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The Impact of COVID-19 on Dual Career Athletes: Three Typologies of Coping

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1 The Impact of COVID-19 on Dual Career Athletes: Three Typologies of Coping

2 The rapid spread of the COVID-19 virus (SARS-CoV-2) led to worldwide sanctions
3 that profoundly impacted everyday life. Procedures such as minimising social contact,
4 avoiding gatherings of people, and reduced access to services, were put into place in the
5 United Kingdom (UK) in March 2020. Education institutions, including schools and
6 universities, were required to cease face-to-face teaching for students and provide online
7 education. Many countries, including the UK, chose to suspend all sporting competitions,
8 including a postponement of the Olympic and Paralympic games that were set to be held in
9 Tokyo in July and August 2020 (International Olympic Committee, IOC, 2020). The strictest
10 limitations to daily activities were lifted within the UK in May 2020. Yet forms of
11 restrictions, such as social distancing, cancellations of non-elite competitions, and virtual
12 learning for many tertiary education institutions, were still in place in December 2020. As
13 cases rose in the UK, in January 2021 the country returned to national lockdown status with
14 schools and sporting facilities closing.

15 While the restrictions were necessary to curb the spread of the virus, there was
16 extensive worldwide concern relating to the psychological impact of reduced social contact,
17 reduced physical activity, and an absence from face-to-face education (World Health
18 Organisation, WHO, 2020). Evidence suggested a deterioration of wellbeing (defined as a
19 positive state that allows individuals to thrive and flourish; Huppert & So, 2013) across the
20 general population compared with pre-COVID-19 statistics (Pierce et al., 2020). With this in
21 mind, it was important to understand the populations that were considered to be more at risk
22 for poor wellbeing outcomes. According to the UK's office for national statistics, the 16-29
23 age group reported lower than the national average for scores on life satisfaction and
24 happiness at this time (Office for National Statistics, 2021). It was predicted that those
25 transitioning from secondary to tertiary education would be the most impacted because they

1 were not only required to complete their secondary education in difficult circumstances, but
2 they were also required to adapt to transitioning to a new educational environment and
3 potentially a new living situation amidst social distancing restrictions (Daniel, 2020).

4 The COVID-19 pandemic also presented a unique situation where athletes were
5 required to transition abruptly from non-restricted sport and competition to training and
6 competing under lockdown situations. Many athletes were also required to adjust their
7 projected career trajectories (Stambulova et al., 2020). For example, those training for the
8 Olympic or Paralympic Games were required to adapt their training to peak a year later than
9 expected. When considering the transition holistically (Wylleman & Rosier, 2016), COVID-
10 19 could have affected athletes on multiple levels: athletically (their career trajectory and
11 development), psychologically (questioning their athletic identity), academically or
12 vocationally (online learning or risk to job retention), and financially (the ability to earn or a
13 reduction in funding). An athlete's ability to cope with multiple simultaneous demands can
14 have a significant impact on the transition outcome (i.e., a successful transition or a crisis
15 transition that requires intervention; Stambulova, 2003). Crisis transitions can give rise to a
16 reduced sense of wellbeing and premature athlete dropout from sport (DiFiori et al., 2014;
17 Myer et al., 2015). In these situations, if the psychological and psychosocial needs of athletes
18 are not met, there is a risk of maladaptive health outcomes, such as burnout (defined as a
19 cognitive-affective syndrome comprised of emotional and physical exhaustion, reduced
20 sporting accomplishment, and devaluation of sport participation; Raedeke & Smith, 2001).
21 Likewise, the impact of stressful situations on sport performance is considered to be mediated
22 by the athletes' use of coping strategies (i.e., adaptive and functional, or maladaptive and
23 dysfunctional; Dias et al., 2009).

