. This was driven by my curiosity
5602 regarding whether there is a need for the sport psychologist to be present when an
5603 intervention is embedded within a sporting environment. Specifically, I wanted to understand
5604 if there was any benefit of me facilitating the intervention (via guided learning) with the judo
5605 players, versus whether it would be advantageous for athletes to self-guide themselves
5606 through the intervention (as with cycling). Research decisions were then made to ensure that
5607 a rigorous evaluation of the intervention’s perceived impact.

5608 Firstly, I wanted to capture the true nature of delivering, implementing, and
5609 evaluating an intervention across the sports. This decision was made as when I was a
5610 neophyte practitioner, I did not feel there were true / helpful accounts available regarding the
5611 challenges faced when trying to implement applied interventions. Alongside, my imposter
5612 syndrome at the time, this acted as a catalyst for the use of a reflexive diary throughout the
5613 intervention process, ensuring that I could learn from my experience, but also provide
5614 insights for others applied sport psychologists.

5615 Furthermore, it was evidently necessary to provide an opportunity for athletes,
5616 coaches, and leads to provide their own evaluation of the intervention. This was initially
5617 through an online evaluative survey, which allowed the participants to provide anonymised
5618 data (if they preferred). Semi-structured interviews were then utilised to gather detailed,
5619 individual perceptions of the intervention, allowing me to understand why (and how) the
5620 intervention may or may not have had an impact on the participants’ wellbeing and mental
5621 health.

5622 Overall, throughout the research journey, my decisions were driven by my own values
5623 and beliefs. This included ensuring I was working collaboratively and authentically
5624 throughout the programme of work. Moreover, I took the opportunity to learn from critical
5625 peers within applied sport psychology, to provide a thesis that offered a new perspective on
5626 this subject area, and co-create an intervention that could impact athlete wellbeing and health
5627 in the short- and longer term.

5628 **7.6 Limitations and Future Research Directions**

5629 As with any research, the next section aims to be transparent with the limitations of the
5630 thesis. Firstly, as case study methodology was used there is always the argument of the
5631 results not being applicable to other sports and organisations. However, using a collective
5632 case study enabled the comparison of two cases, which ultimately led to understanding how a
5633 wellbeing and mental health intervention may benefit from lessons learnt across two cases.
5634 Future research should use the bioecological model to research wellbeing and mental health
5635 in sport across different organisations and cultures. Crucially, as most research regarding
5636 athlete wellbeing and mental health is currently developed and conducted in Western society
5637 and cultures, the PPCT model allows for researchers to apply it to various cultures to gain a
5638 better understanding of the processes that occur across cultures, and how these cultures may
5639 also influence the different processes. Moreover, all the research conducted explore the
5640 research of able-bodied athletes, therefore there is a need to understand the processes that
5641 disabled athletes experience, which the PPCT lens allows (see Morris et al., 2023).

5642 Moreover, the thesis has empathised the need for wellbeing and mental health research in
5643 sport. However, the current thesis only focused athlete wellbeing and mental health, which
5644 has proposed a number of implications for coaches and practitioners. As such, to ensure staff
5645 can support athlete wellbeing and mental health, there is a need to further explore and
5646 understand the processes that affect wellbeing and mental health of staff members within
5647 organisations. The theoretical lens of the thesis enables a new scope within the research base
5648 that has focused on coaches and practitioners' wellbeing and mental health (e.g., Hill et al.,
5649 2021; Smith et al., 2020).

5650 One limitation that can be considered is that as the lead researcher I both delivered and
5651 evaluated the intervention. As such, there is a possibility that the evaluation I did receive was
5652 poised positively from the participants, providing socially desirable responses. These
5653 responses may have not highlighted their true thoughts and reflections, which may have been
5654 influenced by the relationship I had built with the participants over the three years. However,

5655 to combat this possibility I explored the limitations of the intervention with the participants,
5656 allowing them a space to reflect on the improvements needed to the programme of work. To
5657 improve future interventions, it would be advantageous to use a different facilitator or
5658 evaluator to ensure this form of bias may be limited within research.

5659 Additionally, my changing roles within the intervention may have impacted the ability to
5660 gather more evaluation. As highlighted within Study two, the intervention lacked engagement
5661 and evaluation from both sports, but in particular, cycling. Although I tried to enlist different
5662 methods (e.g., informal feedback, online anonymous survey, and interviews), sent countless
5663 emails, and follow-ups to gather more evaluation from cycling, I was unable to collect more
5664 data. This had led to the findings of Study two to represent the views of a small sample.
5665 Therefore, in future work, researchers may wish to consider being physically present in the
5666 environment where they are delivering their intervention, to ensure they can build key
5667 relationships to have an impact but also gain insightful data. Moreover, asking athletes how
5668 the intervention should be evaluated may lead to an ownership and meaning in the data
5669 collection stage. Although there was no evaluation from the cycling the benefit of the current
5670 intervention was the sustainable resources that athletes were able to still access after the
5671 Study was concluded. This could be an opening into an area of research that gathers further
5672 understanding of the benefits of sustainable resources. As the future of interventions may
5673 include some form of internet presence and sustainable resources, it is important for the
5674 facilitator to be present for participants at points throughout, even if that is via an online
5675 forum.

5676 **7.7 Personal Reflections**

5677 Throughout my PhD journey, I had the opportunity to reflect as part as my
5678 methodology. The opportunity led to a range of reflections wider than the thesis itself, which
5679 I want to share with others (e.g., early career researchers and neophyte PhD students), so they
5680 can take some learnings into their own journey. As a PhD student, you are constantly asked
5681 how the research is going, how long you have left, and what is next. My biggest reflection of
5682 the PhD (and something I have shared during an academic conference; QRSE 2022
5683 Conference, Durham, United Kingdom) is that the journey is a rollercoaster of emotions, and
5684 in fact, despite being about to submit my thesis, I am not even near the end of the
5685 rollercoaster. You begin the journey with so much excitement, hope, and dedication but these
5686 emotions were tested throughout. It is important to note that these PhD reflections were
5687 highly impacted by the COVID-19 pandemic, and I recognise these reflections may not

5688 reflect the journey for those started to embark on their own journey after COVID and the
5689 “new normal”. As I began the journey, I was very excited. I knew I was coming into an
5690 applied focused PhD, spending time within a wide range of environments, which is
5691 something that I wanted and dreamt of when studying for my Sport Psychology BSc and
5692 MSc. I was determined to take every chance I had, spending time speaking to a wide range of
5693 leaders, practitioners, and athletes. This becomes my first piece of advice, to become an
5694 embedded researcher you must give up your time. You are an outsider, and to develop
5695 rapport and trust with individuals, so they start speaking to you and to gain high quality data,
5696 you have to give yourself (and them) enough time. Within that time, you will have to
5697 sacrifice, and in that moment when you give up your time it may come with feelings of
5698 missing out, but it is highly important, and it is a temporary measure that breeds greater
5699 outcomes. However, with that (and slightly contradictory) you must protect your wellbeing
5700 and mental health as a PhD student.

5701 March 2020. After spending a few months becoming embedded, I had started to collect
5702 some interview data just as the pandemic started to trickle into the news, with threats of
5703 lockdowns. The university experienced their first case, which led the campus to shut down
5704 immediately and we were told to get ourselves home if possible. I headed home, thinking, as
5705 I am sure many of us did, that we would all be back to normal within a couple of weeks. As
5706 the first lockdown was announced, the feelings of novelty took over and offered an
5707 opportunity to spend time with my family at home (i.e., my dad, my brother, and my
5708 brother’s partner), whilst ensuring I was spending time online catching up with friends with
5709 weekly Zoom quizzes. Just as the athletes and coaches noted within their own world, they
5710 were able to reconnect and improve relationships during this time. The first lockdown was
5711 manageable, using coping strategies including ensuring I was remaining connected with
5712 others, cooking fresh meals, and keeping a structure to my day. However, as time crept on,
5713 and we recognised that lockdowns were continuing, that is when my own mental health
5714 declined. I had moved back to Swansea due to not wanting to be at my home. All the things
5715 that were keeping me positive, suddenly disappeared and I became isolated, and not a very
5716 nice person to be around.

5717 I recognised being at home for a prolonged period made me face some demons that I had
5718 run away from for a long time. At aged 19, I lost my mother, and she was the woman who
5719 everyone describes as the “life of the party”. She was a larger-than-life character, someone
5720 who many wanted to call her friend, and were proud to call her a friend. I was the proudest
5721 daughter, knowing the impact she had a wide variety of lives. Then, the day after her funeral

5722 I began my undergraduate career. I ultimately dropped out of my first year due to the large
5723 numbers of transitions in life I was going through, which was the best decision I have ever
5724 made. So, if you are reading this right now as a student, firstly do not be afraid to end
5725 something if you need to look after your wellbeing and mental health. However, going back
5726 made me more determined than ever and probably set me up to become a PhD student, as I
5727 knew I wanted to pursue my studies and work harder than before. I recognised as I was going
5728 through the second lockdown, I had not dealt with the grief I had experienced. I had a bout of
5729 counselling within my third year of my undergraduate degree, which allowed me to speak
5730 about how I was feeling for the first time in three years, rather than suppressing ever negative
5731 feeling I was experiencing. Now in my second year of my PhD, I recognised I was starting to
5732 suppress my feelings once again, and this is when I asked for support from the university
5733 counselling services. I am thankful today that I reached out for counselling. Ultimately,
5734 researching athletes' wellbeing and mental health, I felt a bit of a fraud as I was not looking
5735 after my own wellbeing and mental health. During my counselling journey I was able to gain
5736 a new perspective of wellbeing and mental health, this was alongside the time I was reading
5737 in-depth about the bioecological model. This helped me to recognise that my wellbeing and
5738 mental health was not just a consequence of me personally but my environments, the wider
5739 culture, and the period I was experiencing (i.e., COVID-19). I was beginning to understand
5740 more in depth, the complexity of wellbeing and mental health, and how important it is to
5741 explore processes from various angles. As such, an important reflection for researchers
5742 within the area of work, is to go on your own discovery of your mental health, as it enables
5743 you to gain new perspectives for research but ultimately enables you to finish the projects,
5744 something that you have worked for, and as mentioned above you have sacrificed a lot. It
5745 must be noted that I was not completely healthy after the counselling, but I was able to
5746 become a lot more self-aware regarding how important it was not to identify solely as a PhD
5747 student, as it becomes overwhelming.

5748 I recognised this when I was coming back off my time-off in July 2022. I had just
5749 experienced two amazing weeks with friends, reconnecting after two years of separation. It
5750 was the last evening, and I was hit with my first experience of a panic attack. Reflecting with
5751 friends and colleagues afterwards, I realised that it was because I knew I had to come home
5752 to my PhD and finish my thesis. Now, this may sound bleak, but it is not, it was because my
5753 whole identity had become my PhD. I was beginning to see friends become wives and
5754 husbands, buy their first and second homes, have children, and experience success within
5755 their jobs (e.g., promotions). I felt the PhD had put me into isolation and put my life on hold,

5756 not being able to save for a house etc, and / or progress in my life personally because my
5757 whole being was dedicated to the PhD and to academia in general. Coming back into the final
5758 year of my write up, my priority was to widen my identity. I achieved a full-time job, whilst
5759 working part-time as psychology lead for a Women's County Cricket Club, and this became
5760 the greatest thing for me. I must admit, my PhD write-up become delayed and slowed down,
5761 but it meant my wellbeing and mental health was moderate and / or positive across the
5762 period, and for me that was most important. As such, it is important for PhD students to
5763 ensure that you have a wider identity other than your PhD. We discuss the importance of
5764 athletes widening their identity, so it is important to take a leaf out of the same book and
5765 ensure you have a life away from the programme of work.

5766 One part of my identity that began to develop was my applied practitioner role. An
5767 important reflection was the impact I was having in my research and my applied world. That
5768 is, I felt I was able to have more impact in the applied world (i.e., the team I work with)
5769 because I have witnessed the change as an insider. Whereas, as a researcher, I still felt like an
5770 outsider, chasing the things I needed for a completed research thesis. I do feel there is a
5771 difference between a researcher feeling that they are embedded and an applied practitioner
5772 who is embedded, due to the insider and outside debate. It felt at times disheartening to be a
5773 researcher because I perceived at time I was on the outside. Whereas, as a practitioner I felt
5774 valued, with my thoughts and reflections being heard across the setting. This was mainly
5775 because I am constantly able to provide real-time feedback to key stakeholders about the
5776 environment, whereas in research you have boundaries of when you are able to feedback
5777 results. As such, as mentioned in the methodological contributions, becoming embedded is
5778 important but you have to work hard as a researcher to be within that environment, and be
5779 someone who may not feel valued as you would like to be.

5780 So, one final reflection is, remember the reason why you are completing the research. As
5781 I was going through the PhD journey, there were moments when all I was thinking 'I need to
5782 get this data, as I need to finish the PhD'. I completely forgot the initial reason why I applied
5783 for and started the PhD. I was sometimes lost within the research, forgetting that I wanted to
5784 make some kind of impact in the world of athletes' and to provide them with something that
5785 could enhance their wellbeing and mental health, at a time when they need it. Maybe, when
5786 they do need it, they may open a conversation with someone significant to aid their wellbeing
5787 and mental health.

5788 **7.7 Conclusion**

5789 This thesis has provided new insights into the wellbeing and mental health of athletes.
5790 That is, there are processes that impact athletes' wellbeing and mental health, which include:
5791 (i) the development of trusting relationships; (ii) negative perceptions of self; (iii) attitudinal
5792 changes towards wellbeing and mental health; and (iv) the expansion of a resource pool.
5793 Importantly, the processes were influenced by the person characteristics of individuals (e.g.,
5794 tendency to seek help), the environmental context (e.g., the policies affecting the athletes
5795 access to sport science practitioners), and time (e.g., team selection). The processes informed
5796 a multi-level intervention that aimed to impact the processes and enhance wellbeing and
5797 mental health. The intervention impacted the processes, and in turn, was perceived to
5798 increase confidence of help-seeking behaviours, increase the ability to manage wellbeing and
5799 mental health symptoms, increase knowledge of wellbeing and mental health concerns, and
5800 acted as a preventive measure. The perceived outcomes were impacted by the benefits of the
5801 podcasts (i.e., flexibility of listening, easy and informal listening, and the control and
5802 ownership), infographics (i.e., provide concise information, accessibility of critical
5803 information, and supports different ways of learning). The environmental recommendations
5804 were perceived by the CEO to play a small role in creating an opportunity for athletes to
5805 openly discuss their wellbeing and mental health.

5806 The programme has provided recommendations for researchers and practitioners that
5807 can be used to support and enhance athletes' wellbeing and mental health, including the
5808 importance of being present when delivering interventions. The benefit of underpinning the
5809 thesis with the PPCT model, has highlighted the complexity of processes that affect
5810 wellbeing and mental health, and should be taken into consideration alongside the person,
5811 context, and time. As such, once the processes are considered they should be addressed to
5812 enhance athletes' wellbeing and mental health within elite sport.

