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Title Page

Running head: Relative age in netball

Relative age effect in netball: a qualitative investigation

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Running head: Relative age in netball

Relative age effect in netball: a qualitative investigation

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Abstract

The purpose of the present study was to investigate the lived experiences of international netball players born in different parts of the school year. A total of thirteen international netball players aged 24 or over were interviewed (six born in the first half of the school year and seven born in the second half of the school year). An inductive qualitative analysis was performed on the interview data and five broad themes emerged: maturation effects, location issues, support, participation motives and attrition motives. The main findings highlighted that the netball players born earlier in the school year were identified as being talented at an early age to a greater extent than the players who were born later. This led to early born players experiencing attrition motives related to the demands of competing, training, and travel being balanced against work, study and social aspects of life. The players born in the second half of the school year reported experiences suggesting that they did suffer a relative age disadvantage when younger. However, these players were particularly competitive and continued to participate in the sport up to and including senior competition. Need a sentence on the application of the research in coaching.

Key words: participation motives, attrition motives, support networks

1

2 RELATIVE AGE EFFECT IN NETBALL: A QUALITATIVE INVESTIGATION

3

4 Relative age results from the grouping of developing athletes into age bands using cut-
5 off dates. For example, UEFA (Union of European Football Associations) uses a cut off
6 date of January 1st meaning that a player born in January will be one of the oldest in their
7 age group while a player born in December will be one of the youngest. This is believed
8 to give the athletes born early in the junior competition year a relative age advantage over
9 the later born athletes because of biological age being related to chronological age. The
10 older children in a cohort have additional lived experience, physical maturation, social
11 and cognitive development over other children. EXPLAIN RELATIVE AGE. Relative
12 age is a secondary mechanism explaining sports performance and attainment because it
13 may be associated with participation opportunities for athletes (Wattie, Baker, Cobley &
14 Montelpare., 2007). The distribution of senior athletes' birth dates is uneven in many
15 sports with more athletes having been born in the first half of the junior competition year
16 than during the second half. EXPLAIN JUNIOR COMPETITION YEAR. Asymmetric
17 season of birth patterns have been observed in ice hockey (Boucher & Mutimer, 1994),
18 baseball (Thompson, Barnsley & Stebelsky., 1991), soccer (Brewer, Balsom and Davis,
19 1995; Musch & Hay, 1999; Simmons & Paull, 2001) and tennis (Dudink, 1994; Edgar &
20 O'Donoghue, 2005). This is evidence that children born in the second half of the junior
21 competition year may withdraw from these sports before they reach senior age groups.

22 MAKE IT CLEAR WHAT THE NON-ALTERNATIVE EXPLANATION IS.

23 Alternative explanations for uneven birthdate distributions in sport have been proposed.

1 These include maturational factors associated with chronological age, urbanisation
2 effects, industrialisation effects and season of birth effects on personality traits (Musch &
3 Hay, 1999). However, there is evidence that the dominant factor explaining birthdate
4 asymmetry of professional players is the cut off date for the junior competition year
5 (Cobley, Baker, Wattie & McKenna, 2009). The players born early in the junior
6 competition year have a greater chance of becoming professional soccer players than
7 players born late in the junior competition year (Musch & Hay, 1999; Simmons & Paull,
8 2001). Musch and Hay (1999) analysed the birth months of players in the highest
9 professional soccer leagues in Germany, Brazil, Japan and Australia; countries with
10 different climates and cultures. In each case there were more players who had been born
11 in the first quarter of the junior competition year within each country than during any
12 other quarter. Further evidence was that when the cut off date for junior competition in
13 Australia was moved from August to January in 1988, it eventually produced a
14 corresponding shift in the birthdate distribution of senior professional players in the
15 highest Australian professional soccer league in the 1995-1996 season (Musch & Hay,
16 1999).

17 Researchers who have investigated the birthdates of athletes in sport have speculated
18 about the mechanisms that lead to the uneven birthdate distributions that have been
19 observed. Relative age effect can have both physical and psychological effects (Dudink,
20 1994; Simmons & Paull, 2001). Early maturing children may be perceived as being
21 talented by their parents, coaches and teachers, which in turn can lead to more
22 opportunities of high quality coaching, higher levels of competition and greater sponsor
23 support (Brewer et al., 1995). On the other hand, players excluded due to their relative

1 age receive limited access to similar opportunities, which can trigger lower levels of self
2 esteem and questioning their own ability (Simmons & Paull, 2001). Less mature children
3 may become frustrated by perceived lack of talent and drop out of the sport as a
4 consequence (Barnsley, Thompson & Legault, 1992; Musch & Hay, 1999).