24 Considering the various demands the transitions into COVID-19 lockdowns placed on
25 athletes and the risk that these demands, if not appropriately supported, could lead to poor

1 wellbeing, burnout, or dropout from sport, it is vital for researchers, sport practitioners, and
2 governing bodies to understand the psychological impact on athletes. A study investigated
3 the emotional regulation of elite athletes during the pandemic and identified those with a
4 higher athletic identity (defined as the degree to which a person identifies with the athlete
5 role; Brewer et al., 1993) were more likely to score higher on negative affectivity and
6 experience poor emotional regulation outcomes, such as rumination and catastrophising
7 (Costa et al., 2020). Likewise, a comparison study suggested that athletes were just as likely
8 to suffer from poor mental health as non-athletes during the COVID-19 pandemic (Knowles
9 et al., 2021). While evidence is emerging to understand the impact of the COVID-19
10 restrictions on elite and full-time athletes, less research has focused on athletes that are
11 combining their sport with education or work (i.e., dual career athletes). There are several
12 reasons why an elite or aspiring athlete might combine their sporting careers with education
13 or work (i.e., a dual career). Engagement with activities outside of sport can facilitate the
14 development of a more diverse identity (Cartigny et al., 2021) and avoidance of an
15 exclusively athletic identity (Lally, 2007). This multi-dimensional identity can have benefits
16 for athletes' wellbeing during periods of adversity, such as injury or deselection. Specifically,
17 the development of athletic and academic identities amongst dual career athletes can facilitate
18 their ability to cope with adversity (e.g., injury and deselection; Van Rens et al., 2019) and
19 transitions (Knights et al., 2016).

20 As outlined previously, the COVID-19 pandemic presented athletes with transitional
21 challenges. Dual career athletes experience numerous day-to-day demands from their sport
22 but also their education or work (Brown et al., 2015; Harrison et al., 2020) also had the added
23 demands of adapting to a shift in their education delivery. Hence, under this adverse
24 situation, athletes in education were potentially exposed to threats to both their athletic and
25 academic identities. At the time of writing, research has focused on elite or full-time athletes

1 and has been of a quantitative nature (e.g., Knowles et al., 2021; Şenışık et al., 2021), and
2 findings suggest that athletes may be at an increased risk of experiencing mental health
3 concerns than non-athletes. Further, there is currently no research understanding the coping
4 strategies used by athletes in the COVID-19 pandemic. Based on the existing research, it is
5 unclear whether dual career athletes were able to utilise their diverse identity to facilitate
6 coping and avoid poor wellbeing, or if these multiple threats and demands negatively
7 impacted their wellbeing. There are two main benefits to understanding the coping strategies
8 of dual career athletes in the pandemic situation: (1) for practitioners to better support dual
9 career athletes to manage and cope with the situation at the present time and similar situations
10 in the future; and (2) to better understand the impact of multi-dimensional adversity on
11 coping and wellbeing. The aims of this study were to: (1) identify the coping strategies that
12 dual career athletes utilised throughout the COVID-19 restrictions; and (2) understand the
13 impact these coping strategies had on their levels of wellbeing and burnout.

14 **Materials and Methods**

15 *Participants*

16 In total, 165 survey responses were received. 6 participants were removed due to not
17 meeting one of the two inclusion criteria: (1) combining their sport participation with
18 education or work (i.e., a dual career athlete), or (2) competing at a national or international
19 level. The final consisted of a sample of 159 participants (Participant characteristics are
20 summarised in Table 1). The sample consisted of 63.5% females and 36.5% males. All
21 participants were from the UK and identified as: White (87.4%), Mixed nationality (6.2%),
22 Asian (3.7%), or Black (2.5%). Participants were from a range of dual career backgrounds,
23 including athletes in school (7.5%) and athletes in work (8.8%), but the majority of the
24 sample consisted of university student-athletes (83.6%). Likewise, the sample consisted of
25 athletes with experience of competing at a range of levels, but the majority of the sample
26 were international junior (34%) or senior level athletes (30.2%).