References

- 5813
5814
5815 Abdulrahman, T. R., Basalama, N., & Widodo, Moh. R. (2018). The impact of podcasts on
5816 EFL students' listening comprehension. *International Journal of English*
5817 *Linguistics*, 8(6), 122-130 <https://doi.org/10.5539/ijel.v8n6p122>
- 5818 Ajilchi, B., Amini, H. R., Ardakani, Z. P., Zadeh, M. M., & Kisely, S. (2019). Applying
5819 mindfulness training to enhance the mental toughness and emotional intelligence of
5820 amateur basketball players. *Australasian Psychiatry*, 27(3), 291–
5821 296. <https://doi.org/10.1177/1039856219828119>
- 5822 Almeida, D. M. (2005). Resilience and vulnerability to daily stressors assessed via diary
5823 methods. *Current Directions in Psychological Science*, 14(2), 64-
5824 68. <https://doi.org/10.1111/j.0963-7214.2005.00336.x>
- 5825 Amorose, A. J., Anderson-Butcher, D., & Cooper, J. (2009). Predicting changes in athletes'
5826 well being from changes in need satisfaction over the course of a competitive
5827 season. *Research Quarterly for Exercise and Sport*, 80(2), 386–
5828 392. <https://doi.org/10.1080/02701367.2009.10599575>
- 5829 Anderson, C., & Petrie, T. A. (2012). Prevalence of disordered eating and pathogenic weight
5830 control behaviors among NCAA division 1 female collegiate gymnasts and
5831 swimmers. *Research Quarterly for Exercise and Sport*, 83(1), 120–
5832 124. <https://doi.org/10.1080/02701367.2012.10599833>
- 5833 Andersson, G. (2018). Internet interventions: Past, present and future. *Internet*
5834 *Interventions*, 12, 181–188. <https://doi.org/10.1016/j.invent.2018.03.008>
- 5835 Andersson, G., & Titov, N. (2014). Advantages and limitations of Internet-based
5836 interventions for common mental disorders. *World Psychiatry*, 13(1), 4–
5837 11. <https://doi.org/10.1002/wps.20083>
- 5838 Aragon, S. R. (2003). Creating social presence in online environments. *New Directions for*
5839 *Adult and Continuing Education*, 2003(100), 57–68. <https://doi.org/10.1002/ace.119>
- 5840 Ballesteros, J., Capielo, C., Blom, L. C., Buckman, L., & Kroot, A. (2022). Block and tackle
5841 or interfere: Student-athletes' identities and well-being. *Journal for the Study of*
5842 *Sports and Athletes in Education*, 1-
5843 25. <https://doi.org/10.1080/19357397.2022.2060704>
- 5844 Bandura, A. (1977). Self-efficacy: toward a unifying theory of behavioral
5845 change. *Psychological Review*, 84(2), 191-215. [https://doi.org/10.1037/0033-](https://doi.org/10.1037/0033-295X.84.2.191)
5846 [295X.84.2.191](https://doi.org/10.1037/0033-295X.84.2.191)

- 5847 Bapat, S., Jorm, A., & Lawrence, K. (2009). Evaluation of a mental health literacy training
5848 program for junior sporting clubs. *Australasian Psychiatry*, *17*(6), 475–
5849 479. <https://doi.org/10.1080/10398560902964586>
- 5850 Bauman, N. J. (2016). The stigma of mental health in athletes: Are mental toughness and
5851 mental health seen as contradictory in elite sport? *British Journal of Sports*
5852 *Medicine*, *50*(3), 135–136. <https://doi.org/10.1136/bjsports-2015-095570>
- 5853 Baxter, P., & Jack, S. (2008). Qualitative case study methodology: Study design and
5854 implementation for novice researchers. *The Qualitative*
5855 *Report*. <https://doi.org/10.46743/2160-3715/2008.1573>
- 5856 Becker, C. B., McDaniel, L., Bull, S., Powell, M., & McIntyre, K. (2012). Can we reduce
5857 eating disorder risk factors in female college athletes? A randomized exploratory
5858 investigation of two peer-led interventions. *Body Image*, *9*(1), 31–
5859 42. <https://doi.org/10.1016/j.bodyim.2011.09.005>
- 5860 Bertollo, M., Forzini, F., Biondi, S., Di Liborio, M., Vaccaro, M. G., Georgiadis, E., & Conti,
5861 C. (2021). How does a sport psychological intervention help professional cyclists to
5862 cope with their mental health during the covid-19 lockdown? *Frontiers in*
5863 *Psychology*, *12*, 607152. <https://doi.org/10.3389/fpsyg.2021.607152>
- 5864 Biggin, I. J. R., Burns, J. H., & Uphill, M. (2017). An investigation of athletes' and coaches'
5865 perceptions of mental ill-health in elite athletes. *Journal of Clinical Sport*
5866 *Psychology*, *11*(2), 126–147. <https://doi.org/10.1123/jcsp.2016-0017>
- 5867 Bird, M. D., Simons, E. E., & Jackman, P. C. (2021). Mental toughness, sport-related well-
5868 being, and mental health stigma among National Collegiate Athletic Association
5869 Division I student-athletes. *Journal of Clinical Sport Psychology*, *15*(4), 306–
5870 322. <https://doi.org/10.1123/jcsp.2020-0043>
- 5871 Blakelock, D., Chen, M., & Prescott, T. (2016). Psychological distress in elite adolescent
5872 soccer players following Deselection. *Journal of Clinical Sport Psychology*, *10*, 59–
5873 77. <https://doi.org/10.1123/jcsp.2015-0010>
- 5874 Bornstein, M. H. (2012). Proximal to distal environments in child development: Theoretical,
5875 structural, methodological, and empirical considerations. In L. Mayes & M. Lewis
5876 (Eds.), *The Cambridge Handbook of Environment in Human Development* (1st ed.,
5877 pp. 15–34). Cambridge University
5878 Press. <https://doi.org/10.1017/CBO9781139016827.003>
- 5879 Bourke, B. (2014). Positionality: Reflecting on the research process. *The Qualitative*
5880 *Report*. <https://doi.org/10.46743/2160-3715/2014.1026>

- 5881 Braun, V., & Clarke, V. (2019). Reflecting on reflexive thematic analysis. *Qualitative*
 5882 *Research in Sport, Exercise and Health*, 11(4), 589–
 5883 597. <https://doi.org/10.1080/2159676X.2019.1628806>
- 5884 Braun, V., & Clarke, V. (2021). One size fits all? What counts as quality practice in
 5885 (reflexive) thematic analysis? *Qualitative Research in Psychology*, 18(3), 328–
 5886 352. <https://doi.org/10.1080/14780887.2020.1769238>
- 5887 Braun, V., & Clarke, V. (2022). *Thematic Analysis A Practical Guide*. Sage.
- 5888 Breslin, G., Haughey, T. J., Donnelly, P., Kearney, C., & Prentice, G. (2017). Promoting
 5889 mental health awareness in sport clubs. *Journal of Public Mental Health*, 16(2), 55–
 5890 62. <https://doi.org/10.1108/JPMH-08-2016-0040>
- 5891 Breslin, G., Haughey, T., O'Brien, W., Caulfield, L., Robertson, A., & Lawlor, M. (2018).
 5892 Increasing athlete knowledge of mental health and intentions to seek help: the state of
 5893 mind Ireland (SOMI) pilot program. *Journal of Clinical Sport Psychology*, 12(1), 39–
 5894 56. <https://doi.org/10.1123/jcsp.2016-0039>
- 5895 Breslin, G., Shannon, S., Cummings, M., & Leavey, G. (2022). An updated systematic
 5896 review of interventions to increase awareness of mental health and well-being in
 5897 athletes, coaches, officials and parents. *Systematic Reviews*, 11(1),
 5898 99. <https://doi.org/10.1186/s13643-022-01932-5>
- 5899 Breslin, G., Shannon, S., Haughey, T., Sarju, N., Neill, D., Leavey, G., & Lawlor, M. (2021).
 5900 Athlete and nonathlete intentions to self-manage mental health: Applying the
 5901 integrated behavior change model to the state of mind program. *Journal of Applied*
 5902 *Sport Psychology*, 33(1), 83-97. <https://doi.org/10.1080/10413200.2019.1629547>
- 5903 Brinkmann, S. (2013). *Qualitative interviewing*. Oxford University Press.
 5904 <https://doi.org/10.1093/acprof:osobl/9780199861392.001.0001>
- 5905 Bronfenbrenner, U. (1975). Reality and research in the ecology of human
 5906 development. *Proceedings of the American Philosophical Society*, 119(6), 439-469.
- 5907 Bronfenbrenner, U. (1977). Toward an experimental ecology of human
 5908 development. *American Psychologist*, 32(7), 513–531. [https://doi.org/10.1037/0003-](https://doi.org/10.1037/0003-066X.32.7.513)
 5909 066X.32.7.513
- 5910 Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and*
 5911 *design*. Harvard university press.
- 5912 Bronfenbrenner, U. (1995). Developmental ecology through space and time: A future
 5913 perspective. In P. Moen, G. H. Elder, Jr., & K. Lüscher (Eds.), *Examining lives in*

- 5914 *context: Perspectives on the ecology of human development* (pp. 619–647). American
5915 Psychological Association. <https://doi.org/10.1037/10176-018>
- 5916 Bronfenbrenner, U., & Ceci, S. J. (1994). Nature-nuture reconceptualized in developmental
5917 perspective: A bioecological model. *Psychological Review*, *101*(4), 568–
5918 586. <https://doi.org/10.1037/0033-295X.101.4.568>
- 5919 Bronfenbrenner, U., & Evans, G. W. (2000). Developmental science in the 21st century:
5920 Emerging questions, theoretical models, research designs and empirical
5921 findings. *Social development*, *9*(1), 115-125. [https://doi.org/10.1111/1467-](https://doi.org/10.1111/1467-9507.00114)
5922 9507.00114
- 5923 Bronfenbrenner, U., & Morris, P. A. (1998). The ecology of developmental processes. In W.
5924 Damon & R. M. Lerner (Eds.), *Handbook of child psychology: Theoretical models of*
5925 *human development* (pp. 993–1028). John Wiley & Sons Inc.
- 5926 Bronfenbrenner, U., & Morris, P. A. (2006). The Bioecological Model of Human
5927 Development. In R. M. Lerner & W. Damon (Eds.), *Handbook of child psychology:*
5928 *Theoretical models of human development* (pp. 793–828). John Wiley & Sons, Inc.
- 5929 Brown, D. J., Arnold, R., Fletcher, D., & Standage, M. (2017). Human thriving: A conceptual
5930 debate and literature review. *European Psychologist*, *22*(3), 167–
5931 179. <https://doi.org/10.1027/1016-9040/a000294>
- 5932 Brown, D. J., Arnold, R., Reid, T., & Roberts, G. (2018). A qualitative exploration of
5933 thriving in elite sport. *Journal of Applied Sport Psychology*, *30*(2), 129–
5934 149. <https://doi.org/10.1080/10413200.2017.1354339>
- 5935 Buckley, G. L., Hall, L. E., Lassemillante, A.-C. M., & Belski, R. (2021). Disordered eating
5936 & body image of current and former athletes in a pandemic; a convergent mixed
5937 methods study—What can we learn from COVID-19 to support athletes through
5938 transitions? *Journal of Eating Disorders*, *9*(1), 73. [https://doi.org/10.1186/s40337-](https://doi.org/10.1186/s40337-021-00427-3)
5939 021-00427-3
- 5940 Byrne, D. (2022). A worked example of Braun and Clarke’s approach to reflexive thematic
5941 analysis. *Quality & Quantity*, *56*(3), 1391–1412. [https://doi.org/10.1007/s11135-021-](https://doi.org/10.1007/s11135-021-01182-y)
5942 01182-y
- 5943 Byrne, S., & McLean, N. (2002). Elite athletes: Effects of the pressure to be thin. *Journal of*
5944 *Science and Medicine in Sport*, *5*(2), 80–94. [https://doi.org/10.1016/S1440-](https://doi.org/10.1016/S1440-2440(02)80029-9)
5945 2440(02)80029-9
- 5946 Caoilte, N. Ó., Lambert, S., Murphy, R., & Murphy, G. (2023). Podcasts as a tool for
5947 enhancing mental health literacy: An investigation of mental health-related

- 5948 podcasts. *Mental Health & Prevention*, 30,
 5949 200285. <https://doi.org/10.1016/j.mhp.2023.200285>
- 5950 Carnevale Pellino, V., Lovecchio, N., Puci, M. V., Marin, L., Gatti, A., Pirazzi, A., Negri, F.,
 5951 Ferraro, O. E., & Vandoni, M. (2022). Effects of the lockdown period on the mental
 5952 health of elite athletes during the COVID-19 pandemic: A narrative review. *Sport
 5953 Sciences for Health*, 18(4), 1187–1199. <https://doi.org/10.1007/s11332-022-00964-7>
- 5954 Castaldelli-Maia, J. M., Gallinaro, J. G. de M. e, Falcão, R. S., Gouttebauge, V., Hitchcock,
 5955 M. E., Hainline, B., Reardon, C. L., & Stull, T. (2019). Mental health symptoms and
 5956 disorders in elite athletes: A systematic review on cultural influencers and barriers to
 5957 athletes seeking treatment. *British Journal of Sports Medicine*, 53(11), 707–
 5958 721. <https://doi.org/10.1136/bjsports-2019-100710>
- 5959 Cheetham, M., Wiseman, A., Khazaeli, B., Gibson, E., Gray, P., Van Der Graaf, P., &
 5960 Rushmer, R. (2018). Embedded research: A promising way to create evidence-
 5961 informed impact in public health? *Journal of Public Health*, 40(suppl_1), i64–
 5962 i70. <https://doi.org/10.1093/pubmed/fox125>
- 5963 Cho, D., Cosimini, M., & Espinoza, J. (2017). Podcasting in medical education: A review of
 5964 the literature. *Korean Journal of Medical Education*, 29(4), 229–
 5965 239. <https://doi.org/10.3946/kjme.2017.69>
- 5966 Chow, G. M., Bird, M. D., Gabana, N. T., Cooper, B. T., & Swanbrow Becker, M. A. (2020).
 5967 A program to reduce stigma toward mental illness and promote mental health literacy
 5968 and help-seeking in National Collegiate Athletic Association Division I student-
 5969 athletes. *Journal of Clinical Sport Psychology*, 15(3), 185–
 5970 205. <https://doi.org/10.1123/jcsp.2019-0104>
- 5971 Coulter, T. J., Mallett, C. J., & Singer, J. A. (2016). A subculture of mental toughness in an
 5972 Australian Football League club. *Psychology of Sport and Exercise*, 22, 98–
 5973 113. <https://doi.org/10.1016/j.psychsport.2015.06.007>
- 5974 Coyle, M., Gorczynski, P., & Gibson, K. (2017). “You have to be mental to jump off a board
 5975 any way”: Elite divers’ conceptualizations and perceptions of mental
 5976 health. *Psychology of Sport and Exercise*, 29, 10-
 5977 18. <https://doi.org/10.1016/j.psychsport.2016.11.005>
- 5978 Crotty, M. (1998). *The Foundations of Social research: Meaning and Perspective in the
 5979 Research Process*. Sage Publications.

