

Can't pay, can't play? Talent lead's perspectives on the financial constraints experienced by athletes on the England Talent Pathway

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1 **Title page**

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1 **Abstract**

2 This study explored the extent of financial constraints experienced by athletes on the England
3 Talent Pathway, as perceived by talent leads from various sports. Using a mixed-methods
4 approach, 34 participants completed online surveys with 26 follow-up interviews. Findings
5 showed the prevalence of financial constraints on individuals within the system, with three
6 emerging themes: costs; demands on athletes; and potential funding support. 'Pinch points',
7 causing the greatest severity of financial constraint, emerged further along the pathway and
8 there were infrequent examples of mechanisms to identify talented athletes experiencing
9 financial hardship. A means-tested system, premised on the demonstration of potential, is
10 suggested by talent leads as a way of providing funding for athletes to ameliorate financial
11 constraints in the future.

12 **Keywords**

13 Talent, financial constraints, talent pathway, theory of constraints

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1 **Talent development processes and systems**

2 The aim of this research was to explore the financial constraints affecting athletes on the
 3 England Talent Pathway (ETP), from the viewpoint of Talent Leads (TL) who were
 4 employed within a range of national governing bodies of sport to lead the development of
 5 talented athletes. Many talent development theories in sport extol the value of specific
 6 *processes* for optimising athletic potential; for example, acquiring 10,000 hours of deliberate
 7 practice (Eriksson, Krampe and Tesch-Römer, 1993) or moving through certain stages of
 8 development (Côté, Baker and Abernethy, 2003). However, while these processes may
 9 enhance an athlete's ability to realise their potential, there is a need to further understand the
 10 interrelationships between these processes and the role of *systems* in enabling or constraining
 11 their deployment (Bailey and Collins, 2013; Dettmer, 1997; Ziegler, 2005).

12 Gagne (2004) suggested these interdependent systems include Internal Intrapersonal
 13 systems (e.g. physiological and psychological) and External Environmental systems (e.g.
 14 coaching and family), along with elements of chance. In an update to his original model,
 15 Gagne (2010) reported that the interface between Intrapersonal and Environmental systems
 16 was stronger than originally indicated, with three categories of 'environmental catalysts'
 17 involved in talent development; Milieu (physical or geographical influences), Individuals
 18 (influence of significant persons) and Provisions (talent development services and programs).
 19 This study is particularly interested in exploring the interdependence of TLs as Individuals
 20 and the ETP as a Provision.

21 While Gagne's Differentiated Model of Giftedness and Talent (DMGT) provides an
 22 overview of the talent development process through the articulation of interrelated systems,
 23 Goldratt's (1990) 'theory of constraints' suggests that achieving excellence revolves around
 24 effectively managing these interrelated systems. The 'theory of constraints' also contends that

at least one constraint in each system limits achievement of higher levels of performance relative to its goals (Aryanezhad, Badri and Komijan, 2010). In sport, because of the multifaceted and expanding range of factors that could potentially affect the likelihood of being successful, it has become increasingly important to understand the complex interrelationships between these systems (Davids, et al., 2013; Gagne, 2011; Vaeyens et al., 2008).

Finance as a constraint on talent development

Previous studies have demonstrated a link between financial constraints and sports participation, although these studies are typically targeted toward exploring specific socio-economic populations and their overall sport participation (Holt et al., 2011; Nielsen et al., 2011; Steenhuis et al., 2009). From an expertise development perspective, Baker et al. (2003) suggested that athletes unable to access certain financial resources face a difficult pathway in accumulating high levels of practice necessary for expert performance. Furthermore, Baker and Horton (2004) proposed a framework of primary and secondary influences on sport expertise; suggesting that financial investment, as a secondary influence, is an important function provided within the construct of familial support. Although the influence of environmental constraints has been considered in the development of talented athletes (Baker et al., 2003; Baker, Cobley and Schorer, 2012; Bloom, 1985), little has been published regarding the constraining nature of finances within the specific system of a talent pathway.

In a rare exception to the rule, a recent survey (Sports Aid, 2013) reported that nearly 40% of athletes identified the cost of participation as the single greatest barrier to their success; this can be compared to other recognized constraints such as lack of access to facilities (9%), coaching (7%) or equipment (1%). While these data may reflect a potential sampling bias (by definition Sports Aid athletes will already have had financial support

because of identified hardship), they corroborate previous evidence that also illustrates the importance of finance for retaining talented athletes, specifically in Athletics (U.S. Olympic Committee, 2003; Shibli and Barrett, 2011). Although these effects vary across sports and at different levels of performance, what is constant is that financial support continues to play a prominent role in the development and retention of athletes on a talent pathway.