1 *[Insert Table 1 about HERE]*

2 **Procedure**

3 The procedure for this study received institutional ethical clearance. The study was
4 promoted to athletes via the authors' professional network (i.e., athletes were supported by
5 *[blinded for review]*) where it was made clear that participation was voluntary and
6 anonymous. The survey was also promoted on social media (e.g., Twitter) and via other
7 sporting organisations that collaborate with *[blinded for review]*. Participants were presented
8 with information about the study on the first page of the questionnaire and were asked to
9 provide their consent to continue.

10 The aim of the data collection process was to assess the impact of coping strategies on
11 wellbeing for dual career athletes, but also to explore their experiences during this
12 challenging period in a more in-depth manner; therefore, a survey using both closed- and
13 open-ended questions was used. O'Cathain and Thomas (2004) suggest that open ended
14 questions within surveys can be used to generate more in-depth data or stories for qualitative
15 analysis, and help to identify areas that might complement the closed questions. The survey
16 included questionnaires relating to coping, wellbeing, and burnout as well as three opened
17 questions. Data collection began in October 2020 and concluded at the end of January 2021.
18 This timescale was selected to incorporate the first term of the academic year for both
19 secondary and tertiary education within the UK, including a potential
20 examination/assessment period (December-January). During this time, forms of social
21 distancing, cancellations of non-elite competitions, and virtual learning for many tertiary
22 education institutions were still in place. Additionally, in January 2021 the UK returned to
23 national lockdown status with schools and sporting facilities closing.

24 **Materials**

25 **Coping strategies.** To measure the coping strategies used by participants, the Brief
26 COPE Inventory (adapted by Carver, 1997) was used, consisting of 28 items. Participants are

1 required to answer, on a four-point Likert scale ranging from ‘not at all’ to ‘very much’, the
2 extent to which they are currently using each of the 14 coping strategies. The strategies
3 included adaptive coping: active coping, planning, emotional support, instrumental support,
4 positive reframing, acceptance, religion, humour. Whereas maladaptive strategies consist of
5 venting, denial, substance use, behavioural disengagement, self-distraction, and self-blame.
6 Within this sample the COPE inventory showed good psychometric properties with internal
7 consistencies ($\alpha = 0.72$; individual alpha scores for each subscale are reported in Table 2).
8 Interestingly, two subscales of the coping measures reported poor Cronbach’s alpha scores
9 (self-distraction and venting). When investigating this, it became apparent that responses to
10 these two subscales could have been impacted by the COVID context. Two questions refer to
11 actions or behaviours that the respondents would not have been able to do under the restricted
12 social contact and requirements to stay at home (i.e., I’ve been saying things to let my
13 unpleasant feelings escape; I’ve been doing something to think about it less, such as going to
14 movies, watching TV, reading, daydreaming, sleeping, or shopping). It was decided to keep
15 the questions in because the COVID context was universal to all participants.

16 **Wellbeing.** As a measure of wellbeing, participants were required to respond to the
17 World Health Organisation Quality of Life abbreviated assessment, WHOQOL-BREF
18 (WHOQOL Group, 1998). This 26-item questionnaire includes aspects of life satisfaction
19 that make up four subscales: physical health, psychological health, social relationships, and
20 environment. Respondents are required to reflect on the 4 weeks prior to taking part in the
21 survey and identify on a five point Likert scale from “Not at all” to “Extremely”, how
22 satisfied they are with aspects of their life. Three of the WHOQOL-BREF subscales,
23 physical ($\alpha = 0.72$), social ($\alpha = 0.63$), and environment ($\alpha = 0.76$) showed good internal
24 consistency within this same. Psychological health showed an alpha score of 0.8 after the

1 removal of one question, item 26 “How often do you have negative feelings such as bad
2 mood, anxiety, and depression?”.

