1	Understanding the Leadership and Environmental Mechanisms in a Superleague Netball Club
2	
3	Don Vinson ¹ , Anita Navin ² , Alison Croad ³ , Jennifer Turnnidge ⁴ and Jean Côté ⁴
4	
5	¹ University of Worcester
6	² eXpert Sports Coaching Consultancy
7	³ University of Gloucestershire
8	⁴ Queen's University
9	
10	
11	
12	
13	
14	
15	
16	
17	Author notes:
18	
19	Don Vinson is with the School of Sport and Exercise Science, University of Worcester, Worcester, United
20	Kingdom.
21	Anita Navin is Director of eXpert Sports Coaching Consultancy, United Kingdom.
22	Alison Croad is with the School of Sport and Exercise, University of Gloucestershire, Cheltenham, United
23	Kingdom.
24	Jennifer Turnnidge and Jean Côté are with the School of Kinesiology and Health Studies, Queen's
25	University, Kingston, Ontario, Canada.
26	
27	Corresponding author: Dr Don Vinson, School of Sport and Exercise Science, University of Worcester,
28	Henwick Grove, Worcester, Worcestershire, WR2 6AJ, Email: <u>d.vinson@worc.ac.uk</u> , Telephone: +44
29	(0)1905 542470.
30	
31	

1	
	L

2 3

Abstract

Understanding the Leadership and Environmental Mechanisms in a Superleague Netball Club

The Personal Assets Framework (PAF; Côté et al., 2020) offers a lens to better understand the 4 5 relationship between leadership within sport environments and the resultant (athlete) developmental 6 outcomes. This investigation aimed to explore how leadership behaviors and the broader environment 7 of a Superleague netball club represented an effective context for athletes to flourish by exploring the 8 inter-relations between the PAF's dynamic elements, namely (a) Quality Social Dynamics, (b) 9 Appropriate Settings, and (c) Personal Engagement in Activities. Twenty-eight stakeholders were 10 interviewed either individually or in small groups. The results revealed the environment constructed 11 was shaped by many inter-related mechanisms and all stakeholders influenced how the dynamic 12 elements intersected with one another. Key leadership behaviors driving the positive environment of the club were related to individualization and generating perceptions of value. The stakeholders' desire 13 14 to understand the relationship between their individual contribution and Superleague netball was also 15 crucial.

16

17 Keywords: Personal Assets Framework, netball, Positive Youth Development, sport coaching

1	Understanding the Leadership and Environmental Mechanisms in a Superleague Netball Club
2	Leadership in sport has been a prominent feature of research from an extensive array of
3	disciplinary lenses and methodological approaches for over 40 years (Welty Peachey et al., 2015).
4	Research specifically examining leadership in youth sport has also featured investigations from various
5	theoretical and empirical perspectives (e.g., Erikstad et al., 2021; Newland et al., 2019). The vast
6	majority of theoretical perspectives suggest that leadership is a complex social dynamic, requiring an
7	understanding of the leader-follower dyad and incorporating considerable strategic and power-laden
8	phenomena (Vella et al., 2011). One area of concern which has attracted substantial attention in recent
9	years has been the relationship between the leadership of youth sport environments and the resultant
10	developmental outcomes of the athletes (Newland et al., 2019). The importance of this area of interest
11	is underlined by numerous studies which have highlighted that organized youth sport requires
12	deliberate planning and quality leadership in order to facilitate positive experiences because
13	participation does not automatically confer desirable outcomes (Coakley, 2011; Erikstad et al., 2021).
14	Several contemporary models of athlete development acknowledge the dynamic and synergistic
15	relationship between the participant and the context in which they reside (Bronfenbrenner, 1999; Côté
16	et al., 2020). Sometimes referred to as ecological approaches to understanding human development,
17	these models recognize the importance of athletes' physical environment, social interactions with other
18	key stakeholders, as well as the less tangible aspects such as the respective organization's operational
19	culture (LaVoi & Dutove, 2012). Specifically focussing on youth athletes, Côté et al. (2014) sought to
20	explain the interactions underpinning positive development by proposing the Personal Assets
21	Framework (PAF; see Figure 1) which comprises three inter-related underpinning mechanisms;
22	Appropriate Settings, Quality Social Dynamics, and Personal Engagement in Activities. The PAF has been
23	subsequently updated and amended (see Côté et al., 2022; Côté et al., 2020; Côté et al., 2016). Whilst a
24	promising tool for conceptualizing development in youth sport, the framework requires further

empirical investigation and support (Holt et al., 2017). To understand the context of the present
investigation, it is first important to outline the underpinning construction of the PAF and review some
of the influencing frameworks and related evidence. Subsequently, we will turn to the applied context
of the present investigation to outline how this study has contributed to bridging the theory-to-practice
gap.

6 F

Personal Assets Framework and Positive Youth Development

7 The PAF (Côté et al., 2022; Côté et al., 2014; Côté et al., 2020) seeks to help leaders within youth 8 sport development systems better understand the interacting mechanisms influencing athlete 9 development for the immediate (i.e., real time), short-term (e.g., single season) and long-term (e.g., 10 multiple seasons) benefit of the participants. The short-term benefits are characterized by the four Cs 11 (i.e., personal assets) of athletes' competence, confidence, connection, and character (see Figure 1). By 12 engaging in sport environments that facilitate the acquisition of the 4Cs over multiple seasons, the PAF 13 posits that athletes can acquire the long-term outcomes of participation, personal development, and 14 performance (i.e., 3Ps). The PAF potentially offers sport contexts a more salient approach than other 15 Positive Youth Development (PYD) systems (e.g., Lerner et al., 2014) because of its focus on processes and outcomes that are derived and supported by sport research. Other attempts to model PYD in sport 16 (e.g., Holt et al., 2017) draw on a similar base of conceptual issues to the PAF but do not offer any 17 18 dynamic or generative relationship between processes and outcomes over time (Côté et al., 2020). 19 Accordingly, Côté et al. (2020) argued that the PAF might help to address the lack of consensus 20 concerning how the various phenomena of sport involvement interact over time to elicit positive 21 outcomes.

The PAF was, in part, informed by the perspective of PYD which is an inherently strengths-based concept insofar as it considers young people from the perspective of their potential to become, rather than considering them as problems to be fixed (Holt et al., 2017). Concomitantly, the PAF seeks to

1 understand, first and foremost, what might potentially inform the interrelationship of the gears, rather 2 than focusing too fixedly on the deficits in the system. Despite such a positive perspective, research 3 concerning PYD has highlighted the need to better understand the mechanisms and processes which 4 lead to the 4Cs and, resultantly, the 3Ps (Holt et al., 2017). Furthermore, Vella et al. (2011) argued there 5 was a substantial research-to-practice gap in terms of how the mechanisms, such as those illustrated 6 within the PAF, might be operationalized in real-world youth sport contexts. More recent research 7 contributing to addressing this gap has found PYD and the PAF to be an appropriate lens through which 8 to view positive youth sport experiences in community sport (Vierimaa et al., 2017), successful clubs 9 (Erikstad et al., 2021) and disadvantaged groups (McDonough et al., 2013), although no research to date 10 has investigated the potential of the PAF to explore the underpinning mechanisms influencing a club-11 based talent development pathway.

12 The unique feature of the PAF is highlighted in the figurative gears of the three principal 13 components (i.e., Quality Social Dynamics, Appropriate Settings, and Personal Engagement in Activities). 14 The interlocking representation of these elements denotes their inter-dependence, that is, the 15 functionality of one gear helps drive, or hinder, the others – and vice versa. Each of the gears contains three elements which feature in order of importance from proximal to distal to the centre (see Figure 2). 16 17 Appropriate Settings encompasses the physical contexts of the participant and comprises playing field, 18 club/organization structure and community/league structure (Côté et al., 2020). Considering the playing 19 field requires leaders to ensure the activities provided are developmentally appropriate for the 20 participating young people. For example, leaders might consider how the activities are sized, scaled, 21 and scored. Facilitating appropriate settings might enhance a range of beneficial outcomes including, 22 for example, intrinsic motivation and engagement (Burton et al., 2011). Within a Talent Development 23 environment, considering the *club/organization structure* might require leaders to contemplate how 24 young people are made aware of the opportunities to progress through the pathway and how their

position within the setting reflects the culture of the broader organization (Curran et al., 2022). The
 community/league structure is also considered to be important to ensure the competition available to
 participants is appropriate for their level of competence in that it is stretching, but not overwhelming
 (Light & Harvey, 2017).

