"I can Just Get all the Bits That I Need": Practitioners' Use of Open-Access Sport Science Podcasts

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The aim of the current investigation was to explore practitioners' attitudes toward and reasons for listening to open-access podcasts. It is well accepted within the literature that sport and exercise practitioners, such as coaches and sport scientists, perceive several barriers to access of scientific and academic research. Open-access podcasts may provide an alternative platform for developing esoteric knowledge. Nine sport and exercise practitioners (including gym owners, nutritionists, and sport coaches) participated in the investigation. A single-semi structured interview was conducted, and data were analyzed using a thematic network analysis approach. Three themes were constructed from the data—flexibility of podcast listening, convenience of podcast listening, practitioners' need for authentic and novel information.

Keywords: podcast, learning, sport science, mobile learning, interview

INTRODUCTION

The sport and exercise industry has grown rapidly in the last 2 decades, which has led to specialization and fragmentation into a number of disciplines including physiology, biomechanics, and sports psychology (Balagué et al., 2017). With innovation and advances in sports and exercise science, alongside greater commercialization of these fields, comes the widespread emergence and investment in sport science and sports medicine professionals (Wagstaff et al., 2015). In this context, advances in theoretical knowledge, and rapid changes in technology, means there is a need for scientists and sport-related professionals to stay up to date with an array of specialized information (Balagué et al., 2017). Such concentrated information, especially in the form of academic research and theoretical frameworks are difficult to communicate to intended audiences from the sport and exercise community (Eisenmann, 2017; Halperin et al., 2018; McNamara et al., 2020a). For example, for more than a decade authors have acknowledged that sports coaches make limited use of peer-reviewed journal articles to seek information to inform their practice, as they do not have the time to find and then read scientific literature (Williams and Kendall, 2007; Reade et al., 2008).

Many governing bodies and societies within sport and exercise regularly host face-to-face conferences to disseminate research and best practices to both scholars and practitioners. However, much like barriers to accessing scientific literature, there are significant barriers to conference attendance (York et al., 2014). For example, sport scientists interviewed by York and colleagues (2014) showed that although attendance was highly worthwhile in developing their professional network, this came at a personal and financial cost. Financial barriers to professional development have also been identified within strength and conditioning (Gillham et al., 2017) and coaching (Dawson et al., 2016) communities as well as generically across academia (Mair et al., 2018).

The barriers to traditional face-to-face conferences and in-service trainings have been further amplified during the recent Coronavirus pandemic, as traditional forms of professional development have temporarily ceased to exist. Although many kinesiology related associations and conferences have rapidly transferred their professional learning opportunities to virtual settings, the nuances of online learning within these fields remains largely unexplored.

Although there is a severe dearth of literature related to the podcasting phenomena within the field of kinesiology (McNamara et al., 2021), podcasts may be an ideal tool to enable knowledge translation within sports and exercise sciences. This may be due in part to the necessity of the recent global pandemic, but also because podcasts offer a variety of unique characteristics which are often void in online settings. Podcasts may offer a unique learning opportunity for practitioners and students alike within the sport and exercise industry to engage with relevant information, and professional networking that may only previously have been available through attending conferences and professional workshops. Furthermore, podcasts are typically free to download from aggregation sites such as iTunes, overcoming cost barriers to professionals within the industry. This medium also enables listeners to be more in control of their learning, as podcasts allow the listener to pause, rewind, and listen to content as often as necessary to properly learn the content (Kay, 2012; Drew, 2017).

Commercially created podcasts, commonly called *open-access podcasts*, that are discipline-specific are not associated with course curricula, and instead act as standalone educational resources for listeners outside of formal education (Drew, 2017). These podcasts tend to be longer and involve more guests than short-form podcasts produced by institutional distance learning courses (Drew, 2017). Similarly, they typically involve invited expert guests to bridge the gap between experts and practitioners. Open-access podcasts often have a strong informal learning emphasis and tend to supply in-depth examinations of a specific topic, providing narrative stories about specific interventions or unique criticisms that were previously only available *via* academic conferences and journals. Therefore, open-access podcasts may offer a unique solution to the gap between the experts with specialized information and everyday practitioners within sport and exercise fields. Alongside the potential benefits, open-access media, that is typically self-published, has previously been criticized for not having a quality assurance process (Zanussi et al., 2012). Hence forth the need to further investigate the ways in which practitioners engage with a medium that is under-researched (Fronek et al., 2016).

