

Citation for the published version:

Jenkin, C. R., Eime, R. M., Westerbeek, H., & van Uffelen, J. G. (2018). Sport for Adults Aged 50+ Years: Participation Benefits and Barriers. *Journal of Aging and Physical Activity*, 26(3), 363-371. DOI: 10.1123/japa.2017-0092

Document Version: Accepted Version

Link to the final published version available at the publisher:

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Journal of Aging and Physical Activity

<https://doi.org/10.1123/japa.2017-0092> © Human Kinetics, Inc.

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Sport for Adults aged 50+ Years:
Participation Benefits and Barriers

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Abstract

Despite the health benefits of sport, the proportion of people participating in sport decreases with age. This qualitative study explored the benefits and barriers regarding older adult community sport participation, from the perspective of National Sporting Organizations, in addition to older adult sport club and non-sport club members, across eight focus group interviews (n=49). Seven benefits were discussed, primarily social and physical health and intergenerational opportunities. Ten barriers were also discussed, including physical health, time constraints and lack of appropriate playing opportunities.

Ensuring access to activities that can benefit social health is of great importance to older adults. As sport can provide participation opportunities across generations, it can be an ideal physical activity option for this age group. However, a major barrier is that sport policy often prioritizes participation for younger age groups. Policymakers should include a focus on older adults, in order to derive social health benefits.

Keywords

Sport participation, socio-ecological model, social health, active aging, qualitative study

Word Count 6117

Figures 2

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Introduction

Worldwide populations are aging (World Health Organization, 2015), and aging often correlates with a decline in health. Being physically active is important for good health. Therefore it is prudent to support older adults (referring to people aged 50 years and older) to continue being physically active. In order to develop effective physical activity strategies, the barriers to, as well as the benefits of, physical activity participation for older adults need to be better understood. The majority of the research investigating the benefits of, and the barriers to, physical activity participation for older adults has been based upon general recreational forms of leisure-time physical activity. These studies have largely reported on broad health outcomes, such as improved self-esteem and mood (Dergance et al., 2003), physical health (Buman et al., 2010; Juarbe, Turok & Pérez-Stable, 2002) and cognition (Lautenschlager et al., 2008) as a benefit of physical activity. While poor health (Dergance et al., 2003; Mathews et al., 2010; Moschny, Platen, Klaaßen-Mielke, Trampisch & Hinrichs, 2011; Rasinaho, Hirvensalo, Leinonen, Lintunen & Rantanen, 2007), lack of company (Moschny et al., 2011), time (Bopp et al., 2007; Chao, Foy & Farmer, 2000; Juarbe et al., 2002) and the physical environment, such as safety and accessibility (Mathews et al., 2010; Rasinaho et al., 2007), have been reported as barriers to leisure-time physical activity.

People can be physically active through many different ways in their leisure-time. There has been research on the participation of older adults in recreation based leisure-time physical activity, however there is only limited research that specifically relates to their participation in sport. Although sport, as a form of leisure-time physical activity, is most recognized as an activity for children and youth, it can also be beneficial for older adults. The benefits and barriers of general community sport club participation for children (Casey, Eime, Payne & Harvey, 2009; Eime, Young, Harvey, Charity & Payne, 2013; Holt, Kingsley, Tink & Scherer, 2011) and adults (Eime, Young, Harvey, Charity & Payne, 2013; Marlier et al.,

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1 2015) has been extensively researched. For older adults, there has only been some research
2 on the benefits and barriers of sport participation. Conversely this research knowledge has
3 been mostly limited to studies of high level competitive Masters sport (Dionigi, 2006;
4 Dionigi, 2002; Pike, 2012) or in specific sports at community level (Heuser, 2005; Litchfield
5 & Dionigi, 2011; Siegenthaler & O'Dell, 2003), rather than more general population based
6 studies of community club sport participation.

7 Sport participation declines considerably with age, with a recent Australian survey reporting
8 that fewer than 10% of sport club participants were older adults (Eime et al., 2016). Thus
9 more knowledge on older adult community sport participation is needed. Previous studies
10 with older adults have mainly focused on intrapersonal and interpersonal benefits, including
11 physical health (Dionigi, 2006; Henderson, 2012; Heo, Culp, Yamada, & Won, 2013; Kim,
12 Yamada, Heo & Han, 2014; Siegenthaler & O'Dell, 2003), decreasing social isolation
13 (Leipert et al., 2011) and increasing social support (Henderson, 2012; Heo et al., 2013; Kim
14 et al., 2014; Leipert et al., 2011; Lyons & Dionigi, 2007), reinforcing social identity (Heo et
15 al., 2013; Lyons & Dionigi, 2007), and improving mental or psychological health (Dionigi,
16 2006; Heo et al., 2013; Kim et al., 2014; Leipert et al., 2011). Barriers to sport participation
17 in older adults include physical health as a limitation (Chaudhury & Shelton, 2010; Green et
18 al., 2009; Heo et al., 2013).