- 5980 Crowe, S., Cresswell, K., Robertson, A., Huby, G., Avery, A., & Sheikh, A. (2011). The case
 5981 study approach. *BMC Medical Research Methodology*, *11*(1), 1-
 5982 9. <https://doi.org/10.1186/1471-2288-11-100>
- 5983 Crozier, S. E., & Cassell, C. M. (2016). Methodological considerations in the use of audio
 5984 diaries in work psychology: Adding to the qualitative toolkit. *Journal of Occupational
 5985 and Organizational Psychology*, *89*(2), 396–419. <https://doi.org/10.1111/joop.12132>
- 5986 Cumming, S. P., Smith, R. E., Grossbard, J. R., Smoll, F. L., & Malina, R. M. (2012). Body
 5987 size, coping strategies, and mental health in adolescent female athletes. *International
 5988 Journal of Sports Science & Coaching*, *7*(3), 515–526. [https://doi.org/10.1260/1747-
 5989 9541.7.3.515](https://doi.org/10.1260/1747-9541.7.3.515)
- 5990 Cummins, R. A. (2010). Subjective wellbeing, homeostatically protected mood and
 5991 depression: A synthesis. *Journal of Happiness Studies*, *11*(1), 1-
 5992 17. <https://doi.org/10.1007/s10902-009-9167-0>
- 5993 Currie, A., Blauwet, C., Bindra, A., Budgett, R., Campriani, N., Hainline, B., McDuff, D.,
 5994 Mountjoy, M., Purcell, R., Putukian, M., Reardon, C. L., & Gouttebauge, V. (2021).
 5995 Athlete mental health: Future directions. *British Journal of Sports Medicine*, *55*(22),
 5996 1243–1244. <https://doi.org/10.1136/bjsports-2021-104443>
- 5997 Darawsheh, W. (2014). Reflexivity in research: Promoting rigour, reliability and validity in
 5998 qualitative research. *International Journal of Therapy and Rehabilitation*, *21*(12),
 5999 560–568. <https://doi.org/10.12968/ijtr.2014.21.12.560>
- 6000 Day, M. (2016). Documents of life: From diaries to autobiographies to biographical objects.
 6001 In B. Smith, & A.C. Sparkes (Eds.), *Routledge handbook of qualitative research in
 6002 sport and exercise* (pp. 199-210). Routledge.
- 6003 de Villiers, C., Farooq, M. B., & Molinari, M. (2022). Qualitative research interviews using
 6004 online video technology – challenges and opportunities. *Meditari Accountancy
 6005 Research*, *30*(6), 1764–1782. <https://doi.org/10.1108/MEDAR-03-2021-1252>
- 6006 DeFreese, J. D., & Smith, A. (2014). Athlete social support, negative social interactions, and
 6007 psychological health across a competitive sport season. *Journal of Sport & Exercise
 6008 Psychology*, *36*, 619–630. <https://doi.org/10.1123/jsep.2014-0040>
- 6009 Delenardo, S., & Terrion, J. L. (2014). Suck it up: Opinions and attitudes about mental illness
 6010 stigma and help-seeking behaviour of male varsity football players. *Canadian Journal
 6011 of Community Mental Health*, *33*(3), 43–56. <https://doi.org/10.7870/cjcmh-2014-023>

- 6012 Didymus, F. F., & Fletcher, D. (2014). Swimmers' experiences of organizational stress:
 6013 Exploring the role of cognitive appraisal and coping strategies. *Journal of Clinical*
 6014 *Sport Psychology*, 8(2), 159–183. <https://doi.org/10.1123/jcsp.2014-0020>
- 6015 Diener, E. (1984). Subjective well-being. *Psychological Bulletin*, 95(3), 542–575.
- 6016 Diener, E., & Ryan, K. (2009). Subjective well-being: A general overview. *South African*
 6017 *Journal of Psychology*, 39(4), 391–
 6018 406. <https://doi.org/10.1177/008124630903900402>
- 6019 Diener, E., Suh, E. M., Lucas, R. E., & Smith, H. L. (1999). Subjective well-being: Three
 6020 decades of progress. *Psychological Bulletin*, 125(2),
 6021 276. <https://doi.org/10.1037/0033-2909.125.2.276>
- 6022 Dietze, P. M., Fitzgerald, J. L., & Jenkinson, R. A. (2008). Drinking by professional
 6023 Australian Football League (AFL) players: Prevalence and correlates of risk. *Medical*
 6024 *Journal of Australia*, 189(9), 479–483. [https://doi.org/10.5694/j.1326-](https://doi.org/10.5694/j.1326-5377.2008.tb02138.x)
 6025 [5377.2008.tb02138.x](https://doi.org/10.5694/j.1326-5377.2008.tb02138.x)
- 6026 Dodge, R., Daly, A., Huyton, J., & Sanders, L. (2012). The challenge of defining
 6027 wellbeing. *International Journal of Wellbeing*, 2(3), 222–
 6028 235. <https://doi.org/10.5502/ijw.v2i3.4>
- 6029 Doherty, S., Hannigan, B., & Campbell, M. J. (2016). The Experience of depression during
 6030 the careers of elite male athletes. *Frontiers in*
 6031 *Psychology*, 7. <https://doi.org/10.3389/fpsyg.2016.01069>
- 6032 Donohue, B., Chow, G. M., Pitts, M., Loughran, T., Schubert, K. N., Gavrilova, Y., & Allen,
 6033 D. N. (2015). Piloting a family-supported approach to concurrently optimize mental
 6034 health and sport performance in athletes. *Clinical Case Studies*, 14(3), 159–
 6035 177. <https://doi.org/10.1177/1534650114548311>
- 6036 Donohue, B., Gavrilova, Y., Galante, M., Gavrilova, E., Loughran, T., Scott, J., Chow, G.,
 6037 Plant, C., & Allen, D. (2018). Controlled evaluation of an optimization approach to
 6038 mental health and sport performance. *Journal of Clinical Sport Psychology*, 12, 1–
 6039 42. <https://doi.org/10.1123/jcsp.2017-0054>
- 6040 Dowell, T. L., Waters, A. M., Usher, W., Farrell, L. J., Donovan, C. L., Modecki, K. L.,
 6041 Zimmer-Gembeck, M. J., Castle, M., & Hinchey, J. (2021). Tackling mental health in
 6042 youth sporting programs: A pilot study of a holistic program. *Child Psychiatry &*
 6043 *Human Development*, 52(1), 15–29. <https://doi.org/10.1007/s10578-020-00984-9>
- 6044 Drew, C. (2017). Educational podcasts: A genre analysis. *E-Learning and Digital*
 6045 *Media*, 14(4), 201–211. <https://doi.org/10.1177/2042753017736177>

- 6046 Dubuc-Charbonneau, N., & Durand-Bush, N. (2015). Moving to action: The effects of a self-
 6047 regulation intervention on the stress, burnout, well-being, and self-regulation capacity
 6048 levels of university student-athletes. *Journal of Clinical Sport Psychology*, 9(2), 173–
 6049 192. <https://doi.org/10.1123/jcsp.2014-0036>
- 6050 Dunlap, J. C., & Lowenthal, P. R. (2016). Getting graphic about infographics: Design lessons
 6051 learned from popular infographics. *Journal of Visual Literacy*, 35(1), 42–
 6052 59. <https://doi.org/10.1080/1051144X.2016.1205832>
- 6053 Dunn, M., & Thomas, J. O. (2012). A risk profile of elite Australian athletes who use illicit
 6054 drugs. *Addictive Behaviors*, 37(1), 144–
 6055 147. <https://doi.org/10.1016/j.addbeh.2011.09.008>
- 6056 Eriksson, M., Ghazinour, M., & Hammarström, A. (2018). Different uses of
 6057 Bronfenbrenner's ecological theory in public mental health research: What is their
 6058 value for guiding public mental health policy and practice? *Social Theory &*
 6059 *Health*, 16(4), 414–433. <https://doi.org/10.1057/s41285-018-0065-6>
- 6060 Fogaca, J. L. (2021). Combining mental health and performance interventions: Coping and
 6061 social support for student-athletes. *Journal of Applied Sport Psychology*, 33(1), 4–
 6062 19. <https://doi.org/10.1080/10413200.2019.1648326>
- 6063 Foskett, R. L., & Longstaff, F. (2018). The mental health of elite athletes in the United
 6064 Kingdom. *Journal of Science and Medicine in Sport*, 21(8), 765–
 6065 770. <https://doi.org/10.1016/j.jsams.2017.11.016>
- 6066 Foster, B. J., & Chow, G. M. (2019). Development of the Sport Mental Health Continuum—
 6067 Short Form (Sport MHC-SF). *Journal of Clinical Sport Psychology*, 13(4), 593–
 6068 608. <https://doi.org/10.1123/jcsp.2017-0057>
- 6069 Gabana, N. (2017). A strengths-based cognitive behavioral approach to treating depression
 6070 and building resilience in collegiate athletics: The individuation of an identical
 6071 twin. *Case Studies in Sport and Exercise Psychology*, 1(1), 4–
 6072 15. <https://doi.org/10.1123/cssep.2016-0005>
- 6073 Gascon, M., Triguero-Mas, M., Martínez, D., Dadvand, P., Forn, J., Plasència, A., &
 6074 Nieuwenhuijsen, M. (2015). Mental health benefits of long-term exposure to
 6075 residential green and blue spaces: A systematic review. *International Journal of*
 6076 *Environmental Research and Public Health*, 12(4), 4354–
 6077 4379. <https://doi.org/10.3390/ijerph120404354>

- 6078 Gavrilova, Y., & Donohue, B. (2018). Sport-specific mental health interventions in athletes:
 6079 A call for optimization models sensitive to sport culture. *Journal of Sport*
 6080 *Behavior*, 41(3), 283-304.
- 6081 Gibbs, G. (1988). *Learning by doing: A guide to teaching and learning methods*. Further
 6082 Education Unit.
- 6083 Giel, K. E., Hermann-Werner, A., Mayer, J., Diehl, K., Schneider, S., Thiel, A., & Zipfel
 6084 (2016). Eating disorder pathology in elite adolescent athletes. *International Journal of*
 6085 *Eating Disorders*, 49(6), 553–562. <https://doi.org/10.1002/eat.22511>
- 6086 Giles, S., Fletcher, D., Arnold, R., Ashfield, A., & Harrison, J. (2020). Measuring well-being
 6087 in sport performers: Where are we now and how do we progress? *Sports*
 6088 *Medicine*, 50(7), 1255–1270. <https://doi.org/10.1007/s40279-020-01274-z>
- 6089 Glass, C. R., Spears, C. A., Perskaudas, R., & Kaufman, K. A. (2019). Mindful sport
 6090 performance enhancement: Randomized controlled trial of a mental training program
 6091 with collegiate athletes. *Journal of Clinical Sport Psychology*, 13(4), 609–
 6092 628. <https://doi.org/10.1123/jcsp.2017-0044>
- 6093 Gorczynski, P., Currie, A., Gibson, K., Gouttebauge, V., Hainline, B., Castaldelli-Maia, J. M.,
 6094 Mountjoy, M., Purcell, R., Reardon, C. L., Rice, S., & Swartz, L. (2021). Developing
 6095 mental health literacy and cultural competence in elite sport. *Journal of Applied Sport*
 6096 *Psychology*, 33(4), 387–401. <https://doi.org/10.1080/10413200.2020.1720045>
- 6097 Gorczynski, P. F., Coyle, M., & Gibson, K. (2017). Depressive symptoms in high-
 6098 performance athletes and non-athletes: A comparative meta-analysis. *British Journal*
 6099 *of Sports Medicine*, 51(18), 1348–1354. <https://doi.org/10.1136/bjsports-2016-096455>
- 6100 Gould, D., Dieffenbach, K., & Moffett, A. (2002). Psychological characteristics and their
 6101 development in Olympic champions. *Journal of Applied Sport Psychology*, 14(3),
 6102 172–204. <https://doi.org/10.1080/10413200290103482>
- 6103 Gouttebauge, V., Bindra, A., Blauwet, C., Campriani, N., Currie, A., Engebretsen, L.,
 6104 Hainline, B., Kroshus, E., McDuff, D., Mountjoy, M., Purcell, R., Putukian, M.,
 6105 Reardon, C. L., Rice, S. M., & Budgett, R. (2021). International Olympic Committee
 6106 (IOC) Sport Mental Health Assessment Tool 1 (SMHAT-1) and Sport Mental Health
 6107 Recognition Tool 1 (SMHRT-1): Towards better support of athletes' mental
 6108 health. *British Journal of Sports Medicine*, 55(1), 30–
 6109 37. <https://doi.org/10.1136/bjsports-2020-102411>
- 6110 Gouttebauge, V., Castaldelli-Maia, J. M., Gorczynski, P., Hainline, B., Hitchcock, M. E.,
 6111 Kerkhoffs, G. M., Rice, S. M., & Reardon, C. L. (2019). Occurrence of mental health

- 6112 symptoms and disorders in current and former elite athletes: A systematic review and
6113 meta-analysis. *British Journal of Sports Medicine*, 53(11), 700–
6114 706. <https://doi.org/10.1136/bjsports-2019-100671>
- 6115 Gouttebarga, V., Frings-Dresen, M. H. W., & Sluiter, J. K. (2015). Mental and psychosocial
6116 health among current and former professional footballers. *Occupational
6117 Medicine*, 65(3), 190–196. <https://doi.org/10.1093/occmed/kqu202>
- 6118 Gouttebarga, V., Hopley, P., Kerkhoffs, G., Verhagen, E., Viljoen, W., Wylleman, P., &
6119 Lambert, M. (2018). A 12-month prospective cohort study of symptoms of common
6120 mental disorders among professional rugby players. *European Journal of Sport
6121 Science*, 18(7), 1004–1012. <https://doi.org/10.1080/17461391.2018.1466914>
- 6122 Gouttebarga, V., Jonkers, R., Moen, M., Verhagen, E., Wylleman, P., & Kerkhoffs, G.
6123 (2017). The prevalence and risk indicators of symptoms of common mental disorders
6124 among current and former Dutch elite athletes. *Journal of Sports Sciences*, 35(21),
6125 2148–2156. <https://doi.org/10.1080/02640414.2016.1258485>
- 6126 Gouttebarga, V., Tol, J. L., & Kerkhoffs, G. M. M. J. (2016). Epidemiology of symptoms of
6127 common mental disorders among elite Gaelic athletes: A prospective cohort
6128 study. *The Physician and Sportsmedicine*, 44(3), 283–
6129 289. <https://doi.org/10.1080/00913847.2016.1185385>
- 6130 Grey-Thompson, T. (2017). *Duty of Care in Sport: Independent Report to Government*.
6131 Retrieved from [https://www.gov.uk/government/publications/duty-of-care-in-sport-
6132 review](https://www.gov.uk/government/publications/duty-of-care-in-sport-review)
- 6133 Griffiths, K. M., Christensen, H., Jorm, A. F., Evans, K., & Groves, C. (2004). Effect of web-
6134 based depression literacy and cognitive-behavioural therapy interventions on
6135 stigmatising attitudes to depression: Randomised controlled trial. *British Journal of
6136 Psychiatry*, 185(4), 342–349. <https://doi.org/10.1192/bjp.185.4.342>
- 6137 Gross, M., Moore, Z. E., Gardner, F. L., Wolanin, A. T., Pess, R., & Marks, D. R. (2018). An
6138 empirical examination comparing the mindfulness-acceptance-commitment approach
6139 and psychological skills training for the mental health and sport performance of
6140 female student athletes. *International Journal of Sport and Exercise
6141 Psychology*, 16(4), 431–451
- 6142 Gucciardi, D. F., Hanton, S., & Fleming, S. (2017). Are mental toughness and mental health
6143 contradictory concepts in elite sport? A narrative review of theory and
6144 evidence. *Journal of Science and Medicine in Sport*, 20(3), 307–
6145 311. <https://doi.org/10.1016/j.jsams.2016.08.006>