5 Research investigating elements related to the Quality Social Dynamics gear has affirmed the 6 importance of the three sub-components, namely relationships, team dynamics and social environment 7 (Vierimaa et al., 2017). The implications for leaders of organized youth sport suggest considerable 8 attention should be paid to enabling young people to foster positive interpersonal relationships with a 9 variety of sport stakeholders, including coaches, parents, peers, and officials (Fraser-Thomas et al., 10 2008). Within contemporary research, a substantial degree of consensus has been reached concerning 11 the importance of providing individualized consideration, especially when considering approaches to 12 feedback and goal setting (Bowles & O'Dwyer, 2021; Newland et al., 2019). Furthermore, considerable 13 research has advocated for enabling youth athletes to have a meaningful degree of autonomy in their 14 sporting experience (Duguay et al., 2020; Vinson & Bell, 2020) and to fostering the joy of self-discovery 15 (Light & Harvey, 2017). Leadership behaviors such as individualized consideration and autonomy support have been shown to be related to athletes perceiving their value to the group and also to 16 17 enhanced intrinsic motivation (Newland et al., 2019). The evidence concerning the importance of *team* 18 dynamics in youth sport is equally compelling. Transparent communication, athlete satisfaction and 19 normative expectations have all been shown to influence athletes' moral development as well as their 20 willingness to compete for the team (Smith et al., 2013). From the more distal social environment 21 perspective, Henriksen and Stambulova (2017) stressed the importance of leaders' understanding of 22 youth culture, the smoothness of transitions and integrated organizational-level communication. In 23 addition, an increasing volume of research has investigated the importance of care within leadership 24 settings, emphasizing the considerable onus on leaders to foster environments which athletes perceive

to be deeply, and empathetically, considerate of their needs as a principal concern (Cronin et al., 2019;
 Vinson & Parker, 2021).

3 In summary, Quality Social Dynamics spans dyadic, team-based and broader organizational 4 factors related to the social environment and has been shown to positively influence PYD (Côté et al., 5 2020). However, despite this array of research, there is discernibly little evidence to show how the 6 various mechanisms discussed here are interrelated, especially in applied settings. This is equally true 7 when considering the evidence relating to the connections between the various layers within each gear, 8 for example, between the social environment and team dynamics. Recently, Côté et al. (2022, p. 7) 9 suggested that numerous sociocultural factors may inhibit the functioning of the PAF and depicted such 10 elements as "grains of sand" falling in between the gears; however, this latest augmentation has yet to 11 be used in applied settings. Having reviewed some of the contemporary evidence concerning the 12 underpinning mechanisms driving the PAF's key components, it is now important to outline the context 13 of the present investigation to explain how this setting will help to address a number of the research-to-14 practice gaps identified thus far and show applied inter-relations between, and within, the gears. Context 15 The present investigation is positioned across the second year of operation of the Severn Stars 16 17 (a Superleague netball club in the UK) and builds on the findings of Navin et al. (2020) who investigated 18 the club's inaugural year. Navin et al. (2020) conducted a Participatory and Appreciative Action and 19 Reflection (PAAR, Ghaye et al., 2008) investigation focusing on how the overall leader's values were 20 operationalized, reporting numerous positive leadership practices such as the Transformational 21 behaviors (Bass & Riggio, 2006) of most coaches and the creation of the family feel of the club. 22 However, Navin et al. (2020) also reported that there were misconceptions between teams concerning

their alignment to, and the visibility of, the organization's overarching vision and values – and suggested

future investigations explored a broader range of club stakeholders to better explain these underpinning
 phenomena.

3 The Severn Stars netball club incorporates a wide range of stakeholders, partly due to the co-4 owned nature of the organization - a partnership between the University of Worcester and the 5 University of Gloucestershire. Navin et al.'s (2020) study focused solely on the on-court stakeholders of 6 coaches and players attached to the senior squad, U21 and U19 teams, and called for research which 7 incorporated senior managers and support staff from both partner institutions. Additionally, this second 8 year of operation featured the expansion of the performance pathway to include eight partner NOVA 9 academies. NOVA academies are hosted within educational institutions within, or close to, 10 Worcestershire and Gloucestershire. These educational institutions have a formal agreement with the 11 Severn Stars, use the logo, have coaches appointed with the agreement of the club, and participate in an 12 annual inter-NOVA competition. All eligible female athletes are welcome to attend a trial at a NOVA 13 academy; the coaches then take responsibility for providing regular training for the selected athletes 14 with the ultimate aim of feeding the U17 and U19 National Performance League (NPL) squads – and so 15 represent a crucial component of the Severn Stars operation (Severn Stars, 2022). The aim of this second investigation into the establishment of the Severn Stars, was to explore 16 17 how leadership behaviors and the broader environment of the club represented an effective context for 18 youth athletes to flourish, thereby addressing Navin et al.'s (2020) proposed research agenda. The 19 present investigation particularly focused on leadership behaviors and broader environmental issues 20 which were most pertinent to the Talent Development pathway below the Superleague team, although 21 draws on a wide range of stakeholders across the club to better understand the factors driving the 22 respective gears of the PAF. In founding this investigation in this way, we are concerned with the upper 23 range of youth development commensurate with the United Nation's (2022) definition which includes 24 anyone up until the age of 24. Specifically, we sought to address the following research questions:

1	1.	To what extent are effective leadership behaviors and positive environmental factors evident
2		across the operation of the Severn Stars?
3	2.	To what extent are the club's vision and values evident to all staff and players?
4	3.	What is the influence of the leadership behaviors and broader environment in facilitating
5		appropriate settings for youth development?
6	4.	How do leadership behaviors and the broader environment evolve over the course of a season?
7	5.	How could leadership behaviors and the broader environment within the club be enhanced to
8		better underpin the development of youth athletes?
9		Methodology and Methods
10		This investigation adopts a general, pragmatic, qualitative inquiry into the leadership behaviors

and broader environment of the Severn Stars. In adopting this position, we embrace Robson and
McCartan's (2016) perspective on pragmatic inquiry. Specifically, real-world empirical data are sought
as the foundation for determining truth, albeit tentatively. Furthermore, theoretical frameworks such
as the PAF are considered useful when they can be informed by such real-world empirical data, although
deterministic assertions are made cautiously, acknowledging that claims of inter-relationship between
phenomena are both fallible and temporal (Johnson & Onwuegbuzie, 2004; Robson & McCartan, 2016).

17 **Participants and procedure**

In scrutinizing the PAF, we acknowledge the gears are not static and the respective drivers cannot be best understood via a single instance of time. To that end, 21 individual and group semistructured interviews were conducted in two phases – one phase near to the beginning of the competitive season (n = 6, M = 41.59mins ± 6.25) and one phase following its conclusion (n = 15, M = 44.31mins ± 10.17). Twenty-eight stakeholders from across the different levels and operational functions of the club consented to participate in the individual (n = 13) and group interviews (n = 8). Individual interviews were conducted with participants with leadership responsibility (i.e., operational

1 staff and coaches). Group interviews of between two and five were conducted with participants with 2 experience of the environment of the club as a player or external stakeholder (i.e., players, parents and 3 learners on a Coach Development program). Interviews were conducted with players, parents and 4 external stakeholders in separate groups, i.e., commensurate with the methodology of the present 5 investigation, we did not conduct focus groups and so membership was not cross-pollinated (Parker & 6 Tritter, 2006). Coaches and athletes directly involved with competitive teams (i.e., those for whom the 7 leadership behaviors and the broader environment might have been particularly susceptible to change 8 due to competitive performance over the course of the season), were interviewed in the first phase, 9 whilst all participants were interviewed in the second phase. Data were only collected from those aged 10 at least 18 to ameliorate any potential perception from youth athletes that declining to participate 11 might hinder their chances of progressing through the pathway. Table 1 shows the participants, their 12 role and responsibility within the club, coaching experience where relevant, and illustrates whether they 13 participated in individual or group interviews. All names are pseudonyms. 14 Ethical approval for the study was granted by the University of Worcester College of Business, 15 Psychology and Sport Research Ethics Committee. Interview guides were constructed comprising thematic topics such as individual beliefs about leadership, learning how to lead, Severn Stars' values 16 17 and vision, leadership behaviors and the environment of the club. For example, guestions included 18 "how have you developed your beliefs about leadership?" and "what leadership behaviors are most 19 evident within the Severn Stars"? Probes were used to delve deeper into any topic requiring further

elucidation (Clark et al., 2021). Interviews were conducted in a quiet side-room at one of the club's
training venues and were subsequently transcribed verbatim yielding 167,391 words spanning 337 A4

22 pages.