5 Therefore, participation and attrition motives of young athletes are relevant areas to
6 relative age effect. In particular, attrition motives may be exacerbated by relative age for
7 players born late in the junior competition year. Participation motives include fun,
8 improving skills, enjoying success, being part of a team, fitness and energy release (Gill,
9 Gross & Huddleston, 1983). Reasons given by young gymnasts who dropped out of the
10 sport include injury, not having fun, too much pressure to perform well and time
11 pressures (Klint & Weiss, 1986). Attrition can also be caused by a win-oriented climate
12 (Coakley, 2004; Horne, Tomlinson & Whannel, 1999) as well as physical, economic,
13 social, cultural and political barriers (Hylton, Bramham, Jackson & Nesti, 2001).

14 Netball is a predominantly female sport where an asymmetric birth pattern has been
15 found in Welsh senior participants (Joll & O'Donoghue, 2007). Joll and O'Donoghue
16 (2007) investigated the participation of Welsh netball players and used a cut off date of
17 1st September because the major exposure to netball for most girls in Wales is in a school
18 setting and the children would be banded according to the school year. They found that
19 the 54.9% of registered Welsh netball players born in the first 6 months of the school year
20 was significantly greater than the percentage of Welsh females, in general, who were
21 born in the same period. However, the quantitative study done by Joll and O'Donoghue
22 (2007) did not provide any data explaining why this significantly skewed birth pattern
23 was observed. Such explanations may be uncovered by applying qualitative research

1 methods to describe the experiences of players born in different halves of the school year.
2 The nature of the relative age effect may be different in female sport than male sport.
3 Indeed, participation levels in sport within secondary level education are effected by
4 gender (Houlihan, 2003). A significantly greater proportion of male Canadian ice hockey
5 players are born in the first half of the junior competition year than expected but there is
6 no significant difference between the observed and expected distributions for females
7 (Wattie et al., 2007). Edgar and O'Donoghue (2005) analysed the birth months of all
8 tennis players who had competed in the first round of a singles event in at least one Grand
9 Slam tournament in 2002 or 2003 as well as a comparable sample of the highest ranked
10 junior players by the International Tennis Federation (ITF). The proportion of players
11 born in the first half of the junior competition years was greater for senior female players
12 than junior female players but lower for senior male players than junior male players.
13 This could indicate that female players born in the second half of the year are more likely
14 to withdraw from the sport as juniors than female players born in the first half of the year.
15 This also could suggest that some male players born in the first half of the year may
16 withdraw from the sport as senior players when they no longer have a relative age
17 advantage over other players. Therefore, the effects of relative age in elite tennis might
18 be more physical for male players and psychological for female players (Edgar &
19 O'Donoghue, 2005).

20 Despite the many quantitative investigations that have identified an association
21 between relative age and participation in senior sport, no studies have investigated the
22 nature of participation and attrition motives experienced by young athletes born in
23 different parts of the junior competition year. There is a need for more in-depth

1 information to be explored by qualitative means to give greater understanding of the
2 experience of athletes with a relative age disadvantage. There is a lack of research into
3 relative age effect in female sports, the relative age effect in netball (Joll & O'Donoghue,
4 2007), and a lack of qualitative research exploring the participation and attrition motives
5 experienced by players born in different parts of the junior competition year. Therefore,
6 the purpose of the current investigation was to explore the lived experiences of netball
7 players born in the first and second halves of the school year.

8

9

10

Method

11

Participants

12
13 CRITERIA FOR INCLUSION. Thirteen female international netball players aged 24
14 to 31 years agreed to participate in the study. SIZE OF HOME TOWN. Each potential
15 participant was selected on their past and present playing history. The players came from
16 two different countries with 11 having competed in senior international netball and the
17 remaining 2 players having competed for their country at junior age groups. The 13
18 participants were split into two groups. One group comprised of 6 players who were born
19 in the first half of the school year (September to February) and were termed as H1
20 players. The other group consisted of 7 players who were born in the second half of the
21 school year (March to August) and were referred to as H2 players. During the analysis of
22 the data, the six H1 players were referred to as H1A to H1F while the H2 players were
23 referred to as H2A to H2G.