19 However this existing research was predominantly from the perspective of older adults and
20 not from sporting organizations. This is a gap in the literature, as knowledge from both older
21 adults (consumers) as well as sporting organizations (providers of sport) is essential to
22 understand different influences on sport participation for this population group. Thus this
23 study will incorporate the perspectives of both types of stakeholders to enable a more holistic
24 understanding of this research area.

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1 The research focus of the older adult perspective in sport and ageing has also resulted in
2 limited investigation of the organizational and policy influences on the intrapersonal and
3 interpersonal determinants of participation. Recent research on sport participation trends has
4 highlighted that sport policy is likely to influence participation, with one study highlighting
5 the impact of sport policy on young children and adolescent participation (Eime et al., 2016).
6 Therefore the influence of sport policy is worth exploring for other population groups, such
7 as older adults.

8 The socio-ecological model can provide a framework to explore how these different factors
9 can influence older adult sport participation. The model outlines that behaviors are influenced
10 by a range of intrapersonal, interpersonal, organizational and policy factors (Sallis, Owen &
11 Fisher, 2008). The model has been used previously within the sport participation field, for
12 example, with adolescents (Eime et al., 2013; Toftegaard-Stöckel, Nielsen, Ibsen &
13 Andersen, 2011) and the relationship between sport participation and aging (Jenkin, Eime,
14 Westerbeek, O’Sullivan & van Uffelen, 2016).

15 Therefore, the aim of this study is to investigate the benefits of, and barriers to community
16 sport club participation for older adults, from the perspective of older adults and National
17 Sporting Organizations. We use the socio-ecological model as the conceptual model to the
18 study.

19 **Methods**

20 A constructivist approach to this research was utilised, which suggests that knowledge is
21 constructed through lived personal experiences (Cresswell & Plano Clark, 2011). As this was
22 exploratory research to understand the benefits of and barriers to older adult sport
23 participation, this approach was deemed most appropriate. We chose to address this research
24 question using qualitative methodology, and more specifically, focus group interviews, as

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1 they enable an in depth understanding of participants' beliefs and feelings on a topic
2 (Morgan, 1997). Due to limited research on the role of sport policy and the perspectives of
3 sporting organizations on older adult sport participation, focus group interviews provided an
4 appropriate forum to gain in depth knowledge for this research area from different
5 homogeneous groups. Data were collected through eight focus group interviews, with 49
6 participants in total. Overall the study included older adults who were sport club members
7 and older adults who were not sport club members, in addition to key informants from
8 National Sporting Organizations (NSOs).

9 To gain a broader understanding of the benefits of and barriers to sport participation for older
10 adults, participants from two sports that differed in terms of participation rates for older
11 adults were involved in this study. Participation data from the Australian national Exercise,
12 Recreation and Sport Survey (ERASS) 2010 data (Australian Sports Commission, 2010) were
13 used to identify ten sports with the highest and the ten sports with the lowest levels of
14 participation for older adults for both genders. These sports were also considered concerning
15 their appropriateness for older adults to participate in. The research team's existing relations
16 with NSOs to maximise the access to relevant respondents was also taken into account. From
17 the various sports, tennis was chosen from the ten most frequently played sports and cricket
18 from the ten least frequently played sports.

19 For this study, sport has been defined as "a human activity capable of achieving a result
20 requiring physical exertion and/or physical skill which, by its nature and organization, is
21 competitive and is generally accepted as being a sport" (Australian Sports Commission,
22 2009). To gain a breadth of information, two interviews were conducted with employees of
23 NSOs (Tennis Australia and Cricket Australia); four with older adult sport club members
24 (one male and female interview from each sport); and two with older adult non-sport club
25 members (one female and one male interview).