23

1 Data analysis

2 At the completion of the project, the data were analysed in five stages featuring both inductive 3 and deductive processes following Robson and McCartan's (2016) approach to thematic coding analysis 4 which was managed via NVivo 12 Pro (QSR International, 2020). Firstly, the data were read and re-read 5 to gain familiarity. Secondly, on a line-by-line basis, the data were allocated initial meaning units 6 intended to capture the most important elements of each statement. Each segment of text could be 7 allocated more than one meaning unit depending on what was considered important. For example: 8 "What are the Seniors' values? What is their aim as a Superleague team? What do they 9 wanna [sic] be known as because that needs to be the same with the 21s, and the 19s, 10 and the NOVAs". (Hana, NOVA Head Coach, T2) This quotation was assigned the meaning units "values" and "connections across the club". In this way, 11 12 740 meaning units were created. In Stage 3, 47 first order themes were created by inductively grouping 13 the meaning units together (Robson & McCartan, 2016). For example, the first order theme 14 "Accountability" comprised meaning units including (a) athlete accountability, (b) athlete responsibility, (c) attribution, (d) blame, and (e) contract. Stages 1-3 were first conducted by the first author 15 16 independently before engaging with two other members of the authorship team separately to generate reflexive discussions concerning the process to that point. These reflexive conversations resulted in 17 18 minor adjustments to the analysis such as renaming a first order theme or moving a meaning unit. In 19 Stage four, the first order themes were assigned deductively to one of the three gears in the PAF, 20 namely, (a) Appropriate Settings, (b) Quality Social Dynamics, and (c) Personal Engagement in Activities. 21 Subsequently, the first order themes were then assigned to one of the subcategories within the 22 corresponding gear and a map of the relationship between the various themes and PAF gears was 23 created. First order themes which related to more than one gear were explicitly discussed by two 24 members of the authorship team and were assigned to the gear which they felt the data helped to

1 explain most profoundly. In Stage 5, the map was integrated and interpreted to generate the most 2 meaningful subheadings which were then connected to the most appropriate layer within each overall 3 gear (Robson & McCartan, 2016). For example, the first order theme "perceptions of being valued by 4 coaches" was deductively assigned to the Quality Social Dynamics gear and then connected to the 5 "relationships" subcategory. Some layers of the PAF were not represented within the final process of 6 interpretation and integration of the data from this investigation because relevant subheadings were 7 not generated through the analysis process. Rather than force all layers to be represented, we 8 considered the more authentic solution was to focus on the elements of the analysis which were most 9 profound. Finally, the integrated and interpreted model was presented by the first author to the rest of 10 the authorship team who reflexively discussed the structure and main messages to agree the major 11 points of discussion to have arisen from the analysis.

12 Rigor

13 Smith and Sparkes (2014) argued that qualitative research in sport psychology should move 14 away from pre-ordained quality checklists and instead invite researchers to propose their own criteria on which their research should be judged. Commensurate with such a "connoisseurial" (Smith & 15 Sparkes, 2014, p. 203) approach, we invite the reader to consider whether this research demonstrates 16 17 resonance, meaningful coherence (Tracy, 2019), understandability (Ghaye et al., 2008), analytic and 18 naturalistic generalization (Smith, 2018). Resonance will have been achieved if the concepts described 19 and the data presented enable the reader to empathize with the participants on more than a superficial 20 level. Meaningful coherence will have been achieved if the key messages of the investigation are 21 evident throughout this paper clearly connect and progress from one to the next. Furthermore, the 22 theoretical and empirical elements of the study should align and not be ill-fitting (Tracy, 2019). 23 Understandability will enable the reader to more deeply appreciate the generative and inter-dependent 24 nature of the gears of the PAF, the layers within them, and how these are evidenced within the context

1	of the Severn Stars' Player Pathway. Analytic generalization will have been achieved if the findings of
2	this study can be meaningfully related to the underpinning theoretical framework of the PAF (Smith,
3	2018). In this way, it is not the participants nor the Severn Stars organization which we consider to be
4	generalizable, it is rather how these data relate to the underpinning theory. Finally, naturalistic
5	generalization is evident when the reader can see something of their own world in the findings and is
6	subsequently better able to make sense of their reality because of this investigation (Smith, 2018).
7	Results and Discussion
8	This section will present a discussion of the subheadings deductively aligned to their respective
9	layers within the PAF gears beginning with Quality Social Dynamics before progressing to Appropriate
10	Settings and, finally, Personal Engagement in Activities. Subheadings are presented from the most
11	proximal to the most distal within their respective gear. Quotations will be presented and analysed in
12	relation to previous research in the field to generate an explanation of how the gears within the Severn
13	Stars' Player Pathway drive one another. For clarity of structure throughout the paper, the three gears
14	are named using upper case first letters and the respective layers are italicized. "T1" refers to interviews
15	conducted in the first phase and "T2" to the second phase.
16	Quality Social Dynamics
17	Perceptions of being valued by coaches (relationships)

Côté et al. (2020) strongly asserted the importance of quality relationships between athletes and coaches in facilitating appropriate social environments for the development of young people. The findings from this investigation affirm the magnitude of this foundational dyad, highlighting numerous beneficial aspects perceived by a range of stakeholders and uncovering several related mechanisms. One such mechanism was individualized support. For example, Sophie (Pathway Head Coach, T2) said: l've done three one-to-one meetings with every athlete; one pre-season, one during season and then one post the NPL league. We've also done individual performance

1	plans where they've rated themselves technically, tactically, and then extra things like
2	nutrition, hydration, lifestyle then we sit down, and we talk about them and then they
3	re-evaluate. The girls often come to me after a game and they say, "what can I do to get
4	better?" so we sit down and go through HUDL [video analysis].
5	The types of interventions outlined by Sophie are consistent with previous research, which has similarly
6	underlined the importance of individualized support (e.g., Bowles & O'Dwyer, 2021; Newland et al.,
7	2019). However, despite the open nature of the athlete's question in Sophie's statement, the tone of
8	the question positions the coach as the knowledge-holder to future development. Vinson and Bell
9	(2020) suggested that, when encouraging an autonomy-supportive and individualized coaching
10	approach, it is challenging to re-position the coach-athlete dyad away from hierarchical, knowledge-
11	seeking behaviors – even over the course of a season. Indeed, this perspective is strengthened when
12	considering Ana's (U19 athlete, T2) perspective:
13	We need more one-to-ones because, as a team, I felt like we were given a lot of
14	information but, individually, it's how you can improve to meet your goal, make sure
15	that we know our role, what we're doing, and ensure that everyone has a clear aim.
16	Here, whilst valuing such processes, Ana considered further individual attention was required.
17	Relatedly, educators have consistently reported that individualized approaches remain prohibitively
18	labor-intensive until the information flow becomes less hierarchical and more discursive (Darling-
19	Hammond et al., 2020). Indeed, the relationship between these various elements posed some
20	challenges. For example:
21	Because Sophie was part of Severn Stars [Superleague squad], when we had a game the
22	same day it was very hard to have a de-brief it was hard to get individual feedback
23	when Sophie obviously has other commitments warming-up and preparing for her game

1	we won't see her until Monday. We'll still get the stats back, we'll still talk about the
2	game, but it's not fresh in your mind. (Bronwyn, U19 athlete, T2)
3	Bronwyn perceives Sophie's numerous roles and responsibilities across the club were potentially in
4	conflict. Whilst the connections across the club will be shown to be a principal inter-related mechanism
5	for the PAF gears (see below), Bronwyn's perspective highlights the importance of navigating potential
6	tensions between multiple roles. Additionally, for some athletes, the development of coach-athlete
7	relationships was not a particularly quick process. Carlotta (U19 athlete, T2) said:
8	It took me a while to feel valued in the step-up because although I was picked for the
9	fifteen some weeks, some weeks I wasn't picked for the game, and you didn't really get
10	an explanation. Sometimes I felt personally that in the game play and on the Thursday,
11	I'd done quite well but as soon as I asked her [Sophie] why I wasn't playing she gave
12	me a good explanation and said what I can improve [now] I actually belong to the
13	team and the [NPL] tournament really solidified that.
14	Carlotta's perspective resonates with other recent research which has also highlighted that quality
15	coach-athlete relationships are built over time and require very frequent maintenance (Foulds et al.,
16	2019; López de Subijana et al., 2021). For Carlotta, being valued was related both to meaningful,
17	individualized, interactions with the coach, but also identifying as being part of the team (i.e.,
18	connecting <i>relationships</i> to <i>team dynamics</i>). That it took time to develop a sense of perceived value to
19	the organization was not solely reserved for athletes. Hana (NOVA Head Coach, T2) said:
20	I don't think it was until I was picked to coach at the NPL tournament [that I felt valued].
21	I didn't think we were valued all year and I think that's why some of us NOVA coaches
22	get a little bit agitated because we put in so many hours and then we don't get anything.
23	We don't even get a thank you at the end of it and we don't even know who that thank
24	you should come from. At the NPL tournament – a lot of "thank yous" came, from [Club

- 1 Director] which was lovely, but a lot come from parents because I've got the
- 2 relationships with the parents all year.