- 6146 Gulliver, A., Griffiths, K. M., & Christensen, H. (2012). Barriers and facilitators to mental
 6147 health help-seeking for young elite athletes: A qualitative study. *BMC*
 6148 *Psychiatry*, *12*(1), 157. <https://doi.org/10.1186/1471-244X-12-157>
- 6149 Gulliver, A., Griffiths, K. M., Christensen, H., Mackinnon, A., Calear, A. L., Parsons, A.,
 6150 Bennett, K., Batterham, P. J., & Stanimirovic, R. (2012). Internet-Based Interventions
 6151 to Promote Mental Health Help-Seeking in Elite Athletes: An Exploratory
 6152 Randomized Controlled Trial. *Journal of Medical Internet Research*, *14*(3),
 6153 e69. <https://doi.org/10.2196/jmir.1864>
- 6154 Gulliver, A., Griffiths, K. M., Mackinnon, A., Batterham, P. J., & Stanimirovic, R. (2015).
 6155 The mental health of Australian elite athletes. *Journal of Science and Medicine in*
 6156 *Sport*, *18*(3), 255–261. <https://doi.org/10.1016/j.jsams.2014.04.006>
- 6157 Hagger, M. S., & Chatzisarantis, N. L. D. (2009). Integrating the theory of planned behaviour
 6158 and self-determination theory in health behaviour: A meta-analysis. *British Journal of*
 6159 *Health Psychology*, *14*(2), 275–302. <https://doi.org/10.1348/135910708X373959>
- 6160 Hagger, M. S., & Chatzisarantis, N. L. D. (2014). An integrated behavior change model for
 6161 physical activity. *Exercise and Sport Sciences Reviews*, *42*(2), 62–
 6162 69. <https://doi.org/10.1249/JES.0000000000000008>
- 6163 Hammond, T., Gialloreto, C., Kubas, H., & Davis IV, H. H. (2013). The prevalence of
 6164 failure-based depression among elite athletes. *Clinical Journal of Sport*
 6165 *Medicine*, *23*(4), 273-277. <https://doi.org/10.1097/JSM.0b013e318287b870>
- 6166 Hardie, A., Oshiro, K. F., & Dixon, M. A. (2022a). Understanding body image perceptions of
 6167 former female athletes: A qualitative analysis. *Body Image*, *43*, 393–
 6168 407. <https://doi.org/10.1016/j.bodyim.2022.10.001>
- 6169 Headey, B. W., & Wearing, A. J. (1991). Subjective well-being: a stocks and flows
 6170 framework. In Strack, F., Argyle, M., & Schwarz, N. (Eds.). *Subjective Wellbeing –*
 6171 *An interdisciplinary perspective* (pp. 49–76). Oxford: Pergamon Press.
- 6172 Headey, B. W., & Wearing, A. J. (1992). *Understanding happiness: A theory of subjective*
 6173 *well-being*. Melbourne: Longman Cheshire.
- 6174 Henriksen, K., Schinke, R., Moesch, K., McCann, S., Parham, W. D., Larsen, C. H., & Terry,
 6175 P. (2020). Consensus statement on improving the mental health of high-performance
 6176 athletes. *International Journal of Sport and Exercise Psychology*, *18*(5), 553–
 6177 560. <https://doi.org/10.1080/1612197X.2019.1570473>

- 6178 Hew, K. F. (2009). Use of audio podcast in K-12 and higher education: A review of research
 6179 topics and methodologies. *Educational Technology Research and*
 6180 *Development*, 57(3), 333–357. <https://doi.org/10.1007/s11423-008-9108-3>
- 6181 Hill, D., Hanton, Matthews, N., & Fleming, S. (2010). A qualitative exploration of choking in
 6182 elite golf. *Journal of Clinical Sport Psychology*, 4, 221–
 6183 240. <https://doi.org/10.1123/jcsp.4.3.221>
- 6184 Hill, D. M., Brown, G., Lambert, T.-L., Mackintosh, K., Knight, C., & Gorczynski, P. (2021).
 6185 Factors perceived to affect the wellbeing and mental health of coaches and
 6186 practitioners working within elite sport. *Sport, Exercise, and Performance*
 6187 *Psychology*, 10(4), 504–518. <https://doi.org/10.1037/spy0000263>
- 6188 Holmes, A. G. D. (2020). Researcher positionality—A consideration of its influence and
 6189 place in qualitative research—A new researcher guide. *Shanlax International Journal*
 6190 *of Education*, 8(4), 1–10. <https://doi.org/10.34293/education.v8i4.3232>
- 6191 Huppert, F. A., & So, T. (2009, July). What percentage of people in Europe are flourishing
 6192 and what characterises them. In *IX ISQOLS Conference* (pp. 1-7).
- 6193 Huppert, F. A., & So, T. (2013). Flourishing across Europe: application of a new conceptual
 6194 framework for defining well-being. *Social Indicators Research*, 110(3), 837–
 6195 861. <https://doi.org/10.1007/s11205-011-9966-7>
- 6196 Hurley, D., Allen, M. S., Swann, C., Okely, A. D., & Vella, S. A. (2018). The development,
 6197 pilot, and process evaluation of a parent mental health literacy intervention through
 6198 community sports clubs. *Journal of Child and Family Studies*, 27(7), 2149–
 6199 2160. <https://doi.org/10.1007/s10826-018-1071-y>
- 6200 Huta, V., & Ryan, R. M. (2010). Pursuing pleasure or virtue: the differential and overlapping
 6201 well-being benefits of hedonic and eudaimonic motives. *Journal of Happiness*
 6202 *Studies*, 11(6), 735–762. <https://doi.org/10.1007/s10902-009-9171-4>
- 6203 Jones, C., Gulliver, A., & Keegan, R. (2022). A brief online video-based intervention to
 6204 promote mental health help-seeking in the context of injuries for athletes: A pilot
 6205 study. *Psychology of Sport and Exercise*, 63, 102281
- 6206 Jones, M. I., & Lavalley, D. (2009). Exploring perceived life skills development and
 6207 participation in sport. *Qualitative Research in Sport and Exercise*, 1(1), 36–
 6208 50. <https://doi.org/10.1080/19398440802567931>
- 6209 Jones, T.V. (2016). Predictors of perceptions of mental illness and averseness to help: A
 6210 survey of elite football players. *Journal of Mental Health*, 25(5), 422–
 6211 427. <https://doi.org/10.3109/09638237.2015.1124384>

- 6212 Jorm, A. F. (2000). Mental health literacy: Public knowledge and beliefs about mental
 6213 disorders. *British Journal of Psychiatry*, *177*(5), 396–
 6214 401. <https://doi.org/10.1192/bjp.177.5.396>
- 6215 Jowett, S. (2017). Coaching effectiveness: The coach–athlete relationship at its heart. *Current*
 6216 *Opinion in Psychology*, *16*, 154–158. <https://doi.org/10.1016/j.copsyc.2017.05.006>
- 6217 Jowett, S., & Cockerill, I. M. (2003). Olympic medallists’ perspective of the athlete–coach
 6218 relationship. *Psychology of Sport and Exercise*, *4*(4), 313–
 6219 331. [https://doi.org/10.1016/S1469-0292\(02\)00011-0](https://doi.org/10.1016/S1469-0292(02)00011-0)
- 6220 Jowett, S., O’Broin, A., & Palmer, S. (2010). On understanding the role and significance of a
 6221 key two-person relationship in sport and executive coaching. *Sport & Exercise*
 6222 *Psychology Review*, *6*(2), 19–30. <https://doi.org/10.53841/bpssepr.2010.6.2.19>
- 6223 Jowett, S., & Poczwardowski, A. (2007). Understanding the Coach-Athlete Relationship. In
 6224 Jowett, S., & Lavallee, D. (Eds.), *Social Psychology in Sport* (pp. 3–14). Human
 6225 Kinetic
- 6226 Jowett, S., & Shanmugam, V. (2016). Relational coaching in sport: Its psychological
 6227 underpinnings and practical effectiveness. In Schinke, R. J., McGannon, K. R., &
 6228 Smith, B. (Eds.). (2016). *Routledge international handbook of sport psychology*. (Pp.
 6229 471-482). Routledge.
- 6230 Kaier, E., Cromer, L. D., Johnson, M. D., Strunk, K., & Davis, J. L. (2015). Perceptions of
 6231 mental illness stigma: Comparisons of athletes to nonathlete peers. *Journal of College*
 6232 *Student Development*, *56*(7), 735-739. [10.1353/csd.2015.0079](https://doi.org/10.1353/csd.2015.0079)
- 6233 Katagami, E., & Tsuchiya, H. (2017). Effects of received social support on athletes’
 6234 psychological well-being. *International Journal of Sport and Health Science*, *15*(0),
 6235 72–80. <https://doi.org/10.5432/ijshs.201612>
- 6236 Kavanagh, E., Brown, L., & Jones, I. (2017). Elite athletes' experience of coping with
 6237 emotional abuse in the coach–athlete relationship. *Journal of Applied Sport*
 6238 *Psychology*, *29*(4), 402-417.
- 6239 Kay, R. H. (2012). Exploring the use of video podcasts in education: A comprehensive
 6240 review of the literature. *Computers in Human Behavior*, *28*(3), 820–
 6241 831. <https://doi.org/10.1016/j.chb.2012.01.011>
- 6242 Keal, J., McCabe, T., Wright, J., & Renshaw, P. (2022). Media portrayal of mental health at
 6243 the 2020 Tokyo Olympic and Paralympic Games. *Sports Psychiatry*, *1*(2), 41–
 6244 46. <https://doi.org/10.1024/2674-0052/a000011>

- 6245 Kemmis, S., & McTaggart, R. (2000). Participatory action research. In N. K. Denzin & Y.
6246 6951 S. Lincoln (Eds.), *Handbook of qualitative research* (2nd ed., pp. 567- 605).
6247 Sage.
- 6248 Keyes, C. L. M. (1998). Social Well-Being. *Social Psychology Quarterly*, 61(2), 121–
6249 140. <https://doi.org/10.2307/2787065>
- 6250 Keyes, C. L. M. (2002). The mental health continuum: From languishing to flourishing in
6251 life. *Journal of Health and Social Behavior*, 43(2), 207–
6252 222. <https://doi.org/10.2307/3090197>
- 6253 Keyes, C. L. M. (2005). Mental illness and/or mental health? Investigating axioms of the
6254 complete state model of health. *Journal of Consulting and Clinical Psychology*, 73(3),
6255 539. <https://doi.org/10.1037/0022-006X.73.3.539>
- 6256 Keyes, C. L. M. (2006). Subjective well-being in mental health and human development
6257 research worldwide: An introduction. *Social Indicators Research*, 77(1), 1–
6258 10. <https://doi.org/10.1007/s11205-005-5550-3>
- 6259 Keyes, C. L. M. (2007). Promoting and protecting mental health as flourishing: A
6260 complementary strategy for improving national mental health. *American*
6261 *Psychologist*, 62(2), 95–108. <https://doi.org/10.1037/0003-066X.62.2.95>
- 6262 Keyes, C. L. M., Shmotkin, D., & Ryff, C. D. (2002). Optimizing well-being: The empirical
6263 encounter of two traditions. *Journal of Personality and Social Psychology*, 82(6),
6264 1007–1022. <https://doi.org/10.1037/0022-3514.82.6.1007>
- 6265 Kilic, Ö., Aoki, H., Haagenen, R., Jensen, C., Johnson, U., Kerkhoffs, G. M. M. J., &
6266 Gouttebauge, V. (2017). Symptoms of common mental disorders and related stressors
6267 in Danish professional football and handball. *European Journal of Sport*
6268 *Science*, 17(10), 1328–1334. <https://doi.org/10.1080/17461391.2017.1381768>
- 6269 Kilic, Ö., Hopley, P., Kerkhoffs, G. M. M. J., Lambert, M., Verhagen, E., Viljoen, W.,
6270 Wylleman, P., & Gouttebauge, V. (2019). Impact of concussion and severe
6271 musculoskeletal injuries on the onset of mental health symptoms in male professional
6272 rugby players: A 12-month study. *BMJ Open Sport & Exercise Medicine*, 5(1),
6273 e000693. <https://doi.org/10.1136/bmjsem-2019-000693>
- 6274 Knowles, C., Shannon, S., Prentice, G., & Breslin, G. (2021). Comparing mental health of
6275 athletes and non-athletes as they emerge from a Covid-19 pandemic
6276 lockdown. *Frontiers in Sports and Active Living*, 3,
6277 612532. <https://doi.org/10.3389/fspor.2021.612532>

- 6278 Koushede, V., Lasgaard, M., Hinrichsen, C., Meilstrup, C., Nielsen, L., Rayce, S. B., Torres-
 6279 Sahli, M., Gudmundsdottir, D. G., Stewart-Brown, S., & Santini, Z. I. (2019).
 6280 Measuring mental well-being in Denmark: Validation of the original and short version
 6281 of the Warwick-Edinburgh mental well-being scale (WEMWBS and SWEMWBS)
 6282 and cross-cultural comparison across four European settings. *Psychiatry*
 6283 *Research*, 271, 502–509. <https://doi.org/10.1016/j.psychres.2018.12.003>
- 6284 Kuettel, A., Durand-Bush, N., & Larsen, C. H. (2022). Mental health profiles of Danish
 6285 youth soccer players: The influence of gender and career development. *Journal of*
 6286 *Clinical Sport Psychology*, 16(3), 276–293. <https://doi.org/10.1123/jcsp.2021-0035>
- 6287 Kuettel, A., & Larsen, C. H. (2020). Risk and protective factors for mental health in elite
 6288 athletes: A scoping review. *International Review of Sport and Exercise*
 6289 *Psychology*, 13(1), 231–265. <https://doi.org/10.1080/1750984X.2019.1689574>
- 6290 Kuettel, A., Pedersen, A. K., & Larsen, C. H. (2021). To Flourish or Languish, that is the
 6291 question: Exploring the mental health profiles of Danish elite athletes. *Psychology of*
 6292 *Sport and Exercise*, 52, 101837. <https://doi.org/10.1016/j.psychsport.2020.101837>
- 6293 Laureano, C., Grobbelaar, H. W., & Nienaber, A. W. (2014). Facilitating the coping self-
 6294 efficacy and psychological well-being of student rugby players. *South African Journal*
 6295 *of Psychology*, 44(4), 483–497. <https://doi.org/10.1177/0081246314541635>
- 6296 Leguizamo, F., Olmedilla, A., Núñez, A., Verdaguer, F. J. P., Gómez-Espejo, V., Ruiz-
 6297 Barquín, R., & Garcia-Mas, A. (2021b). Personality, coping strategies, and mental
 6298 health in high-performance athletes during confinement derived from the covid-19
 6299 pandemic. *Frontiers in Public Health*, 8, <https://doi.org/10.3389/fpubh.2020.561198>
- 6300 Lerner, R. (2005). Urie Bronfenbrenner: Career contributions of the consummate
 6301 developmental scientist. In Bronfenbrenner, U. (Eds.), *Making human beings human:*
 6302 *Bioecological perspectives on human development* (pp. ix-xxix) Sage Publications,
 6303 Inc
- 6304 Levitt, H. M., Motulsky, S. L., Wertz, F. J., Morrow, S. L., & Ponterotto, J. G. (2017).
 6305 Recommendations for designing and reviewing qualitative research in psychology:
 6306 Promoting methodological integrity. *Qualitative Psychology*, 4(1), 2–
 6307 22. <https://doi.org/10.1037/qup0000082>
- 6308 Leyland, S., Currie, A., Board, E., Mistry, A., Jaques, R., & Ranson, C. (2022). A survey of
 6309 the mental health of UK Olympic and Paralympic sport athletes. *Journal of Athlete*
 6310 *Development and Experience*, 4(2), 160-172 <https://doi.org/10.25035/jade.04.02.03>