In England, each National Governing Body of sport employs a Talent Lead (TL) who is responsible for ensuring the ETP is effectively established and maintained. TLs were identified as key informants regarding the support systems provided by the NGB because of their proximity to athletes, coaches and parents. To our knowledge, there has been no research exploring the perceptions of sports administrators responsible for developing and supporting talented athletes across a range of sports. Therefore, this research would have implications for the future support of athletes on a talent pathway, by offering new perspectives on how finances constrain the system and how administrators of such pathways could recognize and support athletes experiencing financial hardship.

Method

Study design

A mixed methods approach was deemed suitable for this particular study to consolidate previous survey data gleaned (SportAid, 2012) and further probe key areas to present a more detailed and personalized perception of financial constraints affecting athletes. Therefore, the study had two stages, with the first stage involving the completion of an online survey by 34 TLs and the second stage consisting of semi-structured telephone interviews, lasting 30-45 minutes, with 26 TLs who had also completed the survey. Drawing on recommendations for

the timing and ordering of data capture (Creswell and Plano Clark, 2007), online surveys were conducted first, with that data informing the interview schedule. Morse (2010) terms this approach as 'sequential exploratory'; data from one method is used to inform the design of a subsequent method to explore major themes; in the current study qualitative data supplemented quantitative data.

Online survey

The survey contained 35 items under five main headings: (1) Impact of financial constraints on retention/ drop-out, (2) Costs associated with being on the ETP, (3) Provision of funding sources, (4) Pinch points, and (5) Identifying hardship, taking approximately 15-20 minutes to complete.

Semi-structured interviews

A team of five researchers met at regular intervals prior to the beginning of the interviewing process to discuss the interview format and clarify any ambiguities with the proposed terminology and interview structure. This process was informed by discussions with senior representatives from Sport England and Sport Aid, information drawn from analyzing the data from the online survey and the limited previous research related to financial constraints. At this stage, five main themes were determined: (1) Ability to pay, (2) Financial pinch points, (3) Nature of expenses, (4) Funding streams to support the athlete, and (5) Identifying hardship. Pilot interviews were carried out with six TLs and modifications to the interview schedule and format were incorporated. An interim meeting was held at a mid-way point during the course of interviewing to conduct a preliminary analysis of findings in order to probe certain areas in more detail in subsequent interviews. For example, the specific nature and placement of financial 'pinch points' was identified as an emerging theme so additional probes were added to explore this area in more depth.

1 *Data analysis*

2 Online survey responses were initially analysed using standard descriptive statistics. All
 3 interviews were tape-recorded and transcribed verbatim by a third party. The authors then
 4 listened to each of the interview tapes and scrutinized the transcriptions in order to verify
 5 their accuracy. Transcripts were then analyzed using a process of selective coding. Individual
 6 units of meaning were then initially represented by a word or term and then amplified into a
 7 descriptive sentence to allow for further axial coding (Strauss and Corbin, 1998). Themes and
 8 sub-themes were then proposed and subsequent 'thematic descriptions' were used to ensure
 9 consistent application of findings. For example, the theme of 'Costs' was described as 'the
 10 specific costs incurred as a result of being an athlete on the ETP'.

11 Perhaps one of the most controversial elements of mixed methods research is the
 12 integration of findings and use of representational forms (Sparkes, 2015). While interview
 13 data were important in understanding the beliefs, attitudes and values of TLs as they made
 14 sense of, and shared their views on, the research area, it was also important to triangulate
 15 these findings with survey data, with equal parity. Bryman (2007) has criticized the lack of
 16 parallel representation of mixed methods data demonstrating that over half of reviewed mixed
 17 methods papers failed to achieve this. Furthermore, it has been suggested that without a fully
 18 integrated approach, the yield of data analysis is the equivalent to conducting the quantitative
 19 and qualitative analysis separately (Bryman, 2008; O'Caithan, Murphy and Nicholl, 2010).
 20 To achieve integration, in light of our explanatory sequential approach to mixed methods
 21 research, we use a visual 'joint display' to represent the data (Gutterman, Fetters and
 22 Cresswell, 2015). A joint display is defined as a way to 'integrate the data by bringing the
 23 data together through a visual means to draw out new insights beyond the information gained
 24 from the separate quantitative and qualitative results' (Fetters, Curry and Cresswell, p.213).

