Staying safe while staying together: the COVID-19 paradox for participants returning to community-based sport in Victoria, Australia

Kiera Staley,[1] Emma Seal,[1] Alex Donaldson,[1] Erica Randle,[1] Kirsty Forsdike,[1] Donna Burnett,[1] Lauren Thorn,[1] Matthew Nicholson[1]

Abstract

Objective: To identify the challenges adult community sport participants anticipate when returning to sport in Victoria, Australia, post a COVID-19 shutdown.

Methods: Using online concept mapping, participants brainstormed challenges to returning to community sport, sorted them into groups and rated them for impact and ability/capacity to overcome. Analysis included multidimensional scaling and hierarchical cluster analysis.

Results: Forty-five community sport participants representing 24 sports identified 69 unique challenges to returning to sport. Eight clusters/questions participants need answered emerged from the sorting data (mean cluster impact and ability/capacity rating out of 5): Will we have enough participants? (3.32, 2.89); How do we stay safe? (3.31, 3.35); How will our sport change? (3.17, 2.85); How can we stay together? (3.15, 3.01); Will I be physically ready? (3.15, 3.05); What about the money? (2.86, 2.53); What about me? (2.65, 3.13); and What about the facilities? (2.49, 2.45).

Conclusions: Participants perceived paradoxical challenges to returning to sport after COVID-19 shutdown, which revolved around staying safe, staying connected and accessing meaningful sport activities.

Implications for public health: Sport organisations and public health practitioners should address the participant-centred challenges identified in this study to maximise the public health benefits of participants returning to community sport.

Key words: concept mapping, community-based sport, COVID-19, participation, physical activity

Sport is a common way in which people undertake physical activity (PA) and it provides important physical, psychological and social health benefits at the individual and community level.[1-10] Participating in sport through community-based sports clubs has better mental wellbeing and life satisfaction outcomes than participating in individual physical activities (e.g. using a gymnasium or walking).[5] This is because clubs serve as social hubs.[8-10]

Globally, the COVID-19 pandemic has impacted health and wellbeing at the population[11,12] and athlete-group[13-16] level. In Australia, restrictions on sport varied from state to state and region to region (e.g. metropolitan vs. regional). They included physical distancing requirements, reduced access to facilities, and limited participation time. This amplified the negative health impacts, particularly by restricting physical activity and social engagement through community sport.[17-20] While some people substituted their sport activity with non-sport-based PA, preliminary data indicates that 44% of Australians missed sport in their life and 57% were extremely/very keen to return to sport.[17] Those who maintained some PA during lockdown periods reported greater optimism, connection and wellbeing than those who were less active, highlighting the link between returning to physical activity and enhanced population wellbeing.[17]

In their study on youth and families in Victoria, Elliott et al.[20] found that reconnection to and reengaging with sport was important for improving the mental health decline brought on by the isolation felt during COVID-19 lockdowns. Sport could provide positive social, mental and health benefits[1-10,18] on its return from COVID-19, however there were also potential negative impacts, such as risk of injury, which could be exacerbated by a prolonged time away from activity[21-23]. In addition, there was also the risk of not returning to sport at all, for volunteers and participants due to the personal pressures caused by or worsened as a result of the pandemic, such as financial strain and sector-wide pressure as a consequence of the loss of paid sport support staff.[19,20] Sport has relied heavily on its human resource and financial security in returning and recovering from natural disasters,[24] and as such, returning from COVID-19 is likely to be jeopardised by both the impact on volunteers and members.

At the time of collecting data for this study in June 2020, one in four Australian adult sport participants were extremely/very

1. Centre for Sport and Social Impact, La Trobe University, Melbourne, Victoria

Correspondence to: Kiera Staley, Centre for Sport and Social Impact, La Trobe University, Plenty Road, Bundoora, Melbourne Victoria 3086; e-mail: k.staley@latobe.edu.au

Submitted: February 2021; Revision requested: August 2021; Accepted: September 2021

The authors have stated they have no conflicts of interest.

Aust NZ J Public Health. 2021; Online; doi: 10.1111/1753-6405.13177

concerned about playing organised sport again, particularly about COVID-19 spreading via sport clubs (34%); people not following the health rules during sport (34%); clubs not being able to operate (29%); and the impact of the lockdown on their fitness and skills (25%).[17] Our objective was to provide a deep understanding of the concerns of Australian adult sport participants when returning to community sport post a COVID-19 shutdown. These insights could enable the public health and sport sectors to: 1) better support a return to community sport participation when COVID-19 restrictions allow; 2) facilitate transitions in and out of subsequent lockdowns; and 3) address sector-wide issues and vulnerabilities during future pandemics. We explored the concerns of community sport club-based participants by asking them about the challenges they perceived and anticipate retuning to sport in the state of Victoria, Australia.

All forms of community-based club sport were suspended in Victoria, Australia in March 2020, and access to facilities and exercising outside of the home was restricted to groups of two people for one hour, once a day, within five km of a person's home.[25] A return to sport was planned for June 2020 with a maximum of 20 people for outdoor group sport.[25] We collected data in June 2020 when a restricted return to sport was imminent after the first COVID-19 wave.

Methods

We used standard concept mapping (CM) methods[26] to enable community-based sports participants to articulate (brainstorm in response to a focus prompt), organise (sort based on perceived similarity of meaning) and rate (for *impact* on their return to sport and for player/athlete *ability/capacity* to overcome it) the anticipated challenges to returning to sport post the COVID-19 shutdown. Participants completed all activities using the Concept Systems groupwisdom™ online platform (https://groupwisdom.com/groupwisdom) and received a AU$50 gift card for their time. The La Trobe University human ethics committee approved the study (HEC20249).

Sample selection and recruitment

We aimed to recruit 30 to 50 people[27] who participated in a range of sports at community-based sport clubs in Victoria. Recruitment was initiated with an email asking 22 Victorian State Sporting Associations to forward study recruitment information to contacts in community sports clubs. Interested club members completed an online expression of interest (EOI) identifying the sport they participated in, their gender, age, and years of participation at the club. Anyone who completed an EOI, was aged ≥16 years and actively participated in sport at a community-based sport club in Victoria was invited to participate in the CM project via email in June 2020.