- 6311 Li, C., Fan, R., Sun, J., & Li, G. (2021). Risk and protective factors of generalized anxiety
6312 disorder of elite collegiate athletes: A cross-sectional study. *Frontiers in Public*
6313 *Health, 9*, 607800. <https://doi.org/10.3389/fpubh.2021.607800>
- 6314 Li, J., Gao, H., & Hu, J. (2021). Satisfaction and the coach–athlete relationship: The
6315 mediating role of trust. *Social Behavior and Personality: An International*
6316 *Journal, 49*(2), 1–11. <https://doi.org/10.2224/sbp.9807>
- 6317 Liddle S, Hurley D, Schweickle M, Swann C, Vella S. (2019). Ahead of the Game: a sports-
6318 based mental health programme for adolescent males. In Breslin, G., & Leavey, G.
6319 (Eds.). (2019). *Mental health and well-being interventions in sport: Research, theory*
6320 *and practice*. (pp. 74-90) Routledge
- 6321 Liddle, S. K., Deane, F. P., Batterham, M., & Vella, S. A. (2021). A brief sports-based mental
6322 health literacy program for male adolescents: A cluster-randomized controlled
6323 trial. *Journal of Applied Sport Psychology, 33*(1), 20–
6324 44. <https://doi.org/10.1080/10413200.2019.1653404>
- 6325 Linton, M.-J., Dieppe, P., & Medina-Lara, A. (2016). Review of 99 self-report measures for
6326 assessing well-being in adults: Exploring dimensions of well-being and developments
6327 over time. *BMJ Open, 6*(7), e010641. <https://doi.org/10.1136/bmjopen-2015-010641>
- 6328 Longshore, K., & Sachs, M. (2015). Mindfulness training for coaches: A mixed-method
6329 exploratory study. *Journal of Clinical Sport Psychology, 9*(2), 116–
6330 137. <https://doi.org/10.1123/jcsp.2014-0038>
- 6331 Lundqvist, C. (2011). Well-being in competitive sports—The feel-good factor? A review of
6332 conceptual considerations of well-being. *International Review of Sport and Exercise*
6333 *Psychology, 4*(2), 109–127. <https://doi.org/10.1080/1750984X.2011.584067>
- 6334 Lundqvist, C., & Sandin, F. (2014). Well-being in elite sport: dimensions of hedonic and
6335 eudaimonic well-being among elite orienteers. *The Sport Psychologist, 28*(3), 245–
6336 254. <https://doi.org/10.1123/tsp.2013-0024>
- 6337 MacKenzie, L. (2019). Science podcasts: Analysis of global production and output from 2004
6338 to 2018. *Royal Society Open Science, 1*–18. <https://doi.org/10.1098/rsos.180932>
- 6339 Maher, C. A. (2022). *Fostering the mental health of athletes, coaches, and staff: A systems*
6340 *approach to developing a mentally healthy sport organization*. Taylor & Francis.
- 6341 Marshall, M. (2014). Researchers-in-Residence: A solution to the challenge of evidence-
6342 informed improvement? *Primary Health Care Research & Development, 15*(04),
6343 337–338. <https://doi.org/10.1017/S1463423614000310>

- 6344 McCrorie, A., Donnelly, C., & McGlade, K. (2016). Infographics: Healthcare
 6345 Communication for the Digital Age. *The Ulster Medical Journal*, 85(2), 71–
 6346 75. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4920488/>
- 6347 McHenry, L. K., & Zakrajsek, R. A. (2023). Thriving in elite athletes. In Nixdorf, I.,
 6348 Beckmann, J., Macintyre, T., Martin, S., & Nixdorf, R (Eds.), *Routledge handbook of*
 6349 *mental health in elite sport* (pp. 12-30). Routledge.
- 6350 McNamara, S. W. T., Shaw, M., Wilson, K., & Cox, A. (2021). Educational podcasts in
 6351 kinesiology: A scoping review. *Kinesiology Review*, 10(1), 88–
 6352 100. <https://doi.org/10.1123/kr.2020-0007>
- 6353 McNiff, J. (2017). *Action research: All you need to know*. Sage.
- 6354 Merçon-Vargas, E. A., Lima, R. F. F., Rosa, E. M., & Tudge, J. (2020). Processing proximal
 6355 processes: What Bronfenbrenner meant, what he didn't mean, and what he should
 6356 have meant. *Journal of Family Theory & Review*, 12(3), 321–
 6357 334. <https://doi.org/10.1111/jftr.12373>
- 6358 Miklin, S., Mueller, A. S., Abrutyn, S., & Ordonez, K. (2019). What does it mean to be
 6359 exposed to suicide?: Suicide exposure, suicide risk, and the importance of meaning-
 6360 making. *Social Science & Medicine*, 233, 21–
 6361 27. <https://doi.org/10.1016/j.socscimed.2019.05.019>
- 6362 Mills, A., Durepos, G., & Wiebe, E. (2010). *Encyclopedia of Case Study Research*. SAGE
 6363 Publications, Inc. <https://doi.org/10.4135/9781412957397>
- 6364 Mohammed, W. A., Pappous, A., & Sharma, D. (2018). Effect of mindfulness based stress
 6365 reduction (mbsr) in increasing pain tolerance and improving the mental health of
 6366 injured athletes. *Frontiers in Psychology*, 9,
 6367 722. <https://doi.org/10.3389/fpsyg.2018.00722>
- 6368 Morris (2023). Career transitions in sport. In Nixdorf, I., Beckmann, J., Macintyre, T.,
 6369 Martin, S., & Nixdorf, R (Eds.), *Routledge handbook of mental health in elite*
 6370 *sport* (pp. 287-299). Routledge.
- 6371 Muir, I. L., & Munroe-Chandler, K. J. (2020). Using infographics to promote athletes' mental
 6372 health: Recommendations for sport psychology consultants. *Journal of Sport*
 6373 *Psychology in Action*, 11(3), 143–
 6374 164. <https://doi.org/10.1080/21520704.2020.1738607>
- 6375 Mulhall, A. (2003). In the field: Notes on observation in qualitative research. *Journal of*
 6376 *Advanced Nursing*, 41(3), 306–313. [https://doi.org/10.1046/j.1365-](https://doi.org/10.1046/j.1365-2648.2003.02514.x)
 6377 [2648.2003.02514.x](https://doi.org/10.1046/j.1365-2648.2003.02514.x)

- 6378 Nadin, S., & Cassell, C. (2006). The use of a research diary as a tool for reflexive practice:
 6379 Some reflections from management research. *Qualitative Research in Accounting &*
 6380 *Management*, 3(3), 208–217. <https://doi.org/10.1108/11766090610705407>
- 6381 Newman, H. J. H., Howells, K. L., & Fletcher, D. (2016). The dark side of top-level sport:
 6382 An autobiographic study of depressive experiences in elite sport performers. *Frontiers*
 6383 *in Psychology*, 7. <https://doi.org/10.3389/fpsyg.2016.00868>
- 6384 Ng Fat, L., Scholes, S., Boniface, S., Mindell, J., & Stewart-Brown, S. (2017). Evaluating
 6385 and establishing national norms for mental wellbeing using the short Warwick–
 6386 Edinburgh Mental Well-being Scale (SWEMWBS): Findings from the Health Survey
 6387 for England. *Quality of Life Research*, 26(5), 1129–
 6388 1144. <https://doi.org/10.1007/s11136-016-1454-8>
- 6389 Nicholls, A. R., Madigan, D. J., Fairs, L. R. W., & Bailey, R. (2020). Mental health and
 6390 psychological well-being among professional rugby league players from the UK. *BMJ*
 6391 *Open Sport & Exercise Medicine*, 6(1), e000711. [https://doi.org/10.1136/bmjsem-](https://doi.org/10.1136/bmjsem-2019-000711)
 6392 2019-000711
- 6393 Nikander, J., Saarni, J., K. Ihalainen, J., & Valtonen, M. (2022). Online guided act
 6394 intervention for enhancing the psychological well-being of female soccer players in
 6395 pre-season. *Scandinavian Journal of Sport and Exercise Psychology*, 4(1), 41–
 6396 50. <https://doi.org/10.7146/sjsep.v4i1.130136>
- 6397 Nixdorf, I., Beckmann, J., Macintyre, T., Martin, S., & Nixdorf, R. (2023). *Routledge*
 6398 *Handbook of Mental Health in Elite Sport* (1st ed.).
 6399 Routledge. <https://doi.org/10.4324/9781003099345>
- 6400 Nixdorf, I., Frank, R., & Beckmann, J. (2016). Comparison of athletes' proneness to
 6401 depressive symptoms in individual and team sports: Research on psychological
 6402 mediators in junior elite athletes. *Frontiers in*
 6403 *Psychology*, 7. <https://doi.org/10.3389/fpsyg.2016.00893>
- 6404 Nixdorf, I., Frank, R., Hautzinger, M., & Beckmann, J. (2013). Prevalence of depressive
 6405 symptoms and correlating variables among german elite athletes. *Journal of Clinical*
 6406 *Sport Psychology*, 7(4), 313–326. <https://doi.org/10.1123/jcsp.7.4.313>
- 6407 O'Brien, K. S., Blackie, J. M., & Hunter, J. A. (2005). Hazardous drinking in elite New
 6408 Zealand sportspeople. *Alcohol and Alcoholism*, 40(3), 239–
 6409 241. <https://doi.org/10.1093/alcalc/agh145>

- 6410 O'Connor, M., & Casey, L. (2015). The Mental Health Literacy Scale (MHLS): A new scale-
6411 based measure of mental health literacy. *Psychiatry Research*, 229(1–2), 511–
6412 516. <https://doi.org/10.1016/j.psychres.2015.05.064>
- 6413 Pankow, K., McHugh, T.-L. F., Mosewich, A. D., & Holt, N. L. (2021). Mental health
6414 protective factors among flourishing Canadian women university student-
6415 athletes. *Psychology of Sport and Exercise*, 52,
6416 101847. <https://doi.org/10.1016/j.psychsport.2020.101847>
- 6417 Pankow, K., Mosewich, A. D., McHugh, T.-L. F., & Holt, N. L. (2022). The role of mental
6418 health protection and promotion among flourishing Canadian university sport
6419 coaches. *Sport, Exercise, and Performance Psychology*, 11(1), 28–
6420 43. <https://doi.org/10.1037/spy0000277>
- 6421 Pankow, K., Mosewich, A. D., McHugh, T.-L. F., & Holt, N. L. (2023). A process map of
6422 flourishing between the coach and athlete in Canadian university sport. *Qualitative
6423 Research in Sport, Exercise and Health*, 15(3), 397–
6424 416. <https://doi.org/10.1080/2159676X.2022.2127859>
- 6425 Paparini, S., Green, J., Papoutsi, C., Murdoch, J., Petticrew, M., Greenhalgh, T., Hanckel, B.,
6426 & Shaw, S. (2020). Case study research for better evaluations of complex
6427 interventions: Rationale and challenges. *BMC Medicine*, 18(1), 1-
6428 6. <https://doi.org/10.1186/s12916-020-01777-6>
- 6429 Philippe, R. A., Sagar, S. S., Huguet, S., Paquet, Y., & Jowett, S. (2011). From teacher to
6430 friend: the evolving nature of the coach-athlete relationship. *International Journal of
6431 Sport Psychology*, 42(1), 1-23.
- 6432 Pierce, D., Liaw, S. T., Dobell, J., & Anderson, R. (2010). Australian rural football club
6433 leaders as mental health advocates: an investigation of the impact of the Coach the
6434 Coach project. *International Journal of Mental Health Systems*, 4, 1-
6435 <https://doi.org/10.1186/1752-4458-4-10>
- 6436 Poczwardowski, A., Barott, J. E., & Jowett, S. (2006). Diversifying approaches to research on
6437 athlete–coach relationships. *Psychology of Sport and Exercise*, 7(2), 125–
6438 142. <https://doi.org/10.1016/j.psychsport.2005.08.002>
- 6439 Poczwardowski, A., Sherman, C. P., & Ravizza, K. (2004). Professional philosophy in the
6440 sport psychology service delivery: building on theory and practice. *The Sport
6441 Psychologist*, 18(4), 445–463. <https://doi.org/10.1123/tsp.18.4.445>

- 6442 Pollard, E. L., & Lee, P. D. (2003). Child well-being: A systematic review of the
 6443 literature. *Social indicators research*, *61*, 59-78.
 6444 <https://doi.org/10.1023/A:1021284215801>
- 6445 Potts, A. J., Nobles, J., Shearn, K., Danks, K., & Frith, G. (2022). Embedded researchers as
 6446 part of a whole systems approach to physical activity: reflections and
 6447 recommendations. *Systems*, *10*(3), 69. <https://doi.org/10.3390/systems10030069>
- 6448 Poucher, Z. A., Tamminen, K. A., Kerr, G., & Cairney, J. (2021). A commentary on mental
 6449 health research in elite sport. *Journal of Applied Sport Psychology*, *33*(1), 60–
 6450 82. <https://doi.org/10.1080/10413200.2019.1668496>
- 6451 Poucher, Z. A., Tamminen, K. A., Sabiston, C. M., & Cairney, J. (2022). A longitudinal
 6452 examination of changes in mental health among elite Canadian athletes. *Journal of*
 6453 *Sports Sciences*, *40*(7), 733–741. <https://doi.org/10.1080/02640414.2021.2015908>
- 6454 Prinz, B., Dvořák, J., & Junge, A. (2016). Symptoms and risk factors of depression during
 6455 and after the football career of elite female players. *BMJ Open Sport & Exercise*
 6456 *Medicine*, *2*(1), e000124. <https://doi.org/10.1136/bmjsem-2016-000124>
- 6457 Prior, E., Papathomas, A., & Rhind, D. (2022). A systematic scoping review of athlete mental
 6458 health within competitive sport: Interventions, recommendations, and
 6459 policy. *International Review of Sport and Exercise Psychology*, 1–
 6460 23. <https://doi.org/10.1080/1750984X.2022.2095659>
- 6461 Purcell, R., Gwyther, K., & Rice, S. M. (2019). Mental health in elite athletes: increased
 6462 awareness requires an early intervention framework to respond to athlete
 6463 needs. *Sports Medicine - Open*, *5*(1), 46 <https://doi.org/10.1186/s40798-019-0220-1>
- 6464 Purcell, R., Pilkington, V., Carberry, S., Reid, D., Gwyther, K., Hall, K., Deacon, A., Manon,
 6465 R., Walton, C. C., & Rice, S. (2022). An evidence-informed framework to promote
 6466 mental wellbeing in elite sport. *Frontiers in Psychology*, *13*,
 6467 780359. <https://doi.org/10.3389/fpsyg.2022.780359>
- 6468 Purcell, R., Rice, S., Butterworth, M., & Clements, M. (2020). Rates and correlates of mental
 6469 health symptoms in currently competing elite athletes from the Australian national
 6470 high-performance sports system. *Sports Medicine*, *50*(9), 1683–
 6471 1694. <https://doi.org/10.1007/s40279-020-01266-z>
- 6472 Putukian, M. (2016). The psychological response to injury in student athletes: A narrative
 6473 review with a focus on mental health. *British Journal of Sports Medicine*, *50*(3), 145–
 6474 148. <https://doi.org/10.1136/bjsports-2015-095586>