Several open-access podcasts that engage with the sport and exercise industry have emerged online that attempt to communicate emerging knowledge to a diverse and disparate audience. These podcasts are produced by a range of professionals that are enthusiastic to disseminate theoretical and industrial knowledge. Such podcasts offer practitioners the opportunity to listen to and learn from subject specialists and industry experts. For example, two of the highest rated sports science podcasts available on iTunes both acknowledge having an informal educational philosophy:

Weekly interviews sharing knowledge, experience and best practice in sports science and strength and conditioning (Pacey, 2020).

For current and aspiring sports nutritionists! The Institute of Performance Nutrition's "We Do Science" Podcast, hosted by Dr. Laurent Bannock, features a wide variety of leading guest experts (elite practitioners and scientists) with expertize in sport and exercise nutrition, and related fields relevant to "real-world" practice (Bannock, 2021).

Hence, open-access podcasts may offer scholars and practitioners within sports and exercise science fields an alternative, accessible, and motivating opportunity for informal learning outside of traditional face-to-face conferences or professional development forums that have been significantly disrupted due to the Coronavirus pandemic.

Although there is literature to support the use of educational and discipline specific podcasts, mostly from medical and education related journals, there appears to be a dearth of scholarly work focused on the use and impact of these podcasts within the field of sport science and kinesiology. McNamara and colleagues (2021) recently conducted a scoping review of the literature on the use of educational podcasts in the field of kinesiology, and identified 11 empirical articles. The authors also concluded that much of this research lacked critical information related to research design, podcast development, and findings. Understanding how the podcasting phenomena is affecting specific fields and professions is essential, as this medium can be used as a knowledge translation tool to reach a larger audience and increases the likelihood of the use of pertinent information within a particular field (Rader et al., 2014). For instance, along with informing sport and exercise science practitioners, podcasting may be used to better reach and connect with sedentary people who would benefit from exercise content and motivation to be more physically active. O'Bannon et al., 2011 also explained that because educational podcasting research "is in its infancy, there is a need for additional research in different content areas and for longer periods of time" (p. 1891) to determine the long-term impact of this new tool. Hence, the aim of this exploratory study is to investigate how practitioners working in the sport and exercise industry engage with open-access podcasts.

METHODS

Participants and Design

This study used a qualitative descriptive approach, which aims to provide a thorough account of participants' lived experiences without changing their words dramatically (Sandelowski, 2000; Sandelowski, 2010). This method was used as it allows for a forthright insight into a phenomenon, discipline-specific podcast listening, that have been largely unexplored (Sandelowski, 2000). Further, this approach allows researchers to select from a variety of techniques regarding

TABLE 1 | Participant information.

Participant pseudonym	Sex	Age	Education level	Profession
John	Male	33	PhD	University lecturer
Andrew	Male	25	BS	Strength and conditioning coach
David	Male	27	MS	Sport scientist
Anthony	Male	29	MS	Lecturer
Tim	Male	29	MS	Gym owner
Ryan	Male	32	PhD	University lecturer
Brian	Male	29	MS	Professional soccer coach
James	Male	28	BS	Gym owner
Anne	Female	27	MS	Sports nutritionist

Note. *MS = Masters, PhD = Doctorate, BS = Bachelors.*

TABLE 2 | Interview guide.