3 **Athlete Burnout.** The Athlete Burnout Questionnaire (ABQ; Raedeke & Smith, 2001)
4 is a 15-item self-report measure that assesses the participant’s level of burnout. The
5 questionnaire comprises three subscales each with five items: physical and emotional
6 exhaustion, reduced accomplishment, and sport devaluation. Respondents are required to
7 identify, on a five-point Likert Scale anchored by (1) “Almost Never” and (5) “Almost
8 Always”, how often they have had each feeling or thought over the last 4 weeks. Scores are
9 then calculated for each of the subscales by taking a mean of the associated five items and a
10 global athlete burnout score by taking a mean of all 15 items. Within this study the ABQ
11 showed good psychometric properties with internal consistencies for all three subscales
12 (physical and emotional exhaustion, $\alpha = 0.83$; reduced accomplishment, $\alpha = 0.79$; sport
13 devaluation, $\alpha = 0.80$).

14 **Identity.** The Athletic and Academic Identity Scale (AAIS; Yukhymenko-Lescroart,
15 2014) is an 11-item questionnaire that assesses the academic and athletic identity of student
16 athletes. Respondents are asked to rate characteristics or qualities such as “doing well in
17 school” on a scale of 1-6, with a 1 indicating that the item is “not central to my sense of self”
18 and 6 indicating that it is “very central to my sense of self”. The scale consists of two
19 subscales, the first containing five items related to the student role and the second containing
20 six characteristics related to the athletic role. A sum of the item scores is calculated for each
21 subscale separately, where higher scores represent greater identification with the student and
22 athletic role, respectively. The student subscale was adapted to include vocational aspects of
23 an individual’s career (i.e., the item “Doing well in school” was adjusted to “Doing well in
24 school / work”). Within this sample, both subscales showed good internal consistency
25 (athletic identity, $\alpha = 0.85$; academic identity, $\alpha = 0.91$).

1 17.6% of the variance, included active, positive reframing, acceptance, and planning. This
2 second component appeared to reflect positive coping strategies. The third component
3 explained 10% of the variance. Since this component contained instrumental support and
4 emotional support, it appeared to relate to support seeking behaviours.

5 *[Insert Table 3 about HERE]*

6 Stage 3, consisted of a two-step clustering method, which provides increased
7 confidence in the stability of the cluster solution through using a combination of hierarchical
8 and non-hierarchical clustering methods (Gore, 2000; Hair et al., 2013; Jain, 2010; stages 1-3
9 were performed in IBM SPSS Statistics Version 26.0.0.0; IBM Corp., Armonk, NY),
10 including ANOVA analysis of the between group difference of wellbeing, burnout and
11 identity. The 14 subscales of the brief COPE questionnaire were used as the clustering
12 variables: Self-Distraction, Active Coping, Denial, Substance Use, Use of Emotional
13 Support, Use of Instrumental Support, Behavioural Disengagement, Venting, Positive
14 Reframing, Planning, Humour, Acceptance, Religion, and Self-Blame. The cluster groups
15 were then examined for their differences on wellbeing, burnout, and athletic identity, and
16 labelled according to the participants that they best represented (a significance level of $P =$
17 0.05 was used). Finally, in stage 4, responses to the open-ended questions were separated into
18 the three clusters that were identified in stage 3. The responses facilitated the labelling of the
19 cluster solutions and representative quotes were selected to illustrate the recognition of
20 change, level of coping, and support needs of the participants within each cluster.

21 **Results**

22 First, a hierarchical cluster analysis was conducted and identified that a 3-cluster
23 solution would be appropriate. A k-means analysis was then used to allocate all participants
24 into three clusters, which are described in detail below. To further illustrate the cluster

1 characteristics and illustrate the differences between clusters, box plots of the cluster
2 variables are shown in figure 1.

3 *[Insert Figure 1 about HERE]*

4 Cluster 1 (n = 33, 20.0%) contained participants that indicated a higher use of more negative
5 coping strategies, such as: denial, substance use, behavioural disengagement, venting, and
6 self-blame. This cluster is labelled 'negative coping'. Cluster 2 (n = 74, 44.8%) contained
7 participants that were more likely to use positive coping methods, such as: active, emotional
8 support, positive reframing, planning, and religion or spirituality. This cluster is labelled
9 'positive coping'. The final cluster, cluster 3 (n = 52, 31.5%), showed the lowest scores on
10 almost all types of coping strategies (except acceptance). It could be that this group had not
11 engaged with other coping strategies for two reasons: (1) this group did not consider the
12 COVID-19 pandemic to have impacted their life or wellbeing, and therefore did not need to
13 employ coping strategies, or (2) because this group was high on the acceptance subscale, they
14 were exclusively using this as a coping strategy. This cluster has been labelled as
15 'acceptance'.

