A qualitative exploration of sport and exercise psychology practitioners' perceptions and experiences of using Think Aloud in applied practice

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Abstract

Aims: Think aloud (TA) is a tool that has been used within sport and exercise psychology research and applied contexts to understand participants' cognitions. We aimed to explore ASEPs' perceptions of using TA within their applied practice. **Method:** Following a workshop on TA, 10 ASEPs engaged in semi-structured interviews about their experiences of using TA with clients. Data were analysed via content analysis. **Results:** TA was used as part of the needs analysis process, and to facilitate reflection and evaluation. Considerations were highlighted: client factors (e.g., individual differences); consulting factors (i.e., teaching participants how to TA); and the client-consultant relationship (i.e., strength of the working alliance). **Conclusion:** This is the first study to consider ASEPs perspectives on how TA can be used within applied practice and offers considerations to ASEP's on the use of TA as a tool within service delivery.

Key words: Sport Psychology, Think Aloud, Self-Awareness, Applied Practice

Introduction

Understanding the thought processes of clients is generally an important part of the role of applied sport and exercise psychologists (ASEPs;Hector et al., 2018). Gaining insight into what a client is thinking before, during, and/or after a sports experience can help ASEPs to design, deliver, and evaluate interventions that are intended to support the client to achieve their objectives. Although practitioners adopt different approaches to practice depending on their philosophical orientation and its underlying assumptions (e.g., psychodynamic approaches [Andersen & de Queiroz, 2023], Person-Centred Therapy [Rogers, 1951], and Cognitive-Behaviour Therapy Butt et al., 2023]; Poczwardowski et al., 2004; Tod & Eubank, 2020),

gaining insight into clients' thought processes is regarded as useful in learning about their experiences, tailoring interventions, developing empathy and relationships, and assessing the effectiveness of service delivery.

At the beginning of the consultancy process with a client, ASEPs are encouraged to engage in an intake phase, during which they will begin to develop the therapeutic relationship with their client and establish consultancy goals (e.g., Keegan, 2016). For ASEPs to offer and deliver sport psychology support that optimises intervention success, there is a need to individualise services and offer task-specific support for each client (Anderson et al., 2002). Undertaking an initial assessment to develop an understanding of the client is fundamental to effective consulting (Taylor, 2017). Thus, in the early stage of a therapeutic relationship, ASEPs are advised to undertake a needs analysis, which may inform the case conceptualisation and intervention selection (e.g., Keegan, 2016).

During needs analysis, ASEPs will gather information to deepen their knowledge of their clients (e.g., strengths, motivations, aspirations) and to clarify areas where they will provide support (Taylor, 2017). Traditionally, there are a number of assessment methods that ASEPs can choose from when seeking to identify the needs of a client, including (but not limited to) interviews (Aoyagi et al., 2017), direct observations (Holder & Winter, 2017), questionnaires (e.g., Vealey et al., 2019), objective performance measures (e.g., win/loss record), psychophysiological measures, and performance profiling (Butler & Hardy, 1992). These methods can provide ASEPs with insights into a client's thoughts, feelings, and behaviours. Nevertheless, there remains an opportunity to expand the repertoire of assessment methods available to ASEPs by collecting information on the thought processes of clients in real time *during* sporting performance using concurrent methods of assessment.

In the current study, we focus on one such method that could be used to generate information about a client's cognitions *during* task performance: the think aloud (TA) method.

Originally proposed by Ericsson and Simon (1980, 1993), the TA method was introduced as a research tool to generate information about thought processes mediating task performance by asking participants to verbalise their thoughts out loud while performing a task or verbally recalling thoughts immediately following completion of a task. Verbalisations are usually captured by a clip-on microphone and Dictaphone. Early examples of the use of TA to study cognitive processes included problem-solving tasks and puzzles (e.g., Gagne & Smith, 1962), and chess (de Groot, 1946). Ericsson and Simons (1980, 1993) originally proposed the *verbalisation framework* where TA verbalisations were a representation of information that is in the short-term memory (STM) during task performance (Level 1 and Level 2 TA). Level 1 verbalisation is simply the vocalization of inner speech where the individual does not need to make any effort to communicate his/her/their thoughts. Level 2 verbalisation involves the verbal encoding and vocalization of an internal representation that is not originally in verbal code. Level 3 verbalisation requires the individual to explain his/her/their thoughts, ideas, hypotheses, or motives. While asking participants to explain their thinking (Level 3) deviates from Ericsson and Simon's framework (due to Level 3 requiring participants to retrieve information from the long-term memory, and in turn disrupt naturalist thought processes) more recent work within sport has adopted Level 3 with the rationale to gain deeper insights into athletes knowledge and awareness of their thought processes (e.g., Welsh et al., 2018; Whitehead et al., 2015).