1. What is your maximum education level?
2. What is your current profession?
3. What podcasts do you listen to most regularly?
4. What is it about this podcast that you find valuable?
5. What stimulated your original interest in listening to podcasts?
6. Why *don't* you think you are interested in listening to podcasts?
7. If you could describe your listening habits in terms of when and how you listen to podcasts, what would they be?
8. What features of podcast design and structure do you find engaging? *a) Is there anything about podcast design that have prevented you from engaging with them? Is there anything you consider to be barrier?*
9. What is your opinion of using podcasts to learn new knowledge and skills?
10. What are the primary ways in which you find new podcasts?
11. Could you tell us a little about your friends and colleagues' podcast usage?
12. Could you tell me a little bit about whether you have ever influenced anybody to start listening to a podcast? *a) Has anyone every influence you to start listening?*
13. When comparing podcast listening to taking formal professional development courses, could you explain why you would choose one or the other?

recruitment, sampling, data collection, and analysis. Purposive sampling was used to recruit individuals over the age of 18 who worked full time and represented the sport and exercise industry. Occupations of the interviewees included academics, gym owners, nutritionist, professional sports coach, and sport scientist. Nine participants agreed to take part in an interview. **Table 1** provides demographic information on the participants.

Participants were purposively sampled and initially contacted *via* e-mail and invited to participate before receiving a participant information sheet and informed consent form. Inclusion criteria consisted of being over the age of 18 and working within sport and exercise related industries e.g., sports coaching, personal training. Once participants provided consent, an interview time was arranged. The interviews were single, semi-structured interviews with the questions structured around the participants' current podcast listening behaviors and perceptions of podcasts. An interview guide was developed following two pilot study interviews. **Table 2** shows the questions used in the interview guide.

Interviews were conducted *via* video conferencing and lasted between 18 and 35 min and recorded using free video conference recording software. All interviews were transcribed verbatim. Data derived from the interviews were analyzed using manual data coding. Prior to all data collection, the following procedures were approved by the first author's Institutional Review Board.

Data Analysis

The thematic network analysis approach (Attride-Stirling, 2001) was employed, which coded data based upon a first pass of the transcripts to glean "basic themes," a second pass that grouped basic themes into "organizing themes," and a third pass the developed "global themes." Two of the authors analyzed the data independently and then agreed on the key themes emerging from the data. Considering this method, the researchers initially coded placed statements from the data into categories reflecting similar motifs (e.g., travel, driving) independently. Each category was then given a working title or description of the category. Each statement was then read individually and coded into either an existing category with similar codes, or into new categories. Next, the categories were reorganized into larger groups based on similar themes. For example, the categories of "alternative to reading" and "application to practice" were eventually reconfigured and combined into a larger category of "informing practice." After re-examination of the categories and themes, the lead researcher reviewed each statement again within each category and considered discrepancies.

Trustworthiness

Several measures were taken to help ensure the quality or trustworthiness of the study. The interviews were transcribed verbatim. Copies of the finalized transcripts were sent to

participants to ensure accuracy. In addition, verbatim quotes allowed sensitivity to context, ensuring that participants' voices were exposed in the data. This therefore enabled readers to check interpretations and ensure themes were not duplicated within the existing findings. Peer debriefing was carried out throughout the data analysis and representation process by the second researcher. The peer debriefing process entails sharing and consulting with professionals with enough expertize in the area to provide feedback on the themes to refine and, often, redirect the interpretation process (Erlandson et al., 1993). The second author supported the interpretations of the data and considered them to be representative of the participants' statements. The qualitative data rendered 'thick descriptions' (Ponterotto, 2006) of how and why several participants engaged with podcasts. These thick descriptions add explanatory context to the quantitative data and enable deeper insights into the podcasting habits of practitioners within the sport and exercise science industry.

RESULTS AND DISCUSSION

Three broad and intersecting themes were constructed from the interviews. Theme 1, "I can listen to them while driving whereas I can't really research papers whilst driving" demonstrated the flexibility of being able to listen to a podcast. The second theme, "I can just get all the bits that I need" reflected the perceived convenience of podcast listening where individuals have significant control of the material through features such as preferential episode selection. Finally theme 3, "I like raw, organic, authentic, information" highlighted how participants wanted authentic and novel information whilst listening on the move.