16 Further analysis was conducted to understand the differences between clusters in
17 terms of demographic characteristics and measures of wellbeing, burnout, and identity. The
18 group that showed negative coping tendencies (cluster 1) indicated the youngest mean age (M
19 = 19.94, SD = 2.19), compared to the group that displayed positive coping tendencies (cluster
20 2, M = 21.31, SD = 4.07) and the acceptance group (cluster 3, M = 20.42, SD = 3.86). No
21 differences between clusters were shown for education status (i.e., school, undergraduate or
22 post-graduate degree) or for level of competition in sport (i.e., regional, national, or
23 international competition). It is interesting to note that, the three outliers according to age
24 were assigned to either the positive coping or acceptance groups. This could suggest that
25 while younger participants inclined to use negative coping strategies there was no clear

1 tendency towards certain coping strategies in this rather limited sample of older dual career
2 athletes.

3 The results indicated that the group using negative coping strategies showed
4 significantly lower scores on all wellbeing scales: overall wellbeing [$F(2, 156) = 18.30, p <$
5 $.001$], physical wellbeing [$F(2, 156) = 15.39, p < .001$], psychological wellbeing [$F(2, 156)$
6 $= 15.09, p < .001$], social wellbeing [$F(2, 156) = 5.73, p < .001$], and environmental
7 wellbeing [$F(2, 156) = 8.67, p < .001$]. A Tukey's HSD post host test on overall wellbeing
8 scores showed that the negative coping group (cluster 1, $M = 13.04, SD = 2.03$) was
9 significantly different from cluster 2 ($M = 15.02, SD = 1.70$) and cluster 3 ($M = 15.27, SD =$
10 1.70), but that clusters 2 and 3 were not significantly different from one another.

11 The results also suggest that the acceptance group (cluster 3) showed significantly
12 lower burnout scores than the other two groups on all burnout subscales: overall burnout [F
13 $(2, 156) = 9.35, p < .001$], exhaustion [$F(2, 156) = 10.08, p < .001$], sense of accomplishment
14 [$F(2, 156) = 5.16, p = 0.01$], and devaluation [$F(2, 156) = 12.39, p < .001$]. A Tukey's HSD
15 post host test on overall burnout scores showed that the acceptance group (cluster 3, $M =$
16 $6.28, SD = 1.22$) was significantly different from other coping clusters: cluster 1 ($M = 7.80,$
17 $SD = 1.64$) and cluster 2 ($M = 7.38, SD = 1.63$), but that clusters 1 and 2 were not
18 significantly different from one another. Despite mean differences between the clusters on
19 academic identity (cluster 1, $M = 15.48, SD = 3.69$; cluster 2, $M = 17.22, SD = 3.22$; cluster
20 3, $M = 16.02, SD = 46.55$), this was not shown to be significant. Plus, no differences were
21 seen between the clusters for athletic identity.

22 ***Qualitative Responses***

23 Following the separation of the participants into three cluster groups, responses to the
24 open-ended questions were first used to facilitate labelling of the clusters (positive coping,
25 negative coping, and acceptance). Secondly, representative quotes were selected to illustrate
26 the recognition of change, level of coping, and support needs of the participants within each

1 cluster. See Table 4 for examples of the athlete responses to the change, coping, and support
2 open-ended questions.