To this effect, the themes derived from the analysis of qualitative data were aligned to the survey data, as demonstrated within Table 1. This process was not without obstacles; analysis of qualitative data yielded emerging themes over and beyond the parameters established within the survey data, for example 'pathway structure'. Given the expansive and explanatory nature of semi-structured interviews within a sequential explanatory MMR approach, this was to be expected. As a result, any qualitative data that we felt merited further discussion is represented without an alignment of quantitative data as generated through the surveys.

Results

The NGB pathway contained a median of 3 levels (range 0-8 levels) that were used to signify an athlete's progression along the pathway; therefore Lower, Middle and High was used to categorize responses. The number of athletes on each ETP ranged from 27 to 16,428 (median = 120 athletes). On average, athletes started on the ETP at 12 years of age (range 6-17 years), moving to World Class / Elite performance, if selected, at 19 years of age (range 12-28 years of age). Three themes and related sub-themes emerged from the interview data; (1) Costs-escalating and detailed, (2) Demands on athletes- drop out and pathway structure, and (3) Potential funding support- identifying hardship and future funding solutions.

Table 1. An integrated joint visual display of Talent Leads perceptions of financial constraints affecting athletes on the England Talent Pathway.

Insert Table 1 here

1 **Discussion**

2 The aim of this mixed methods research was to explore the financial constraints affecting
 3 athletes on the ETP, as perceived by TLs of the national governing bodies of the sports in
 4 which the talented athletes competed. The findings generally revolved around the three broad
 5 themes of (i) costs associated with being on the ETP, (ii) the structure of the pathway itself
 6 and (iii) the potential for funding support.

7 *Costs associated with being on the ETP*

8 TLs suggested that costs escalated as the athlete moved along the pathway and this escalation
 9 was exponentially pronounced in relation to the cost-per athlete of the respective sports, with
 10 higher cost-per athlete sports costing more at all levels of the talent pathway. There seemed to
 11 be an interdependency of costs required and demands placed on athletes at different levels of
 12 the pathway. For example, the escalating costs associated with centralized training were
 13 determined by the NGB that organized the coach/athlete or athlete/competition interface in a
 14 specific way, presumably to provide the most appropriate level of experience for the athlete
 15 to prepare them for competition. While TLs focused their accounts of athlete's experiences as
 16 rotating around these increasingly centralized processes, they rarely contextualized these
 17 structures in relation to the financial impact they may have on the athlete themselves.

18 Reports of increasing equipment, travel, and accommodation costs across sports,
 19 predominantly financed by parents, are consistent with previous findings from other single-
 20 sport studies (Côté, 1999; Gould et al., 2006; Harwood & Knight, 2009). This finding is
 21 illuminating in its own right, in that, irrespective of the varying levels of equipment needed to
 22 play the different sports, most TLs still reported escalating financial demands. Furthermore,
 23 costs almost tripled at all levels of the ETP. 'Pinch points' were identified by most

participants as specific moments along the ETP in which an athlete experienced the most pronounced impact of financial constraints affecting their involvement on the ETP. TLs suggested these pinch points were at their most severe when athletes were at University age and just about to enter the elite stage of the ETP. According to Côté (1999), as athletes enter an 'investment' stage later in their sports career, in which they concentrate on a single sport, the dominant relationship switches from parent and athlete to coach and athlete. Although evidence suggests that parents adopt a different role during this stage (Baker et al., 2003; Bremer, 2012; Lauer et al., 2010; Wolfenden & Holt, 2006), findings here suggest that their ability to fund their child becomes more constraining as other costs during this athlete transition come into play, such as supporting University study. It is particularly worrying that, following a significant period of sustained financial investment by the triumvirate of NGB, parents and the athlete, the most financially constraining period for the athlete themselves is in the penultimate stage to fully realizing their athletic performance.

Structure of the pathway

TLs report a mixed perspective on whether financial constraints were a barrier to an athlete participating on the ETP, although it was generally recognized that any barrier that did exist is more pronounced the further along the pathway the athlete progresses. This finding could be a simple bi-product of escalating costs reported previously, in that the athlete's inability to respond to the increasing costs of the sport, as created by the structure of the pathway, might result in hardship experienced in remaining on the pathway. In this regard, the quantitative data is inconclusive; complicated by half of the TLs within the study feeling unable to report whether financial constraints affected drop-out of athletes. Qualitative data affords a further explanation of this finding with the suggestion that some TLs have a general perspective on the age ranges that athletes are most affected by financial constraints, using key transitions

(for example, starting University) to demonstrate the interrelationship of disposable income, context and demands of the sport. Whilst previous systems-focused reviews of talent development programs indicate an emphasis on the broadening of the talent pool at the beginnings of the talent pathway as being critical for affording athletes opportunities to realize their potential (Sport England, 2015; Gublin, 2012), it seems that support much further along the pathway is as equally important.