Whilst not an athlete, Hana's experience demonstrates how *relationships* within the club were related to the broader *social environment*. In this case, Hana's perception of feeling valued is related to the gratitude shown by multiple stakeholders and the concomitant recognition of the high level of commitment she felt she offered through the season. Indeed, the perception of being valued was consistent across many stakeholders featured in this investigation and relates strongly to the broader organizational structure of the Severn Stars.

9 *"Professional" (team dynamics)*

10 The term "professional" featured strongly and pervasively throughout this investigation and 11 revealed some important mechanisms which again demonstrated the inter-connected nature of all 12 three gears, but also between their respective layers. Within the *team dynamics* layer of the Quality 13 Social Dynamics gear, professionalism was understood by participants to mean a determination to 14 ensure behavioral norms were implemented to a high standard. For example, Ellie (NOVA Head Coach, 15 T2) said:

16 I think one word that I was really keen on this year was "professional". So, whether that
17 was getting to sessions on time – which sometimes I find difficult because I might be at
18 a school match – but making sure that there's always someone there to start the session
19 ... professional with the parent communication, being professional with the girls on
20 court ... sending out information nice and early, making sure my coaches are well aware
21 of what they're doing.
22 Ellie's description of what she considers to be professional behaviors are aimed to provide a foundation

on which to construct the team dynamic of her NOVA squad. Ellie's intentions are consistent with
 previous research which has reported a positive relationship between such behaviors as appropriate and

1	effective communication, and perceptions of athlete satisfaction (McLaren & Spink, 2018; Smith et al.,
2	2013). Suki (Senior Head Coach, T2) outlined some similar behaviors which she considered to be
3	important underpinnings for the norms of the senior team:
4	The behaviors in terms of being professional every training session. You try your
5	hardest, being smart, so all the small things – you turn up on time, you wear the right
6	kit, do your online well-being and your S&C training, tie-up with someone else to help
7	them out if they can't get a lift and you tidy-up your litter at the end. All those small
8	things contribute to being respectful of the venue and the people you are around we
9	haven't got any prima-donnas in our team.
10	Suki's list of behaviors are consistent with research investigating effective culture in elite sport teams in
11	terms of, for example, avoiding the deleterious effect of mavericks, and demonstrating respect for their
12	opponents, although do not demonstrate the commitment to autonomy-supportive behaviors also
13	advocated in such studies (Hodge et al., 2014). A further inter-related mechanism between professional
14	behaviors as a component of club structure and relationships was evident in the selection policy
15	implemented throughout the pathway. For example, Deborah (Coach Developer, T2) said:
16	We had to push the performance value and that was hard for coaches, we had to
17	manage them through it even having the selection policy. It's hard for coaches who
18	have never followed objective materials in front of them. So, with your pathway coach,
19	getting hundreds of players down to your fifteen is very difficult especially if you've
20	been working with some of them.
21	Research concerning talent identification has accelerated rapidly over the last 20 years (Williams et al.,
22	2020). It is beyond the scope of this investigation to discuss the Severn Stars' talent identification
23	system directly, other than to acknowledge Deborah's perspective that, understandably, the club was
24	starting from a relatively blank slate. Ellie (NOVA Head Coach, T2) agreed that this was indeed a new

3

system to her coaching team and suggested that this might have been made more visible from the start
 of the season:

Being part of the selection process for the 17s, there was a criteria they were using ...

that players should be trying to hit each one of those and that would be really useful to 4 5 have as a coach because that's what we can base our coaching off during the season ... 6 it's the first time I've heard of it actually. 7 Ellie's admission that the process of selection criteria was new to her further affirms the inter-related 8 mechanism of *club structure* and the broader *social environment* of the Severn Stars as illustrated by 9 professional behaviors. Whilst the stakeholders within this section considered the term professional to 10 be wholly positive, it is worth noting the caution raised by Côté et al. (2022, p. 10) regarding the likely 11 exclusion of athletes from less affluent environments as youth sports seek to become ever-more 12 "professionalized" and potentially marginalized equity-deserving groups (Camiré et al., 2022). This 13 section has also demonstrated the connection between club structure and team dynamics from the 14 perspective of normative behaviors. The results demonstrate that such behaviors were also shaped by

15 the inter-relation of the broader social environment and the club's values.

16 The inter-relation of the social environment and club values (social environment)

The broader organizational structure of the club was important because of the extent to which it related to the different layers of the Quality Social Dynamics. Whilst previous sections demonstrated the importance of athletes' perceiving value through *relationships*, key stakeholders in the junior teams wanted assurance that being a part of the pathway was to be connected to the Superleague squad in a meaningful way. Whilst the Superleague team is not the focus of this investigation, their position in the club structure mattered to almost all the key stakeholders who wanted to know that there was connectivity between the steps of the pathway. Being selected into the Severn Stars Player Pathway

1	was profoundly important for some of the athletes because it represented a genuine step forward on
2	the highly competitive journey to play elite-level netball. Jamie (Parent, T2) said:
3	I think my daughter was just a bit overwhelmed because it's like the highest she's ever
4	played, and she was always told she was too short, and she would never be accepted.
5	So, when she came in, it was a lot, and she felt very taken in by it all.
6	Jamie's statement underlines the momentous nature of the experience of entering a performance
7	pathway, whilst also highlighting the challenges inherent to developmental transitions. This finding
8	echoes Larsen et al.'s (2014) report that young footballers entering a talent development environment
9	required considerable help to acquire the necessary psychosocial tools to negotiate the journey
10	successfully. Nevertheless, several participants identified that the athletes were provided with a
11	positive and prosocial environment in which to develop. For example, Sophie (Pathway Head Coach, T2)
12	recognized both the prosocial dynamic and the breadth of stakeholders contributing to the club's social
13	environment:
14	It was definitely that family feel – even the parents got that feeling and even parents
15	became very close and formed relationships and I think that's really important. With
16	signing a contract that's essentially what they're trying to buy into – that value. We sat
17	down at the start of the season and did our values together I don't think it's
18	necessarily those values which are demonstrated across the franchise There [needs to
19	be] more of a connection throughout the seniors and the pathway because a lot of the
20	seniors didn't know half the girls playing in the U19s or U21s.
21	Sophie's testimony suggests that, consistent with Navin et al.'s (2020) findings from the previous season,
22	she felt that whilst the team dynamics were positive and founded on explicit, shared values, this still was
23	not true of the club's broader social environment. These findings echo Curran et al.'s (2022)
24	investigation into the Irish field hockey junior international talent development system where it was

1	reported that, even when there was communication between stages, it was largely reactive and lacked
2	strategic coherence. Similarly, Jane (Coach U21s, T2) acknowledged the lack of strategic connection
3	across the club, feeling that direction should come from higher-up in the organization:
4	I think that everything just needs to be a little clearer from the top down. I think
5	everybody needs to have their own roles and what's expected of them First off, we
6	need to actually recognize what the values of the Severn Stars are, to have that more
7	visible It's not in a handbook, it's not on a wall or embroidered on the kit it's not
8	visual and nobody knows it even verbally well, apart from that PowerPoint meeting
9	we had at the beginning which invited along the players and the parents.
10	Here, Jane wrestles between acknowledging that whilst the club values were shared in a meeting at the
11	start of the year, they did not appear to have the immediacy and tangibility she desired. Whilst
12	numerous authors have argued that cultural signalling such as adorning the walls of the training venue
13	with team slogans represents a shallow appreciation of the importance of organizational culture (see,
14	for example, Deal & Peterson, 2016; McDougall et al., 2020), Jane's perspective illustrates the potential
15	value of establishing mechanisms which enable the meaningful sharing and articulation of intangible
16	concepts such as vision and values – elements for which the senior leadership are ultimately
17	responsible. The results of this investigation demonstrate that those key stakeholders in senior
18	leadership were aware of a need to establish the glue holding everything together more explicitly. For
19	example, Sarah (General Manager, T2) said:
20	The message I'd got from year one is that there was a certain amount of friction.
21	Pockets of people were genuinely doing their thing to the best of their ability with the
22	resources they had, be it coaching, team management, events, social media,
23	sponsorship, game night delivery, schools or community engagement – but because of
24	time and resource, no-one was able to see who did what and there was limited