3 *[Insert Table 4 about HERE]*

4 The comments made by athletes in the negative coping cluster support the quantitative
5 results. Athletes stated that the pandemic had caused significant disruption to their lives, with
6 many failing to see any positives from the situation. One University student-athlete wrote:
7 *“Almost everything has changed because of COVID, personal relationships, home life, sport.*
8 *Nothing pleasant has come of it.”* (Participant 159). Other athletes within the negative coping
9 group commented how they felt *“mentally and physically tired all the time”* (Participant 130,
10 University student-athlete) and said that the lack of training and competition made them feel
11 *“worthless”*. When asked about their level of coping, athletes in this group consistently
12 relayed that they felt unable to cope with the situation, with many disengaging: *“No chance*
13 *to cope as too restricted, will not be able to cope fully until back to normal”* (Participant 66,
14 University student-athlete). Athletes suggested that they felt they would never be able to cope
15 with the situation: *“I never think I will completely cope with this situation”* (Participant 99,
16 University student-athlete). When asked about the level of support they require, this cluster of
17 athletes suggested they either did not know where to find support: *“I need support, but I*
18 *don’t know how to find it”* (Participant 38, University student-athlete), did not have any
19 support, or felt that no level of support would help them to cope with the situation: *“the*
20 *support I would need is something that probably isn’t possible. all I am desperate is for full*
21 *training and gym equipment”* (Participant 2, work athlete).

22 When asked about the impact of the pandemic, athletes in the positive coping group
23 were much more likely to express positive aspects such as being able to spend more time with
24 family: *“I found myself enjoying spending more time with family members”* (Participant 39,
25 University student-athlete). Athletes also saw positives in being stuck at home, suggesting it

1 had given them more time to focus on either certain aspects of their sport: *“As much as I’m*
2 *not a fan of working from home, it has given me more opportunity to work on my sport,”*
3 (Participant 26, University student-athlete) or their physical and mental wellbeing: *“I’ve*
4 *managed to use it positively to focus on my physical and mental well-being as well as using it*
5 *to establish a routine”* (Participant 7, University student-athlete). Athletes in the positive
6 coping cluster also relayed the positive coping methods they had been using during the
7 pandemic, including journaling, meditation, and self-care: *“I have done a lot of journaling to*
8 *see my thoughts and emotions more clearly. I try to meditate most days. Lots of self-care and*
9 *me-time helps me keep my mental health in check”* (Participant 67, University student-
10 athlete). In addition, this group of athletes suggested that following a dual career pathway
11 enabled athletes to develop and focus on other aspects of their identity. The findings showed
12 that this was an important coping mechanism for them during the pandemic as it reduced the
13 stress they were experiencing in their sport: *“Having an escape from sport has helped*
14 *massively. Having a passion for education and learning meant I could turn and focus my*
15 *attention on learning new things I wouldn’t normally have time to do and therefore stress less*
16 *about the issues arising in my sporting life”* (Participant 146, University student-athlete).
17 Other university student-athletes in the positive group had also been using proactive support
18 strategies including *“talking with professionals”* (Participant 139), using *“university*
19 *wellbeing teams”* (Participant 70) and using the *“guidelines set by the university”*
20 (Participant 103). Athletes suggested that the support of friends, family, and their university
21 were all helpful and they were aware of where to access further support if they required it:
22 *“There is always someone to reach out to if you are stuck or struggling with anything and*
23 *you are all in the same boat so it’s nice to help everyone out”* (Participant 103).

24 The comments made by athletes in the acceptance cluster also supported the
25 quantitative results. This group did not view the impact of the pandemic as either positive or

1 negative and instead were indifferent about the situation, perceiving that *“Nothing has really*
2 *changed in my day-to-day life”* and *“Not much distress has been caused”* (Participant 45,
3 University student-athlete). When asked about how they had coped with the latest national
4 lockdown, this group appeared to have accepted the situation and perceived that there were
5 not any major challenges: *“I think I’ve coped well. Nothing has made it difficult to cope and it*
6 *is just accepting that things have had to change currently”*, *“I’ve coped very well as not*
7 *much has changed. I’m usually a chilled person so I’m happy reading or watching tv to*
8 *distract myself”* (Participant 45, University student-athlete). The acceptance group
9 recognised that everyone around them was in the same situation, and this led to minimal
10 stress: *“Everyone else in my sport and life are in the same position. It’s not something that*
11 *has impacted me”* (Participant 154, University student-athlete). When asked about their
12 support needs, athletes in the acceptance group either outlined how they did not require any
13 support because the pandemic had not been particularly demanding: *“At the moment, I feel*
14 *like I do not need support”* (Participant 137, University student-athlete) or they felt that they
15 already had all the support they needed from friends and family: *“Friends and family are all I*
16 *need. No further support needed right now”* (Participant 79, University student-athlete).