Theme 1: I can Listen to Them While Driving Whereas I Can't Really Research Papers Whilst Driving

Throughout the interviews, most of the participants indicated the flexibility and convenience of listening to podcasts, with many indicating their use of listening to podcasts whilst driving in the car. David exemplified this by stating "Definitely driving. It's (listening to a podcast) always in the car. Always." Some participants noted that listening to podcasts while in the car helped to break up the monotonous nature of the drive. For example, Anne stated "When I'm driving I'll get a bit frustrated waiting around doing nothing while I'm driving so I'll have a look through Twitter and see what podcasts people have been posting about." Further, many participants elaborated that listening to podcasts was a useful tool to listen to while commuting to work:

> It's pretty much always commuting. While I'm driving to and from my various workplaces. I'd say 95% of the time it's when I'm sitting in the car driving. I don't really catch public transport very often but if I did I'd listen to it then as well. But it's always when I'm commuting. (Andrew)

Podcast listening concurrent to performing other tasks, specifically driving, is consistent with the broader literature on podcasting listening for educational purposes (Hew, 2009; Kay, 2012; Kennedy et al., 2016; McNamara et al., 2020b). Given that practitioners are busy, it is logical to suggest podcast listening is a way to efficiently access knowledge. As highlighted by the interviewees, podcasts are valuable for the time poor, multi-tasking practitioner (Goerzen et al., 2018). A limitation of this is that multitasking may cause listeners to lose focus and may lead to decreased engagement ["when I'm in the car and I get on the motorway I have to turn the volume up full blast" (Anne)]. As Berry (2016) argues, podcasts tend to be listened to "intimately" and cannot be listened to passively. If a practitioner is listening to a podcast specifically to glean knowledge, distractions might negatively impact their podcasting experience. Nonetheless, as Anne indicated, they feel the urge to "fall asleep" when reading; meaning distractedness is not unique to podcast listening per se.

Perks et al., 2019 suggested commuting may be the initial reason for podcast listening. When asked "what got you interested in podcasts?," Brian suggested it was the traveling that is part of the job of a professional soccer coach:

> I think probably just due to the amount of travel I do to work, whether that be on buses to games, staying in hotels or simply just the driving time to and from work and so on, it's not so much to kill time but I generally don't have time to sit down and read books. So it's kind of a way of bridging that gap, so using time the best you can is probably why I started listening to them.

Tim also stated that work related travel was the initial reason for podcast listening:

> Because I'm driving a lot and on trips away with international competitions and stuff like that it's a lot easier to put it on and travel, whether I'm driving in a car or something like that.

Several participants stated that their listening habits related to some form of travel, where many also stated that they perceived a lack of time to read.

> I'd say that just I'm bad at getting time to sit down and read . . . So for me rather than trying to fight against that I prefer to digest my content *via* audio really so I can do other things as well. If I'm reading a book I can only read a book. You can't do anything other than read a book . . . you can't do anything relatively productive (John)
>
> Basically because of all the roles I have I just don't have the time to read and it's the sort of thing I'd like to do more but I don't have the time really (James). . .that's a part of it in terms of passing the time in a productive manner and I think by doing that you don't feel like it's a waste of 2 or 3 h or whatever that time might be (Anthony)

In addition, Anne explained that they used podcasts while driving to continue to learn about their field, stating "I can listen to them while driving whereas I can't really research papers whilst driving." Many of the participants may be "working-fast" (Coutts 2016), and do not have time to slowly deliberate over traditional research platforms as means of informing their practice. This perceived lack of time is not unique to the participants of the current study, as literature has previously highlighted time as a barrier to accessing sport science research (Fullagar et al., 2019). Indeed, within the fields of education and kinesiology, researchers often do not prioritize the dissemination and accessibility of research to practitioners (Armour, 2017; Casey et al., 2017; McNamara et al., 2020a). Academic knowledge has been widely criticized for decades for being inaccessible and impractical to everyday practitioners (Brüggemann and Engesser, 2014). In addition to lack of time being a barrier to traditional forms of research dissemination, financial barriers have been cited within sport science and kinesiology fields (Dawson et al., 2013; Dawson et al., 2016; Gillham et al., 2017) as well as generically across academia (Mair et al., 2018).