1	consistency. So, things were often being missed from an operational perspective and
2	people felt we kept going back to step one. That doesn't help glue anything together.
3	You're bringing together experienced, bright, intelligent people who really try hard
4	the glue is people and the relationship building.
5	Navin et al. (2020) reported that future research should investigate the dynamics underpinning the
6	relationship between the two supporting universities of the Severn Stars including consideration of the
7	perspective of senior leadership. The results of the present investigation show the senior leaders were
8	keenly aware of the importance of strong partnership, and of some of the issues which might cause the
9	types of friction to which Sarah alluded above. For example, two of the senior leaders outlined their
10	broader approach to the leadership of the club:
11	The most interesting one is recruitment and retention because, in some ways, we're
12	competitors we've worked really hard to make sure that there isn't a conflict of
13	interest It has been very honorable so far and trust is important on both sides I
14	think that we have to keep working to do what's in the best interests of the club and
15	we've been really good so far at not always looking at what's in the best interest of
16	individual universities. (Mark, General Director, T2)
17	My remit primarily is to see that the Severn Stars achieves what both institutions set out
18	together in the agreement making sure that we keep on track and make sure it is
19	bringing benefit to both the communities it works in the prime purpose of both
20	institutions are actually really quite similar – we're there for public good. (Richard, Chair
21	of the Board, T2)
22	Mark and Richard's perspectives are reflective of a full-range leadership approach (Avolio & Bass, 1991),
23	featuring their transactional focus on the contractual agreement and the avoidance of a conflict of
24	interest. Both Mark and Richard also highlight more Transformational (Bass & Riggio, 2006)

1	characteristics such as trust and setting a collective vision. Nonetheless, these high-level aspirations
2	founded on the co-owned organizational structure did not ensure that operational issues were
3	seamless. In addition to the friction previously discussed, Sarah (General Manager, T2) said:
4	You have to constantly negate self for the greater good I have to constantly think
5	about the two parties coming together if your top people can go away and talk about
6	the Worcester end and the Gloucester end independently – then you've not got
7	partnership. I think that's happened loads less this year.
8	It is evident that the organizational structure (i.e., glue) which binds together these key stakeholders
9	does have an influence on the broader <i>social environment</i> of the club and might be underpinned by
10	"grains of sand" in between the PAF's gears (Côté et al., 2022, p. 7). Indeed, Sarah's perspective is that,
11	whilst the collective element is improving, is it not yet frictionless and requires further lubrication.
12	Akkerman and Bakker (2011, p. 134) ascribe the term "boundary interactions" – asserting the process of
13	two different organizational practices coming together as being a learning venture which is likely to
14	result in new ways of (joint) operation being established, although the extent to which this will be
15	harmonious within the Severn Stars is, as yet, unclear. The findings in this section demonstrate the
16	inter-relation between all three layers of the Quality Social Dynamics gear and that these elements are,
17	to some extent, connected. The issues highlighted so far have predominantly been concerned with
18	elements relating to Quality Social Dynamics. Taking a further step back enables a more strategic view
19	of the inter-related mechanisms impacting the Appropriate Settings gear.
20	Appropriate Settings
21	Connections through NOVAs and to the community (community/league structure)
22	The addition of the NOVA academies represented a considerable step in the development of the
23	Severn Stars, more than tripling the number of youth athletes officially connected to the club. Whilst
24	the principal aim of the NOVA academies was to develop an effective Talent Development system, Lorna

(Director of Netball, T2) considered they represented an opportunity to build connections both within
 and across the club:

3	My personal aim was that the Super NOVA tournament be a big success. I wanted it
4	to be a celebration and I wanted it to generate noise regionally, I wanted it to help build
5	our relationship with West Midlands Netball. I wanted to make the most out of having
6	that venue [the Arena] and I wanted it to be an opportunity where county academy
7	coaches, NOVA coaches, staff, volunteers, parents, players, umpires, no longer felt that
8	they were working in isolation. That it was a chance to see that everyone else has been
9	busy training and practicing throughout the year. So that tournament was a big target
10	for me to have eight counties represented.
11	Lorna's acknowledgement of the strategic value of the NOVA academies demonstrates how the club and
12	community structure (i.e., Appropriate Settings) can be utilized to drive the broader social environment
13	(i.e., Quality Social Dynamics). Lorna highlights her perception of the importance of using the academy
14	tournament as a mechanism to tackle potential isolation in the workforce, but also to generate
15	connections to the local regional netball association. Whilst the limited previous research in this area
16	has acknowledged the importance of: (a) connections to external stakeholders, (b) shared
17	understandings of athletes' development needs, and (c) an alignment of expectations (Curran et al.,
18	2021), our findings extend previous studies by providing a tentative first step in identifying inter-related
19	mechanisms. For example Burgess and Naughton (2010, p. 111) suggest that factors such as media and
20	culture should be "appropriately mediated"; Lorna's use of the Super NOVA tournament to bring various
21	stakeholders together demonstrates an applied and tangible example. One strategy deployed by the
22	club to further connect the Superleague team with the community was player presence – where a
23	member of the squad makes an appearance at a local school or event. Suki (Senior Head Coach, T1)
24	highlighted some challenges in this regard:

Leadership comes with responsibility. The players aren't great at doing appearances, so
I think the leadership develops with the off-court stuff as well as the on-court stuff ... it's
about encouraging players to really understand what you get for being a Superleague
player – this is what you take from us, but this is what you must give. I think that's still a
work in progress. I think the work we're doing about making the players more
responsible and accountable is really good and we've got a number of players that are in
a coaching environment and giving back to the community.

8 Suki highlights some of the tensions within the Severn Stars which are illustrative of the still-emerging 9 nature of top-level netball in the UK and the challenges this presented in terms of connecting the 10 Superleague squad to the community. Almost all the Severn Stars Superleague squad were juggling two 11 or three significant occupational roles (e.g., elite athlete, postgraduate student, and coach at local 12 private school) and thus, were not full-time professional athletes. McCarthy et al. (2021) reported the 13 New Zealand national netball team, the Silver Ferns, struggled with similar kinds of multi-role tensions 14 which are likely to exist for some time to come. It is this kind of issue which could also be considered a sociocultural "grain of sand" that potentially hindered the slick operation of the PAF's gears (Côté et al., 15 2022, p. 7). Our findings demonstrate that the connection between the Superleague squad and the rest 16 of the club is crucial – although also fraught with numerous challenges. Indeed, Gabby and Hephzi 17 18 (Senior Players, T2) said:

Gabby: Last year, we were very very separate from the club as a whole. Part of that is
perhaps due to the fact that we had a change in team managers, the fact that some of
the stuff off-court at times maybe felt a bit chaotic, or the miscommunication stuff. That
made [former Senior Coach] pull us back a bit, maybe we did it subconsciously to
protect our little bubble – pulling the team away from the chaos. The fact that we

- weren't training at our home arena actually makes you feel like you're not part of the
 club.
- 3 Hephzi: Integrate, integrate, integrate for the future of Stars that's so important
- 4 because I think we did that one or twice last year and there were definitely
- 5 developments from the two sessions.
- 6 Gabby and Hephzi highlight that one of the most challenging elements emanating from the
- 7 organizational structure, and that affected the club's broader social environment (i.e., Quality Social
- 8 Dynamics gear), was the tension between performance and development, which has been extensively
- 9 reported across many different contexts (e.g., Henriksen & Stambulova, 2017; Larsen et al., 2014). Our
- 10 findings highlight the importance of person-centred approaches which recognize and value
- 11 stakeholders' lives beyond their immediate sport experience (Litchfield & Elliott, 2020). Furthermore,
- 12 our findings are consistent with many such reports which often highlight the need for effective
- 13 communication between stakeholders and the maintenance of seamless, integrated, pathways as far as
- 14 is possible (Henriksen et al., 2010; McLaren & Spink, 2018). The importance of integrated pathways was
- reinforced by the powerful draw of the Superleague squad and was evident across the various key
- 16 stakeholders. Sophie (Head Pathways Coach, T2) said:
- 17 Being part of the Severn Stars is going to be a lot different to just playing for your club
- 18 side. These girls come in and train alongside the Superleague team so they know there
- 19 is a pathway and there's a ladder and there's a stepping stone ... My U19s all very much
- 20 fan girl the senior team ... [but] I can tell you now that half the girls in my pathway
- 21 wouldn't have a clue who the Director of Netball is or who does the media, so I
- 22 definitely think that needs to be better ... The U21s and U19s had a really good bond but
- 23 I feel that there needs to be more work from the senior's end ... there definitely needs
- to be more of a community feel [across the club].