Upon entering the groupwisdom™ platform, participants provided additional demographic information about the competitive season for their sport (winter/summer/year-round); type of sport they participated in (individual/small team sport (<10 participants per team)/large team sport (≥10 participants per team)); venue/facility used for their sport (indoor/outdoor/indoor and outdoor); and club location (metropolitan Melbourne/regional or rural Victoria).

Challenge generation and synthesis

The focus prompt for this study was "*A challenge that I face as I return to participating in community sport post COVID-19 is …*". Participants could contribute multiple challenges, see the de-identified contributions of other participants, and revisit the online platform during the 10 days the brainstorming phase was open.

The research team synthesised and edited the brainstormed challenges into a clearly presented and manageable list of challenges that reflected all the relevant ideas contributed by participants.[26] This iterative process aimed to retain the participants' voice while ensuring responses were relevant to the focus prompt; splitting compound responses; identifying similar responses, selecting the most appropriate and deleting redundant responses; and editing responses for clarity.

Sorting and rating the challenges

Participants who completed the brainstorming were invited to sort and rate the synthesised challenges. Participants used the groupwisdom™ platform to express their view of the interrelationship between the challenges by grouping the randomised challenges in a way that made sense to them (i.e. participant-perceived similarity). They were asked to name each group they created informed by the contents of the group. Participants were also asked to rate each challenge for the impact it would have on their return to sport (*impact*: 1 = very low; 5 = very high) and how much individual players/athletes could do to overcome this challenge (*ability/capacity*: 1 = not much; 5 = a lot). They were encouraged to use the full rating scale and to rate each challenge relative to all the other challenges.

Data analysis

Participants' sorting and rating data were verified before we used the groupwisdom™ platform to conduct a multistage statistical analysis.[28] This analysis involved constructing a similarity matrix to use as input for nonmetric multidimensional scaling (MDS) to produce a two-dimensional 'point map'. A stress value was generated via the MDS to assess goodness of fit between the map and the original sorting data.[27] We then used hierarchical cluster analysis (HCA) with Ward's algorithm to partition the point map into a cluster map with non-overlapping clusters. We identified the cluster solution that retained conceptual differences between clusters useful for interpretation and action, while merging clusters that seemed to belong together, in the context of this study.[26] Having identified the most useful cluster representation of the data, we reviewed each challenge to determine if it was appropriate to re-draw any cluster boundaries. Finally, we named each cluster informed by the challenges within the cluster and the cluster names created by participants.

We calculated the mean impact and ability/capacity rating values for each challenge and used them to generate a bivariate go-zone graph[26] divided into quadrants above and below the mean all-challenge impact (x-axis) and ability/capacity (y-axis) ratings. We also used this descriptive data to create pattern matches[19] to visually display comparisons of mean cluster ratings across sub-groups of participants (competitive season, (3 variables); type of sport (3); venue/facility (3); and club location (2)). We compared sub-group mean impact ratings within clusters using Welch's t-test (using the number of items in the cluster as the sample n for cluster comparisons) when a pattern match slope appeared steep. The Welch's t-test assumes unequal variances and unequal sample sizes, to test the differences in cluster means between identified subgroups. We assumed interval measurement, with our primary interest in examining whether two groups differ on the specific cluster mean. Our

calculation of cluster means comes from the item averages, thereby producing data at an interval-level. Given we conducted multiple (n=25) t-tests, we adjusted the alpha level to 0.01 to reduce the likelihood of encountering a Type-1 error.

Results

Participant demographics, sport characteristics and CM engagement

Forty-five participants from 24 sports contributed concept mapping data: 49% male; 55% aged 16–34 years; 73% played sport at their club for >5 years; 67% participated in outdoor sport; 48% participated in large team-based sport; 42% participated in year-round competitions; and 83% of clubs were in metropolitan Melbourne. See Supplementary File 1 for full demographic details.

Forty-five participants brainstormed 142 challenges that the research team synthesised down to 69 unique challenges (Table 1) for sorting and rating. Thirty-four participants completed the sorting while 42 participants completed the rating on both scales (impact and ability/capacity).

Go-zone graph

Figure 1 is a scatterplot based on the mean impact and ability/capacity ratings of the 69 challenges. Thirty-seven challenges were rated above the mean all-challenge impact rating (3.09 out of 5), placing them in Q1 and Q2 of the go-zone graph. Thirty-two challenges were rated below the mean all-challenge ability/capacity rating (2.99) placing them in Q2 and Q4. The 20 challenges in Q2 are above the mean all-challenge impact rating and below the mean all-challenge ability/capacity rating indicating they may be a priority to address. See Table 1 for the mean impact and ability/capacity rating for all challenges.

Cluster map

The distance between points on the cluster map (Figure 2) is a proxy indicator of the participants' interpretation of the relationships between challenges—challenges participants considered similar were sorted together more often and are therefore located closer to each other on the map. The stress value of 0.2729 indicates the sorted data is unlikely to be random or without structure.[27] Applying

Table 1: Challenges facing participants returning to community-based sport post COVID-19 shutdown (by cluster and in order of mean impact rating).