Researchers within sport have used TA to gain insight into athletes' thought processes as they are performing in a range of sports, including ecologically valid training and competition settings. For example, researchers have employed TA to study athletes' cognitions in individual sports, such as golf (e.g., Nicholls & Polman, 2008; Shaw et al., 2021; Whitehead et al., 2016) and cycling (e.g., Whitehead et al., 2018), and within team-sport athletes, such as cricketers (McGreary et al., 2020) and Australian rules footballers (Elliot et al., 2020). Findings

from studies that have used TA have illustrated differences in athletes' thought processes between practice and competition (e.g., Whitehead et al., 2016) and between earlier and later stages of a performance (e.g., Massey et al., 2020; Robinson et al., 2021), thus illustrating the potential utility of TA to generate new understanding about athlete cognitions during sport performance.

Although TA has been used predominantly as a research tool, there is also preliminary evidence concerning the potential utility of TA in applied sport psychology practice. For example, Birch et al. (2022) reported that the golfers perceived TA to have helped them to become more aware of their thoughts and suggested that TA could be a useful tool for their coach to gain an insight into their on-course thought processes. Further evidence for the utility of TA in applied practice can also be inferred from the first published case-study of the use of TA in applied sport psychology consultancy (Moffat et al., 2021), in which the authors reported on one practitioner's experience of using TA to understand the initial attributions formed by tennis players prior to implementing a psychoeducation intervention. In reflecting on this case, the practitioner explained that the use of TA reinforced their awareness of the importance of going beyond behaviour to develop a comprehensive understanding of the client's experience prior to developing an intervention (Moffat et al., 2021). Alongside this evidence concerning the potential utility of using TA with athletes, researchers have also reported on perceived psychological growth (e.g., reflection, knowledge) in coaches following the use of TA in their practice (e.g., Whitehead et al., 2016b; Swettenham & Whitehead, 2022). Collectively, evidence from these studies suggests that TA could be a potentially valuable method that could be used by ASEPs. While this might be the case, to inform training and the professional development of practitioners, further research is needed to better understand how TA can be used–and its use optimised–in applied practice. For example, how it might be used to help

tailor interventions, gain insights into clients' thought processes, and build empathy and therapeutic relationships.

In the current study, we aimed to explore ASEPs' perceptions of using TA and their views on the potential utility of TA within their applied practice. By educating ASEPs on how to use TA and encouraging them to use it with clients in their applied practice, we sought to contribute fresh insights on how TA could be added to the range of techniques used in applied sport psychology services. In turn, this could subsequently inform the development of evidence-based guidance to support the use of TA in applied practice and enhance the quality of sport psychology service delivery.

Methods

Research Approach

To address our research questions and generate an in-depth understanding of ASEPs' perceptions and views on the utility of using TA in applied practice, we selected a qualitative descriptive approach (Sandelowski, 2000, 2010). We deemed this approach suitable for our study as qualitative description can develop a comprehensive understanding of people's experiences (e.g., ASEPs experiences of using TA) and generate knowledge with applied implications for practitioners (Sandelowski, 2000). We approached this research philosophically from an interpretivist paradigm embracing a relativist ontological and constructivist epistemological position (Smith, 2010). Accordingly, we assumed that that there are multiple ways by which practitioners will interpret their experiences of using TA (ontological relativism) and that knowledge about practitioners' views and experiences of using TA can be developed through interactions between the researchers and participants (constructivist epistemology). In our study, we analysed data generated through semi-structured interviews with ASEPs who had attended an initial educational workshop on TA

prior to using it with clients to ensure that the participants were trained in the use of TA and were able to comment on its (potential) use in practice (see below).