> Again, I think it's how accessible it is. So, for me I would try to network with people, see them in person, share research papers, lectures online and podcasts all as ways of learning. But for me the podcast is free and I can listen to it at my own convenience. I'm self-employed, so if I need to go to a conference I need to put it in the diary far in advance, but then when I get closer to it and I can't go because I've got work. I also have loss of earnings for the day because I'm not working. Then there's the cost of the conference and then there's maybe a talk at the conference I'm not really bothered about. Whereas I see podcasts as introducing me to a topic and just being so accessible.

Podcasts may therefore offer a viable alternative learning opportunity for practitioners within the sport and exercise industry to engage with a relevant professional network that may only previously have been available through international conference attendance. Open access, freely available podcasts have the capacity to break through the divide between theory and practice (Chartier and Helman, 2016; McNamara and Haegele, 2021). In this sense, podcasts act as contemporary "knowledge brokers" (Meyer 2010), taking knowledge from the esoteric space of academia and reformatting it for a wider practitioner audience. Podcasting forms an "interpretive community" (Brüggemann and Engesser, 2014) that enables theoretical knowledge to be disseminated to audiences who may find value in it to their everyday work.

Theme 2: I can Just Get all the Bits That I Need

The ability to listen whilst traveling and driving relates more broadly to flexibility, convenience, and the unique features of podcast listening for learning. Recent literature has examined the convenience for learning phenomena in varying higher education settings. Broadly, convenience is the concept that individuals consider how much time and effort is required to achieve a goal (Sanford et al., 2017). All the participants listened to podcasts with a primary aim to educate themselves and improve their practice, with podcasts providing a convenient means of achieving this goal. Participants emphasized that it was more convenient to listen to a subject rather than read about it.

> ...when I'm tight for time I think that's when with a podcast I can still feel like I'm researching and learning even if that week's been crammed and I don't really have any time to do any reading of papers (Anne)

> But I suppose the benefits of the podcast is that you can get through so much content quite quickly rather than having to go to a seminar or a conference or something like that whereas if you've got it in your pocket and learning in your commute or whatever, then um you're being more efficient with your time. (Andrew)

> So, I guess, when I read I have to fight myself not to fall asleep. When I have to read a research article but I can listen to a podcast on it instead I'm not going to (pause) I'm going to find it more engaging (Anne)

Indicative of the perceived relative ease of listening over reading for these participants, several also indicated a preference to being told the practical applications of the research and theory, rather than reading original source materials. The reluctance of the participants to engage with scientific literature corresponds the existing literature on this area. For example Brink et al. (2018) reported that only 8% of their sample of football coaches read peer-reviewed journal articles:

> I think sometimes in a research paper it's more hard work to get the information that I want, whereas where you've got a good researcher or someone who's good at basically translating their findings and how it can be applied, sometimes I find it makes getting my information easier (Anne)

> ...ultimately I'm not going to sit down and read the books and manuals and magazines and so on, so if I can listen to it while I'm kind of not doing anything . . . I can just get all the bits that I need really quick (Brian)

> ...it's just an alternative to sitting down and reading a research paper (Ryan)

> And also I like that they talk about practical applications instead of reading it off a textbook where you have theory in front of you (Andrew)

Participants were not only listening to podcasts because of perceived time barriers (theme 1), but also to overcome perceived difficulties in reading scientific literature. Understanding scientific literature is acknowledged as a "cognitive challenge" with unfamiliarity with discipline-specific terminology offered as one explanation (Hubbard and Dunbar, 2017). Forty-two percent

of the academics (PhD students, postdocs and senior researchers) surveyed by Hubbard and Dunbar (2017) reported to find scientific literature frustrating to read even though they found this to be a valuable use of time. In contrast we know that many within the sport and exercise community do not see the value in reading scientific literature (Fullagar et al., 2019). Therefore this perceived lack of value, in combination with the cognitive challenge of using discipline-specific terminology, may explain the historical preference for other sources of information (Reade et al., 2008) and our participants preference to podcast listening over reading primary source literature.