Cluster and statements		Bridging score[a]	Mean rating[b]		All statement go-zone
			Impact	Ability/ Capacity	
1.	**Will we have enough participants?**	**0.71**	**3.32**	**2.89**	
3[c]	... loss of players (e.g. due to financial hardship, loss of interest)	0.89	3.93	2.88	2
43[c]	... having enough participants/athletes to compete	0.63	3.71	2.98	2
65[c]	... the viability of the sport at grass roots level in a new social climate	0.93	3.38	2.62	2
16	... motivating or encouraging high risk participants, concerned about COVID, to return (e.g. Veteran players)	0.59	3.31	2.90	2
10	... dealing with people who don't want to see sport changes (e.g. to rules, format etc.)	0.51	3.26	2.76	2
7	... learning to be IT savvy and get more proficient at using Apps such as Zoom to access coaching/training advice	0.75	2.31	3.19	3
2.	**How do we stay safe?**	**0.23**	**3.31**	**3.35**	
30	... ensuring that I, my fellow team mates/athletes and others don't become complacent and continue to observe the protocols re. social distancing and cleaning equipment etc.	0.06	4.05	4.02	1
68[c]	... ensuring other club members feel safe	0.43	4.00	3.79	1
24	... following new, hard to understand and frequently changing government/peak body guidelines	0.43	3.86	2.98	2
58	... knowing how to implement health and safety protocols to keep me and others safe	0.00	3.76	3.90	1
9	... everyone in the team/competition having a different approach/view of health and safety while training/competing with restrictions	0.20	3.67	3.26	1
15	... knowing venues meet COVID guidelines for facility use (e.g. cleaning, access etc.)	0.07	3.60	3.21	1
2	... the possible risk of contracting illness	0.42	3.55	3.50	1
57	... knowing how to comply with social distancing while competing	0.20	3.29	3.57	1
22	... using public facilities in public spaces (e.g. change rooms, toilets etc.)	0.12	3.26	2.63	2
56	... knowing who decides if regulations are being followed during the game/ competition	0.25	3.14	3.21	1
19[c]	... the concerns of families, partner, parents etc, about players/athletes being around other people	0.46	3.14	3.05	1
28	... data collection in the event of a positive COVID person/s	0.22	3.12	2.93	2
63	... knowing how we will participate if our suburb goes into lockdown	0.53	3.12	2.76	2
26	... uncertainty around how shared equipment will be managed/kept clean and safe	0.14	3.05	3.62	3
14	... keeping personal items apart (e.g. towels, drink bottles etc.)	0.10	2.45	3.88	3
13	... sharing of food	0.13	1.83	3.31	3
3.	**How will our sport change?**	**0.34**	**3.17**	**2.85**	
51[d]	... not knowing if the season/training will be cancelled at short notice, if there is another wave of COVID cases	0.32	3.95	2.31	2
23[d]	... no events or competition are scheduled	0.35	3.83	2.26	2
18[d]	... having no obvious goal to work towards when the start of the season is uncertain	0.23	3.45	3.17	1
5[d]	... competitions may be impacted (if they happen at all) due to travel restrictions	0.42	3.26	2.48	2
48[d]	... uncertainty about whether or not we will be able to play competitively	0.24	3.31	2.66	2
36[d]	... uncertainty around season length and what I will be committing to	0.24	3.29	2.57	2
49[d]	... shifting the focus to participation (and being happy that we get to play at all) compared with competition/premierships etc, as it won't be a 'normal' season.	0.26	3.21	3.57	1
11[d]	... playing in compromised competitions in compromised conditions	0.38	3.21	2.64	2
47[d]	... knowing if the sport will be modified to offer participation (e.g. limit the number of participants/athletes, change rules etc.)	0.40	3.19	2.71	2
59[d]	... the training allowed is not enticing/motivating	0.24	3.07	2.74	4
32[d]	... being motivated to participate in a modified version of the sport or general exercise	0.14	2.93	3.33	3
6[d]	... loss of match fitness with the cancellation of the season and now I am unlikely to return next season	0.41	2.76	3.14	3
17[d]	... picking up team sport/competition skills again after training individually for so long	0.54	2.76	3.40	3
38[d]	... accessing a social competition instead of a traditional offering - many sports do not offer alternatives	0.35	2.69	2.95	4
8[d]	... justifying travel for training when it is restricted (e.g. quality, participant numbers, time limits etc.)	0.53	2.60	2.85	4

Continued over page

Table 1 cont.: Challenges facing participants returning to community-based sport post COVID-19 shutdown (by cluster and in order of mean impact rating).

Cluster and statements		Bridging score[a]	Mean rating[b]		All statement go-zone
			Impact	Ability/ Capacity	
4.	**How can we stay together?**	**0.80**	**3.15**	**3.01**	
12	... lack of volunteers who can help out consistently	0.79	3.79	3.24	1
60	... developing club cohesion given sessions with limited or segregated number of players	0.68	3.60	3.57	1
46	... whether we will be able to have social events to bring the club players/athletes together	0.92	3.40	2.74	2
37	... communication is vague leading to uncertainty	0.97	3.29	2.69	2
41	... rebuilding relationships at the club	0.82	3.19	3.76	1
52	... avoiding politics and working together in the interest of the sport and community health	0.67	3.05	3.31	3
50	... not knowing if I can socialise before/after the game/training/competition	0.83	3.00	2.98	4
33	... believing that the governing/peak body has the player/club best interests at heart rather than their financial situation	0.70	2.95	2.33	4
69	... convincing the committee to open the club to all members ASAP	0.85	2.12	2.50	4
5.	**Will I be physically ready?**	**0.63**	**3.15**	**3.05**	
64	... avoiding injury when we can't practice important aspects of the sport (e.g. contact training techniques, competition with others etc.)	0.62	3.45	3.07	1
55	... getting match/competition ready at a moment's notice	0.59	3.40	3.14	1
21	... not being able to train at a relevant sport facility to be fit enough for competition (e.g. swimming pool, gym etc.)	0.85	3.10	2.40	2
1	... being more susceptible to injury due to loss of fitness	0.62	3.07	3.21	3
20	... difficulty adapting to training/competition with no contact allowed	0.55	3.05	3.21	3
27	... concerned about beginning training at an appropriate pace (avoid injury)	0.60	3.02	3.31	3
42	... not knowing where to start with training activities (limited preparation time)	0.58	2.98	3.02	3
6.	**What about the money?**	**0.92**	**2.86**	**2.53**	
61	... ensuring I get value for money for my membership (i.e. unknown season length)	0.82	3.14	2.69	2
4	... diminished competition in current and next season due to financial difficulties for clubs	0.93	3.02	2.38	4
45	... not knowing if the cost of participating will increase	0.92	2.71	2.29	4
40	... if I can afford to participate considering my financial situation	1.00	2.55	2.76	4
7.	**What about me?**	**0.29**	**2.65**	**3.13**	
29	... a lack of motivation with all the pressures in place	0.20	3.31	3.21	1
39	... deciding whether I am in the right headspace to start sport again after so many months of exercising on my own	0.24	2.88	3.57	3
53	... not knowing if the sport will be fun anymore	0.32	2.69	2.71	4
25	... my own anxiety about being in a large group of people after being by myself for several months	0.36	2.60	3.45	3
34	... I'm not sure I want to play/participate in traditional sport/competition this year i.e. my body and mind would prefer a social format	0.20	2.55	3.36	3
31	... the impact of my changed work conditions on my ability to commit to sport	0.44	2.43	2.59	4
35	... not taking a spot from someone who is more committed than me when numbers are limited	0.27	2.12	2.98	4
8.	**What about the facilities?**	**0.64**	**2.49**	**2.45**	
67	... having the sport facility ready to train/play (e.g. goal posts in, cricket pitch installed, markings on the court etc.)	1.00	3.07	2.57	4
54	... accessing somewhere comfortable (e.g. warm and dry) before and after participating	0.64	2.86	2.17	4
66	... accessing club facilities outside of training hours for personal equipment access (stored there)	0.49	2.19	2.24	4
44	... taking family along to watch	0.7	2.17	2.45	4
62	... accessing food and drink during sport (e.g. if canteens/cafes etc are closed)	0.36	2.14	2.83	4
All statements			**3.09**	**2.99**	