Research Team

Consistent with our epistemological positioning, we provide a brief overview of our backgrounds as researchers. As a research team, we consist of academics and/or registered practitioner or trainee ASEPs, with each of us having different levels of experience with TA through our research and applied backgrounds. Prior to embarking on the study, four of the six authors (initials of authors) had all published studies on TA in sport, while three of the authors (initials of authors) had used TA in their applied practice. In contrast, two authors had no prior experience of publishing research on TA or had not used it in their applied practice. Therefore, we individually brought different experiences that contributed to the research. For example, the experience of members of the team who had used TA previously, helped to inform the design and delivery of the TA workshop. Conversely, the authors who had no prior experience of applying TA played an important role throughout the study by asking questions that encouraged other members of the team to consider alternative perspectives on the use of TA and to situate the research within the broader applied sport psychology literature.

Participants and Recruitment

After gaining ethical approval from the first author's university ethics committee, we invited participants to attend a free webinar entitled 'Think Aloud in Applied Sport and Exercise Psychology Workshop' in March 2021. To be eligible to take part, individuals needed to be a registered practitioner sport and exercise psychologist with the Health and Care Professions Council (HCPC) or on a recognised training pathway to achieve this (i.e., British Psychological Society [BPS] Stage 2, or British Association of Sport and Exercise Science's [BASES] Sport and Exercise Psychology Accreditation Route). Multiple recruitment strategies were used for the workshops, including (a) advertisements circulated via the BPS Division of

Sport and Exercise Psychology and the BASES Division of Psychology; and (b) posts from our social media accounts. The workshop was attended by 25 participants (female $n = 11$, male $n = 14$), consisting of registered ($n = 4$) and trainee ($n = 21$) sport and exercise psychologists. The length of applied experience ranged from 0 (i.e., beginning training pathway) to 20 years ($M = 4.5$ years).

Following the workshop, 10 attendees (40%) agreed to partake in a one-to-one semi-structured interview and, therefore, participated in the current study (female $n = 4$, male $n = 6$; registered practitioner sport and exercise psychologists $n = 3$, trainees $n = 7$). These participants had between 1-8 years of experience, and an average age of 29 years, and were all white British. Participants had also used Think Aloud within a range of sports including rugby union, running, rugby league, golf, cricket, cycling and football.

Procedures

Initial Workshop

The initial workshop was conducted via an online platform (Zoom). In the initial workshop (slides available on request), we provided an overview of the TA literature, including summaries of research methods and findings from studies that used TA previously in sport. For example, studies such as Welsh et al (2018) (snooker), Whitehead et al., (2018) (cycling), Birch et al., (2022) (golf), and Moffat et al (2022) (tennis), were presented. To help attendees to develop understanding as to how TA could be used in practice, we offered insights into how members of the research team had used TA within their own practice as ASEPs. For example, the first author explained how following an initial intake meeting with a golf client, she wanted to gain more information about his pre shot routine. Therefore, she asked him to verbalise his thoughts during his golf performance and send her the audio file, to inform the work and her discussions with the client. In addition, the fourth author shared videos showing how she had used TA with a tennis coach. More specifically the coach aimed to develop an autonomy

supportive approach to coaching, therefore, the coach was asked to TA to both inform the ASEP of the coaches behaviour, but also to help the coach become more aware of his behaviour. Following these examples, we facilitated small group discussions focused on how participants have previously, or might, in future, use TA in their practice. We concluded the workshop by asking participants to consider how they might use TA within their future practice. In total, the workshop lasted 60 minutes. On completion of the workshop, we invited the attendees to express an interest in participating in a one-to-one semi structured interview which formed the data for this study.

Post-workshop interviews

Ten participants engaged in single post-workshop semi-structured interviews with the first, third, fourth, and fifth authors. After participants provided informed consent for data to be recorded, stored, and published, we arranged a time for their post-workshop interview, which took place online on average 12 weeks after the initial workshop. We allowed 12 weeks between the initial workshop and the interview to ensure that participants had sufficient time to consider the use of TA and to reflect on how it could be applied in their practice. We adopted a semi-structured and open-ended questioning approach, which enabled the interviewees to expand on areas of interest throughout the discussion and afforded us an opportunity to ask follow-up questions to elicit further information (Sparkes & Smith, 2014). In the interviews, we sought to elicit details on the practitioners' experiences of using TA within their practice and their views on its potential utility in their future practice. After initial demographic and background questions, we asked questions in relation to four areas: (1) how had the participant used TA in their applied practice (or not) ("Can you talk to me about how you have used think aloud in your applied practice?"); (2) perceptions of their experience of using TA with a client ("How have you found implementing TA with a client?") or not ("Why have you not used think aloud?"); (3) whether they would be willing to use TA again, and, if so, why ("Would you be

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willing to use think aloud again? Why?") and if they were planning on doing so ("Are you planning on using think aloud again? When?"); and (4) whether the practitioner would change anything if using TA again ("Is there anything you would change if you were using think aloud again?"). Follow up questions such as 'can you explain more' were used, for example, when discussing using TA at specific stages of the consultancy processes, and if participants explained finding TA challenging. Before the interview concluded, we gave participants the opportunity to add anything further that they wished to discuss on the topic. The interviews ranged from 25 minutes to 54 minutes (m = 34 minutes), were recorded and then transcribed verbatim.