Although many open-access podcasts typically release episodes weekly, it was clear that participants were not simply listening to a podcast episode because it was the latest episode available. The ability to preferentially select content is a convenient feature of podcast listening that was important to participants. The participants used podcast listening as professional development on demand (Bauer, 2010) whereby podcasts function as a continually accessed repository (Nwosu et al., 2017). Participants used the flexible on-demand features of podcasts to select episodes based on the specific content:

> At the moment we're looking to do some research into velocity based training and jump assessment so I've sought out a podcast with Dan Baker in it who I know has done a lot of research in that area, so I tend to listen for that sort of stuff (Tim)

Furthermore, participants considered the credibility and reputation of the guests, when selecting episodes:

> Yeah, I pick and choose. I pick and choose based on . . . let's say an email pops into my inbox and I open it and there's either an overview of the interview or an interesting premise to it I'll choose based on that, but I won't listen to every one (John)

> If I find there's a particular area I want to brush up on—maybe I'm doing a lecture, for example I had a lecture on periodisation a couple of months back and what I did do was go onto those couple of podcasts and had a look around to see if there was any interesting discussion on those particular areas just to get their insight and to give me more useful information to talk about with students when I go into the classroom, that's probably an example I would use them (Anthony)

I think I choose the podcasts where there's researchers I respect on them. I wouldn't just listen to any old podcast. I've selected those podcasts and those episodes (Anne)

Theme 3: I Like Raw, Organic, Authentic Information

As previous research has shown, the aural medium is intimate, immersive and lively (Ames, 2016; Berry, 2016) accounting for some people's preference for aural over written forms. The grain

of the voice and intonation made available *via* the aural mode of address enables listeners to immerse themselves in the content in a way that provides "three-dimensionalizing" of information (Salvati, 2015). Sport and exercise practitioners, such as performance sport coaches, prefer informal conversations with peers to obtain scientific knowledge (Reade et al., 2008). Conversation through human voice rather than written text "creates a positive social context for meaningful interaction" (Kang and Gretzel, 2012). Human voice creates a sense of social presence and minimizes the sense that information is sanitized and overly mediated. It therefore presents information in a way that feels authentic and personal. This may be why the participants exclusively discussed the use of open-access, freely available podcasts (Fronek et al., 2016), a podcast format that is typically characterized by an interview with an invited guest, as opposed to a monologue or dialogue between hosts. Podcasting is particularly valuable in this regard given that podcasts not only employ human voice but have the added benefit of appearing "raw" and "truthful" because the content is rarely mediated by a publishing house, editorial board or distribution channel (Berry, 2016). For example, James stated "I like raw, organic, authentic information." Further, Ryan explained there is some merit to accessing information that has not gone through a rigorous peer-review process:

> And I guess from a personal point of view, when you read somebody's paper—you know, by the time a paper gets published, it's not necessarily the original thing. Lots of reviewers and editors' comments have changed the shape of it. So I think it's quite nice to just listen to the authors without any—I don't want to say censorship because censorship is the wrong word—but no editing of their views.

Academic journals often set rigorous standards within their peer-review process, resulting in practitioners perceiving the research to be inaccessible, as well as void of application to their practice (McNamara et al., 2020a). Indeed, many well respected journals are those which do not accept articles unless they have undergone a process of "peer review," leading researchers to not write for practitioners, rather to write for an audience of their university peers (Montgomery and Smith, 2015; McNamara et al., 2020a). However, at least from some of the participants perspectives, this rigorous review process may at times unintentionally "water down" the actual research or the authors' words. Open-access podcasts that have researchers on to discuss their research may then provide a more organic and authentic view of their research and perspective, which practitioners may appreciate. Thus, podcasts that give researchers the ability to speak about their work without the standards and guidelines of most academic journals is a double-edged sword; it gives a more authentic and easier to understand view of the research, but the trustworthiness of the content may need to be called into question. Ryan was particularly cautious about the potential for podcasts disseminating inaccurate information, they also expressed the benefit of podcasts presenting more authentic content.