17 Discussion

18 This research not only identified three coping approaches (positive coping, negative
19 coping, and acceptance) that were employed by dual career athletes during the COVID-19
20 restrictions, but also associated these approaches to wellbeing and burnout responses of
21 athletes. In making these links, the results suggest that individuals using coping strategies
22 such as denial, substance use, behavioural disengagement, venting, and self-blame are at
23 increased risk of poor wellbeing. These findings were triangulated through multiple methods
24 of quantitative and qualitative questionnaire responses. The qualitative data validates and
25 enhances the quantitative data through providing further detail into participants’ experiences

1 of coping, including the changes they experienced due to the pandemic and the support they
2 received.

3 While research is beginning to establish the transition challenges that the COVID-19
4 pandemic presented to athletes, the experiences of dual career athletes had yet to be explored.
5 This group is distinct from full-time athletes or non-athletes because they were required to
6 adapt to both restrictions in their sport and in their education or work. This study not only
7 contributes to the evidence base that indicates athlete populations are ‘at risk’ of negative
8 outcomes due to the COVID-19 pandemic but extends this to dual career athletes. The
9 findings also have implications for our understanding of the role diverse identities play in
10 facilitating athlete wellbeing (Knights et al., 2016; Van Rens et al., 2019). By establishing
11 three homogenous groups within this cohort, for some dual career athletes establishing a
12 diverse identity supported their ability to cope with multiple threats. But, for other athletes
13 these multiple threats and demands negatively impacted their wellbeing. By identifying
14 different coping approaches in this way, the research provides a framework for support to be
15 targeted to the different coping styles (e.g., individuals using negative coping strategies could
16 require more mental health support). Additionally, the study presents some key
17 considerations for stakeholders within sport and education in relation to supporting people’s
18 return to education and sport, but also in addressing the potential negative consequences they
19 may be experiencing due to the pandemic (Daniel, 2020; Knowles et al., 2021).

20 Interestingly, the group that showed negative coping tendencies and lower scores on
21 wellbeing (cluster 1) also had the youngest mean age (19.9 years), compared to the two other
22 groups. This age bracket indicated that this group is most likely to be transitioning out of
23 compulsory education and into either work or higher education. These findings highlight the
24 additional challenge of transitioning in education during a pandemic, as predicted by Daniel
25 (2020). Consistent with the sport psychology literature (e.g., DiFiori et al., 2014; Myer et

1 al., 2015; Stambulova, 2003), the present findings could indicate that some participants are
2 experiencing a crisis school-to-university transition and may therefore be at increased risk of
3 further mental health issues and/or dropping out from sport and/or education.

4 The negative coping group presents some concerns and recommendations for sporting
5 governing bodies and educational stakeholders. Due to the timing of the data collection, the
6 findings provide evidence to suggest that 10 months on from the initial lockdown in the UK,
7 in March 2020, some dual career athletes are still using negative coping strategies to manage
8 their response. Furthermore, the qualitative findings indicated that the negative coping group
9 were often not clear of where they could seek additional support. It is, therefore, suggested
10 that stakeholders consider the support provided to dual career athletes at all levels of sport
11 and education. Additional support could include: (1) identifying and promoting key referral
12 pathways for mental health, (2) clear messaging to individuals for seeking support in their
13 education and their sport; and (3) regular wellbeing check-ins or monitoring of athletes'
14 mental health. It is important for organisations to consider if they have the appropriately
15 trained staff or outsource expert support to conduct these recommendations, particularly point
16 3.