Data Analysis

Consistent with the qualitative descriptive method (Sandelowski, 2000), we analysed data using a content analysis approach (Miles & Huberman, 1994), a method that can generate knowledge about participants' experiences of a particular phenomenon (i.e., using TA in applied sport psychology service delivery) (Elo & Kyngas, 2008). We adopted a team approach for our analysis. Specifically, authors 1, 3, 4, and 5, each of whom interviewed two participants, initially read the transcripts for interviews they conducted and made notes of their initial impressions of the dataset. Following this, we engaged in a peer debriefing meeting (Miles & Huberman, 1994). Here, we discussed the potential to use an abductive approach to analysis (Timmermans & Tavory, 2012), as this would allow us to generate data-driven codes and to draw on – at least partially – existing literature to aid our interpretations and attain a situational fit between the data and theory. In the case of the latter, for example, we discussed the potential to use Keegan's (2016) framework for sport psychology service delivery to interpret aspects of our analysis. After this meeting to discuss our initial impressions, we each revisited our allocated transcripts and engaged in the process of coding in relation to our two research questions by labelling segments of text that were relevant to our research questions with codes.

For example, we labelled the quote "older athletes grasped it a lot better where they were able to verbalise their thoughts and emotions a lot better" as "the utility of TA can depend on the client's developmental stage". We then shared our interpretations with one another, and the wider author team, reviewed all codes, and combined similar codes to create categories. For example, the codes "the influence of the working alliance" and "differences in client receptiveness to TA" were combined within the broader category, "deciding to use think aloud (or not)". In writing up our findings, we presented verbatim quotes to facilitate the voice of participants.

Trustworthiness

To build rigour into our study, and in reflection of our relativist approach we used and applied the following criteria drawn from an ongoing list for judging the quality of qualitative research (e.g., Miles & Huberman, 1994; Tracy, 2010; Smith & McGannon, 2018). We considered the topic of research to be a *worthy topic*, as it had the potential to offer new understanding of the use of TA in sport psychology. Throughout data analysis, we sought *rich rigour* by engaging in peer debriefing and challenging each other's assumptions and interpretations through the critical friend's process (Miles & Huberman, 1994), which led to further developments in our analysis. For example, as noted in the data analysis section, based on our early discussions, we integrated aspects of Keegan's (2016) model for sport psychology service delivery at an early stage of our analysis to help us to contextualise the stages at which participants described the use of TA. Likewise, in the later stages of the analysis, the second author, who was not involved in conducting interviews, encouraged other members of the research team to articulate the meaning of certain sub-categories in more detail and to offer more interpretative insight in the labels used. Finally, we also sought to enhance rigour via making a *significant contribution* to practical understanding of how TA can be used in applied

sport psychology practice, with a view to establishing a platform from which to develop guidance to support practitioners in future.

Findings

Reflective of our research questions and analysis, we present our findings in two sections. The first section, "think aloud as a flexible tool for applied practice", illustrates how practitioners reported TA could be used in applied practice. The second section, "considerations for using think aloud in applied practice", represents our interpretations of participants' views on practical or procedural factors to be considered when using TA in applied practice.

Think Aloud as a Flexible Tool for Applied Practice

In this section, we describe the multitude of ways in which practitioners had used TA or perceived it could be used in applied practice. In total, 7 participants (70%, participants 1, 2, 3, 6, 7, 9, 10) reported using TA in their applied practice with clients following the educational workshop. Our analysis of the ways in which practitioners used, and perceived they could use TA in applied practice is presented in two categories. When interpreted as a collective, these findings illustrate how TA was a tool that could be used flexibly in multiple stages of the sport psychology service delivery process (e.g., Keegan, 2016).