Notes:
1 = above all-challenge mean on impact and on ability/capacity; 2 = above all-challenge mean on impact, below all-challenge mean on ability/capacity; 3 = below all-challenge mean on impact, above all-challenge mean on ability capacity; 4 = below all challenge mean on impact and ability/capacity
a: Values range between 0.00 and 1.00. Values closer to 0 indicate anchoring statements closely related to others in the cluster. Values closer to 1 indicate bridging statements more connected to statements in other clusters in the map.
b:1 = low; 5 = high; n = 42 for both rating scales
c: reassigned from an adjacent cluster
d: emerged together to form one cluster

HCA, we agreed a nine-cluster solution was the most useful visual representation of the participants' sorting data. However, based on our conceptual interpretation and informed by quantitative spanning information and bridging data, we merged two clusters resulting in final eight-cluster map. We also reassigned five challenges to an adjacent cluster and named each cluster using eight questions that the data suggested participants want answered to assist their return to sport (Figure 2). The eight clusters are ordered by their mean impact rating from: 1. *Will we have enough participants?* to 8. *What about the facilities?*. Details of the challenges within each cluster, including the challenges reassigned to/merged with another cluster are provided in Table 1.

Pattern match and T-test results

Using the mean impact rating for the eight clusters, we generated five pattern match graphs: type of sport; club location; competition season; venue type; and gender of participant (see Supplementary File 2). The 25 sub-group analysis t-tests identified statistically significant differences at the $p<0.01$ level, across three of the five sub-groups (*Type of sport*, *Competitive season*, and *Venue type*) and four of the eight clusters (*How will our sport change?, How do we stay safe?, Will we have enough participants?* and *Will I be physically ready?*) (See Table 2).

Discussion

This study highlights the diverse and complex challenges individuals perceive and anticipate in returning to community club-based sport following a COVID-19 lockdown. These findings build on previously identified concerns[17] and will enable public health organisations, community sport clubs and sport governing bodies to better address the needs of participants, facilitating a safer and smoother return to sport. Based on the experience of Australia and other countries, it is highly likely there will be more waves or outbreaks of COVID-19,[29] with subsequent lockdowns further impacting community sport and people's physical, mental and social health. It is crucial, therefore, to consider how to best support community sport participants to return to sport when it is possible. The following discussion examines the themes that emerged from the results of our study and considers the implications for the public health and sport sectors.

Figure 1: Go-zone graph plotting the mean rating of each challenge for impact on return to sport and player/athlete ability/capacity to overcome the challenge.