1

2 *Instrumentation*

3 The interview guide was designed to explore experiences during the stages of an
4 athlete's career (Côté, 1999): sampling years, specialisation years and investment years.
5 The questions enquired about the players' experiences during these stages as well as the
6 transitions between these stages. The question areas incorporated in the guide were based
7 on literature derived themes: maturation effects, participation motives and attrition
8 motives. [need literature to support theme choice] The interview format allowed
9 flexibility to explore topics freely and allowed participants to discuss their feelings and
10 views. The final question of the interview enquired about the player's month of birth.

11

12 *Procedure*

13 It was necessary to conceal from the participants the true purpose of the study until
14 after the interviews were completed. This was to avoid responses being influenced by
15 such knowledge. The interview study including the need to conceal the precise purpose
16 was approved by the Cardiff School of Sport Research Ethics Committee. All potential
17 participants were provided with a synopsis of the study and what participants were
18 required to do. While not being advised of the purpose to compare players born in
19 different halves of the school year, the participants were advised that they were being
20 interviewed about their experiences in netball as junior and senior players. Thirteen one-
21 to-one semi-structured interviews were conducted, which was an ideal method for a small
22 sample and the exploratory nature of the investigation (Veal, 1997). Interviews varied in
23 duration lasting between 34-62 minutes and were conducted in a comfortable

1 environment to put the participants at ease. An interview guide was produced to assist
2 the interview process which utilised the limited time available whilst providing a
3 systematic approach (Patton, 2002). Participants were encouraged to be as open and as
4 elaborative as possible, with the interviews being kept focused on the key themes during
5 the different stages of the players' careers. All interviews were recorded using an
6 Olympus PearlCorder S713 Dictaphone. Prior to each interview, all equipment was
7 checked to establish recording quality and adequate sound levels in order to prevent
8 transcription errors. Immediately after each interview, the participant was informed of
9 the precise purpose of the study. Verbatim transcription was done to ensure that all of the
10 data was analysed. Each transcript was checked by re-listening to the recordings while
11 reading the transcripts. Participants were provided with a copy of the transcript of their
12 interview and asked to verify it as a true reflection of their experiences and views.
13 Participants were also offered the opportunity to withdraw from the study at this point but
14 all agreed to be included and no changes were required to the transcripts.

15

16 *Data Analysis*

17 Prior to data analysis, literature derived generalisations were formed (Patton, 2002).
18 The interviews were analysed using the three anticipated themes (maturation effects,
19 participation motives and attrition motives) as well as two additional themes that
20 occurred in the majority of the interviews (location issues and support networks). The
21 analysis process consisted of coding the transcribed interviews into these five themes.
22 Each theme was colour coded using highlighter pens to mark evidence relating to the
23 themes on each transcript (O'Donoghue, 2010). This method was chosen over the use of

1 more systematic coding processes (Côté, 1999) <cant do this any more> and qualitative
2 analysis software due to the relatively low volume of data within the study <explain -
3 volumes>. Through the process of coding it was possible to organise raw data into
4 conceptual categories that were thematically related with the prime focus of gaining a
5 logical structure for the data (Gratton & Jones, 2004). The two authors independently
6 analysed each interview using this process and then compared their analyses and
7 interpretations. There were some sentences within some interviews that were categorised
8 as evidence of different themes by the two authors. These disagreements were discussed
9 and it was agreed that where sentences could be interpreted as being relevant to more
10 than one theme, they would be highlighted according to all relevant themes. Once the
11 individual interviews had been analysed in isolation, a systematic method of comparing
12 the two groups of players was utilised, with the emergent similarities and dissimilarities
13 between H1 and H2 players being recorded in analysis tables. A total of five tables were
14 produced, each table representing an individual theme. Within each table, common sub-
15 themes that appeared within the transcripts were identified (Appendix A).