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1 The Australian Sports Commission (ASC) provided suitable contacts for the two NSOs, who
2 then enlisted appropriate colleagues (employees with an interest in community sport
3 participation) for the NSO interviews. These NSO contacts also suggested community sport
4 clubs for the researchers to contact for the sport club member interviews. Committee
5 members at additional sport clubs were also contacted by the research team. Sport club
6 members who were aged 50 years and older, who were actively participating in the sport
7 and/or involved in the coaching or administration of the club, were eligible for participation.
8 Non-sport club members were recruited through public advertisements or community groups.
9 Adults aged 50 years and older and who were not members of a sport club were eligible to
10 participate in these interviews.

11 The focus group interviews were run as semi-structured interviews, which used the socio-
12 ecological model as a framework for the interview schedule. Interview questions were
13 developed by the research team, with input from the Australian Sports Commission.
14 Examples of interview questions were: *Can you tell us about sport participation in this age*
15 *group within your organization? and What do you think are positive and negative aspects of*
16 *sport participation for people your age?*. Each participant received an information sheet, an
17 informed consent form and a demographic questionnaire to complete before the interview.
18 Interviews were undertaken at university, sport clubs and NSO office settings. Each interview
19 included two academic researchers, one who led the conversation and the other who observed
20 the group dynamics and produced written notes. Discussions relating to the benefits and
21 barriers of sport participation for older adults lasted for 20-30 minutes in each focus group
22 interview. The interviews were recorded using voice recorders and transcribed by a
23 professional transcription company. Ethics approval was obtained from the xxxxx Human
24 Ethics Committee.

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1 The two researchers held a debriefing meeting immediately after each focus group interview,
2 which led to the initial coding of the data. The transcriptions were then studied by the lead
3 author/focus group interview researcher for accuracy, which enabled initial immersion in the
4 data. The data were analysed using an abductive approach, which enables the researcher to
5 use a theoretical perspective to ground participants' viewpoints (Bryman, 2012). Content and
6 thematic analyses using the NVIVO 10 software program were used to code the
7 transcriptions by the lead author. Responses on similar topics were grouped together in
8 NVIVO, and then the themes that arose from this analysis were categorised within the socio-
9 ecological model domains (intrapersonal; interpersonal; organizational) (Sallis et al., 2008) to
10 determine the key concepts for each research sub-question. The wider research team
11 discussed the development of the themes and sub-themes throughout the coding process as a
12 form of peer debriefing, to provide analytical rigor (Lincoln & Guba, 1985). While data from
13 each focus group interview were analysed individually, common themes emerged across the
14 interviews. In this article, the most prominent themes are presented under each of the socio-
15 ecological model domain headings, and themes that influenced other themes are discussed at
16 the end of the results section. The results of the study are representative of the study
17 participants. As such, the opinions and quotes presented may not be reflective of all older
18 adults or all NSOs (Anderson, 2010).

19

Results

20 The eight focus group interviews comprised of 49 participants. The group size ranged from
21 four to nine participants, with an average of six per group. Participants in the National
22 Sporting Organization (NSO) focus group interviews had a mean age of 41 years (range of
23 23-67 years) and were mainly male (85%). Their positions within their respective
24 organizations ranged from Community Sport Officers to Senior Development Managers. The
25 mean age of participants in the tennis and cricket sport club member focus group interviews

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1 was 62 years (range of 50-85 years), with an equal number of male and female participants.
 2 Furthermore, the mean age of participants in the non-sport club member interviews was 57
 3 years (range of 51-65 years), with an even gender spread of male and female participants.

4 **Benefits of Sport Participation for Older Adults**

5 Across all focus group interviews, there were seven major themes that emerged as benefits
 6 that older adults could derive from participating in community club sport. Three were
 7 intrapersonal themes (social, physical and mental health), two were interpersonal themes
 8 (intergenerational opportunities and role modelling) and two were organizational themes
 9 (personal safety and flexibility of playing options). The most prominent themes were social
 10 health, physical health and intergenerational opportunities.

11 **Intrapersonal Benefits.**

12 The most prominent benefits of participation in sport for older adults, discussed by
 13 participants in all focus group interviews, were **social health** and **physical health**, followed
 14 by **mental health** which was discussed by participants in three interviews.