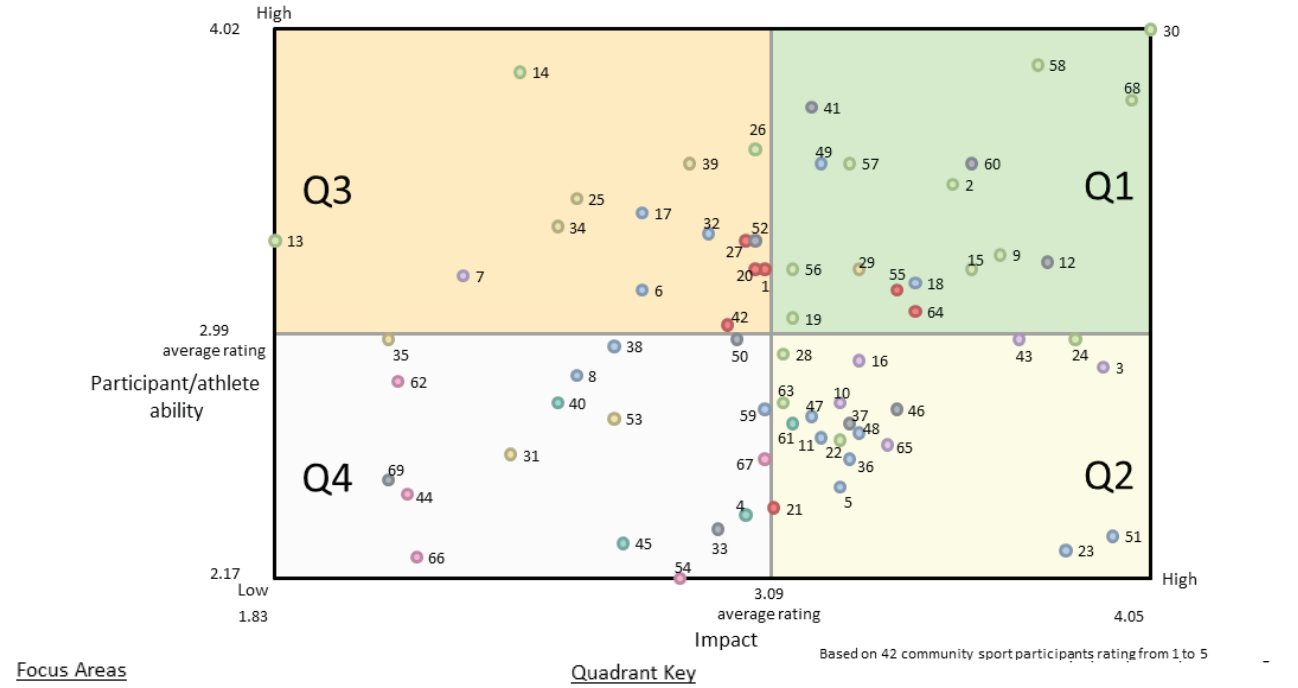
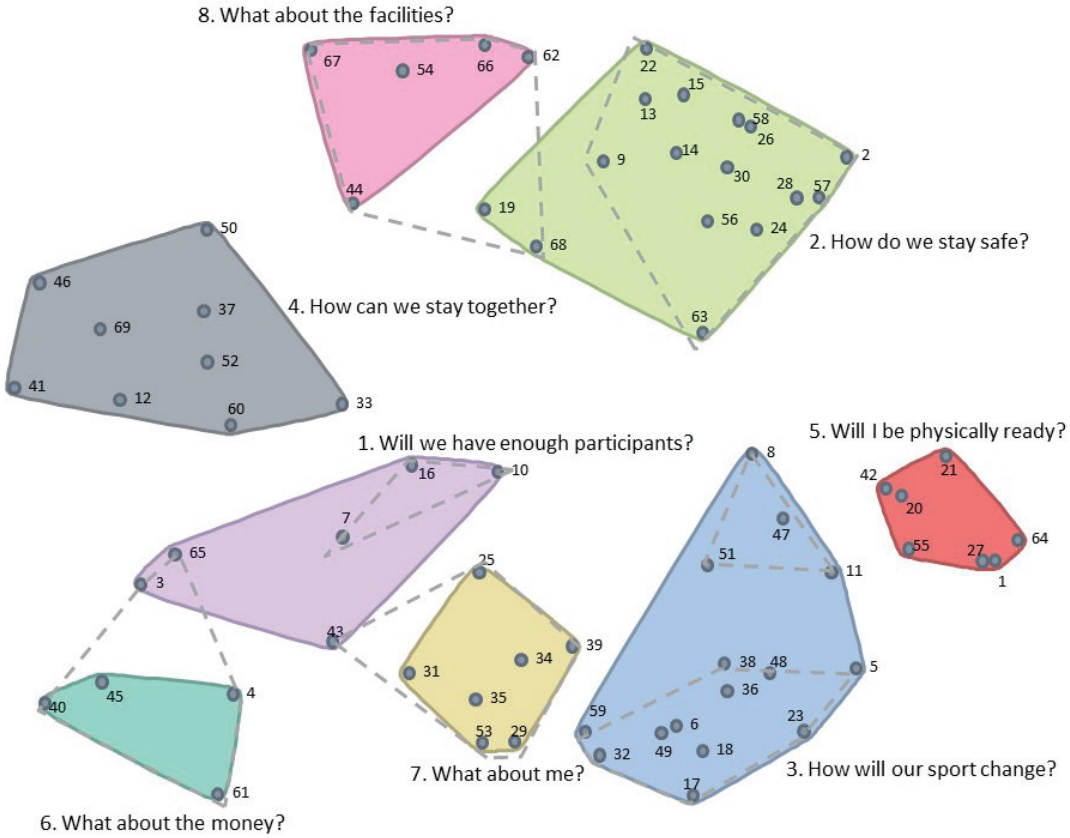


Figure 2: Cluster map displaying the eight questions about returning to sport participants want answered.



The COVID Paradox

The results highlight a COVID-19 paradox, where participants' perceived challenges to returning to sport coalesce around the competing ideas of *staying safe* while *staying together*. In a COVID-19 world where physical distancing is encouraged and often required to stay safe, coming together to meaningfully participate in sport and maximise the social benefits of sport is contradictory. Many challenges that participants brainstormed and subsequently grouped together can be related back to this nexus of being safe while remaining socially connected. For example, concerns about whether there will be enough participants (cluster 1) and how sport will change (cluster 3) are linked to the need to come together for meaningful sporting experiences. Arguably, participants and volunteers may not return to the club because of the impact of COVID-19 on their relationship with the club and their lifestyles/habits more broadly. Interestingly, nearly all the challenges in the *Will we have enough participants?* cluster are in Q2 of the go-zone graph, suggesting they are relatively high in impact, but individual players/athletes have relatively less capacity to address them. Therefore, these perceived challenges are likely to be an important source of stress and concern for players/athletes who are contemplating a return to community sport following COVID-19 lockdowns.

Indeed, a decline in PA and for some, a switch to other forms of activity is emerging. For example, in July 2020, one Australian state found a third of participants had not returned to community sport and sport registrations were down by 29% compared to the same time the year before.[30] Sport Australia reported that younger people found staying active during lockdown harder than older people, with 29% of those aged 18–34 years doing less PA compared to 15% of those aged 55+ years.[17] This was explained as younger people being more likely to rely on sport-based activities to remain active, and these were restricted during this time. For example, 100% of people who would usually participate in futsal, indoor netball or rock climbing did not participate in those activities due to restrictions.[17] This highlights the detrimental effect on participation in PA and sport that the pandemic and subsequent lockdowns can have.

Community sport clubs adapting to a changeable COVID-19 context and addressing issues participants consider important to feeling both safe and connected, will be paramount as participants consider re-engaging with PA via community sport. These two overarching themes and what they mean for supporting sport participation, whilst adhering to physical distancing requirements and other public health guidelines in addition to embracing changes in lifestyles, are discussed in detail below.

Staying Safe

How do we stay safe? had the second highest overall mean cluster impact rating, highlighting the importance of mitigating these perceived risks. The results indicate that the construct of safety operates at environmental, physical and social levels, which all require consideration to holistically support participants to return to community sport. At an environmental level, participants were concerned about contracting COVID-19 (#2, 3.55), social (physical) distancing during training and competition (#30, 4.05), and implementing health/safety protocols (#58, 3.76), including managing facilities and shared equipment. Many challenges in this cluster conceptualised safety in a practical, operational way, centred on implementing and adhering to public health guidelines and regulations in community sport settings.