16

17 *Trustworthiness*

18 The trustworthiness of the data was addressed through three processes. Firstly,
19 interview transcripts were verified as accurate reflections of participant experiences and
20 views by the participants. None of the interview transcripts needed to change. Secondly,
21 the authors were familiar with research into relative age in sport and that this could lead
22 to potential bias during the analysis. Critical self-reflection <?> on such potential biases
23 ensured that the authors were aware of these during the analysis of the data. This process

1 was successful and indeed the theory that was developed from the data included some
2 aspects that were not anticipated from reviewing previous literature. Thirdly, each
3 transcript was independently analysed by the two authors with any minor disagreements
4 in coding being discussed and an agreed position being taken.

5

6

Results

7

8 *Similarities between the H1 and H2 players' experiences*

9 There were many similarities in the participation motives and attrition motives
10 experienced by the two groups of players as well as the support of friends, family
11 members and coaches. A total of 11 different factors were identified as being the prime
12 motives for the players' initial involvement in netball. Enjoyment, friendship and
13 achievement were the most commonly mentioned participation motives, "*I just wanted to*
14 *do a team sport and I was quite good at it, so kept doing it because I knew I could*
15 *socialise as well as have fun playing netball*"[H2C].

16 Similar responses for the H1 and H2 players discussed the roles of coaches and
17 teachers and the fact that they were not just seen in a supporting role, but also as a key
18 motivational factor, "*I had a particular coach at county level who had played at*
19 *international level, so that kind of inspired me and motivated me...*" [H1D]. Many
20 responses highlighted that player success was partly due to the relationship formed with
21 their coach, "*if you feel you've got a good relationship with the coach then it gives you*
22 *confidence*" [H2A].

1 Players reported that participation at international level required support from family
2 and friends during difficult times:

3

4 *“...some experiences when I wasn’t selected or reselected...I was fortunate with*
5 *urm...was the support network around me of my family and friends, and the*
6 *realisation of it wasn’t the only thing in my life...” [H1D].*

7

8 There was evidence of parental support comprising financial support, assistance with
9 travel and emotional support. In addition to practical support, parental support was a
10 huge influential factor for players when making lifestyle decisions:

11

12 *“my mum was very supportive of my netball and me going into sports studies at*
13 *university to do a degree in sport without any question because she would have*
14 *done sport many years ago when she was younger and she was very supportive of*
15 *my sport” [H2E].*

16

17 The support provided by peers and team mates was perceived as important during
18 difficult times. One player expressed her views: *“my club mates would have backed me*
19 *100% and would have been great club mates, friends, the people I would call my friends”*
20 [H2B]. In cases where limited family support was given, it was noted that the role of the
21 coach would be vitally important. Players commented on the fact that they looked to a
22 coach for the netball specific support that their parents could not provide: *“I probably*
23 *looked to my coaches for the support I didn’t get at home” [H1A].* However,

1 dissatisfaction was expressed by some concerning external pressure from family
2 members, for example parents questioning player's participation, and questioning the
3 time commitments. Some players in both the H1 and H2 groups perceived some of the
4 support provided by coaches to be inappropriate. This tended to be during selection
5 processes at senior level:

6

7 *“So I didn't get selected. I was sent a letter listing the reasons why I hadn't been*
8 *selected. I didn't have the basic skills, she was my coach for the two years prior to*
9 *that, she hadn't mentioned it before, not the most positive effect, it put me off*
10 *netball” [H1C].*

11

12 Some players in both groups also reported inappropriate support during times of
13 injury. Two of the participants experienced very difficult times with injury. One player
14 commented: *“after I was dropped I decided it wasn't worth it to be treated that badly. I*
15 *decided it wasn't worth going back to” [H2B].* This emphasises the level of support that
16 players expect, at the same time illustrating perceived inappropriate support from
17 coaches. As well as players commenting on inappropriate support, some players were
18 also frustrated with the lack of support provided by their coaches. It is important to
19 distinguish between the inappropriate support and a lack of support. The occasions when
20 players reported to have been subjected to lack support was related to the provision of
21 feedback after squad selections, in particular when players were de-selected from a
22 squad.