15 All interview groups felt that playing community sport could positively influence older
 16 adults' social health, for example reducing loneliness or engaging with friends. They stated
 17 that participation in sport through local community clubs was an important social element in
 18 their lives: *"It's the social aspect that keeps me going"* (53 year old male cricket club
 19 member). Participants felt that sport clubs also had a positive family-like atmosphere: *"I*
 20 *think the club sort of becomes your extended family"* (51 year old male cricket club member)
 21 and *"After tennis sometimes on a Saturday, we'd got around here and had a few drinks*
 22 *together. It's not only us, there are other people who play as well and a family-type*
 23 *atmosphere"* (69 year old male tennis club member).

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1 Participants also expressed that sport clubs can provide opportunities for social interaction:

2 *“In the world of cricket...you always have a friend”* (69 year old female cricket club
3 member) and *“We come together for the socialisation, don’t we?”* (70 year old female tennis
4 club member). Furthermore, it was suggested that sport could reduce social isolation: *“If you
5 join a [sport] club...you lose your loneliness, because you’ve met thirty, forty, fifty, a
6 hundred different people. It might take a little bit of time, but I think a lot of people might
7 want to join clubs for that reason rather than just physicality or getting fitter”* (53 year old
8 male non-sport club member).

9 In addition to the role that participation in sport can play for social interaction and health, all
10 of the groups also discussed the role that sport can play to improve health in general,
11 particularly physical health: *“It’s helped my health. I mean I don’t know where I’d be if I
12 wasn’t playing tennis”* (69 year old male tennis club member). It was also felt that sport
13 could provide an avenue to minimise the effects of aging: *“At my age, at least it is a way of
14 keeping everything moving. I’m 81, you see. I’m the oldest member, playing member, in the
15 club. If I didn’t have tennis, I don’t know, I could be sitting in a wheelchair by now”* (81 year
16 old male tennis club member).

17 Numerous participants stated that they enjoyed the training aspect of sport, getting or keeping
18 fit or even the role sport played in injury rehabilitation: *“I love training too. We train twice a
19 week and that is so much fun. You have to be reasonably fit as well. Really enjoy that”* (51
20 year old female cricket club member) and *“For me, it was getting on the tennis court, doing
21 exercise in a way that I really enjoy and then the socialisation with people”* (64 year old
22 female tennis club member) and *“So the [benefits can be an] opportunity to rehabilitate
23 yourself in the sport if you’re getting over an injury”* (64 year old female tennis club
24 member).

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1 Further to the social and physical health aspects, some participants specifically mentioned the
 2 role that sport can play in assisting older adults' mental health, as it can enable players to
 3 relax: *"You're among people. You're not talking about work stuff. Yes, the brain's switching
 4 off. You go home at the end of the day and you just feel relaxed before your real job starts
 5 again"* (53 year old male cricket club member) and can help older adults feel good about
 6 themselves as they age.

7 **Interpersonal Benefits.**

8 Sport can provide a unique leisure-time physical activity that older adults can play with other
 9 generations in their families. All interview groups discussed the benefit of having
 10 **intergenerational opportunities** to play or be involved in sport together as a family.
 11 Furthermore, some groups discussed **role modelling**.

12 Providing intergenerational opportunities to play sport with other members/generations of
 13 their family was another contributor to positive social health, and was described as a
 14 prominent and unique benefit of participation in sport for older adults. It was felt that both
 15 tennis and cricket were sports that could be played across the lifespan: *"From six to 86 you
 16 can play and everyone's involved...[there are] very few sports where that is the case"* (62
 17 year old male tennis club member). Therefore older adults could play these particular sports
 18 in the same club setting as their children or grandchildren, which could provide an
 19 opportunity for family bonding: *"There's nothing better than playing with your kids"* (62
 20 year old male tennis club member).

21 A few participants stated that older adults can provide guidance to younger players and be a
 22 role model to less experienced players: *"You feel pretty good about yourself if you're
 23 involved in a [sport] club and you can see some kids who are a little bit wayward or what*

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1 *have you, if you can advise them or be a bit of a role model or something” (53 year old male*
2 *non-sport club member).*

3 **Organizational Benefits.**

4 Given that the aim of this study was to discuss the benefits of and barriers to sport
5 participation for older adults, not surprisingly few organizational benefits were discussed.

6 The benefits discussed related to **personal safety** and **flexibility of playing options**.

7 One female non-sport club participant felt playing sport, in a club, could provide increased
8 safety. For example, when kayaking, participants may feel safer exploring new areas as part
9 of a group rather than individually. While the female tennis club members said that being a
10 member of a sport club provided flexible playing options, with opportunities to play informal,
11 social sport and/or structured competitions.