. . .sport and nutrition is quite a contentious area and there's lots of people who disagree with each other there's often the risk that a particular point of view can come across strongly to a student simply because of the charisma or the way the author has put across that idea, whereas somebody who might not be particularly as sociable, I suppose you'd say, won't put their idea across quite as well

A lack of moderation and peer-review is commonly cited as a major weakness of open-access, self-published digital media (Zanussi et al., 2012). This challenge has previously been identified as inherent in media such as blogs and online videos (Williams and Delli Carpini, 2004; Lister, 2008). Specific to this context, Bennie et al. (2017) call for governing bodies of the fitness industry to quality assure sources of information used by fitness professionals, as many professionals in this context use low-quality online sources that are absent of peer-review.

So if there was something that was earmarked by associations like that as being vetted, then it'd be good. I mean if you're working in the industry you know yourself who's worth listening to. But the issue is when you get people who aren't as involved, maybe people like your Level one and two fitness instructors. How do they know what's the safest, well not safest but, the most legitimate podcast to listen to can be difficult unless there's some form of regulation (Ryan)

However previous literature has shown that there is not a consensus on implementing traditional peer-review processes in podcasts (Lin et al., 2015; Purdy et al., 2015; McNamara and Haegele, 2021). This has been discussed as a contentious issue within medical education podcasts, perhaps the most prevalent context of open-access podcast listening for educational purposes. Future research is therefore needed to better understand how both podcast listeners and creators navigate the challenges of balancing authentic conversation with high quality information, and if the findings from the current study are applicable to other fields and disciplines such as medicine.

The participants were listening to open-access, freely available podcast for educational purposes. Participants were using podcasts to acquire esoteric knowledge to both enhance their theoretical understanding and apply to their fields of practice. Podcasts were an asynchronous learning tool for the participants, whereby the content was of more importance than technical features of podcasts, such as episode length. Existing literature on online learning suggests learners often prefer content, such as asynchronous video lectures, to be shorter in length (Kennedy et al., 2016). However, the episode content was of greater importance to the participants. Contrary to existing literature on online, asynchronous learning activities, the participants expressed wanting to have longer podcast episodes.

I would prefer a longer podcast because it provides people more of an opportunity to get a more detailed

and natural answer. And what can be done off the back of that, some people record a podcast for let's say an hour and that's it. And for whatever reason that's an arbitrary podcast length. (John)

I like podcasts that are probably between 1 and 2 h in length because they sort of allow for that in-depth engagement whereas those 0.5 h or 45 min podcasts don't really get into any real depth on any particular topic (Andrew)

Whereas the ones that—depending on who's being invited on the podcast—it might be interesting, they're quite articulate, you might want to listen to them for 3 h (Anthony)

So, length to me, depends on the context . . . he had someone on the other day where the whole conversation was about sleep and there was some pretty awesome information that they spoke about. (James)

This finding may contradict previous research (Kennedy et al., 2016) that suggests short and concise learning tools are useful for acquisition of knowledge. However most of the extant literature has focused on instructor-created podcasts used largely within college settings (McNamara et al., 2021) rather than open-access podcasts, which tend to be longer in duration (Drew, 2017). Sport and exercise professionals may be listening to open-access podcasts for reasons that extend beyond simple knowledge acquisition, such as understanding new perspectives on a topic they are already familiar with. Although the findings from the present study demonstrate that practitioners have generally favourable views toward the ease of use and effectiveness of listening to open-access podcast as a learning tool, and used the podcasts to access research, further research is needed to truly understand the best practices that surround using open-access podcasts within this population. Future researchers should examine the differences in preferences toward podcasts of different lengths among kinesiology practitioners, as well as the outcomes acquired from podcasts of differing lengths. To confirm the benefits and usefulness of open-access podcasts, as well as to identify the merits of different durations of podcasts, the impact of open-access podcasts' on learning should be compared to different forms of podcasts, such as those grounded in theory are shorter in duration, such as content acquisition podcasts, which are guided by the Cognitive Theory of Multimedia Learning (Mayer, 2008).