1	The findings in this section have demonstrated that whilst there are clear connections between the
2	gears of Appropriate Settings and Quality Social Dynamics, most notably relating to the club structure
3	and social environment, there are many elements which are not producing the frictionless movement
4	which might see the gears turning more smoothly in this context. The power of the Superleague to act
5	as an inspirational incentive was also reported by Navin et al. (2020), and remains strongly in evidence in
6	this second year of the club's operation. Navin et al. (2020) also reported that investigating the roles
7	and perceptions of a broader range of stakeholders would provide further insight into the club's overall
8	connectivity.
9	Personal Engagement in Activities
10	For many youth athletes in the Severn Stars Player Pathway, netball represented their principal
11	sport, although the findings of this investigation demonstrate the importance of considering the various
12	other activities which were important to them. Our findings demonstrate how the Quality Social
13	Dynamics, Appropriate Settings, and Personal Engagement in Activities gears are inter-related.
14	Specifically, the athletes' commitment to the pathway was sometimes in tension with the suitability of
15	the playing field, club structure and league structure. For example, Jane (Coach, U21s, T2) said:
16	They knew the league was probably too high but that's what they wanted to aim for
17	Having had a break after NPL there were a couple that disengaged. Having a
18	conversation about not wanting to look silly There were mixed feelings about how
19	much emphasis to place on this tournament – what does it mean if we do badly?
20	Within the club's first year of operation, Navin et al. (2020) reported that both U21 and U19 squads
21	struggled to compete in their respective competitions and acknowledged that it would take some
22	considerable time to bridge the gap to more established franchises. Our findings demonstrate this
23	deficit remained evident in the second year of operation and how the inability to compete detracted
24	from some athletes' intrinsic motivation and commitment to the club (Light & Harvey, 2017). Carlotta

1	(U19 athlete, T2) described how the extensive commitment required was mediated through coaches
2	promoting a balanced perspective in terms of winning and development:
3	I feel like Stars expect a lot of commitment, which is good at this level. I go to school in
4	[town approximately 70 miles away], so it takes ages to get to Gloucester. Sophie
5	appreciated that and still gave me the opportunities even if I couldn't make sessions
6	its tiring traveling, playing was quite tiring, it was good to have a laugh at the
7	tournament the coaches understood and played games and it was just fun we have
8	to promote the fun side of netball because you can't put this much pressure on our age
9	to perform all the time.
10	Carlotta's perspective reflects previous research which has promoted a carefully considered balance
11	between the demands placed on athletes, winning, and enjoyment (Côté et al., 2020; Curran et al.,
12	2022). Erdal (2018) argued that the positive balance struck alluded to by Carlotta is increasingly rare in
13	contemporary youth sport which commonly reflects adult models of competition complete with an
14	over-emphasis on winning over development. Carlotta's intrinsic motivation has been protected by the
15	acknowledgement by the coach of her individual circumstance, set within a social environment which
16	promoted enjoyment and a league structure which was somewhat out-of-reach. Jane (Coach U21s, T2)
17	explained how these elements of the Appropriate Settings and Quality Social Dynamics gears were inter-
18	related with some of the athletes' Personal Engagement in Activities:
19	A couple made decisions they weren't going to play at a tournament because they're
20	going on holiday – its booked and they're not cancelling but I did have one girl that
21	completely changed all her holidays round so they she could attend training and play.
22	Another girl – she decided to no longer carry on with netball because she had an
23	opportunity to look at rowing Olympically ultimately it's their playing career and I

1

2

can't force them to do anything ... it's about having that open and honest relationship with the player and allowing them to make their own decision.

3 Jane's perspective is encouraging in that she appears to both acknowledge and advocate for the 4 diversity of her athletes' engagement with other sports and activities. She has not sought to diminish 5 their autonomy or penalize their decision to choose another activity over netball. Jane's approach is 6 consistent with research which argues that diversity should precede specialization (e.g., Fraser-Thomas 7 et al., 2008; Vierimaa et al., 2017). Whilst the majority of the pathway athletes impacted by the inter-8 relations discussed in this investigation are likely to be positioned within the 'investment' years of the 9 Developmental Model of Sport Participation (Côté, 1999; Côté & Vierimaa, 2014), Jane's testimony 10 reminds us that young people may still require considerable support and understanding to enable them 11 to balance their various commitments and flourish in whatever direction they ultimately choose to go 12 (Côté, 1999; Côté et al., 2020). 13 Limitations 14 This investigation has sought to address several research-to-practice gaps, specifically addressing the extent to which the various mechanisms described are inter-related. It is not supposed 15 that the inter-relations we have described are causal mechanisms. Nonetheless, the findings we have 16 17 presented illustrate the plausible generative relationship between several of the mechanisms within the 18 gears of Quality Social Dynamics, Appropriate Settings and Personal Engagement in Activities. 19 Inevitably, any single-club investigation can only help to illuminate elements of the PAF. Resultantly, 20 this discussion has focussed on a few of the potential inter-relations; there are many others which

22

21

require further investigation.

Practical Recommendations and Conclusions

This investigation has shown that the environment constructed for young athletes within the
 Severn Stars was influenced by a wide range of inter-related mechanisms and that stakeholders at every

1 level had some influence over how the various elements of the PAF gears were related to one another. 2 This investigation has revealed particularly strong connections within and between Appropriate Settings 3 and Quality Social Dynamics, whilst the prominent features of the Personal Engagement in Activities 4 gear were less prominent but still connected to the social and physical environment of the club. The 5 leadership behaviors most important to the positive environment of the Severn Stars were those related 6 to individualization and generating perceptions of value. These elements were inter-related with the 7 *club structure* and *league structure* because of the importance of the Superleague and the various 8 stakeholders' desire to see the relationship between their individual contribution and the elite netball 9 that Superleague represents. For pathways players (and coaches) this investigation has emphasized the 10 importance of the clarity of the stepping stones in the developmental pathway. Administrators of 11 similar Talent Development pathways may want to consider what factors, above and beyond the 12 prosocial foundations of intrasquad dynamics, might be important to ensuring the "grains of sand" (Côté 13 et al., 2022, p. 7) do not prevent youth athletes' progress through the 4Cs and ultimately to the 3Ps over 14 an athletic career. Specifically, administrators can build on individualized programme delivery to ensure 15 each athlete understands the journey to the next stage of the process and are working within an aligned 16 system of actions and values that, ultimately, allow athletes to achieve their long-term outcomes while 17 maintaining their health and interest in the short-term.

Although the clarity of the structure of the pathway was important within the Severn Stars, the perception of a coherent and consistent vision and set of values reflected by every team within the club remains a work in progress. Consistent, clear vision and values remain challenging to establish because of the ongoing difficulties in balancing the demands of athletes' multiple roles and activities within a university-based co-ownership model. Senior operational leaders and managers of organizations featuring multiple stakeholders may want to consider how their practice may facilitate, or hinder, the effective integration of the activities that athletes engage in within the constraints of specific physical

1 and organizational settings and particular social dynamics. Specifically, senior operational leaders need 2 to ensure that the vision and values of the organization are sufficiently clear and tangible to all 3 stakeholders, and meaningfully shape the athletes' daily activities in an organizational and social 4 environment that is caring and supportive This investigation has shown the mechanisms underpinning 5 PAF did indeed shift over the course of the season, but not equally. Indeed, the Appropriate Settings 6 gear appears to be more stable across time and more difficult to change than the activities that in which 7 the athletes engage or the social dynamics. Furthermore, interventions on the more proximal layer of a 8 specific gear (e.g., relationships) can be implemented more clearly and directly than interventions on a 9 more distant layer of a gear (e.g., social environment). Given these observations, it may be useful for 10 sport organizations to understand that interventions on different gears and layers of the PAF will lead to 11 direct or indirect outcomes over different timelines.

Future research should continue to investigate the evolution of the inter-related mechanisms discussed here both through the continued immersion within the Severn Stars and in other applied settings. In particular, further attention should be given to the Personal Engagement in Activities gear and how the various activities of sport and life are inter-related to Quality Social Dynamics and Appropriate Settings. Furthermore, future research should seek to establish the connection in applied settings between the underpinning inter-related mechanisms of the PAF, the 4Cs, and the 3Ps.