12 **Barriers to Older Adult Sport Participation**

13 There were ten themes that emerged for the barriers older adults may encounter to participate
14 in sport. These aligned with the intrapersonal (physical health and lack of sport skills),
15 interpersonal (time constraints, societal factors and perceived concerns) and organizational
16 (lack of appropriate playing opportunities, cost, lack of knowledge, inappropriate facilities
17 and location) domains of the socio-ecological model. The most prominent themes discussed
18 were lack of appropriate playing opportunities and time constraints.

19 **Intrapersonal Barriers.**

20 **Physical health** as a limitation of participating in sport for older adults was discussed across
21 the majority of the focus group interviews.

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1 It was suggested that playing sport can increase the risk of injury and that it is harder to
2 recover from injuries as people age: *“It’s easier to break bones when you’re over 50”* (51
3 year old male non-sport club member). It was also suggested that former club members had
4 left these sports due to their physical health limitations.

5 **Interpersonal Barriers.**

6 **Time constraints** for older adults to participate in sport was a prominent theme mentioned by
7 all groups, with **societal factors** and **perceived concerns** discussed by two different groups.

8 It was felt that older adults were often responsible for caring for their children, grandchildren
9 or elderly parents, so may not have the time to participate in sport: *“I’ve found that before I
10 had my three children, I was actively involved with sport; then I had my three kids and full-
11 time work... I found that I couldn’t manage it”* (60 year old female non-sport club member).

12 It was also suggested that life schedules, particularly employment structure, had changed.
13 Therefore traditional sport formats, such as Saturday competitions, were becoming less
14 popular or difficult to fit into people’s lives.

15 Societal factors, specifically perceived societal expectations, were mentioned by the female
16 tennis club member group and one NSO as a specific barrier for older adults. For example it
17 was mentioned that members of the public sometimes expressed surprise that these older
18 adults were still playing sport: *“I’ll say I’m going to play tennis. ‘Oh you still play tennis?’
19 Like hell, once you get over fifty, you shouldn’t be playing”* (70 year old female tennis club
20 member). Several groups also felt that it could be quite daunting for a new player to walk into
21 an unfamiliar club environment, which may deter some older adults from playing community
22 sport.

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1 One NSO and the female non-sport club member groups stated that older adults may have
2 perceived concerns about participating in sport. It was felt that most beginner programs were
3 aimed at younger people, thus older adults may feel sport is not appropriate for them.

4 **Organizational Barriers.**

5 A general **lack of appropriate playing opportunities** were discussed by all groups as a
6 barrier to older adults playing sport. Cost and lack of knowledge were also discussed by three
7 groups and inappropriate facilities and location were briefly mentioned by two groups and
8 one group respectively.

9 It was a common thought that there was a general lack of senior aged club teams or
10 competitions across sports, limited facilities and that not all sport clubs made older adults feel
11 welcome. These barriers were often compounded by the (limited) proximity of opportunities
12 to play sport: *“When I looked at the activities for retired people in my country town, there*
13 *wasn’t any. The tennis club’s gone. There weren’t enough people to keep it going, so very few*
14 *people used those tennis courts anymore”* (60 year old female non-sport club participant) and
15 *“there’s probably much more clubs all around that area...They talk to each other quite*
16 *frequently and they organise these competitions between clubs, whereas out here we have to*
17 *battle to get a team together”* (69 year old male tennis club member). Therefore participants
18 reported a lack of peers to play sport with or against *“I reckon it’s very hard to get other*
19 *people playing tennis. We’ve found it very hard, haven’t we, to try and fill in blokes with us?”*
20 (69 year old male tennis club member).

21 The cost of playing sport was commonly mentioned as a barrier to participation for older
22 adults. It was perceived that sporting equipment in some sports can be expensive, which may
23 deter some older adults from participating. Cost of membership, particularly having a joining
24 fee or replacing a joining fee with an increased membership cost, was also debated in the

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1 sport club member groups without conclusive agreement, while introducing reduced older
2 adult memberships was also discussed: *“You can actually set up a seniors membership, you
3 can set up a part-time membership, you can set up a 5 dollar Wednesday afternoon
4 membership if you want... long term I believe it will actually keep people in the sport,
5 because instead of paying 150 bucks and you’re playing 5 times a year and saying that’s not
6 value, you’ll be out of there and go along and just pay maybe 20 dollars and play 5 times a
7 year”* (31 year old NSO participant).