1 The motives for player to withdraw from the sport were discussed with 19 attrition
2 motives being identified. However these were not entirely independent factors. The
3 most commonly reported ones (6 of the 13 participants) were negative experiences,
4 feelings of failure and feelings of not belonging. The majority of the responses indicated
5 that negative experiences encountered during international representation were the main
6 reasons for their discontinuation of the sport. Concerns about both training and
7 competition situations were expressed by a number of participants; one participant
8 elaborated: *“it was very I think the word I would use ‘cliquey’, I just didn’t like the set
9 up, and didn’t like the atmosphere of it all”* [H1C].

10 As players progressed through to senior ranks, feelings of missing out on life
11 experiences began to emerge: *“I gave up two years of my life for it. I want it back now,
12 yeah. Just yeah I want my life back, I want to do other things”* [H2A]. Indeed some felt
13 that netball had held them back from other opportunities: *“I think that I’d like to do other
14 things that probably I’ve not been able to do in the whole time I’ve played netball. Like
15 there’s things I’ve turned down, and there’s jobs I’ve given up, and there’s places I
16 haven’t gone because of netball”* [H1A].

17 Older international players described feelings of achieving all there was to achieve and
18 boredom as a result of repetitive drills in training as reasons for dissatisfaction.
19 Situational factors such as location seemed to exacerbate negative feelings as players felt
20 disadvantaged due to location factors as one player explained: *“coming from CITY was a
21 lot harder because you didn’t have the same opportunities, the travelling was too much”*
22 [H2D]. Some views expressed by one player whose priorities changed after moving,
23 netball became a lower priority:

1

2 *“The move to CITY A when I got a job after my masters degree really finished my*
3 *netball. Netball is not played to a great level in CITY A and the travel to CITY B*
4 *for trials and training would have been too much. We were saving up for a deposit*
5 *on our first house and prices in CITY A were much more expensive than they are in*
6 *CITY B and I did not want to spend money on travel, physiotherapy, etc for netball.*
7 *I just could not justify the cost anymore, even though I enjoyed playing the sport”*
8 [H1F].

9

10 Location issues not only placed added pressure on players regarding travelling to training
11 but also, players felt isolated from the team and governing body. In particular, feelings of
12 being disadvantaged with regard to the level of support they received outside of training
13 and competition were noted. Concerns emerged regarding weakened communication
14 channels provided by coaches for isolated players: *“I just think maybe a bit more support*
15 *locally in our area rather than having to travel all the way to CITY for everything”*
16 [H1C]. By contrast, other responses indicated that some players were not as affected by
17 location, and found that the travel helped them bond with team mates:

18

19 *“I remember that with the under 16s that training would have been in CITY, there*
20 *would have been quite a good bunch of us so we would have quite often got the*
21 *train together”* [H1E].

22

23 *Findings associated with H1 players*

1 As previously outlined, similarities existed between the two groups. However there
2 were some experiences encountered by the H1 players to a much greater extent than by
3 the H2 players. These arose from the fact that a majority of these players were identified
4 at a young age as being talented. There were indications that the players found it
5 increasingly difficult to maintain a normal lifestyle, career development and maintain
6 their level of excellence as they progressed through to the senior rankings. The H1
7 players found balancing netball with other aspects of their lives more difficult than the
8 H2 players reported. The H1 players also perceived themselves to be more
9 disadvantaged in away matches than the H2 players reported. At international level,
10 similar pressures were encountered as one participant explained the level of commitment
11 expected by an international coach:

12

13 *“I sort of I think I was going for the wrong reasons again and that I felt that really*
14 *I was tired, I was finding it more difficult in terms of the intensity and balancing the*
15 *work, netball, and life’s bits. And in fact now when I look back I thought ‘oh my*
16 *God how did I do that?’” [H1E].*

17

18 The level of commitment required particularly affected the H1 players suggesting that the
19 relative age advantage and early selection for higher level squads and competitions has a
20 downside which is the commitment involved. Responses revealed that the majority of H1
21 players experienced being selected for an older age group squad. In most cases, the
22 mismatch between the school year and the cut off date of 1st January used by the national
23 netball associations resulted in ineligibility for a younger national squad. There were

1 positive comments of playing above their age group, which included gaining greater
2 experience, availability of opportunities and improvement in their playing ability.
3 However, feelings of not belonging to the team and problems of team integration were
4 expressed by one player: *“I didn’t feel I belonged to any team...just would have been nice
5 to play with people of the same age as me”* [H1B].