References

2	Akkerman, S. F., & Bakker, A. (2011). Boundary crossing and boundary objects. Review of Educational
3	<i>Research, 81</i> (2), 132-169. <u>https://doi.org/10.3102/0034654311404435</u>
4	Avolio, B. J., & Bass, B. M. (1991). The Full Range of Leadership Development Center for Leadership
5	Studies.
6	Bass, B. M., & Riggio, R. E. (2006). Transformational Leadership (2nd ed.). Lawrence Erlbaum Associates.
7	Bowles, R., & O'Dwyer, A. (2021). Identifying learning in a coaching community of practice: a
8	collaborative self-study. European Journal for Sport and Society, 1-18.
9	https://doi.org/10.1080/16138171.2021.1930943
10	Bronfenbrenner, U. (1999). Environments in developmental perspective: Theoretical and operational
11	models. In S. L. Friedman & T. D. Wachs (Eds.), Measuring Environment Across the Life Span:
12	Emerging methods and concepts (pp. 3-28). American Psychological Association.
13	Burgess, D. J., & Naughton, G. A. (2010). Talent development in adolescent team sports: A review.
14	International Journal of Sports Physiology and Performance, 5(1), 103-116.
15	https://doi.org/10.1123/ijspp.5.1.103
16	Burton, D., Gillham, A. D., & Hammermeister, J. (2011). Competitive engineering: Structural climate
17	modifications to enhance youth athletes' competitive experience. International Journal of Sports
18	<i>Science and Coaching, 6</i> (2), 201-218. <u>https://doi.org/10.1260/1747-9541.6.2.201</u>
19	Camiré, M., Newman, T. J., Bean, C., & Strachan, L. (2022). Reimagining positive youth development and
20	life skills in sport through a social justice lens. Journal of Applied Sport Psychology, 34(6), 1058-
21	1076. <u>https://doi.org/10.1080/10413200.2021.1958954</u>
22	Clark, T., Foster, L., Sloan, L., & Bryman, A. (2021). Bryman's Social Research Methods (6th ed.). Oxford
23	University Press.
24	Coakley, J. (2011). Youth sports: What counts as "Positive Development?". Journal of Sport and Social
25	Issues, 35(3), 306-324. https://doi.org/10.1177/0193723511417311
26	Côté, J. (1999). The influence of the family in the development of talent in sport. The Sport Psychologist,
27	13(4), 395-417. <u>https://doi.org/10.1123/tsp.13.4.395</u>
28	Côté, J., Murata, A., & Martin, L. J. (2022). The personal and social development of children in sport. In P.
29	K. Smith & C. H. Hart (Eds.), Wiley-Blackwell Handbook of Childhood Social Development (3rd
30	ed., pp. 386-404). John Wiley and Sons. <u>https://doi.org/10.1002/9781119679028.ch21</u>
31	Côté, J., Turnnidge, J., & Evans, M. B. (2014). The dynamic process of development through sport.
32	Kinesiologia Solvenica, 20(3), 14-26.
33	Côté, J., Turnnidge, J., Murata, A., McGuire, C., & Martin, L. J. (2020). Youth sport research: Describing
34	the integrated dynamic elements of the Personal Assets Framework. International Journal of
35	Sport Psychology, 51(6), 562-578. https://doi.org/10.7352/IJSP.2020.51.562
36	Côté, J., Turnnidge, J., & Vierimaa, M. (2016). A personal assets approach to youth sport. In K. Green &
37	A. Smith (Eds.), Routledge Handbook of Youth Sport (pp. 243-255). Routledge.
38	Côté, J., & Vierimaa, M. (2014). The developmental model of sport participation: 15 years after its first
39	conceptualization. Science & Sports, 295, S63-S69. https://doi.org/10.1016/j.scispo.2014.08.133
40	Cronin, C., Walsh, B., Quayle, L., Whittaker, E., & Whitehead, A. (2019). Carefully supporting autonomy –
41	learning coaching lessons and advancing theory from women's netball in England. Sports
42	Coaching Review, 8(2), 149-171. <u>https://doi.org/10.1080/21640629.2018.1429113</u>
43	Curran, O., MacNamara, Á., & Passmore, D. (2021). Singing off the same hymn sheet? Examining
44	coherence in a talent development pathway (part 1). <i>Journal of Sports Sciences</i> , 1-8.
45	https://doi.org/10.1080/02640414.2021.1896456

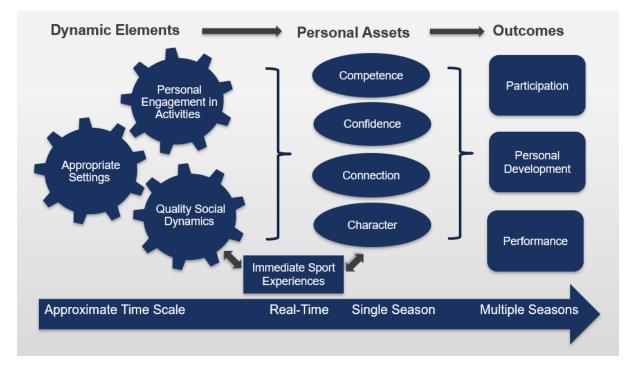
1	Curran, O., Passmore, D., & MacNamara, Á. (2022). Singing off the same hymn sheet? Examining
2	coherence in a talent development pathway (part 2). Journal of Sports Sciences, 1-8.
3	https://doi.org/10.1080/02640414.2021.2021702
4	Darling-Hammond, L., Flook, L., Cook-Harvey, C., Barron, B., & Osher, D. (2020). Implications for
5	educational practice of the science of learning and development. Applied Developmental
6	Science, 24(2), 97-140. https://doi.org/10.1080/10888691.2018.1537791
7	Deal, T. E., & Peterson, K. D. (2016). Shaping School Culture (3rd ed.). John Wiley & Sons.
8	Duguay, A. M., Loughead, T. M., Hoffmann, M. D., & Caron, J. G. (2020). Facilitating the development of
9	shared athlete leadership: Insights from intercollegiate coaches. Journal of Applied Sport
10	Psychology, 1-22. https://doi.org/10.1080/10413200.2020.1773576
11	Erdal, K. (2018). The Adulteration of Children's Sports: Waning health and well-being in the age of
12	organized play. Rowman & Littlefield.
13	Erikstad, M. K., Johansen, B. T., Johnsen, M., Haugen, T., & Côté, J. (2021). "As many as possible for as
14	long as possible" - A case study of a soccer team that fosters multiple outcomes. <i>The Sport</i>
15	Psychologist, 35(2), 131-141. https://doi.org/10.1123/tsp.2020-0107
16	Foulds, S. J., Hoffmann, S. M., Hinck, K., & Carson, F. (2019). The coach–athlete relationship in strength
17	and conditioning: High performance athletes' perceptions. <i>Sports</i> , 7(12), 244.
18	https://doi.org/10.3390/sports7120244
19	Fraser-Thomas, J., Côté, J., & Deakin, J. (2008). Understanding dropout and prolonged engagement in
20	adolescent competitive sport. <i>Psychology of Sport & Exercise</i> , 9(5), 645-662.
21	https://doi.org/10.1016/j.psychsport.2007.08.003
22	Ghaye, T., Melander-Wikman, A., Kisare, M., Chambers, P., Bergmark, U., Kostenius, C., & Lillyman, S.
23	(2008). Participatory and appreciative action and reflection (PAAR) – democratizing reflective
24	practices. <i>Reflective Practice</i> , 9(4), 361-397. https://doi.org/10.1080/14623940802475827
25	Henriksen, K., & Stambulova, N. (2017). Creating optimal environments for talent development: A
26	holistic ecological approach. In J. Baker, S. Cobley, J. Schorer, & N. Wattie (Eds.), <i>Routledge</i>
27	Handbook of Talent Identification and Development (pp. 370-386). Routledge.
28	Henriksen, K., Stambulova, N., & Roessler, K. K. (2010). Successful talent development in track and field:
29	Considering the role of environment. Scandinavian Journal of Medicine & Science in Sports, 20,
30	122-132. <u>https://doi.org/10.1111/j.1600-0838.2010.01187.x</u>
31	Hodge, K., Henry, G., & Smith, W. (2014). A case study of excellence in elite sport: Motivational climate
32	in a world champion team. <i>The Sport Psychologist, 28</i> (1), 60-74.
33	https://doi.org/10.1123/tsp.2013-0037
34	Holt, N. L., Neely, K. C., Slater, L. G., Camiré, M., Côté, J., Fraser-Thomas, J., MacDonald, D., Strachan, L.,
35	& Tamminen, K. A. (2017). A grounded theory of positive youth development through sport
36	based on results from a qualitative meta-study. International Review of Sport and Exercise
37	Psychology, 10(1), 1-49. <u>https://doi.org/10.1080/1750984X.2016.1180704</u>
38	Johnson, R. B., & Onwuegbuzie, A. J. (2004). Mixed methods research: A research paradigm whose time
39	has come. Educational Researcher, 33(7), 14-26. https://doi.org/10.3102/0013189X033007014
40	Larsen, C. H., Alfermann, D., Henriksen, K., & Christensen, M. K. (2014). Preparing footballers for the
41	next step: An intervention program from an ecological perspective. Sport psychologist, 28(1), 91-
42	102. https://doi.org/10.1123/pes.2013-0015
42 43	LaVoi, N. M., & Dutove, J. K. (2012). Barriers and supports for female coaches: An ecological model.
43 44	Sports Coaching Review, 1(1), 17-37. https://doi.org/10.1080/21640629.2012.695891
44 45	Lerner, R. M., Wang, J., Champine, R. B., Warren, D. J., & Erickson, K. (2014). Development of civic
45 46	engagement: Theoretical and methodological issues. International Journal of Developmental
40 47	
4/	Science, 8(3-4), 69-79. <u>https://doi.org/10.3233/DEV-14130</u>