8 A general lack of awareness among older adults about the available sport programs and
9 events was also briefly discussed: *“We have a lot of programs, a lot of events, a lot of
10 tournaments, a lot of social opportunities around the states in seniors’ tennis that so many,
11 many senior people are simply not aware of”* (67 year old NSO participant). Several club
12 member groups discussed the issue of inappropriate facilities specifically for older adults.
13 They felt that some playing surfaces may not be suitable for older adults to play on, as they
14 can cause more injury. They believed this may deter some older adults from playing these
15 sports.

16 The female non-sport club members felt that location of sporting opportunities was
17 important, as older adults may not want to travel long distances to play sport.

18

19

20 **Linked Themes of the Socio-Ecological Model**

21 In line with four domains of the socio-ecological model, a number of key themes influenced
22 behavior across or within the domains. Figures 1 and 2 show the links between the major
23 themes within the socio-ecological model.

1

2 Benefits of Sport Participation for Older Adults.

3 Figure 1 shows that participation in sport for older adults can be intertwined between social
4 health benefits of participation, playing and having fun, mental health, and the social nature
5 of being involved with clubs and their family through intergenerational participation.

6 The physical health benefits of playing sport were linked to flexible playing options, as older
7 adults can engage in sport at different levels of intensity, depending on their physical
8 abilities.

9 Barriers of Sport Participation for Older Adults.

10 Five of the barriers that were noted related to a lack of appropriate playing opportunities. This
11 included a range of factors such as a lack of knowledge of playing opportunities available, a
12 lack of locations available for older adults to participate in sport or perceived low skill levels.
13 Additionally, limited opportunities meant it may be more time consuming to find a club or
14 travel to play sport. Lack of appropriate playing opportunities can also be linked to societal
15 factors, as there is sometimes a perception that sport is not for older adults, resulting in fewer
16 opportunities to play.

17

18

19

Discussion

20 This study adds to the body of knowledge regarding the benefits of, and barriers to,
21 participation in community sport for adults aged 50 years and older. This study triangulated
22 the perspectives of people representing National Sporting Organizations (NSOs), older sport

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1 club members and older non-sport club members. A number of common key interpersonal,
2 intrapersonal and organizational benefits and barriers were discussed. Furthermore, 13
3 themes that linked between the different domains of the socio-ecological model emerged.

4

5 **Benefits of Older Adult Sport Participation**

6 This study reported that the most prominent benefits that older adults could derive from
7 participating in sport were social health, physical health and intergenerational opportunities.
8 Social health, for example providing a sense of belonging and socialising through sport, was
9 identified as a key benefit of older adult sport participation. Previous research has highlighted
10 the value of sport for social health in community sport above and beyond other types of
11 physical activity for other demographic groups, such as children (Eime et al., 2013; Howie,
12 Lukacs, Pastor, Reuben & Mendola, 2010), adults (Lechner, 2009) or Cultural and
13 Linguistically Diverse (CALD) communities (Sawrikar & Muir, 2010). Where there has been
14 previous research within sport and aging, this has been for competitive Masters sport
15 participation (Dionigi, 2006; Henderson, 2012) or in specific sports, such as curling (Leipert
16 et al., 2011), golf (Siegenthaler & O'Dell, 2003) or bowls (Heuser, 2005). This current study
17 has shown that sport can provide social health benefits for older adults in a wider community
18 sport context. Social health is especially important for this age group, due to an increased risk
19 of social isolation as people age (Grenade & Boldy, 2008).

20 Another aspect of physical health was the 'appropriateness' of playing sport for older adults'
21 physical health, in that it was felt that in general, playing sport was not perceived to be
22 socially appropriate for older adults. This societal perception that sport is an activity for
23 children and youth and not an appropriate activity for older adults, is a common expressed
24 barrier. However, the sports in this study (tennis and cricket) were perceived to be more

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1 appropriate than some other sports, due to the non-contact nature and that they generally
2 required less physical exertion than some other sports. This supports previous research which
3 stated that less than a third of non-contact sports felt there was a lack of demand for their
4 respective sports from older adults, in comparison to two thirds of contact sports (van
5 Uffelen, Jenkin, Westerbeek, Biddle & Eime, 2015). Therefore, contact sports, often deemed
6 to be inappropriate for older adult participation, could be specifically modified for older
7 adults, for example, developing a non-contact version of the sport and/or requiring lower
8 physical exertion (van Uffelen et al., 2015). This could enable more older adults to play a
9 greater variety of sport to derive the potential health benefits of participation, which could be
10 beneficial for both the individual and society in general.