6 Players felt that as an unknown player they had to work harder in order to be accepted
7 and identified as being talented. Other negative experiences included coaches believing it
8 essential to play the older players over the younger players: *“I asked the coach to play me
9 but she didn’t because she deemed the older people get the chance and because I was
10 younger I didn’t”* [H1C].

11

12 *Findings associated with H2 players*

13 Similarly, there were some participation and attrition motives experienced by the H2
14 players to a far greater extent than by the H1 players. All 7 of the H2 players expressed a
15 liking of competition from early age groups, whereas only 2 of the 6 H1 players had
16 mentioned this. The H2 players’ motivations at under 14 level were competition driven,
17 *“Yeah I think towards secondary school I was more competitive and my motivation was
18 to win, and also another motivation was to stay fit and healthy really”* [H2G].
19 Motivation did not only come from competition with opposing teams but also
20 competition between team-mates. One player, who was also involved in other sports at a
21 younger age reported this as follows:

22

1 *“I’m very competitive! I just love the feeling of doing well – and the enjoyment –*
2 *but then it was also a good feeling to be competitive and to be pushing yourself,*
3 *especially in athletics you know, because although they’re your friends, you always*
4 *had that competitive edge, and maybe its just at that (Under 14) age, but you’re*
5 *always pushing each other in a good way – but we were always very competitive*
6 *and our paces were not that far away and so we were always pushing each other*
7 *you know. And netball would have probably been more enjoyment, especially when*
8 *you were winning” [H2E].*

9

10 The competitive nature of the H2 players in the current investigation provided the
11 determination to stay in the sport even where there were set backs due to non-selection.
12 Interestingly, one player, whilst discussing self-perceptions of her own ability
13 emphasised that when she was younger, she encountered co-ordination problems and
14 questioned her capability to play the sport:

15

16 *“Well if you speak to my coach she’ll tell you that I was the worst netball player*
17 *she’d ever met because I couldn’t catch, I couldn’t throw, I didn’t have any basic*
18 *skills. I don’t think it was till an older age that something sort of clicked and then I*
19 *started playing better” [H2F].*

20

21 Other experiences indicating a relative age disadvantage for the H2 players related to
22 physical size at younger age groups, *“in primary school I was very small and very*

1 *uncoordinated, LAUGHS. Truthfully! I was really bad and didn't even make the school*
2 *team” [H2C].*

3

4 Despite these two players lacking key fundamental skills associated with netball, both
5 were determined to persevere and both became senior international netball players.

6 The H2 players also reported negative experiences to a greater extent than the H1
7 players with 3 of them specifically reporting negative experiences of non-selection and
8 de-selection:

9

10 *“I felt I at least deserved to be tried, you know? And I'd never really been given an*
11 *opportunity and I was so keen to get on and try and just didn't want to think that*
12 *maybe I was happy enough being there and being in the squad and being involved”*
13 *[H2E].*

14

15 Responses also revealed that players were unprepared when exposed to different
16 coaching styles and even perceived some coach remarks as tactless. One H2 player
17 reported, *“an assistant came up with different netball philosophies. I was just treated*
18 *very badly”*. [H2B]

19

20

21

Discussion

22

1 There were many similarities between the experiences of the H1 and H2 players with
2 respect to participation motives, attrition motives, support networks and location effects.
3 This is not surprising as close examination of birth distribution of the 1061 senior netball
4 players analysed by Joll and O'Donoghue (2007) shows that there were 573 registered
5 senior players born in the first half of the school year compared to 488 born in the second
6 half; while statistically significant this is only a 17.4% difference. This supports the view
7 that relative age is a secondary factor explaining achievement in sport (Wattie et al.,
8 2007) rather than a primary factor. Both H1 and H2 players are subject to the same
9 social, economic, cultural and political barriers to sports participation (Hython et al.,
10 2001). Various solutions have been proposed to the problem of asymmetric birth date
11 distributions in sport including rotating cut off dates (Barnsley et al., 1985), using 9
12 month age groups and rotating cut off dates (Brewer et al., 1995), using anthropometric
13 data (Baxter-Jones, 1995) and parental heights (Roche, Tyleshevski & Rogers, 1983).
14 The practical difficulties of implementing such solutions may not be justified by the
15 degree of birth date asymmetry found for netball players (Joll & O'Donoghue, 2007).