Using Think Aloud for Needs Analysis

This category depicted how TA was perceived to be useful as a needs analysis tool when working with clients. Several practitioners reported how they had developed an interest in using TA as part of their applied practice, with this approach being considered useful, either in isolation or alongside other methods (e.g., interviews), for gathering information about the client during the early stages of the therapeutic relationship. Some participants reported how the use of TA had culminated in changes in their practice. For instance, P9, who had used TA with a golfer, discussed how the addition of TA had encouraged them to spend more time in

the needs analysis. The additional time aided their understanding of the client and circumvented the potential for moving to the intervention stage too quickly:

> I was working with a professional golfer who was basically struggling with the putting yips and after a few sessions one of the things we did was ...I just asked him to speak out loud the thoughts that were occurring before, you know, in the lead up, during, after and just to try and get them out there to try to work out what was going on. (P9, Trainee ASEP)

In addition, when working in Rugby Union, and working with an injured athlete, P6 spoke about the use of TA to gain an understanding of a player's readiness to return to play and their general thoughts prior to this:

> I was thinking that perhaps think aloud could be a really interesting tool, especially in like their return to play, where you're actually thinking: are they focusing on that injury? Or are they actually focusing on the game? Or how self-aware are people of what they're actually doing and what they think they're doing? So that would probably be a nice tool to use in that situation. (P6, Registered ASEP)

As mentioned in the above extract, TA was perceived to be flexible in terms of the scenarios in which it could be used as a need analysis, with potential situations in which it could be used including to develop insights into skill execution and a performers psychological state (e.g., during task performance).

Using Think Aloud to facilitate reflection

This category depicted how the use of TA was used as a form of reflection intervention in the practitioner's work with clients. More specifically, some participants explained how the clients perceived that listening back to the recorded verbalisations had helped to develop their self-awareness during performances. To provide an example, P9 (trainee ASEP) recalled an encounter with one golfer after listening to a recording:

He was, like, "oh my God. What am I saying to myself over these putts? [It's] No wonder I'm missing…" [and it was] kind of like, "woah. I knew I was joining these little bits but why am I saying that to myself?"

In addition to raising self-awareness, the process of listening back to the recorded verbalisations was also reported to have had broader interpersonal benefits for coaches and athletes. For instance, P10 (registered ASEP) explained that the use of TA within cricket had enhanced the quality of communication between a coach and athlete, which in turn was perceived as beneficial for the coach-athlete relationship:

It was creating a framework to enhance communication, but it enhanced the self-awareness of the athlete to the athlete, enhanced understanding from the coach, but also, it built on communication and understanding, but within that athlete-coach relationship, which then, I guess, then provided information to support further lessons, further interventions, further progression of preparation. (P10, registered ASEP)

This process of reflection was perceived to act as both an intervention and to aid in the evaluation of services delivered. Some participants spoke about how TA could be a useful tool for evaluating progress made in their work with a client. For example, P3 (registered ASEP) described how they could evaluate client progress over time by comparing pre and post-intervention TA verbalisations, pointing out that they were "able to look back and say 'well look, this is before we kind of adopted this intervention. You can see, after... what are the negative thoughts that you are having [in the pre-intervention TA audio] and how they have changed". Furthermore, through the process of evaluation and tracking progress, one participant explained how this in itself could become an intervention that raised self-awareness:

You can track the progress, yes, but then the progress itself and the tracking process itself is an intervention, but it's also a reflection, so if you listen to six recordings and

look back at the changes and differences, you're technically exploring, but then that exploration has the intervention insight by raising self-awareness. (P2, trainee ASEP)

Alongside the evaluation of the impact of services delivered, participants also spoke about how the use of TA encouraged reflection on their own practice. For example, P4 (trainee ASEP) outlined how they used TA as part of their own reflective practice:

For reflecting on a session, post-reflection, you almost, I found I was almost deconstructing [the session], asking questions and answering myself as I went. So, the thinking aloud from that point, helped me to hear what I was saying as well at the same time rather than just thinking in your head, verbalising it, talking through it. I found it so much quicker and easier process to deconstruct and understand what I'd experienced than I would do through writing.

As suggested by P4, TA appeared to be a convenient and time-efficient way for them to reflect on their practice and thus offered them a new way to engage in this professional development activity.

Considerations for Using Think Aloud in Applied Practice

Within this second section, we aimed to address the second research question, which focused on ASEPs' views on factors to consider when using TA in applied sport and exercise psychology practice. Given that TA was a novel tool for most participants within this study, our findings present insights into procedural considerations that participants perceived could enable or prevent them from using TA in practice.