- 6475 Reardon, C. L., Hainline, B., Aron, C. M., Baron, D., Baum, A. L., Bindra, A., Budgett, R.,
 6476 Campriani, N., Castaldelli-Maia, J. M., Currie, A., Derevensky, J. L., Glick, I. D.,
 6477 Gorczynski, P., Gouttebauge, V., Grandner, M. A., Han, D. H., McDuff, D.,
 6478 Mountjoy, M., Polat, A., &... Engebretsen, L. (2019). Mental health in elite athletes:
 6479 International Olympic Committee consensus statement (2019). *British Journal of*
 6480 *Sports Medicine*, 53(11), 667–699. <https://doi.org/10.1136/bjsports-2019-100715>
- 6481 Rees, T., Hardy, L., Güllich, A., Abernethy, B., Côté, J., Woodman, T., Montgomery, H.,
 6482 Laing, S., & Warr, C. (2016). The Great British Medalists Project: A review of
 6483 current knowledge on the development of the world’s best sporting talent. *Sports*
 6484 *Medicine*, 46(8), 1041–1058. <https://doi.org/10.1007/s40279-016-0476-2>
- 6485 Rehman, A. A., & Alharthi, K. (2016). An introduction to research paradigms. *International*
 6486 *Journal of Educational Investigations*, 3(8), 51-59.
- 6487 Rice, S. M., Purcell, R., De Silva, S., Mawren, D., McGorry, P. D., & Parker, A. G. (2016).
 6488 The mental health of elite athletes: A narrative systematic review. *Sports*
 6489 *Medicine*, 46(9), 1333–1353. <https://doi.org/10.1007/s40279-016-0492-2>
- 6490 Rogers, M., & Werthner, P. (2022). Gathering narratives: Athletes’ experiences preparing for
 6491 the Tokyo summer olympic games during a global pandemic. *Journal of Applied*
 6492 *Sport Psychology*, 1–19. <https://doi.org/10.1080/10413200.2022.2032477>
- 6493 Rosa, E. M., & Tudge, J. (2013). Urie Bronfenbrenner’s theory of human development: Its
 6494 evolution from ecology to bioecology: The evolution of Urie Bronfenbrenner’s
 6495 Theory. *Journal of Family Theory & Review*, 5(4), 243–
 6496 258. <https://doi.org/10.1111/jftr.12022>
- 6497 Rose, S., Burton, D., Kercher, V., Grindley, E., & Richardson, C. (2023). Enduring stress: A
 6498 quantitative analysis on coping profiles and sport well-being in amateur endurance
 6499 athletes. *Psychology of Sport and Exercise*, 65,
 6500 102365. <https://doi.org/10.1016/j.psychsport.2022.102365>
- 6501 Rousselet, M., Guérineau, B., Paruit, M. C., Guinot, M., Lise, S., Destrube, B., Ruffio-Thery,
 6502 S., Dominguez, N., Brisseau-Gimenez, S., Dubois, V., Mora, C., Trolonge, S.,
 6503 Lambert, S., Grall-Bronnec, M., & Prétagut, S. (2017). Disordered eating in French
 6504 high-level athletes: Association with type of sport, doping behavior, and
 6505 psychological features. *Eating and Weight Disorders - Studies on Anorexia, Bulimia*
 6506 *and Obesity*, 22(1), 61–68. <https://doi.org/10.1007/s40519-016-0342-0>
- 6507 Ryan, K., & Deci, E. L. (2001). On happiness and human potentials: A review of research on
 6508 hedonic and eudaimonic well-being. *Annual Review of Psychology*, 52(1), 141–156.

- 6509 Ryff, C. D., & Keyes, C. L. M. (1995). The structure of psychological well-being
 6510 revisited. *Journal of Personality and Social Psychology*, 69(4), 719-
 6511 727. <https://doi.org/10.1037/0022-3514.69.4.719>
- 6512 Ryff, C. D., & Singer, B. H. (2008). Know thyself and become what you are: A eudaimonic
 6513 approach to psychological well-being. *Journal of Happiness Studies*, 9(1), 13-
 6514 39. <https://doi.org/10.1007/s10902-006-9019-0>
- 6515 Saarijärvi, M., & Bratt, E.-L. (2021). When face-to-face interviews are not possible: Tips and
 6516 tricks for video, telephone, online chat, and email interviews in qualitative
 6517 research. *European Journal of Cardiovascular Nursing*, 20(4), 392-
 6518 396. <https://doi.org/10.1093/eurjcn/zvab038>
- 6519 Sarkar, M., & Fletcher, D. (2014). Psychological resilience in sport performers: A review of
 6520 stressors and protective factors. *Journal of Sports Sciences*, 1-
 6521 16. <https://doi.org/10.1080/02640414.2014.901551>
- 6522 Sauvé, J. L., O'Rourke, J. J., Wilson, B., Bundon, A., & Beauchamp, M. R. (2022). Looking
 6523 back to move forward: Recently retired Olympians' perspectives of factors that
 6524 contribute to and undermine athlete well-being. *Sport, Exercise, and Performance
 6525 Psychology*, 11(1), 44-60. <https://doi.org/10.1037/spy0000273>
- 6526 Sauvé, J. L., Waldhauser, K. J., Wilson, B., Bundon, A., & Beauchamp, M. R. (2023). What
 6527 supports and what thwarts Olympic athlete well-being?: Coach and organizational
 6528 perspectives. *Journal of Applied Sport Psychology*, 1-
 6529 22. <https://doi.org/10.1080/10413200.2023.2166156>
- 6530 Schaal, K., Tafflet, M., Nassif, H., Thibault, V., Pichard, C., Alcotte, M., Guillet, T., El
 6531 Helou, N., Berthelot, G., Simon, S., & Toussaint, J.-F. (2011). Psychological balance
 6532 in high level athletes: Gender-based differences and sport-specific patterns. *PLoS
 6533 ONE*, 6(5), e19007. <https://doi.org/10.1371/journal.pone.0019007>
- 6534 Schuring, N., Kerkhoffs, G., Gray, J., & Gouttebauge, V. (2017). The mental wellbeing of
 6535 current and retired professional cricketers: An observational prospective cohort
 6536 study. *The Physician and Sportsmedicine*, 45(4), 463-
 6537 469. <https://doi.org/10.1080/00913847.2017.1386069>
- 6538 Sebbens, J., Hassmén, P., Crisp, D., & Wensley, K. (2016). Mental Health in Sport (MHS):
 6539 Improving the early intervention knowledge and confidence of elite sport
 6540 staff. *Frontiers in Psychology*, 7. <https://doi.org/10.3389/fpsyg.2016.00911>
- 6541 Sekizaki, R., Nemoto, T., Tsujino, N., Takano, C., Yoshida, C., Yamaguchi, T., Katagiri, N.,
 6542 Ono, Y., & Mizuno, M. (2019). School mental healthcare services using internet-

- 6543 based cognitive behaviour therapy for young male athletes in Japan. *Early*
 6544 *Intervention in Psychiatry*, 13(1), 79–85. <https://doi.org/10.1111/eip.12454>
- 6545 Seligman, M. (2018). PERMA and the building blocks of well-being. *The Journal of Positive*
 6546 *Psychology*, 13(4), 333–335. <https://doi.org/10.1080/17439760.2018.1437466>
- 6547 Shannon, S., Hanna, D., Haughey, T., Leavey, G., McGeown, C., & Breslin, G. (2019).
 6548 Effects of a mental health intervention in athletes: applying self-determination
 6549 theory. *Frontiers in Psychology*, 10, 1875. <https://doi.org/10.3389/fpsyg.2019.01875>
- 6550 Sharp, L. A., & Hodge, K. (2011). Sport psychology consulting effectiveness: The sport
 6551 psychology consultant's perspective. *Journal of Applied Sport Psychology*, 23(3),
 6552 360-376. <https://doi.org/10.1080/10413200.2011.583619>
- 6553 Sharp, L. A., Hodge, K., & Danish, S. (2015). Ultimately it comes down to the relationship:
 6554 Experienced consultants' views of effective sport psychology consulting. *The Sport*
 6555 *Psychologist*, 29(4), 358-370. <http://dx.doi.org/10.1123/tsp.2014-0130>
- 6556 Shaw, M. P., & McNamara, S. W. T. (2021). “I can just get all the bits that i need”:
 6557 Practitioners' use of open-access sport science podcasts. *Frontiers in Education*, 6,
 6558 666865. <https://doi.org/10.3389/educ.2021.666865>
- 6559 Shelton, L. (2019). *The Bronfenbrenner primer: A guide to develecology*. Routledge.
- 6560 Shin, D. C., & Johnson, D. M. (1978). Avowed happiness as an overall assessment of the
 6561 Quality of Life. *Social Indicators Research*, 5(4), 475–
 6562 492. <https://www.jstor.org/stable/27521880>
- 6563 Sibbald, S. L., Paciocco, S., Fournie, M., Van Asseldonk, R., & Scurr, T. (2021). Continuing
 6564 to enhance the quality of case study methodology in health services
 6565 research. *Healthcare Management Forum*, 34(5), 291–
 6566 296. <https://doi.org/10.1177/08404704211028857>
- 6567 Simpson, M., & Tuson, J. A. (2003). *Using Observations in small-scale Research: a*
 6568 *beginner's Guide*. Scottish Council For Research In Education.
- 6569 Simons, E. E., & Bird, M. D. (2022). Coach-athlete relationship, social support, and sport-
 6570 related psychological well-being in National Collegiate Athletic Association Division
 6571 I student-athletes. *Journal for the Study of Sports and Athletes in Education*, 1–
 6572 20. <https://doi.org/10.1080/19357397.2022.2060703>
- 6573 Simons, H. (2014). Case study research: In-depth understanding in context. In Leavy, P.
 6574 (Ed.). *The Oxford handbook of qualitative research*, (pp. 445-470). Oxford University
 6575 Press,

- 6576 Şimşek, Ö. F. (2011). An intentional model of emotional well-being: The development and
 6577 initial validation of a measure of subjective well-being. *Journal of Happiness*
 6578 *Studies*, 12(3), 421–442. <https://doi.org/10.1007/s10902-010-9203-0>
- 6579 Slack, L. A., Maynard, I. W., Butt, J., & Olusoga, P. (2015). An evaluation of a mental
 6580 toughness education and training program for early-career English Football League
 6581 referees. *The Sport Psychologist*, 29(3), 237–257. <https://doi.org/10.1123/tsp.2014-0015>
- 6583 Smith, A., Haycock, D., Jones, J., Greenough, K., Wilcock, R., & Braid, I. (2020). Exploring
 6584 mental health and illness in the UK sports coaching workforce. *International Journal*
 6585 *of Environmental Research and Public Health*, 17(24),
 6586 9332. <https://doi.org/10.3390/ijerph17249332>
- 6587 Smith, B., & McGannon, K. R. (2018). Developing rigor in qualitative research: Problems
 6588 and opportunities within sport and exercise psychology. *International Review of Sport*
 6589 *and Exercise Psychology*, 11(1), 101–
 6590 121. <https://doi.org/10.1080/1750984X.2017.1317357>
- 6591 Smith, B., & Sparkes, A. C. (2016a). Introduction: An invitation to qualitative research. In B.
 6592 Smith, & A.C. Sparkes (Eds.) *Routledge handbook of qualitative research in sport*
 6593 *and exercise* (pp. 1-7). Routledge.
- 6594 Smith, B., & Sparkes, A. C. (2016b). Qualitative interviewing in the sport and exercise
 6595 sciences. In B. Smith, & A.C. Sparkes (Eds.) *Routledge handbook of qualitative*
 6596 *research in sport and exercise* (pp. 103-123). Routledge.
- 6597 Spagnolo, A. B., Murphy, A. A., & Librera, L. A. (2008). Reducing stigma by meeting and
 6598 learning from people with mental illness. *Psychiatric Rehabilitation Journal*, 31(3),
 6599 186–193. <https://doi.org/10.2975/31.3.2008.186.193>
- 6600 Sparkes, A. C., & Smith, B. (2009). Judging the quality of qualitative inquiry: Criteriology
 6601 and relativism in action. *Psychology of Sport and Exercise*, 10(5), 491–
 6602 497. <https://doi.org/10.1016/j.psychsport.2009.02.006>
- 6603 Sport Wales (2023) *Welsh Sport vision*. Sport Wales. <https://www.sport.wales/our-vision-for-sport/>
- 6605 Spreitzer, G., Sutcliffe, K., Dutton, J., Sonenshein, S., & Grant, A. M. (2005). A socially
 6606 embedded model of thriving at work. *Organization Science*, 16(5), 537–
 6607 549. <https://doi.org/10.1287/orsc.1050.0153>
- 6608 Stake, R. E. (1995). *The Art of Case Study Research*. SAGE Publications Ltd.

- 6609 Stake, R. E. (2005). Qualitative Case Studies. In N. K. Denzin & Y. S. Lincoln (Eds.), *The*
6610 *Sage handbook of qualitative research* (443–466). SAGE Publications Ltd.
- 6611 Stambulova, N., Alfermann, D., Statler, T., & Côté, J. (2009). ISSP Position stand: Career
6612 development and transitions of athletes. *International Journal of Sport and Exercise*
6613 *Psychology*, 7(4), 395–412. <https://doi.org/10.1080/1612197X.2009.9671916>
- 6614 Stewart-Brown, S., Tennant, A., Tennant, R., Platt, S., Parkinson, J., & Weich, S. (2009).
6615 Internal construct validity of the Warwick-Edinburgh Mental Well-being Scale
6616 (WEMWBS): A Rasch analysis using data from the Scottish Health Education
6617 Population Survey. *Health and Quality of Life Outcomes*, 7(1), 1-
6618 8. <https://doi.org/10.1186/1477-7525-7-15>
- 6619 Sturgeon, S. (2006). Promoting mental health as an essential aspect of health
6620 promotion. *Health Promotion International*, 21(suppl_1), 36–
6621 41. <https://doi.org/10.1093/heapro/dal049>
- 6622 Su, R., Tay, L., & Diener, E. (2014). The development and validation of the Comprehensive
6623 Inventory of Thriving (CIT) and the Brief Inventory of Thriving (BIT). *Applied*
6624 *Psychology: Health and Well-Being*, 6(3), 251–
6625 279. <https://doi.org/10.1111/aphw.12027>
- 6626 Sullivan, M., Moore, M., Blom, L. C., & Slater, G. (2020). Relationship between social
6627 support and depressive symptoms in collegiate student athletes. *Journal for the Study*
6628 *of Sports and Athletes in Education*, 14(3), 192–
6629 209. <https://doi.org/10.1080/19357397.2020.1768034>
- 6630 Sundgot-Borgen, J., & Torstveit, M. K. (2004). Prevalence of eating disorders in elite athletes
6631 is higher than in the general population: *Clinical Journal of Sport Medicine*, 14(1),
6632 25–32. <https://doi.org/10.1097/00042752-200401000-00005>
- 6633 Tester, G., Watkins, G., & Rouse, I. (1999). The sports challenge international programme
6634 for identified ‘at risk’ children and adolescents: a singapore study. *Asia Pacific*
6635 *Journal of Public Health*, 11(1), 34–38. <https://doi.org/10.1177/101053959901100108>
- 6636 Thorpe, H., & Olive, R. (2016). Conducting observations in sport and exercise settings. In B.
6637 Smith, & A.C. Sparkes (Eds.) *Routledge handbook of qualitative research in sport*
6638 *and exercise*, 124-138. Routledge.
- 6639 Thomas, S., Gonzalez, A. M., & Ghigiarelli, J. J. (2021). The relationship between weight
6640 cutting and the female athlete triad in combat sport athletes. *International Journal of*
6641 *Kinesiology and Sports Science*, 9(1), 9-14. <https://doi.org/10.7575/aiac.ijkss.v.9n.1p.9>