1	Light, R. L., & Harvey, S. (2017). Positive Pedagogy for sport coaching. Sport, Education and Society,
2	22(2), 271-287. <u>https://doi.org/10.1080/13573322.2015.1015977</u>
3	Litchfield, C., & Elliott, S. (2020). Maximising enjoyment to sustain girls' sport participation: A unique
4	case study of netball in Australia. Qualitative Research in Sport, Exercise and Health, 13(5), 781-
5	799. <u>https://doi.org/10.1080/2159676X.2020.1778063</u>
6	López de Subijana, C., Martin, L. J., Ramos, J., & Côté, J. (2021). How coach leadership is related to the
7	coach-athlete relationship in elite sport. International Journal of Sports Science & Coaching,
8	<i>16</i> (6), 1239-1246. <u>https://doi.org/10.1177/17479541211021523</u>
9	McCarthy, L., Martin, A. J., & Watson, G. (2021). Developing winning ways for women's sport: New
10	Zealand's national netball team. The International Journal of the History of Sport, 1-16.
11	https://doi.org/10.1080/09523367.2021.1912025
12	McDonough, M. H., Ullrich-French, S., Anderson-Butcher, D., Amorose, A. J., & Riley, A. (2013). Social
13	responsibility among low-income youth in physical activity-based Positive Youth Development
14	programs: Scale development and associations with social relationships. Journal of Applied Sport
15	Psychology, 25(4), 431-447. <u>https://doi.org/10.1080/10413200.2012.751563</u>
16	McDougall, M., Ryba, T. V., & Ronkainen, N. J. (2020). Is culture a (still) useful category of psychological
17	and social analysis? International Journal of Sport Psychology, 51(6), 626-645.
18	https://doi.org/10.7352/IJSP.2020.51.626
19	McLaren, C. D., & Spink, K. S. (2018). Examining communication as information exchange as a predictor
20	of task cohesion in sport teams. International Journal of Sport Communication, 11(2), 149-162.
21	https://doi.org/10.1123/ijsc.2018-0004
22	Navin, A., Vinson, D., Croad, A., Turnnidge, J., & Côté, J. (2020). The birth of the Stars: Transformational
23	Leadership in a superleague netball club. <i>The Sport Psychologist</i> , <i>34</i> (3), 220-231.
24	https://doi.org/10.1123/tsp.2019-0087
25	Newland, A., Newton, M., Moore, E. W. G., & Legg, W. E. (2019). Transformational Leadership and
26	Positive Youth Development in basketball. <i>International Sport Coaching Journal, 6</i> (1), 30-41.
27	https://doi.org/10.1123/iscj.2018-0002
28	Parker, A., & Tritter, J. (2006). Focus group method and methodology: Current practice and recent
29 30	debate. International Journal of Research & Method in Education, 29(1), 23-37.
30 31	<u>https://doi.org/10.1080/01406720500537304</u> QSR International. (2020). <i>NVivo qualitative data analysis software (version 12 pro) [Software]</i> . QSR
32	International. www.gsrinternational.com
33	Robson, C., & McCartan, K. (2016). <i>Real World Research</i> (4th ed.). Wiley.
34	Severn Stars. (2022). Severn Stars Player Pathway. Retrieved 2nd February 2022 from
35	https://www.severnstars.co.uk/player-pathway/
36	Smith, B. (2018). Generalizability in qualitative research: Misunderstandings, opportunities and
37	recommendations for the sport and exercise sciences. Qualitative Research in Sport, Exercise
38	and Health, 10(1), 137-149. https://doi.org/10.1080/2159676X.2017.1393221
39	Smith, B., & Sparkes, A. C. (2014). Qualitative Research Methods in Sport, Exercise and Health: From
40	process to product. Routledge.
41	Smith, M. J., Arthur, C. A., Hardy, J., Callow, N., & Williams, D. (2013). Transformational leadership and
42	task cohesion in sport: The mediating role of intrateam communication. Psychology of Sport and
43	Exercise, 14(2), 249-257. <u>https://doi.org/10.1016/j.psychsport.2012.10.002</u>
44	Tracy, S. J. (2019). Qualitative Research Methods: Collecting evidence, crafting analysis, communicating
45	<i>impact</i> (2nd ed.). John Wiley & Sons.
46	United Nations. (2022). Youth. Retrieved 20th April 2022 from <u>https://www.un.org/en/global-</u>
47	issues/youth

1 Vella, S., Oades, L., & Crowe, T. (2011). The role of the coach in facilitating Positive Youth Development: 2 Moving from theory to practice. Journal of Applied Sport Psychology, 23(1), 33-48. 3 https://doi.org/10.1080/10413200.2010.511423 4 Vierimaa, M., Turnnidge, J., Bruner, M., & Côté, J. (2017). Just for the fun of it: Coaches' perceptions of 5 an exemplary community youth sport program. Physical Education and Sport Pedagogy, 22(6), 6 603-617. https://doi.org/10.1080/17408989.2017.1341473 7 Vinson, D., & Bell, J. (2020). Athlete-centred coaching: An applied example from junior international field 8 hockey. In E. Cope & M. Partington (Eds.), Sports Coaching: A theoretical and practical guide (pp. 9 40-52). Routledge. 10 Vinson, D., & Parker, A. (2021). Christian sports coaches and Servant Leadership. International Journal of 11 *Sport Science and Coaching*, *16*(2), 304-316. <u>https://doi.org/10.1177/1747954120951768</u> 12 Welty Peachey, J., Zhou, Y., Damon, Z. J., & Burton, L. J. (2015). Forty years of leadership research in sport management: A review, synthesis, and conceptual framework. Journal of Sport 13 14 Management, 29(5), 570-587. https://doi.org/10.1123/jsm.2014-0126 15 Williams, A. M., Ford, P. R., & Drust, B. (2020). Talent identification and development in soccer since the 16 millennium. Journal of Sports Sciences, 38(11-12), 1199-1210. 17 https://doi.org/10.1080/02640414.2020.1766647

1 Figure 1

2 The Personal Assets Framework (Côté et al., 2014; Côté et al., 2020; Vierimaa et al., 2017)



1 Figure 2

2 Dynamic Elements of the PAF (Côté et al., 2020).



Table 1: Participant roles and responsibilities

Type of role	Interviewees	Role	Responsibility	Phase
Players	Superleague Players	Athletes	Playing	1&2
	(Dani, Hephzi, Gabby)			
	U21s athletes	Athletes	Playing	1&2
	(Katie, Liv, Josie, Emmie)			
	U19s athletes	Athletes	Playing	1&2
	(Ana, Bronwyn, Carlotta, Martha)			
Coaching	Sophie	Pathway Head Coach	Oversees U21 and U19 selection and coaching in training and	1&2
	(10 years coaching experience)		match days. Also a player in the senior squad.	
	Jane	U21s coach	Contributes to U21s selection and coaching in training and	1&2
	(12 years coaching experience)		match days	
	Suki	Superleague Head	Senior selection and coaching in training and match days	1&2
	(20 years coaching experience)	Coach		
	Hana	NOVA Head Coach	Operational management and running of one NOVA academy	2
	(11 years coaching experience)			
	Ellie	NOVA Head Coach	Operational management and running of one NOVA academy	2
	(10 years coaching experience)			
Operational	Lorna	Director of Netball	Oversight of the NOVA academies including appointment of coaches and coordination of the inter-NOVA competition	2
	Deborah	Coach Developer	Oversight and mentoring of all NOVA coaches and coaches enrolled on the Coach Development program	2
	Mark	General Director	Oversight of the whole club operation	2
	Richard	Chair of the Board	Chairing Executive Board meetings	2
	Sarah	General Manager	Operational logistics of the performance teams	2
External	Parents	Parents of U21/U19	Holistic care of their children	2
stakeholders	(Jamie, Lisa, Beth, Dave, Clare)	pathway athletes		-
	Coach Development Group	Learner coaches	Engagement with the Coach Development program including	2
	(Bryony and Jackie)		observation of a range of Severn Stars coaching environments	-