Table 2: Statistically significant differences in mean cluster impact ratings by participant sub-group.

Sub-group	Variable	Cluster	Mean cluster impact rating		T-Value	P-Value one tail
Type of sport	Individual sport (n=9) vs. Small team sport (n=14)	Will we have enough participants?	2.63	3.65	3.4208	<0.01
		How do we stay safe?	2.94	3.54	2.7856	<0.01
		How will our sport change?	2.53	3.35	5.9667	<0.001
		Will I be physically ready?	2.59	3.34	5.2166	<0.001
	Individual sport (n=9) vs. Large team sport (n=19)	How will our sport change?	2.53	3.34	5.2039	<0.001
		How can we stay together?	2.52	3.34	4.0593	<0.001
		Will I be physically ready?	2.59	3.29	4.8612	<0.001
Competitive season	Winter (n=12) vs. Year-round (n=18)	How will our sport change?	3.60	2.89	5.0916	<0.001
Venue type	Outdoor (n=29) vs. Both indoor/outdoor (n=6)	How will our sport change?	3.09	3.57	2.9973	<0.01

Notably, statistically significant differences existed between small team and individual sports, suggesting it might be harder for small team sports to address these challenges.

Some aspects of the Staying Safe concept that emerged from our study are aligned with the sport sector's broader response to facilitating a return to sport. For example, Sport Australia's COVID-19 Return to Sport Toolkit[31] and the Australian Institute of Sport Framework for Rebooting of Sport[32] offer a comprehensive road map to support clubs to implement and meet government public health requirements. However, these resources do not address the diverse interpretations of safety relevant to a return to community sport identified in this study. When analysing challenges across the clusters that emerged in our study, it is apparent that safety for community sport participants is a broad and complex concept.

The concept of social safety is interlinked with participants' worries about staying together and staying connected, or how increased social isolation will impact them. The *What about me?* cluster contains several challenges related to this theme. Participants expressed concern and anxiety about being around others after a prolonged time away from various settings including their community sport clubs. Consequently, community sports clubs and those supporting them should be aware of these nuanced dimensions influencing people's sense of wellbeing.

The impact of the financial, work, childcare, social isolation and associated pressures that people experienced during the COVID-19 lockdown(s) is also amplified in challenge #29 (*a lack of motivation* [to return to community sport] *with all the pressures in place)* which had a higher than all-statement mean impact rating (3.31). This issue emerged in other research that highlighted that after the first lockdown in Victoria (May 2020), 37% of over 2,000 people surveyed reported that they were doing less PA compared to February 2020.[33] These findings emphasise the need to be aware of and respond to changes in people's circumstances and lifestyles during and following the COVID-19 pandemic. Ultimately, adopting a participant-centred approach informed by the voice of community sport participants is crucial to help individuals return to physical activity and maximise the benefits of community sport.

Clearly, participants also anticipated challenges to feeling physically safe. Physical safety in this context refers to participants'

sense of being physically fit and ready to return to sport, exemplified by statements #64 (*avoiding injury when we can't practice important aspects of the sport*), #55 (*getting match/competition ready at a moment's notice*), and #1 (*being more susceptible to injury due to a loss of fitness*). These challenges have relatively high impact ratings (all ≥3.07) and are potentially important barriers to address. These challenges will likely be mediated by the type of sport, and whether someone has maintained an alternative but relevant PA regime during lockdown. Team sport participants ranked challenges in the *Will I be physically ready?* as more impactful than did individual sport respondents, suggesting it might be more important for team-based sports to address the issue of physical preparation when returning to participation.

Ensuring people are competition/match/training-ready requires practical and evidence-based strategies to prevent injury and avoid creating tangential public health problems. It is important to avoid a spike in injury rates when people return to sport. Evidence has demonstrated (even under usual conditions) that injury is a common and financially costly adverse outcome of being active through sport[21] and there is emerging evidence[22] and concern[23] about an increased risk of injury after prolonged training restriction due to COVID-19. Preventative measures could include providing participants with at-home training plans, implementing injury prevention regimes and shortening or modifying activities, events or seasons.

Staying connected

As previously discussed, the concept of staying connected is counter intuitive to the concept of staying safe. However, it is important to recognise that sport will need to adapt to keep people safe and connected while adhering to public health guidelines. The *How can we stay together?* cluster demonstrates the variety and importance of the social connection challenges participants raised. The key issues in this cluster included the impact of *a lack of volunteers* (#12, 3.79), *developing club cohesion* (#60, 3.60), *rebuilding relationships* (#41, 3.19) and maintaining the social fabric of the club by being *able to have social events to bring the club players/athletes together* (#46, 3.40). Statistically significant differences existed between participants in individual and team sports (both small and large clubs), highlighting the importance of addressing the challenges within this cluster for team-based participation.

Keeping people connected and feeling a sense of togetherness is important for two main reasons. First, ensuring people feel socially connected is imperative because of the distance and isolation created by COVID-19 and the public health guidelines that have been mandated. This is highlighted in the Australian Bureau of Statistics' national household impacts of COVID-19 survey that found 28% of women and 16% of men reported feeling lonely because of the pandemic, and that this was the most common personal stressor identified.[34] Community sport can help people feel connected and remain engaged in society during this period. Second, many participants become and remain part of community sport for a sense of belonging and connectedness[8,11] and community sport clubs are critical social enterprises that engender a sense of social and mental wellbeing.[9,10] Keeping people connected, for example virtually, and reconnecting with individuals to understand their barriers to returning is vital.