- 6642 Tod, D., Pullinger, S., & Lafferty, M. (2022). A systematic review of the qualitative research
 6643 examining stakeholders' perceptions of the characteristics of helpful sport and
 6644 exercise psychology practitioners. *International Review of Sport and Exercise*
 6645 *Psychology*, 1–25. <https://doi.org/10.1080/1750984X.2022.2145575>
- 6646 Topping, K. J. (2005). Trends in peer learning. *Educational Psychology*, 25(6), 631–
 6647 645. <https://doi.org/10.1080/01443410500345172>
- 6648 Tudge, J. R. H., Payir, A., Merçon-Vargas, E., Cao, H., Liang, Y., Li, J., & O'Brien, L.
 6649 (2016). Still misused after all these years? A reevaluation of the uses of
 6650 bronfenbrenner's bioecological theory of human development. *Journal of Family*
 6651 *Theory & Review*, 8(4), 427–445. <https://doi.org/10.1111/jftr.12165>
- 6652 Ueda, P., Pasternak, B., Svanström, H., Lim, C.-E., Neovius, M., Forssblad, M., Ludvigsson,
 6653 J. F., & Kader, M. (2022). Alcohol related disorders among elite male football players
 6654 in Sweden: Nationwide cohort study. *BMJ*, e074093. <https://doi.org/10.1136/bmj-2022-074093>
- 6656 Uzzell, K. S., Knight, C. J., & Hill, D. M. (2022). Understanding and recognizing high-
 6657 performance swimmers' well-being. *Sport, Exercise, and Performance*
 6658 *Psychology*, 11(1), 12–27. <https://doi.org/10.1037/spy0000284>
- 6659 Van Raalte, J. L., Cornelius, A. E., Andrews, S., Diehl, N. S., & Brewer, B. W. (2015).
 6660 Mental health referral for student-athletes: web-based education and training. *Journal*
 6661 *of Clinical Sport Psychology*, 9(3), 197–212. <https://doi.org/10.1123/jcsp.2015-0011>
- 6662 Van Slingerland, K. J., DesClouds, P., Durand-Bush, N., Boudreault, V., & Abraham, A.
 6663 (2022). How collaborative mental health care for competitive and high-performance
 6664 athletes is implemented: A novel interdisciplinary case study. *Frontiers in*
 6665 *Psychology*, 13, 994430. <https://doi.org/10.3389/fpsyg.2022.994430>
- 6666 Vealey, R. S. (2017). Conflict management and cultural reparation: consulting “below zero”
 6667 with a college basketball team. *Case Studies in Sport and Exercise Psychology*, 1(1),
 6668 83–93. <https://doi.org/10.1123/cssep.2017-0008>
- 6669 Vella, S. A., Swann, C., Batterham, M., Boydell, K. M., Eckermann, S., Ferguson, H., Fogarty,
 6670 A., Hurley, D., Liddle, S. K., Lonsdale, C., Miller, A., Noetel, M., Okely, A. D.,
 6671 Sanders, T., Schweickle, M. J., Telenta, J., & Deane, F. P. (2021). An intervention for
 6672 mental health literacy and resilience in organized sports. *Medicine & Science in Sports*
 6673 *& Exercise*, 53(1), 139–149. <https://doi.org/10.1249/MSS.0000000000002433>
- 6674 Vella, S. A., Swann, C., Batterham, M., Boydell, K. M., Eckermann, S., Fogarty, A., Hurley,
 6675 D., Liddle, S. K., Lonsdale, C., Miller, A., Noetel, M., Okely, A. D., Sanders, T.,

- 6676 Telenta, J., & Deane, F. P. (2018). Ahead of the game protocol: A multi-component,
 6677 community sport-based program targeting prevention, promotion and early
 6678 intervention for mental health among adolescent males. *BMC Public Health*, *18*(1), 1-
 6679 12. <https://doi.org/10.1186/s12889-018-5319-7>
- 6680 Vella, S. A., Swann, C., Boydell, K. M., Eckermann, S., Fogarty, A., Hurley, D., Liddle, S.
 6681 K., Lonsdale, C., Sanders, T., Schweickle, M. J., Telenta, J., & Deane, F. P. (2019).
 6682 Sports-based mental health promotion in Australia: Formative evaluation. *Psychology*
 6683 *of Sport and Exercise*, *45*, 101560. <https://doi.org/10.1016/j.psychsport.2019.101560>
- 6684 Vidic, Z., Martin, M. S., & Oxhandler, R. (2018). Mindfulness meditation intervention with
 6685 male collegiate soccer players: effect on stress and various aspects of life. *Sport J*, *1*.
- 6686 Wachsmuth, S., Jowett, S., & Harwood, C. G. (2022). Third party interventions in coach-
 6687 athlete conflict: Can sport psychology practitioners offer the necessary
 6688 support? *Journal of Applied Sport Psychology*, *34*(1), 178–
 6689 203. <https://doi.org/10.1080/10413200.2020.1723737>
- 6690 Waddington, I., Malcolm, D., Roderick, M., & Naik, R. (2005). Drug use in English
 6691 professional football. *British journal of sports medicine*, *39*(4), e18-e18.
- 6692 Wagstaff, C. R. D., Fletcher, D., & Hanton, S. (2012). Positive organizational psychology in
 6693 sport. *International review of sport and exercise psychology*, *5*(2), 87-103.
 6694 <http://doi.org/10.1080/1750984X.2011.634920>
- 6695 Wagstaff, C.R.D., Fletcher, D., & Hanton, S. (2012). Positive organizational psychology in
 6696 sport: An ethnography of organizational functioning in a national sport
 6697 organization. *Journal of applied sport psychology*, *24*(1), 26-47.
 6698 <http://doi.org/10.1080/10413200.2011.589423>
- 6699 Wagstaff, C. R. D., & Quartiroli, A. (2023). A systems-led approach to developing
 6700 psychologically informed environments. *Journal of Sport Psychology in Action*, 1–
 6701 16. <https://doi.org/10.1080/21520704.2023.2215715>
- 6702 Wahto, R. S., Swift, J. K., & Whipple, J. L. (2016). The role of stigma and referral source in
 6703 predicting college student-athletes' attitudes toward psychological help-
 6704 seeking. *Journal of Clinical Sport Psychology*, *10*(2), 85–
 6705 98. <https://doi.org/10.1123/JCSP.2015-0025>
- 6706 Walker, I., Brierley, E., Patel, T., Jaffer, R., Rajpara, M., Heslop, C., & Patel, R. (2022).
 6707 Mental health among elite sportspeople: Lessons for medical education. *Medical*
 6708 *Teacher*, *44*(2), 214–216. <https://doi.org/10.1080/0142159X.2021.1994134>

- 6709 Ward, V., Tooman, T., Reid, B., Davies, H., & Marshall, M. (2021). Embedding researchers
6710 into organisations: A study of the features of embedded research initiatives. *Evidence*
6711 *& Policy*, 17(4), 593–614. <https://doi.org/10.1332/174426421X16165177580453>
- 6712 Welsh Cycling. (2021). *Home of Welsh Cycling*. <https://www.welshcycling.co.uk/#>
- 6713 Welsh Judo. (2019). *Performance Strategy 2016-2020*. Retrieved from
6714 <https://welshjudo.com/resources/players-pathway-resources/>
- 6715 Welsh Judo. (2020). *Talent Cymru Development Programme*. Retrieved from
6716 <https://welshjudo.com/resources/players-pathway-resources/>
- 6717 Westmattmann, D., Grotenhermen, J. G., Sprenger, M., & Schewe, G. (2021). The show
6718 must go on-virtualisation of sport events during the COVID-19 pandemic. *European*
6719 *Journal of Information Systems*, 30(2), 119-136.
- 6720 Wilkinson, R. J. (2021). A literature review exploring the mental health issues in academy
6721 football players following career termination due to deselection or injury and how
6722 counselling could support future players. *Counselling and Psychotherapy*
6723 *Research*, 21(4), 859–868. <https://doi.org/10.1002/capr.12417>
- 6724 Wood, A. G., Turner, M. J., & Barker, J. B. (2019). Bolstering psychological health using
6725 Rational Emotive Behaviour Therapy. In Breslin, G., & Leavey, G. (Eds.).
6726 (2019). *Mental health and well-being interventions in sport: Research, theory and*
6727 *practice*. (pp. 45-62) Routledge
- 6728 World Health Organization. (1998). *WHO (five) Well-Being Index: World Health*
6729 *Organization*. Regional Office for Europe.
- 6730 World Health Organization. (2005). *Mental health atlas, 2005. Mental Health: Evidence and*
6731 *research*. Department of Mental Health and Substance Abuse, WHO.
- 6732 Wylleman, P., Alfermann, D., & Lavallee, D. (2004). Career transitions in sport: European
6733 perspectives. *Psychology of Sport and Exercise*, 5(1), 7–
6734 20. [https://doi.org/10.1016/S1469-0292\(02\)00049-3](https://doi.org/10.1016/S1469-0292(02)00049-3)
- 6735 Yin, R. (2003). *Applications of Case Study Research*. Sage
- 6736 Yin, R. (2009). How to do Better Case Studies: (With Illustrations from 20 Exemplary Case
6737 Studies). In L. Bickman & D. Rog, *The SAGE Handbook of Applied Social Research*
6738 *Methods* (pp. 254–282). SAGE. <https://doi.org/10.4135/9781483348858.n8>
- 6739 Yin, R. (2018). *Case Study Research and Applications: Design and Methods* (Sixth). SAGE
6740 Publications Ltd.

- 6741 Zhang, Z., & Chelladurai, P. (2013). Antecedents and consequences of athlete's trust in the
6742 coach. *Journal of Sport and Health Science*, 2(2), 115–
6743 121. <https://doi.org/10.1016/j.jshs.2012.03.002>
- 6744 Zhou, J., Heim, D., & O'Brien, K. (2015). Alcohol consumption, athlete identity, and
6745 happiness among student sportspeople as a function of sport-type. *Alcohol and*
6746 *Alcoholism*, 50(5), 617–623. <https://doi.org/10.1093/alcalc/agv030>

Appendix A: Pre-Interview Guide (Study one)

Dear XXXX

Thank you for agreeing to take part an interview, which will explore factors that can affect the wellbeing and mental health of athletes within elite sport.

What is the aim of the interview?

The interview will seek to understand the demands (e.g. competition, work-life balance, injury etc.,) that you face as an elite athlete.

Additionally, it will explore the resources (e.g., family support, relaxing, time away from sport etc.,) that you utilise to help manage those demands.

The interview will be divided into 4 sections:

1. The demands you face as an elite athlete;
2. The impact (both positive and negative) of those demands on your wellbeing and mental health;
3. The resources you use to cope with the demands;
4. Your attitudes towards wellbeing and mental health.

Interview preparation:

In order to help you prepare for your interview, please think about, and (briefly) complete the questions overleaf. They are intended to help you recall key events that will be discussed further in the interview:

1. **Think of a time over the past few months, when you were feeling really good, positive and full of energy.**

Try to remember why that was. What was happening in training / competition / at home (etc.), that was helping you feel this way. What were you doing, and who were you with (etc.), that helped you feel that way?

- 2a) **Think of a time over the past few month when you were not feeling so good. Instead, you were feeling really stressed, a bit low, and not yourself.**

Again, try to remember why that was. What was happening in training / competition / at home (etc.), that was making you feel this way. What were you doing, and who were you with (etc.), that may have made you feel that way?

2b) During the time when you felt stressed, can you please write down (briefly):

Whether/how this “stress” effected your behaviour in training and / or competition. _____

What you did (if anything) to help lower this “stress”– and start to feel a bit better?

Thank you for your time XXXX; looking speaking to seeing you on xxx

Georgia

Appendix B: Study one Interview Schedule (Example)

INTRODUCTION

Throughout the interview, I would like to chat through anything that effects your wellbeing, both positively and negatively... So that means working through the demands...challenges you face in terms of your sport - as an athlete and person. And then consider what you do to manage and cope with those demands and challenges.

WELLBEING

- Meaning: So just to begin, I want to get a feeling for what wellbeing means to you...
- When someone talks about wellbeing, what do you think they are talking about?
- What do you see as positive wellbeing?
- What do you see as negative/poor wellbeing?

- Do you see it in others?

- Recognition / signs (self and others):

- How does that compare to poor wellbeing in yourself?

Low vs High Wellbeing: Comparison of times with high WB and low WB in terms of context, demands, support, experience, thought, feelings and behaviours

- When your wellbeing is high and positive, what has caused that to happen?
- When your wellbeing is low and negative, what has caused that to happen?

DEMANDS

What are the main demands you face in your sport? [NB: the biggest challenges you face as an elite athlete]

Explore:

- the key demands,
- the key times,
- whether the key demands have changed over the last couple of years
- WHY they are considered to be main demands
- WHY are those demands so challenging?

Impact:

Do those MAIN demands impact *your wellbeing / mental health*?

- Explore different impact for different demands
- Explore positive and [then] negative impact
 - Impact on thoughts
 - Impact on feelings
 - Impact on behaviours
- Away from sport
- During training
- During competition

- How and why stressors impact wellbeing / mental health positively and negatively

- Reflect on whether the same demands can have a positive and negative impact on WB. [why and how] - explore on different times of comp

RESOURCES

- Coping with demands
 - How
 - Who helps?
 - What helps?
- Explore whether different stressors are managed in different ways.
- consider individual resource and, external informal and formal resources.
- Failure to cope with demands.
 - Why?
 - Impact
 - On thoughts / feelings and behaviours

NB: Demands and Resources questions can be integrated and iterative.

MODERATORS

(what stops you from seeking behaviour)

- Environment
 - Is wellbeing / mental health a priority among the group?
 - E..g., discussed among athlete / with staff
 - Is / How do you think athlete wellbeing is supported?
- People
 - Who has the most impact on your wellbeing?
- Attitude
 - Is wellbeing / mental health relevant / important to you / other athletes?
 - Why / why not
 - Is wellbeing / mental health as a topic discussed among athlete group?
 - When wellbeing is low – is it discussed / identified [disclosed]
 - Among athletes
 - With coaches
 - With practitioners
- #Reflect on moment when participant had low WB. Did you speak to anyone about how you were feeling?
 - Why / why noy?
 - Did it help [why / how] / would you speak to anyone if it happens again?
- Are you aware of any support available within your sport to seek support for when athlete have low wellbeing and / or poor mental health?
 - Would you access each [why / why not]
 - Anything additional resources that you think would be helpful

CONCLUSION, SUMMARY AND DEBRIEF

- Provide summary of key points;
- Ask Anything to add;
- Thank them for time,

Appendix C: Study two Interview Schedule (Example)

INTRODUCTION

Throughout the interview, I would like to chat through the intervention you received (i.e., podcasts and online resources) and the impact it had on your wellbeing/mental health and your knowledge of mental health.

Podcast Related Questions

- Firstly, how did you find the podcast resource?
 - What was good about the podcast / not so good?
 - Do you feel the podcast affected your wellbeing/mental health (positively / negatively)? Why do you feel that way?
 - How do you feel the podcast may help your wellbeing and mental health in the future? Why do you feel that way?
 - Would you change anything about the podcast? Why do you feel this way?
 - How do you feel that the podcast affected your confidence about [topic], if at all?
 - How do you feel that the podcast affected your confidence to seek help for [topic]?
 - What would you change about the podcast/this way of learning, if anything? Why do you feel that way?
 - Do you feel that podcasts are a good resource for learning and increasing knowledge?
-
- What is wellbeing and mental health?
 - Weight and performance – athlete perspective
 - Weight and performance – coach perspective
 - Importance of rest
 - Managing conflict

Online Resource Questions

- Were you able to identify the online resources?
- How do you feel that the online resources affected your wellbeing/mental health (if at all)?
- How do you feel the online resources may be beneficial in the future / for future athletes?
- Do you feel the resources easy to find? Why do you feel that way?
- Do you feel the resources were valuable? Why do you feel that way?
- Would you change anything about the online resources? Why do you feel this way?

Environmental Recommendations Questions (Athletes)

- Have you been aware of the environmental recommendations that have been fed back to the sports?

- Since the beginning of the project, have you noticed changes in the environment that have supported/hindered your own wellbeing and mental health? Why do you feel that way?
- Are you aware of any support available within your sport to seek support for when athlete have low wellbeing and / or poor mental health?
 - Would you access each [why / why not]
 - Anything additional resources that you think would be helpful
- How do you feel that about having conversations about mental health in the environment?
- Do you feel that the environment can your support your wellbeing and mental further? Why do you feel that way?