11 In addition to the health benefits described in this study, intergenerational opportunities was
12 another key theme. This research suggests that sport can provide an opportunity for
13 intergenerational bonding for families, as older adults can benefit as a player, and also a
14 spectator and volunteer. As children have the highest levels of sport participation compared
15 to other age groups (Eime, Harvey, Charity & Casey, 2014), the majority of active sport
16 opportunities are generally focused on children and adolescents. However, our results suggest
17 that sport clubs are ideal locations for families to connect socially and physically, and that
18 children's participation can enhance connecting older generations with sport. This reflects
19 one study's (Farrell & Shields, 2002) suggestion that having children may lead to higher
20 adult participation in child-oriented sports, such as swimming, cycling or football.

21 Additionally, previous studies have shown that leisure can provide positive family bonding
22 opportunities (Orthner & Mancini, 1991) and satisfaction with family life (Agate, Zabriskie,
23 Agate, & Poff, 2009), which in turn can provide health benefits. While bonding between
24 parents and children through sport (Harrington, 2006) and physical activity (Bronikowski et

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1 al., 2016) has been explored, this has not been previously researched specifically for older
2 adults.

3 Although all of the study participants identified the potential benefits of sport participation,
4 some participants did not play sport themselves. A study by Eime et al (2016) suggest that
5 less than 10% of older adults currently play sport and thus derive these potential benefits of
6 participation. This low number could be attributed to numerous factors, but is likely to be
7 influenced by all of the socio-ecological model behaviors as demonstrated in the subsequent
8 barriers discussion.

9 **Barriers of Older Adult Sport Participation**

10 The most prominently mentioned barriers were a lack of appropriate playing opportunities,
11 time constraints and physical health.

12 In this study, it was widely stated that there was a lack of appropriate opportunities to play
13 community sport, either a lack of senior teams/competitions, inappropriate facilities or
14 negligible opportunities in close proximity. The concept of lack of appropriate playing
15 opportunities has been reflected in other low priority demographic groups, for example
16 CALD communities (Hanlon & Coleman, 2006) or for disabled people (Field & Oates,
17 2001), as they too are often not prioritized by organizational or policy domains. As sport
18 policy prioritizes participation for children and youth, it is understandable that sporting
19 organizations often do not prioritize other demographic groups. However, if participation in
20 sport for older adults and other non-prioritized demographic groups is to increase
21 substantially, then appropriate opportunities designed specifically for their needs must to be
22 provided.

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1 A lack of time to participate in sport was widely reported in this study and is a commonly
2 reported barrier in all age groups (Hardy, Kelly, Chapman, King & Farrell, 2010; Ruseski,
3 Humphreys, Hallmann & Breuer, 2011). It could be argued that this perceived lack of time is
4 influenced by other factors, that is older adults may place a lower priority on playing sport
5 than other leisure activities. Additionally, interpersonal influences, such as societal factors or
6 the organizational domain of few appropriate playing opportunities, can also influence this
7 perceived lack of time. Having few appropriate opportunities and also the uncertainty of the
8 ‘societal appropriateness’ of playing sport at an older age in some sports, will influence older
9 adults’ perception, and personal thoughts, about their own sport participation. Furthermore,
10 as sport clubs often prioritize children and youth playing opportunities, for example
11 allocating them the most desired time and days, this can also contribute to perceived lack of
12 time, resulting from restricted access to playing opportunities. Therefore, older adults may
13 place lower priority on their own sport participation than on their children/grandchildren’s
14 participation.

15 The concept of adults prioritizing their children/grandchildren’s participation has been
16 previously investigated for family leisure trends. The 2000 Mintel study suggests that having
17 children reduces the sport participation level of their parents (Mintel, 2000). While this report
18 studies all adults, and not solely older adults, it can be suggested that this is also true for older
19 adults. This trend is also likely to be influenced by current sport policy. Australian national
20 policy for community sport prioritizes children and adolescent participation (Jenkin et al.,
21 2016), for example through the funding of the Sporting Schools program. Therefore most
22 NSOs and State Sporting Organisations will understandably prioritize younger age groups.
23 Consequently, this will affect societal expectations of who should play sport, resulting in
24 older adults likely to both consciously and subconsciously prioritize their children/
25 grandchildren’s participation, and also sport spectatorship, over their own active

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1 participation. However, it can be argued that a change in policy and organizational domains,
2 such as appropriate playing opportunities, may contribute to longer term societal change.