Participants expressed concern about how their sport will change because of adhering to public health guidelines, particularly requirements to physically distance and limit the number of people in a group. These issues are encapsulated in the *How will our sport change?* cluster that received the third highest mean cluster impact rating (3.17). Again, this is related to the paradox of coming together to participate in sport, but having to remain distanced, and the uncertainty generated by COVID-19. Potential changes identified related to season and event timings or cancellations, modifying rules and participant numbers, accessing social sport opportunities, and how training will operate. Participants were uncertain about how changes would impact them and whether they would be motivated to participate in modified training and competition formats. This cluster had the most statistically significant differences (4 – see Table 2) across the type of sport, competitive season and venue type, with respondents participating in team sports, winter sports and using a mix of indoor/outdoor venues rating the impact of this cluster higher than those participating in individual, summer or year-round sports and outdoor venues only, respectively. These differences are important to consider for team-based sports, with physical distancing guidelines potentially more difficult to implement while maintaining the integrity of sport, and more challenging for participants who use a mix of indoor and outdoor venues (requiring a greater understanding of restrictions/guidelines in both settings).

Limitations

While there is a representation of different sports and demographics, there were several limitations to the study, which predominantly relate to the participant sample (e.g. small sample size, one state location and breadth of sports represented). Nonetheless, the number of 'sorters' in our study and the stress value for the point map were similar to those of other published concept mapping studies.[27] It should be noted that some respondents in our study may also be volunteers within their respective clubs. This may have influenced their response to the focus prompt as they fulfill a dual role. We also recognise that not all sports are included in our sample. We acknowledge that the findings from this study have implications for community sport clubs and future sport development, but it is beyond the scope of this paper to discuss these potential implications.

Conclusions

Participants want to stay safe, including from injury, stay together and for the social and competitive essence of their sport to be retained when returning to sport post COVID-19 lockdown. If the public health and sport sectors fail to address the challenges to returning to sport that community sport participants are currently experiencing or foresee, then the fear apparent in the most impactful cluster of challenges within this study—*Will we have enough participants?*—may be realised.

In Victoria, although sport returned in a restricted way in July 2020, a second wave of COVID-19 in July 2020 closed the sector again before another restricted opening in November 2020. The second lockdown resulted in higher levels of loneliness and greater health concerns compared to other states.[34] Community-based sport returned to COVID-safe-summer restrictions[35] in January 2021 but has been suspended a further three times due to lockdowns in February, May/June and July 2021, a result of a new COVID-19 strain threat.[36] This highlights the potential for sport and PA restrictions to fluctuate dramatically and quickly in response to COVID-19 outbreaks.

Understanding and addressing the concerns of participants is crucial in helping people return to sport. If insufficient numbers return, not only will it be detrimental to people's physical and mental health, it could also jeopardise the traditional sport competition structure and impact the sustainability of community sport. This impact could also extend to the volunteering workforce who are the backbone of community sport club operations. Furthermore, participant concerns about becoming injured or being 'sport (un) fit', if not heeded could result in an increase in injuries, impacting the healthcare system and on-going participation.

Community sport clubs need support from their relevant governing bodies, including State Sport Associations, National Sport Organisations and Regional Sport Assemblies, and the broader sport, PA and public health sectors to keep participants connected and support them back to sport safely and effectively. The findings of this study provide a roadmap of sorts for organisations charged with managing, facilitating and improving community sport, especially in Victoria and Australia. Importantly, this research identifies that negotiating the COVID paradox, the conflict between *staying safe* in the context of returning to sport, while *staying together within sports clubs*, lies at the heart of facilitating a safe and smooth return to community sport.