CONCLUSION, SUMMARY AND DEBRIEF

- Provide summary of key points;
- Ask Anything to add;
- Thank them for time

Appendix D: Self-report Diary Booklet (Study one)



Thank you for agreeing to complete a daily diary, which will identify factors that may affect the wellbeing (positive and negative) of athletes within elite sport.

What is the aim of the diary?

The diary will seek to identify the demands (e.g., competition,) that you face, on a daily basis, as an athlete.

Additionally, it will explore how you manage those demands.

What will I have to do?

Over the next two weeks, I will send a daily message at 6pm each evening. This will prompt you to answer 6 questions (below) via a voice note on Whatsapp. The questions are brief, and so it is intended that this task will not take any more than 2 minutes each day.

When answering each question, can you please indicate which number question you are answering.

The daily questions:

- 1a) Has anything affected your wellbeing positively today? (e.g., did something make you happy, energised or relaxed)
- 1b) If yes - why do you think it affected you in this way?
- 2a) Has anything affected your wellbeing negatively today? (e.g., did something make you sad, lethargic or stressed)
- 2b) If yes - why do you think it affected you in this way?
- 2c) Did you do anything to address these feelings, and improve your wellbeing?
- 2d) If so – what did you do? / If not – why not?

Feel free to contact me at any point, if you have any questions or want to discuss anything.

Appendix E: Intervention Infographics

Anxiety

What is anxiety?

Everyone experiences feelings of anxiety at some point. This is because we all face a range of stressors in our lifetimes, including personal, educational, and/or sporting pressures.

Some anxiety symptoms can be helpful for performance, and some are unhelpful for performance and functioning in life.

Performance Anxiety

Many athletes experience performance-related anxiety symptoms (e.g., increased attention, racing heart, and sweating), which they find helpful for their sports performance. However, if they become unhelpful for performance, seek support from a sport psychologist.

Generalised Anxiety Disorder (GAD)

Away from performance anxiety, people with GAD will experience unhelpful anxiety symptoms most days, and it will affect their daily activities.

Signs and Symptoms of GAD


Difficulty concentrating


Headache


Tiredness


Feeling constantly on edge


Feeling sick


Rapid, shallow breathing and shortness of breath


Stomach ache


Pins and needles


Irritability

Need more information?

If you are experiencing unhelpful anxiety symptoms that are affecting your daily life or causing you distress, it is time to seek help.

Speak to someone you trust:

Family, Coach, Sport Psychologist, Clinical Psychologist, or Sports Science Practitioner

GP

Mental Health Charities
[Click Here](#)

Mental Health

Finding more information

Many charities offer support for anyone who would like more information regarding their mental health.

This infographic provides the links to follow to find that help for you as quickly as possible.



Provides confidential, non-judgmental emotional support for people experiencing feelings of distress or despair, including suicidal thoughts. You can phone, email, write a letter or, in most cases, talk to someone face to face.



There is also a self-help app, which helps you to keep track of you're feeling.

[Self-help app](#)



Provides confidential, anonymous and free support, information and signposting to people anywhere in the UK. You can phone or chat online. Of note, their support lines are only open from 5 pm-midnight each day.



Provides an infoline where you can receive more information about mental health concerns and signposting services.



Provides a free 24/7 text messaging support service for anyone who is struggling to cope. Shout is a free, confidential, anonymous service for anyone in the UK. It won't appear on your phone bill.



To start a conversation, text the word 'SHOUT' to 85258



Provides confidential free support and information for individuals who may experience unhelpful thoughts about weight, body image, and food. They provide various forms of support, including calls, webchat and chat rooms.



Provides services to promote wellbeing and mental health. They offer groups and wellbeing hubs, which can be found on their website.



What to do in Cardiff?

It can take time to adjust when moving away from home. Here are some tips to help you when you have some time to yourself.

1 Explore the local green spaces

There are plenty of parks to explore near the institute, namely Sophia and Bute. Taking time to yourself and leaving the centre is essential to maintain your wellbeing and mental health.

2 Explore the blue spaces

Cardiff Bay boasts a range of restaurants and cafes. The Barrage embankment is an excellent spot for a relaxing stroll or bike ride. Also, explore the beaches of South Wales.

3 Explore the city centre

Cardiff city centre is on the doorstep. Here you can find everything you need for your time at the institute.



4 Build social networks

Spend time with others to maintain your wellbeing and mental health. There are plenty of group activities to do with your teammates in Cardiff. Also, explore different opportunities to build your social networks away from the sport (e.g. volunteering).

5 Widen your identity

Taking breaks from your sport can help your wellbeing and mental health. Take time to explore work and educational options; talk to your coach and/or contact the Sport Wales performance lifestyle advisors for more information.

Need more information?

Discover Cardiff: [Click here](#)

Bus routes: [Click here](#)

Volunteer Wales: [Click here](#)

Performance lifestyle team: Zoe Eaton and Rosie Williams
zoe.eaton@sport.wales



What to do in Newport?

Whether you are travelling to the Velodrome for training or living close by, this infographic highlights some of the things you can do to decompress and relax.

1 Explore the local green spaces

There are plenty of parks to explore around Newport, including Belle Vue and Beechwood. Tredegar House has gardens, parkland, and cafes to explore. Giving yourself time to leave the centre may allow you to achieve breaks when you need them.

2 Explore the local blue spaces

If you need a break from training and a busy life, explore the canal walk at Fourteen Locks. Take time to explore the beaches of South Wales.

3 Explore South Wales and blue spaces

If you find you have some time off, why don't you explore the cities of Newport and Cardiff.



4 Build social networks

Spend time with your teammates, including taking time to have a coffee around Newport and surrounding areas to help your wellbeing and mental health. Also, explore different opportunities to build your social networks away from the sport (e.g., volunteering).

5 Widen your identity

Taking breaks from your sport can help your wellbeing and mental health. Take time to explore work and educational options; talk to your coach and/or contact the Sport Wales performance lifestyle advisors for more information.

Need more information?

Insider guide: [Click here](#)

South Wales guide: [Click here](#)

Volunteer Newport: [Click here](#)

Performance lifestyle team: Zoe Eaton and Rosie Williams
zoe.eaton@sport.wales



Body weight and performance

Finding Support

Athletes can experience a range of symptoms when struggling with their weight, body image, and relationship with food. These symptoms may include:

- Spending a lot or most of the time thinking about food
- A sense of being out of control around food, or a loss of control over-eating
- Negative feeling towards body image
- Eating when not hungry
- Eating until uncomfortably full
- Avoiding eating around others
- Social withdrawal and isolation

There are charities in the UK, which offer support and guidance for individuals who experience any of the above symptoms.

One charity is BEAT

Below are some links to access support provided by BEAT



Phone support

0808 801 0677 (England)
0808 810 0433 (Wales)

Helplines are open 365 days a year from 9 am-8 pm (Monday – Friday), and 4 pm-8 pm (weekends and bank holidays)



One-to-one web chat

If the phone lines are busy, you can try the one-to-one webchat with the following link

[Click Here](#)

Live chat times:
Monday 9:00-21:45 BST
Tuesday to Friday 9:00-23:45 BST
Saturday and Sunday 16:00-19:45 BST



Chat support rooms

The BEAT charity also offers several online support groups, allowing individuals to speak to others about their experiences.

[Click Here](#)

Need more information?

If you feel that you need more information about the above, then please reach out to someone you trust to find the correct support:

Family, Coach, Sport Psychologist, Clinical Psychologist, or Sports Science Practitioner

GP

Your GP is able to refer you to specialist support, should it be needed.

BEAT

[Click Here](#)



Swansea University
Prifysgol Abertawe



sportwales
chwaraeoncymsu

Mental Health

What is depression?

Depression negatively affects how you feel, how you think, and how you act. It is common worldwide.

It is important to note that depression is not just feeling sad. Symptoms of depression (see below) are usually experienced for more than two weeks. It will affect your ability to function and continue in your personal and sporting lives.

Signs and Symptoms



A depressed mood. Loss of enjoyment and interest in activities that used to be enjoyable



Lack of energy and tiredness. Having sleeping difficulties or sometimes sleeping too much



Loss of interest in food or sometimes eating too much



Feeling worthless or feeling guilty when they are not really at fault



Thinking about death a lot or suicide



Difficulty concentrating or making decisions



Moving more slowly or sometimes becoming agitated and unable to settle

Need more information?

If you have been experiencing the above symptoms for more than two weeks and they affect your daily life or are causing you distress, it may be time to seek help.

Speak to someone you trust:

Family, Coach, Clinical Psychologist, Sport Psychologist, or Sports Science Practitioner

GP

Mental health charities
[Click here](#)



Appendix F: Guide to Access Podcasts

The Wellbeing and Mental Health Project: Podcast Series



Podcast Series

Welcome to your podcast series, which explores wellbeing and mental health. The series aims to enhance wellbeing and mental health through increasing awareness of the topics below. It also aims to increase confidence for everyone in the environment to seek help. The topics will include:

1. What is wellbeing? What is mental health? (W/C 1st November)
2. Weight and performance: The athlete perspective (W/C 8th November)
3. Weight and performance: The coach perspective (W/C 15th November)
4. The importance of rest (W/C 22nd November)
5. Managing conflict (W/C 29th November)

How to access the podcast

As the podcast is being made exclusive, to access the podcast you can download a private link into your preferred apps or access the podcast website.

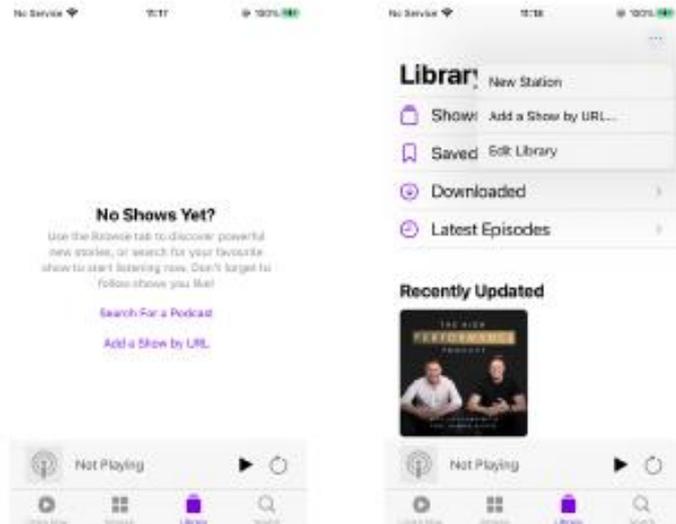
Below are some screenshots of how to download the link to Apple Podcasts and Overcast. Unfortunately, Spotify and Google do not support the connection; however, the apps above are available on iOS and Google Play stores.



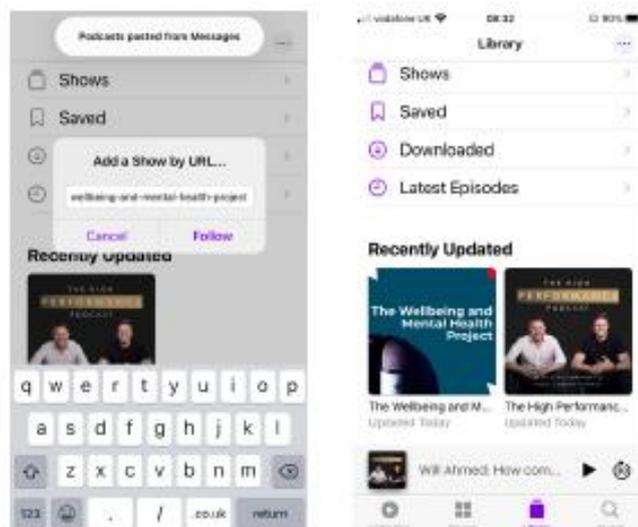
Apple Podcasts



1. Find the Apple Podcast App



2. Find your library. If you have the “No Shows Yet?” message, select the “Add a Show by URL”. If you’re already subscribed to some shows, click on the three dots in the top right corner, then select “Add a Show by URL”



3. Add the link in the box (<https://DGdRpOzv:p0hHGwzR@private.transistor.fm/the-wellbeing-and-mental-health-project>). Once entered, press follow, and the show will be added to your podcast Library.

Overcasts



1. Find the Overcast App



ADD A PODCAST

(OTHERWISE, THIS MAY NOT BE USEFUL)

IMPORT FROM APP

2. Click on "Add a Podcast". This will lead to the screen on the right. Click on "Add URL" in the top right corner.



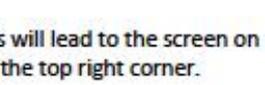
MOST STARRED



PODCASTS BY COLOR



NEWS

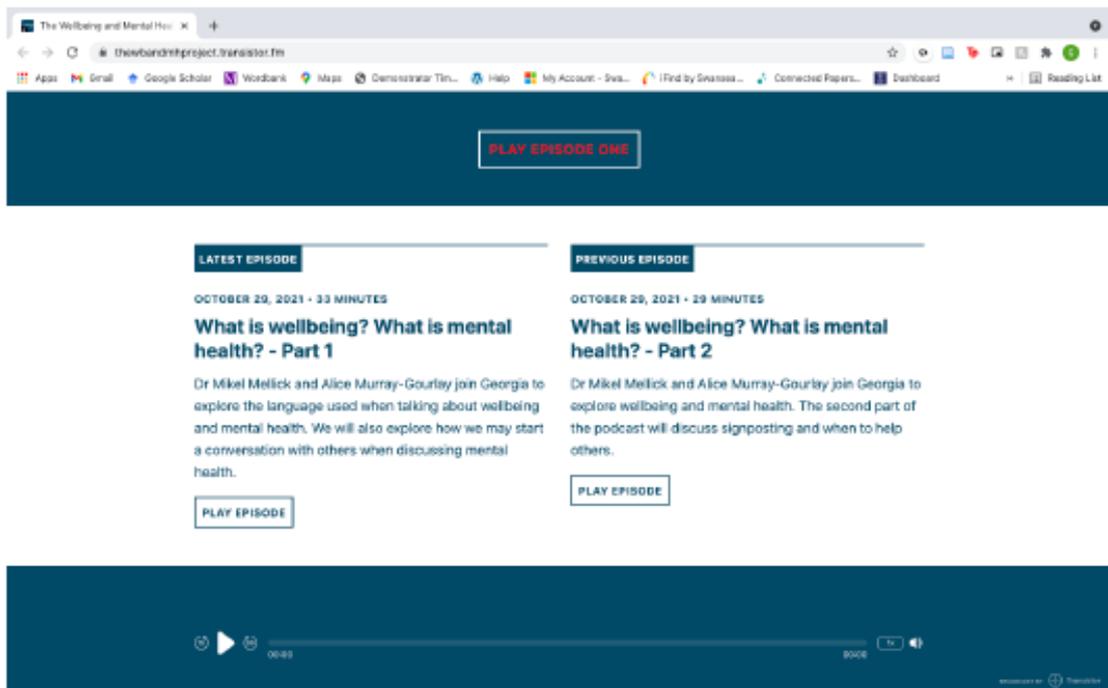


EXCITING & FUN STUFF



3. Add the link in the box (<https://DGdRpOzv:p0hHGwzR@private.transistor.fm/the-wellbeing-and-mental-health-project>). Once entered, press follow, and the show will be added to your podcast Library.

Podcast Website



Above is a screenshot of how the website will look once the first episode is released. The podcasts will be available here on your desktop and on your phones, so you are able to listen to the podcasts if you do not have access to the apps.

Website Link: <https://thewbandmhproject.transistor.fm/>

sportswales
chwaraeon cymru



Swansea University
Prifysgol Abertawe

BEICIO CYMAL
WELSH CYCLING

WELSH INSTITUTE
OF PERFORMANCE SCIENCE
SEFYDLID SWYDDOLA
PERFFORMIO CYMRU