The introduction and technicalities of using Think Aloud

This category provides insight into considerations for TA training, familiarisation, and recording. Given that TA is something that some people may find initially uncomfortable or unusual, participants felt that training clients in how to use or familiarising them with it was an important consideration. Participants who had used TA with their clients' provided insights into

how they introduced their client to TA. For example, P3 (registered ASEP) who had used TA with a running client explained:

> I just brief them [the client], try to educate them, tell them why [we might use it]. I ask them if they think it's useful or not, or if it's completely insane, and then I sort of give them a demo, where I do, I tell them to give me a situation and then I just sort of do a think aloud for 30 seconds, 40 seconds on it and then I invite them to try it. They have a variety of feelings associated with it and then obviously we work our way around.

As articulated in the above extract, introducing TA to a client could elicit different responses which participants had learned to be aware of. Working with participants in the early stages and helping them become comfortable with using TA was considered valuable. Reflecting on their experience of using TA with a rugby player during kicking, Participant 10 (trainee ASEP) explained that:

> There was a process of finding it a bit weird to begin with. So, it was very much kind of it was an um... there's it was kind of a light touch to begin with and not just getting her used to it before really attending to what she was saying at that time. And she got into it pretty quickly anyway. So probably after a week or two weeks or doing it, it was she found it easier to do.

A further consideration discussed by participants centred on the recording of the verbalisations. Some participants spoke about using mobile phone applications: "[There is] an app on my phone that I've started to use, and I can sort of save the files quite easily" (P4, trainee ASEP). For others, however, technological challenges were reported. One participant spoke about how the microphone they purchased did not connect to their phone, while another mentioned that they "got some pre-wrap and wrapped it round it [the microphone] and taped it" (P9, trainee ASEP) to protect the microphone from the wind and noise interference and used phone plug-

in mics to maintain sound quality. Together, this suggested that practitioners often needed to be creative to find solutions to challenges faced when using TA.

Deciding To Use Think Aloud (Or Not)

This category represented factors that participants might consider when deciding whether or not to use TA with a client. When deciding to use TA, participants explained how they felt it would be important to ensure that the relationship between them and their client had developed sufficiently to inform decisions on intervention implementation. P8 (trainee ASEP), for example, explained that using TA was not something they would implement with a new client as they believed that the relationship needed to develop "to a point where you feel comfortable as a practitioner and you'd, you get a sense that the person who you would be using it with would also be open and comfortable for that." Here, this participant recognised the importance of the quality of the working alliance.

Among some participants, concerns were expressed about the potential impact that TA could have on a client's performance and psychological processes. For instance, one participant spoke about how TA appeared to have been disruptive to the client:

> He couldn't be natural while running because he was conscious of having to sort of verbalise his thoughts. And in terms of the think aloud, it, it drew his attention on an internal focus on himself and the pain and the bodily sensations. So, in turn, whereas he preferred whilst running to be distracted, and to possibly think about, so he would listen to a podcast, podcast normally or listen to music to distract him from what he was doing. (P1, trainee ASEP)

As noted by P1, they felt that using TA had disrupted their client's "natural" approach and drew attention to internal bodily sensations more so than would normally be the case. Other participants also appeared to express concern about the potential impact that thinking out loud

could have on performance: "if I sort of mic them up, and ask them to verbalise everything, it could potentially be a bit of a hindrance to their performance" (P2, trainee ASEP).

Based on the potential impact of TA on performers, it appeared that the context in which TA could be used (i.e., training or competition) was an important consideration. Participants also spoke about how individual differences could influence their use of TA. For instance, one participant felt that the age of a performer needed to be considered:

> I think some athletes really struggled with the concept of being able to think aloud. And older athletes grasped it a lot better where they were able to verbalise their thoughts and emotions a lot better, compared to maybe a 13-year-old, who probably doesn't have the language capabilities to express how they're feeling. (P2, trainee ASEP)

In addition to differences between athletes at different career stages, some participants also felt that it was important to consider how open the client was to using TA prior to implementing this strategy, as some athletes might be self-conscious of using TA in a public environment. Together, our findings illustrate that a multitude of factors related to the context, client, and therapeutic relationship were perceived to be important considerations when deciding to use TA in practice.