16 The participants in the current investigation had all played netball at international level
17 either as senior players or in junior age groups. This is a limitation of the study as it does
18 not allow the experiences of players who dropped out of the sport before entering the
19 senior age groups to be explored. However, the investigation of high level participants
20 does allow an understanding of their experiences of the sport to be provided. There were
21 common experiences shared by the H1 and H2 players during the various stages of their
22 development within the sport. A description of these players can be made with respect to
23 the stages of the framework proposed by Côté (1999). All of the players in the current

1 investigation enjoyed competition during the sampling years, even the players who were
2 involved in more than one sport during their sampling years. As players moved into the
3 specialisation years, the support of parents, coaches and team mates was very important
4 (Abbott & Collins, 2004; Baker et al., 2003).

5 There were some differences found between the experiences reported by the H1
6 players and H2 players. The H1 players were more likely to be identified as talented by
7 selectors, coaches and teachers at early ages than the H2 players. This agrees with the
8 speculations made within quantitative studies of birth month distributions of senior high
9 level players in different sports (Simmons & Paull, 2001). The greater probability of
10 selection for regional and national teams provided these players with opportunities of
11 higher level competition, more experienced coaches and better facilities. These
12 advantages could then help the players realise their talent to a greater extent than players
13 who had not been provided with such opportunities (Rejewski, Darracott & Hutstar,
14 1979). However, the involvement in regional and national squads did involve a greater
15 commitment by the players and in some cases the need for a great deal of travel to play
16 netball. This lead to a perception of away match disadvantages to a greater extent than
17 reported by the H2 participants. Such time commitments and difficulty balancing sport
18 with education and social aspects of life is a key attrition motive (Gill et al., 1983). This
19 attrition motive was more experienced more by the H1 players in the current investigation
20 than by the H2 players. These players found themselves having to play with older
21 players than they had played with at school. This was because the cut off date for
22 national netball associations is 1st January rather than 1st September. In soccer, Simmons
23 and Paull (2001) found that 78 English schools youth players and 64 English FA national

1 youth players had different birth month distributions, in each case with more players born
2 in the first 4 months of the particular junior competition year used than in any other 4
3 month period. This may explain the difficulties experienced by H1 players trying to
4 integrate with other members of national squads who they had not played with in school
5 netball. The social atmosphere within sport is a key participation motive (Gould, Feltz &
6 Weiss, 1985). The atmosphere encountered by the H1 players in the current investigation
7 when moving into new squads and the difficulty of establishing friendships is a possible
8 attrition motive for H1 players not identified before in relative age effect studies.

9 The H2 players reported experiences that support the speculations made in previous
10 quantitative studies of relative age effect. Players recalled that they were physically less
11 developed at younger age groups than their peers and that they did not have the same
12 level of co-ordination as other children when in younger age groups. Younger players
13 within junior age groups could become frustrated at perceived lack of talent (Barnsley &
14 Thompson, 1988) while physically mature players were more likely to be retained within
15 the given sport (Barnsley et al., 1985). Children who mature earlier have a tendency to
16 be advantaged physically, cognitively and socially, over later born children in the same
17 cohort (Brewer et al., 1995). The non-selection and de-selection experienced by H2
18 players in the current investigation may have been caused by a relative age disadvantage.
19 These experiences were negative experiences that are very similar to the attrition motives
20 associated with negative aspects of competition (Orlick, 1974) and lack of achievement
21 (Gould, Feltz, Horn & Weiss, 1982). The current investigation also revealed that de-
22 selection and non-selection of players in the H2 group was often accompanied by feelings

1 of isolation and perceptions of poor communication between national governing bodies,
2 coaches and the players.

3 The results of the current investigation agree with previous research that location is an
4 important factor during the early years of a career in sport (Carlson, 1988; Côté,
5 Macdonald, Baker & Abernethy, 2006). However, the current results for netball are
6 opposite to what has been found in other sports. Top Swedish tennis players have been
7 found to come from rural areas (Carlson, 1988) and a greater percentage of PGA Golfers,
8 US players in NHL hockey, NBA basketball and Major League baseball were born in
9 towns and cities of less than 500,000 than the wider population (Côté et al., 2006).
10 Netball is a team sport and, therefore, most national squad sessions would be held in
11 major centres of population within the given country. Players based in these areas may
12 have access to higher level coaching, resources and competition. Issues of travel and
13 commitment were raised by H1 players while some H2 players reported that they felt
14 isolated when they were living away from the particular cities where national squad
15 training occurred. Place of birth might be a more important factor than month of birth in
16 determining whether a young player will progress to high level senior competition in a
17 sport or not (Côté et al., 2006).