The establishment of specific provision based on the potential financial constraints experienced by the athlete did surface within the interview data, with TLs suggesting the location, frequency and duration of training opportunities for athletes had been modified over time to reduce the financial burden of attending. What was less apparent was this same level of flexibility within competitive structures, with TLs clearly stipulating the need for a talented athlete to travel further, absorb the costs of accommodation and purchase more expensive equipment the further along the pathway the athlete progressed.

Future funding opportunities

Some TLs suggested that their NGB supported the athlete with funding as well as providing information on how to apply for additional funds from other organizations to support their progression along the pathway. TLs reported that they were heavily reliant on the coach in detecting and reporting an athlete's financial hardship to the NGB. While TLs suggested that they had more sophisticated methods of identifying financial hardship further along the pathway (primarily due to stronger coach-athlete relationships), they seem helpless about their self-declared lack of formalised mechanisms for identifying financial hardship at the lower levels of the pathway. TLs suggested that they would means-test any potential future funding for ETP athletes, with 60% of TLs surveyed suggesting that they would deploy funding into the higher levels of the ETP and for athlete support services, rather than to the

1 athlete themselves. One TL further explained this in that funding athletes directly might
2 instill the sense that the athlete had 'made it' (TL 04). The perceived duration needed for this
3 level of funding support was different for different sports. TLs from late specialization sports
4 reported that athletes reside in the higher levels of the pathway for longer than their early
5 specialization sport counterparts. This suggests that these particular athletes would require
6 longer periods of funding in comparison to other athletes.

8 **Conclusions**

9 Goldratt's (1990) theory of constraints suggests that at least one constraint exists in each
10 system that limits the achievements of its goals. Constraints experienced within systems have
11 the potential to severely disrupt the intentions of the system and the findings from this
12 research suggest that the lack of finance is one such constraint. Financial constraints existed
13 at varying levels along the talent pathway, but intensified considerably the further along the
14 athlete progresses. The structure of the pathway, or the 'system', is crucial in facilitating the
15 optimum chances of success for talented athletes to reach their potential. Our evidence
16 suggests that financial constraints render this relationship between the system and talented
17 individuals unstable. This instability is indicative of an individual on a perpetual journey as
18 they, and their families and the TLs adjust to the demands of the system. This complex
19 interconnectedness between the individual and their environment resonates with Monteiro et
20 al.'s (2014) theory of 'becoming', rather than 'being' excellent.

21 Individuals responsible for administering the system, such as TLs, should therefore
22 be knowledgeable of, and responsive to, any constraints that exist within the system that
23 could be detrimental to achieving the intentions of the system. Whilst TLs articulate a vivid
24 portrayal of financial constraints that athletes experience, the mechanisms employed to

ameliorate such constraints seem underdeveloped at both the level of support offered by the TL themselves and that offered through the ETP system established to support the talented athlete. Given the evidence presented here, of the simultaneous prevalence and intensifying nature of financial constraints with haphazard levels of 'system' support, it would seem prudent that those responsible for the design and delivery of any system for talented athletes establishes mechanisms for identifying financial hardship at the earliest opportunity. It seems plausible to suggest that systems established to support talent development in related fields (e.g. music, chess, ballet) could also be exposed to difficulties caused by financial constraints experienced by talented children and young people. Further research related to the impact of financial constraints on talented individuals and the efficacy of systems in providing support to ameliorate such constraints seems merited.

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1 Tables

2 Table 1. An integrated joint visual display of Talent Leads perceptions of financial constraints affecting athletes on the England Talent Pathway.