17 While the research presents some immediate recommendations to sport and
18 educational stakeholders, it also presents some long-term considerations. Primarily, the
19 research raises further questions into the impact different coping strategies will have on
20 athletes' ability to manage the transition out of restrictions and on returning to sport. For
21 instance, athletes in the negative coping group could be experiencing continued low
22 wellbeing whilst aiming to perform in their sport. Flexibility and understanding for athletes
23 who have not progressed as expected may be needed, particularly for those experiencing
24 other transitions during the pandemic (e.g., school-to-university, junior-to-senior). Sport
25 organisations should consider policies to reduce any lasting wellbeing impact of the

1 pandemic through supporting wellbeing and tailoring return to training procedure to the
2 individual (e.g., staggered returns and promoting enjoyment in sport).

3 Despite previous research suggesting a link between athletic identity and
4 psychological distress during the COVID-19 pandemic (Knowles et al., 2021), the results of
5 this study did not show any difference between the cluster groups (who showed distinct
6 psychological outcomes) and athletic identity. A suggestion for this difference could be in the
7 sample used. Since the sample in this study comprised dual career athletes who engaged in
8 both sport and education or work, it is likely that they will have developed some form of dual
9 identity, rendering the diversity in athletic identity minimal within this sample. On the other
10 hand, some dual career athletes have used positive coping mechanisms or did not feel that the
11 pandemic had presented a challenge to them. These groups showed the best wellbeing
12 outcomes, but also felt well supported at the time of the survey. Crucially, through the
13 quantitative data, some participants described using their dual career as a distraction or
14 positive focus in their lives to cope with the pandemic situation.

15 While the research extends our understanding of coping in dual career athletes during
16 the COVID-19 pandemic, it also has some limitations that could be addressed by further
17 research. First, while the sample includes a range of dual career, sport and ethnic
18 demographics, the majority of the sample were within the age range of 16-29 years, were
19 university dual career athletes, and identified as white. This could have limited our
20 understanding of the experiences of older, work-based, and ethnic minority dual career
21 athletes. Further research could specifically target these participant groups to better
22 understand their experiences. Second, this study took a cross-sectional view of dual career
23 athletes coping and wellbeing strategies. Considering specifically the pandemic situation, it is
24 important to understand the long-term impact of different coping strategies, including the
25 effect on performance which was not measured in this study. This is particularly pertinent for

1 the individuals who showed lower scores on wellbeing, so that researchers and practitioners
2 can gain an understanding of the long-term wellbeing impacts of the COVID-19 pandemic.
3 Furthermore, a longitudinal approach to this research topic could provide an understanding of
4 the development of these coping strategies, including if participants moved between groups
5 or remain with a coping style overtime (i.e., coping styles are a personal trait).

6 Additionally, this study focused on one unique context in the UK, but it is possible
7 that these groups of coping approaches are not unique to the COVID-19 pandemic and that
8 they manifest in other situations and other cultural contexts. Further investigation is required
9 to understand the consistency of the three coping approaches in different situations, including
10 athletic retirement and injury. Additionally, now that the coping approaches have been
11 identified, further investigation could highlight the best support strategies for each group and
12 the association of the coping approaches with other personal characteristics, such as
13 emotional intelligence, resilience, or perfectionism. Through understanding the competencies
14 and traits of individuals in each coping approach group, support could be targeted to facilitate
15 a shift from lower wellbeing scores to higher ones.

16 **Conclusion**

17 In summary, the present study highlights the different coping approaches of dual career
18 athletes in response to the COVID-19 pandemic. Taking the evidence into account, it is
19 recommended that dual career support providers and stakeholders consider how best to
20 support athletes that have not coped well and have experienced issues with their wellbeing
21 during this time. It is also important to recognise the benefit a dual career has provided to
22 some individuals during this period. As the situation evolves and individuals return to sport
23 and education, it is important to continue to understand the psychological impact and legacy
24 of the pandemic.

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