18 In conclusion, the current investigation has found more similarities than differences
19 between the experiences of the H1 and H2 players with both groups revealing the
20 importance of support networks and participation motives. The main differences between
21 the two groups result to some extent from differences in physical maturity and cognitive
22 development during developing years. The H1 players tended to be recognised as
23 talented much earlier, were selected for national squads, which in turn required great

1 commitment and the experiencing of time and travel pressures. This downside of early
2 selection for high level squads has not been anticipated in previous relative age research.
3 The H2 players, by contrast, reported some negative experiences of non-election and de-
4 selection at younger age groups, but tended to be more competitive than the H1 players
5 and this helped them remain in the sport until they became senior players.

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Appendix A: Analysis tables.

Table 1

Number of participants providing evidence of different participation motives.

| Participation motive | H1 Players (n=6) | H2 Players (n=7) |
|-------------------------|---------------------|---------------------|
| Enjoyment | 6 | 7 |
| Fun | 4 | 3 |
| Friendship | 6 | 7 |
| Competition | 2 | 7 |
| Achievement | 6 | 6 |
| Challenge | 3 | 1 |
| Skill development | 3 | 2 |
| Team sport | 3 | 3 |
| Identified as talented | 3 | 0 |
| Good coach relationship | 3 | 3 |
| Motivated by others | 3 | 6 |

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Table 2

Number of participants providing evidence of different attrition motives.

| Attrition motive | H1 Players (n=6) | H2 Players (n=7) |
|--------------------------------------|---------------------|---------------------|
| Injury | 3 | 1 |
| Feelings of not belonging | 2 | 4 |
| Travelling too much | 3 | 2 |
| Feelings of failure | 4 | 3 |
| Lack of enjoyment | 1 | 3 |
| Conflict with others | 1 | 1 |
| Conflict with Nation Governing Body | 2 | 5 |
| Bitchy atmosphere | 2 | 3 |
| Negative experiences | 4 | 7 |
| Repetitive training | 2 | 0 |
| Sacrifices that had to be made | 3 | 1 |
| Hard to balance netball and life | 5 | 1 |
| Negative experiences of de-selection | 0 | 3 |
| Wish to pursue new opportunities | 3 | 3 |
| Continuing only to please others | 2 | 0 |
| Negative self perceptions | 2 | 3 |
| Under pressure to perform | 1 | 1 |
| Loss of interest | 0 | 1 |
| Burn out | 0 | 1 |

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Table 3

Number of participants providing evidence of maturation effects.

| Maturation effect | H1 Players (n=6) | H2 Players (n=7) |
|--|---------------------|---------------------|
| Ineligible for team due to age | 5 | 6 |
| Not selected as a result of lower maturity | 1 | 3 |
| Feelings of not belonging to a team | 1 | 1 |

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Table 4

Number of participants providing evidence of support.

| Support | H1 Players (n=6) | H2 Players (n=7) |
|--|---------------------|---------------------|
| <i>Positive Support</i> | | |
| Committed parents | 5 | 7 |
| Good player-coach relationship | 6 | 4 |
| Support from team mates | 3 | 6 |
| <i>Negative Support or Lack of Support</i> | | |
| External pressure | 1 | 0 |
| Lack of family support | 1 | 1 |
| Lack of support from National Governing Body | 1 | 0 |
| Wrong type of support | 3 | 5 |

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Table 5

Number of participants providing evidence of location issues.

| Location Issue | H1 Players (n=6) | H2 Players (n=7) |
|---------------------------------------|---------------------|---------------------|
| Travelling long distances for netball | 2 | 1 |
| Isolation due to location | 1 | 1 |
| Less opportunities due to location | 2 | 1 |
| Sacrifices made to travel for netball | 2 | 1 |
| Home match advantage | 1 | 3 |
| Away match disadvantage | 3 | 0 |

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