References

1. Eime R, Young JA, Harvey JT, Charity MJ, Payne WR. A systematic review of the psychological and social benefits of participation in sport for adults: Informing development of a conceptual model of health through sport. *Int J Behav Nutr Phys Act*. 2013;10:98.
2. Australian Department of Health. *Physical Activity and Exercise* [Internet]. 2019 April 4 [cited 2020 Nov 16]. Available from: https://www.health.gov.au/health-topics/physical-activity-and-exercise
3. Reiner M, Niermann C, Jekauc D, Woll A. Long-term health benefits of physical activity–a systematic review of longitudinal studies. *BMC Public Health*. 2013;13:813.
4. Schuch FB, Vancampfort D, Richards J, Rosenbaum S, Ward PB, Stubbs B. Exercise as a treatment for depression: A meta-analysis adjusting for publication bias. *J Psychiatr Res*. 2016;77:42–51.
5. Eime MR, Harvey TJ, Brown JW, Payne RW. Does sports club participation contribute to health-related quality of life? *Med Sci Sports Exer*. 2010;42:1022–28.
6. Omorou Y, Erpelding M-L, Escalon H, Vuillemin A. Contribution of taking part in sport to the association between physical activity and quality of life. *Qual Life Res*. 2013;22:2021–29.
7. Berlin KL, Klenosky DB. Let me play, not exercise!: A laddering study of older women's motivations for continued engagement in sports-based versus exercise-based leisure time physical activities. *J Leis Res*. 2014;46:127–52.
8. Forsdike K, Marjoribanks T, Sawyer AM. Hockey becomes like a family in itself: Re-examining social capital through women's experiences of a sport club undergoing quasi-professionalisation. *Int Rev Sociol Sport*. 2019;54:479–94.
9. Nicholson M, Brown K, Hoye R. Sport, community involvement and social support. *Sport Soc*. 2014;17:6-22.
10. Spaaij R. The glue that holds the community together? Sport and sustainability in rural Australia. In: Spaaij R, editor. *The Social Impact of Sport: Cross-Cultural Perspectives*. Abingdon (UK): Routledge; 2011. p. 24–38.
11. Pierce M, Hope H, Ford T, et. al. Mental health before and during the COVID-19 pandemic: A longitudinal probability sample survey of the UK population. *Lancet Psychiatry*. 2020;7:883–92.
12. Rossi R, Socci V, Talevi D, et. al. COVID-19 Pandemic and lockdown measures impact on mental health among the general population in Italy. *Front Psychiatry*. 2020;11:790.
13. Hall G, Laddu DR, Phillips SA, Lavie CJ, Arena R. A tale of two pandemics: How will COVID-19 and global trends in physical inactivity and sedentary behavior affect one another? *Prog Cardiovasc Dis*. 2021;64:108-10.
14. Martinez EZ, Silva FM, Morigi TZ, et al. Physical activity in periods of social distancing due to COVID-19: A cross-sectional survey. *Cien Saude Colet*. 2020;25(suppl 2):4157-68.
15. di Fronso S, Costa S, Montesano C, et al. The effects of COVID-19 pandemic on perceived stress and psychobiosocial states in Italian athletes. *Int J Sport Exerc Psycho*. 2020. DOI:10.1080/1612197X.2020.1802612
16. Graupensperger S, Benson AJ, Kilmer JR, Evans MB. Social (Un)distancing: Teammate interactions, athletic identity, and mental health of student-athletes during the COVID-19 pandemic. *J Adolesc Health*. 2020;67:662–70.
17. Sport Australia. *AusPlay: Early Impact of COVID-19 on Sport and Physical Activity Participation* [Internet]. Canberra (AUST): Australian Sports Commission; 2020 [cited 2021 Feb 12] Available from: https://www.clearinghouseforsport.gov.au/__data/assets/pdf_file/0011/975530/AusPlay-Focus-Early-Impact-of-COVID-19_Final.pdf
18. Hughes D. In the frame, road map for Australian sport on an uncertain journey through COVID-19. *J Sci Med Sport*. 2020;23:636–8.
19. Drummond M, Elliott S, Drummond C, Prichard I. Youth sport and COVID-19: A potential generation lost. *Emerald Open Res*. 2020;2:27
20. Elliott S, Drummond MJ, Prichard I, Eime R, Drummond C, Mason R. Understanding the impact of COVID-19 on youth sport in Australia and consequences for future participation and retention. *BMC Public Health*. 2021;21:448.
21. Australian Institute of Health and Welfare. *Hospitalised Sports Injury in Australia, 2016–17*. Catalogue No.: INJCAT 211. Canberra (AUST): AIHW; 2020.
22. Stokes KA, Jones B, Bennett M, et al. Returning to play after prolonged training restrictions in professional collision sports. *Int J Sports Med*. 2020;41:895–911.
23. Taylor J. Is Covid-19 causing an epidemic of sports injuries? Psychological and physical contributors to athletic injuries during Covid-19. *Psychology Today*. 2021 [cited 2021 Feb 12] January 26. Available from https://www.psychologytoday.com/us/blog/the-power-prime/202101/is-covid-19-causing-epidemic-sports-injuries
24. Wicker P, Filo K, Cuskelly G. Organizational resilience of community sport clubs impacted by natural disasters. *J Sport Man*. 2013;27:510-25.
25. Chang C. *Coronavirus: Everything You Can do From June 1 in Australia as States Continue to Ease Restrictions* [Internet]. Sydney (AUST): News Corp Australia; 2020 [cited 2020 Nov 10] May 29. Available from: https://www.news.com.au/finance/business/coronavirus-everything-you-can-do-from-june-1-in-australia-as-states-continue-to-release-restrictions/news-story/9e8299c806ad1513d006350309ad3ac2
26. Kane M, Trochim WM. *Concept Mapping for Planning and Evaluation*. Vol. 50. Thousand Oaks (CA): Sage Publications; 2007.
27. Rosas SR, Kane M. Quality and rigor of the concept mapping methodology: A 650 pooled study analysis. *Eval Program Plann*. 2012;35:236–45.
28. Trochim WM, McLinden D. Introduction to a special issue on concept mapping. *Eval Progam Plann*. 2017;60:166–75.
29. Sucdellari, M. How the pandemic might play out in 2021 and beyond. *Nature*. 2020;584:22-5.
30. SportWest. *One in Three Participants Have Not Returned* (Media Release: 8 July 2020) [Internet]. Perth (AUST): WA Sports Federation; 2020 [cited 2021 Feb 12]. Available from: https://sportwest.activehosted.com/index.php?action=social&chash=ac627ab1ccbdb62ec96e702f07f6425b.99&ref=facebook&facebook=share
31. Sport Australia. *Return to Sport* [Internet]. Canberra (AUST): Australian Sports Commission; 2020 [cited 2021 Feb 12]. Available from: https://www.sportaus.gov.au/return-to-sport
32. Hughes D, Sawa R, Pereraa N, et al. The Australian Institute of Sport framework for rebooting sport in a COVID-19 environment. *J Sci Med Sport*. 2020;23:639–63.
33. VicHealth. *VicHealth Coronavirus Victorian Wellbeing Impact Study: Report for Survey #1* [Internet]. Melbourne (AUST): Victorian Health Promotion Foundation; 2020 [cited 2021 Feb 12]. Available from: https://www.vichealth.vic.gov.au/-/media/ResearchandEvidence/VicHealthResearchFellows_2011/20200914_VicHealthVictorian_Coronavirus_Wellbeing_Impact_Study_Report.pdf?la=en&hash=27CB25E7BAAB7D673A81ED5CF46C5E75FB98B288
34. Australian Bureau of Statistics. *Household Impacts of COVID-19 Survey: Insights into the Prevalence and Nature of Impacts from COVID-19 on Households in Australia* [Internet]. Canberra (AUST): ABS; 2020 [cited 2021 Feb 12]. Available from: https://www.abs.gov.au/statistics/people/people-and-communities/household-impacts-covid-19-survey/aug-2020
35. Sport and Recreation Victoria. *Victoria's Roadmap for Sport and Recreation – The Last Steps* [Internet]. Melbourne (AUST): Victorian Government Department of Jobs, Precincts and Regions; 2021 [cited 2021 Feb 17]. Available from: https://sport.vic.gov.au/news/articles/Victorias-roadmap-for-sport-and-recreation-the-last-steps
36. Victorian Government. *Sport, Exercise and Physical Recreation Services Sector Guidance: Sector Guidance for Sport, Exercise and Physical Recreation Businesses Within Victoria* [Internet]. Melbourne (AUST): State Government of Victoria; 2021 [cited 2021 Aug 1]. Available from: https://www.coronavirus.vic.gov.au/sport-exercise-and-physical-recreation-services-sector-guidance

Supporting Information

Additional supporting information may be found in the online version of this article:

Supplementary File 1: Characteristics of participants and the sports they represented.

Supplementary File 2: Pattern match graphs.