Discussion

The aim of the current study was to explore ASEPs perceptions of using TA and their views on the potential utility of TA within their own practice. The study is the first to consider ASEP perceptions of TA as a potential tool within applied practice. Overall, participants highlighted that once the practicalities of using TA were understood, this method could be used within different stages of the consulting process, including needs analysis, intervention, and evaluation. However, our findings illustrate how a range of factors, including contextual, client, and relational elements, should be considered when seeking to use TA in practice. Together,

these novel insights into practitioner experiences of using TA can have implications for applied practice (see *Implications*).

Our findings offer insights into some of the stages that the ASEPs felt TA had been and could be useful in the consultancy process. With reference to the stages of sport psychology consultancy (Keegan, 2016), participants in the current study regarded TA as a flexible method which could be used during the needs analysis phase, and as a potential tool to facilitate reflection as part of both an intervention and a practice evaluation. Moffat et al. (2021) previously used TA to explore the cognitions underlying problematic on-court behaviour of a young tennis player as part of a multidimensional needs analysis. Findings in the current study advance our understanding by suggesting further potential uses of TA as part of a needs analysis, including skill execution and a performer's psychological state when returning from injury. While the focus of our study was on TA, future research could continue to explore potential uses of TA alongside other methods as part of needs analysis. For example, how TA might help inform performance profiling or provide insights that embellish the use of standardised inventories.

Building on previous research in sport psychology (Moffat et al., 2021), findings of the current study offer novel insights in relation to the utility of TA as an intervention tool and as a means of promoting self-awareness. Self-awareness is regarded as a fundamental self-regulatory competency underpinning psychological performance in sport (Durand-Bush et al., 2021) and is proposed to play a vital role in skill development, skill execution, arousal regulation, and emotional control (Ravizza & Fifer, 2014). Furthermore, self-awareness is required when using many sport psychology techniques and is a fundamental principle of most (if not all) models of practice (e.g., acceptance-based approaches: Gardner & Moore, 2007; Cognitive-Behavioural Therapy: Butt et al., 2023). Self-reflection can enhance self-awareness (Kirschenbaum, 1997) and findings of the current study suggest that TA is a tool

that can help clients to reflect on and subsequently develop their self-awareness (Birch et al.,

2022). Birch et al., (2022), found that golfers reported TA to be a method that can develop

self-awareness and more specifically to help a golfer become aware and change their pre shot

thoughts, and stop themselves from 'drifting' off and keep focused on their game.

Furthermore, our findings also suggest that TA may also be beneficial for practitioners

themselves. Given that reflective practice is important for the development of ASEPs

(Cropley et al., 2007), ASEPs could also consider the utility of TA as a method to aid their

own development, as well as that of their clients. Although this was slightly outside the

original aims of this study, recent research has used retrospective methods such as thought

listing (Tod et al., 2024) to gain insight into applied sport psychologists' thoughts and focus

during practice. Although this work did not seek to understand ASEP's perceptions of this

method, these authors alluded to both thought listing and TA being useful for ASEP's to

develop self-awareness. Future research may wish to consider how ASEPs to adopt the use of

TA within their own practice akin to Tod et al. (2024).

The second section of the results focused on the ASEPs' views on factors to consider

when using TA in applied practice. A core consideration highlighted by participants was the

need for ASEPs to educate clients in how to use TA. Although research by Birch and

Whitehead (2019) emphasised the potential value of using task-specific instructions to train

TA in a research context, based on findings in the current study, we suggest that the process of

training clients to use TA in an applied context should consider: the practicalities of using TA

in a specific context (e.g., is it possible to do so without interfering with an athlete?); the client's

openness to using TA; their stage of development and degree of comfort using TA; and how

the act of thinking aloud can evoke emotional responses for a client. With respect for the

potential disruption of performance and psychological processes, previous research in sport

has been somewhat mixed. For instance, Stephenson et al. (2020) reported that coaches could

direct their attention inwards and miss out on important information in their environment (e.g., players' performances) when thinking aloud. Moreover, Whitehead et al. (2018) reported that some cyclists felt TA was not detrimental to their performance, some felt it aided them, while others found it distracting. Thus, we suggest that practitioners could benefit from being flexible in their use of TA and maintain open dialogue with clients about how TA is working (or not) for them.