Theme	Sub-theme	Survey data	Interview data
Costs	Escalating costs	<p>70% believe costs increase as athletes progress along the pathway (21% fluctuate, 9% no change)</p> <p>£2,828 ± 2,563 per year at the lowest level, £4,444 ± 4,004 at the middle level and £6,899 ± 5,569 at the highest level of the ETP.</p> <p>At the lowest level of the ETP, annual costs associated with performing was £1,881 ± 2,925 in low cost per athlete sports, compared to £2,075 ± 1,954 in medium cost per athlete sports and £3,873 ± 3,440 in high cost per athlete sports. This expenditure increased to £4,448 ± 4178, £5687 ± 3943 and £9153 ± 6530 for a year performing at the highest level of the ETP in low, medium and high cost per athlete sports, respectively.</p>	<p>"I think actually the greatest financial constraint is up at the higher end because it is an amateur sport all the way until the low class program and by the time they've reached the top they have often spent you know thousands and thousands to get to that point". (TL 01)</p> <p>"I think the further up the pathway you go the costs become higher largely because we have centralised training". (TL 13)</p>
	Detailed costs	<p>Costs across the three levels (low, medium, high) of the ETP were: Travel (29%, 32%, 32%), Equipment (18%, 11%, 8%), Competition fees (13%, 11%, 13%), Coaching (18%, 17%, 16%), Accommodation (8%, 12%, 14%) and Other (14%, 17%, 17%).</p>	<p>"I would say your travel costs definitely increase again because of the locations of some competition events that we hold, but also then the extent of, I guess, the international calendar". (TL 16)</p> <p>"The equipment, that's the issue, and if you were to add up all the equipment they need from day dot up to world class level your looking between six and seven thousand pounds to get there". (TL 02)</p>

Demands on athletes	Drop out	<p>At all levels, >50% of TLs stated finance provided a ‘medium’ or ‘small’ barrier to progression. Finance was perceived as a very large barrier in relation to high (30%), medium (6%) and low levels (6%)</p> <p>50% did not know what proportion of ETP drop-out was due to financial constraints, with 26% stating finances accounted for between 10% and 40% of ETP drop-out.</p>	<p>"I would say we have a number of dropout points... one is around the age of 17-19 when an athlete is predominantly supported by their parents. At that point some go to university and make a decision there and you know the point in which dad or mam decides whether they are going to continue to fund it. I would say really talented ones who are older, probably fractionally over 20, maybe 21 22, they will also end up dropping out at that point because again they are probably having to fund themselves maybe in full time jobs” (TL 16)</p> <p>"Well, the pinch points start to come, I think, around the age of 13/14, because that’s the [name of competition circuit]...rather than a European circuit, this is a World circuit, and players who are on the England talent pathway in the stage 11 to 16...and then the next phase of that England talent pathway, 16 plus, is where they are regularly competing on the world circuit. So a programme of that player which balances training, coaching and the right level of competition could be costing £25,000 by that stage.” [TL 23]</p>
	NGB ETP structure	No aligned data	<p>"They are paying for themselves, transport and two people, their carers, so the expenses are incredibly high; its not like an individual going for the weekend or you know a family supporting them (TL01)</p> <p>"A lot of what we’ve had to do is to negotiate with the regions about perhaps going down to one-day camps purely on the basis that we don’t think athletes and parents will be able to pay”. (TL 19)</p> <p>"When they’re higher up the talent pathway, I think it certainly does have an impact, because competitions and tournaments, both domestic and in Europe, obviously have financial implications in terms of accommodation, flights, travel... At the lower level, the competitions are fairly localised." (TL24)</p>

Potential funding support	Identifying hardship	No aligned data	<p>"One of the things we did at the start of last season is when people came to the first camp we asked them to fill in their kind of [name of sport] budget as it were. There was an opportunity on that form which was given to me directly to express any concerns about financial hardship that they were having or difficulties that they envisaged with the costs." (TL 01)</p> <p>"It would be hard for us to say which twelve year olds are the ones we really need to subsidise to keep in the sport because at that point it's really hard to, you know, really understand the potential... I don't suppose we have a structured way to gather that information either in terms of exit interviews or questionnaires." (TL 10)</p> <p>"[In terms of identifying financial hardship] those players at a higher level on the pathway that we have more regular contact with, the coaches are responsible for managing the relationship with the player and the parents. I think the relationship should be good enough and close enough for us to have an understanding of that. For players at [lower levels of the ETP], I'm not sure we would necessarily find out. I think it would just happen." (TL 24)</p>
	Future funding solutions	<p>Extra funding should be deployed to the high (60%) level of the ETP, rather than middle (23%) and low (11%) levels.</p> <p>In detail, funding should be provided for travel (35%), coaching (26%), with only one TL suggesting athlete choice should be used.</p> <p>Direct payment of costs associated with performance was preferred (59%), with payments to parents (38%) and athletes themselves also mentioned (29%)</p>	<p>"I'd deploy the funding to those who are physically prepared to do the harder work and are mentally prepared to drive themselves up." (TL 03)</p> <p>"We would have a sliding scale in the same way as in world class and podium potential." (TL 05)</p> <p>"I think the funding in a way makes them think they've made it, think they're professional athletes and they don't have to work hard any more." (TL 04)</p>