These findings indicate that podcasts offer an innovative avenue for scholars and experienced practitioners to communicate evidence-based strategies to exercise and sport science audiences. Whilst journal articles are a medium accessed primarily by scholars and students in formal academic settings (Malone et al., 2019), podcasts are widely used resources outside of educational settings. Burke (2017) recommends scholars from sport and exercise to invest and engage in new, additional education activities to promote research and practice in a crowded market that currently has limited reach to the intended audience. Although Burke (2017) applied this notion to social media platforms such as Twitter, this

should also be applied to other potential virtual learning contexts. Hence, researchers and educators from sport and exercise professions should consider engaging with discipline-specific podcasts, as well as producing their own podcasts, or collaborate with existing podcast producers to further disseminate their findings. Professional bodies, conference organizers, professional development organizations, and educational institutions should consider developing their own podcasts to deliver esoteric knowledge to their communities and help to provide the sports and exercise professions with ongoing professional development content. This will provide an opportunity for researchers and educators to disseminate knowledge in a way that is engaging for professional audiences, as well as meet the need for flexibility and availability in a busy and drastically changing world.

Limitations

The authors acknowledge limitations in the analysis of the data. First, convenience sampling was used to recruit participants through utilizing the primary researchers' social media networks. Recruitment from the researchers' social media networks was also centered on specific platforms (i.e., Facebook, Twitter), thus, it is likely that the sample was biased toward users of these specific social media networks, which in turn reduces the generalizability of these results significantly. However, it should be noted that the posts were open to the public and were delivered in social media network groups with hundreds or thousands of users. These users were able to share the recruitment posts to other users linked to their own social media networks, thus helping to reduce the selection bias issues within this study. Further investigation is required, using a much larger sample, to examine differences in categories such as job role and area of study.

CONCLUSION

This is the first exploratory study to examine commercially available podcast usage among practitioners in the sport and exercise industry. The study highlights that practitioners in the sport science industry are using podcasts to access information that has traditionally been difficult to obtain due to cost, distribution, and publication limitations. The findings both corroborate extant research indicating the importance practitioners place on professional development opportunities (Bertram et al., 2017; Blackett et al., 2017) as well as extant studies on the need for scholars to develop more effective ways of engaging practitioners in industry knowledge (Reade et al.,

2008; Eisenmann, 2017; Halperin et al., 2018). Furthermore, the study indicates that podcasts have demonstrable benefit for bridging the communication gap between scholars, experts, and researchers on the one hand, and practitioners on the other.

It must be reiterated that because the global Coronavirus pandemic has disrupted, and likely forever altered traditional forms of learning, podcasts must be seriously considered as viable learning tool for sports and exercise fields. However, before the benefits of this seemingly useful and unique tool can be fully realized, further research and exploration on this topic is needed. For example, future researchers should examine the use of various theoretical frameworks used within the development of specific types of podcasts (e.g., short duration podcasts, video podcasts, and narrative podcasts). Future researchers should also explicitly examine the impact and perceived usefulness of educational podcasts with different populations within the field of kinesiology (e.g., in-service practitioners, undergraduate kinesiology students). Even simple descriptive research may be of great benefit, as it would allow for an understanding of the extent to which these groups are using this medium to fulfill their professional development and learning needs.

DATA AVAILABILITY STATEMENT

The raw data supporting the conclusion of this article will be made available by the authors, without undue reservation. Requests to access the datasets should be directed to matthew.shaw@hvl.no

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by University of Worcester. The patients/participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

All authors listed have made a substantial, direct, and intellectual contribution to the work and approved it for publication.

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