Another factor reported to influence participants' decisions to use TA was the strength and stage of the working alliance between themselves and their client. The working alliance between a practitioner and client is an important active ingredient underpinning effective sport psychology service delivery (Tod et al., 2019). Practitioners in the current study suggested that having a developed working alliance was important as this could help the client to feel more comfortable with using TA. Consequently, this suggests that when deciding to use TA with a client, ASEPs should not only consider client-related factors, but they should also consider how developed their relationship is with the client. In turn, this reinforces the importance of developing a strong working alliance, a core characteristic associated with effective ASEPs (Cropley et al., 2010; Tod et al., 2022). It is important to note that developing a working alliance may take time for some practitioners, meaning that an initial needs analysis may have already taken place, and thus contradicts our finding of the use of TA as a needs analysis tool; especially as a first step into the needs analysis process. However, as alluded to, it is based on the practitioner's gauge of the client's willingness to try the use of TA, and the appropriateness of the tool to glean further insight into the client. More research is needed to understand specific examples of when are when not this might be. Furthermore, the consultancy process is a continual cycle where needs as being captured and case conceptualisation is ongoing (Bird et al., 2024).

Limitations and Future Directions

Notwithstanding the contribution of findings of the current study, several limitations should be noted. First, the participants recruited for the current study were all registered practitioner sport and exercise psychologists or trainees who had pursued or were pursuing accreditation in the UK. Therefore, studies should explore the use of TA in other contexts and cultures. For example, the UK is an individualist Western society and psychological service delivery needs to be in tailored to the cultures and societies in which it appears. Ong and Hardwood (2018) identified how Eastern cultures reported higher levels of stigma towards sport psychology consultancy. As authors we don't want to make generalizations, but TA could be perceived differently by different cultures. Second, participants in the current study all expressed an interest in learning about TA and completed a workshop about this prior to taking part in the current study. Therefore, the perspectives of other individuals, which could include those who might not have been interested in using TA, were not explored. In the future, researchers could explore the perspectives of individuals who have not used TA nor intend to do so, as this could provide useful information (e.g., perceived barriers). Third, the dataset for the current study was drawn from single interviews with 10 participants who attended one education workshop. Although 12 weeks to follow up on the use of TA was perceived to be sufficient time for ASEPs to have potentially used in practice, in hindsight, this was a limitation of the study. Longitudinal studies are warranted to explore how practitioners' use of TA evolves over time, thus affording the examination of the practitioner-client relationship and the use of TA across the consulting process. Future research should also consider the pedagogical underpinnings of the design and delivery of a one-off educational workshop. Adopting additional continuous social learning groups over an extended period (Kraft & Culver, 2021) for example, could support the learning of the ASEPs in their engagement with TA. Fourth, no participants in the current study reported the use of TA with exercise participants, therefore research is warranted to explore how TA might be used with exercise clients. Finally, and

importantly, the perspectives garnered in the current study focused on ASEPs, but the perspectives of the clients that the participants worked with were not explored. Therefore, it is vital that future research explores the viewpoints of both ASEPs and their clients to gain a new and alternative perspective on the utility of TA in applied practice from the service user perspective.

Practical Implications

Based on findings from this initial exploration of ASEPs' perceptions regarding the use of TA in practice, we summarise several suggestions for practice. First, practitioners should be aware of the potential ways in which TA could be used at different stages in the consultancy process. For instance, TA could be used (alongside other methods) to generate understanding of a client's cognitions during task performance as part of the needs analysis. Likewise, TA could also be considered as a method to enhance client self-awareness. Second, prior to using TA, it is important for ASEPs understands the clients openness to the use of TA and whether or not it might be a suitable method for them to use. Third, practitioners should also consider whether the use of TA is suitable within certain contexts (e.g., competition) and with particular clients (i.e., individual differences should be considered). Assessing the client's openness to TA and their acceptability of this tool could help to identify any potential issues with its implementation. Finally, ASEPs should be mindful of how to train clients about the use of TA and be aware of the various devices and pieces of equipment that will be required to implement it effectively.

Conclusions

The aim of the current study was to explore perceptions of using TA and their views on the potential utility of TA within applied practice among ASEPs. We contribute new knowledge and understanding to the applied sport psychology literature by offering ASEPs' insights into how TA might be used in sport psychology and factors that practitioners could

consider when deciding whether or not to use this method. By doing so, our findings offer an initial starting point regarding the use of TA from the perspective of ASEPs and can be used to inform the development of preliminary guidance to support the use of TA in applied practice.

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