3 Another related barrier was the change in life schedules, particularly employment. It was
4 suggested that the largely inflexible and time consuming traditional structure of sport
5 negatively impacted older adult sport participation. This concept of the lack of flexibility with
6 traditional sport club scheduling correlates with the Australian Sports Commission Market
7 Segmentation report (Australian Sports Commission, 2013). The report investigated sport
8 participation for all age groups up to 65 years old, while this research study suggests
9 inflexible scheduling can also affect adults over 65 years old. Therefore suggesting that
10 appropriate playing opportunities through policy changes are required to help reduce this
11 barrier.

12 Physical health was seen as a barrier to older adults' sport participation, which has been
13 identified in previous sport and aging literature (Chaudhury & Shelton, 2010; Green et al.,
14 2009; Heo et al., 2013). For this study, it was suggested that risk of injury was the most
15 prominent physical health barrier. However previous research has suggested that there is
16 inconclusive evidence to justify the risk of injury in sport or purposeful physical activity for
17 older adults (Dunsky & Netz, 2012), therefore this may be a perceived barrier and as such
18 warrants further research.

19 This study has shown a dual relationship between physical health and sport, in that
20 participation was suggested as being beneficial to physical health, but also that poor physical
21 health can limit sport participation. This dichotomy was also reflected in a recent systematic
22 review on sport and aging (Jenkin, Eime, Westerbeek, O'Sullivan & van Uffelen, 2017). As
23 sport has been shown to provide physical and social health benefits, it can be an ideal
24 environment to encourage healthy aging. The World Health Organization's Global Strategy

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1 and Action Plan on Aging and Health 2016-2020 (World Health Organization, 2016) argues
2 that age friendly environments need to be developed to enable older adults to engage in a
3 healthy lifestyle, which reflects the concept that organizational factors can affect sport
4 behaviors, such as sport participation. However, the current sporting infrastructure is largely
5 non-age friendly, as there is a lack of appropriate playing opportunities and often
6 inappropriate playing facilities for older adults. Therefore if appropriate opportunities, that
7 accommodated for the reduced physical capabilities that can affect some older adults, were
8 created, then physical health as a barrier could be somewhat mitigated.

9 **Strengths and Limitations**

10 This study sought input from older adults who played and did not play sport, in addition to
11 National Sporting Organizations, to ensure a comprehensive approach to the research
12 questions. However, while qualitative methodology can enable this in depth exploration of
13 participant responses, it does also result in limited scope to involve a wider breadth of sport
14 clubs or National Sporting Organizations. Also, the focus group interviews were led by
15 researchers under 50 years old, which may have impacted the responses by the older adult
16 participants and subsequent analysis.

17 The primary outcome from this research was that all of the socio-ecological model domains
18 can affect sport participation and that social health was an important benefit of participating
19 in sport. However, lack of appropriate playing opportunities were the main barrier for older
20 adults to derive the potential health and intergenerational benefits that sport participation can
21 provide. Therefore, future research opportunities could expand this to research where
22 appropriate opportunities do exist and to explore if the same benefit and barrier concepts
23 emerge. Furthermore, the development of additional appropriate participation opportunities is
24 required. This will enable an understanding of whether these benefits, especially the health

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1 benefits, can be derived from the wider older adult population, and if these discussed barriers
2 can be somewhat mitigated.

3 **Conclusion**

4 In conclusion, older adults can derive a variety of general health benefits, particularly social
5 health, from playing community club-based sport. Social health is hugely important for older
6 adults, especially for those who are retired and/or living alone. The social health benefits of
7 participating in sport for older adults extend beyond connections with their age cohorts, to
8 younger club participants, particularly their families. However, as national sport policy
9 prioritizes participation for younger people, and does not specifically address older adults,
10 there is currently a void in specific age-appropriate opportunities for older adults to
11 participate in most sports. Secondly, but a connected point, is that society in general
12 perceives sport as a leisure-time physical activity for young people, therefore many older
13 adults do not see all sports as a viable physical activity option for them. It is recommended
14 that sport policy includes a focus on older adults, and that sporting opportunities are then
15 developed accordingly. Then the promotion of sport as a viable leisure-time physical activity
16 option for older adults may assist in maintaining or improving the health of older adults,
17 particularly their social health.

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