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Developing Rigor in Qualitative Research: Problems and Opportunities within

Sport and Exercise Psychology

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1   **Abstract**

2   Qualitative research has grown within sport and exercise psychology and is now

3   widely conducted. The purpose of this review is to discuss three commonly used ways to

4   demonstrate rigor when conducting or judging qualitative research in sport and exercise

5   psychology. These are the method of member checking, the method of inter-rater reliability,

6   and the notion of universal criteria. Problems with each method are first highlighted. Member

7   checking and inter-rater reliability are shown to be ineffective for verification,

8   trustworthiness, or reliability purposes. Next, universal criteria within the context of Tracy's

9   (2010) heavily drawn on paper within sport and exercise psychology is problematized.

10   Throughout the discussion of each method and universal criteria more suitable possibilities

11   for conducting rigorous qualitative research are offered. The paper concludes that to support

12   high quality qualitative research, scholars - including journal editors and reviewers - need to

13   change how rigor is developed and judged, rather than perpetuate the problems with how it

14   has been commonly evaluated in the past. Recommendations for developing rigor when

15   conducting and/or judging qualitative research within sport and exercise psychology are also

16   offered.

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19   Key Words: Member Checking; Inter-rater Reliability; Universal Criteria; Research Quality

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1   Qualitative research has been utilized as a form of inquiry within sport and exercise

2   psychology for over three decades. During this time there has also been a rapid growth of

3   qualitative research in the field. For example, in their up-dated review of qualitative research

4   in three North American journals (i.e., *Journal of Applied Sport Psychology*, *Journal of Sport*

5   *and Exercise Psychology*, and *The Sport Psychologist*) Culver, Gilbert and Sparkes (2012)

6   highlighted that between 2000–2009 there was a 68% increase in the percentage of

7   qualitative studies published since the 1990's (from 17.3% to 29%). A significant increase in

8   the number of different authors publishing qualitative research in these journals was also

9   noted.

10   In 2009 when Culver et al's. (2012) review period ended the international journal

11   *Qualitative Research in Sport, Exercise and Health* began. Attracting hundreds of

12   submissions yearly, and with 5 issues per year, the journal has published empirical papers

13   within sport and exercise psychology, supported different paradigms and theories, and

14   encouraged innovative methods and methodologies. In recent years other international

15   journals (e.g., *Psychology of Sport and Exercise* and *International Journal of Sport and*

16   *Exercise Psychology*) have similarly published different kinds of qualitative research,

17   creating space for work grounded in different and/or multiple methods, methodologies and

18   ways of knowing. The growth of qualitative research within the broad field of sport and

19   exercise is further evident in the increasing number of heavily cited books devoted solely to

20   qualitative research (e.g., Jones, Brown, & Holloway, 2012; Pitney & Parker, 2009; Smith &

21   Sparkes, 2016a; Sparkes & Smith, 2013; Young & Atkinson, 2012). Moreover, a growing

22   number of conferences and workshops are attempting to address the demand for qualitative

23   research from students, researchers, practitioners, and policy makers. For instance, the bi-

24   annual *International Conference for Qualitative Sport and Exercise* (see twitter

25   @QRSE2018) and quarterly congress by *The European Federation of Sport Psychology* (see

1   http://www.fepsac.com) have hosted workshops dedicated to qualitative research and

2   showcased hundreds of qualitative research papers from established scholars and newcomers

3   from around the world.

4   In light of the foregoing, it would appear that within sport and exercise psychology

5   qualitative research has flourished considerably in recent years. Yet despite flourishing, we

6   cannot be complacent. Like any vibrant field, important intellectual developments within

7   qualitative research have taken place. These developments include work on rigor. Keeping

8   abreast of intellectual developments is of course crucial. Developments in our thinking can

9   mean that certain historically popular qualitative methods and methodologies might now need

10   rejecting, corrective action, or exigent deliberation. Thus, in order for high-quality research to

11   be conducted researchers need to stay engaged with contemporary methodological thinking

12   by, for example, connecting with recently published work (e.g., Birt, Scott, Cavers,

13   Campbell, & Walter, 2016; Burke, 2016; Levitt, Motulsky, Wertz, Morrow, & Ponterrotto,

14   2016; Morse, 2016) on matters like rigor. When we ignore such thinking there is a risk of

15   producing outdated, flawed, stagnant and/or limited research.

16   As the qualitative research landscape continues to rapidly expand and flourish,

17   engaging with contemporary literature concerning the latest thoughts and developments can

18   be challenging. For instance, given our investments in certain methods or methodologies it

19   can be difficult to read work that substantially questions a method or methodology used often

20   in the past. With the large amount of research being regularly published, it may also be

21   difficult to keep abreast of developments in the qualitative methodological literature, even

22   when one is interested in embracing them. In that regard, reviews can be useful resources to

23   take stock of developments, offering ways forward in light of said developments. The

24   purpose of this review paper is to discuss one contemporary development around the theme

25   of 'rigor in qualitative research'. Organized under that theme, three widely used ways of

1   demonstrating rigor in qualitative research within sport and exercise psychology are critically

2   attended to. These are the method of member checking, the method of inter-rater reliability,

3   and the notion of universal criteria within the context of Tracy's (2010) heavily drawn upon

4   and/or cited paper in the field. Numerous problems with each way of approaching rigor are

5   highlighted. Throughout discussing each approach to rigor, constructive possibilities for

6   conducting quality qualitative research are offered. We conclude with a set of

7   recommendations for considering rigor when conducting or judging qualitative research

8   within sport and exercise psychology.

9   In accomplishing the above purpose, we do not single out specific papers within sport

10   and exercise psychology that have utilized the methods of member checking, inter-rater

11   reliability and/or universal criteria outlined and problematized. Singling out work might be

12   counterproductive to our hope that the points brought forward may be read with intellectual

13   curiosity and an openness to consider each point made. We therefore invite those conducting

14   qualitative research in sport and exercise psychology, or are considering doing it, to engage

15   with each point in order to develop informed and reflexive decisions about rigor. Editors and

16   reviewers of journals are also encouraged to consider the points raised, including the

17   recommendations for developing rigor in qualitative research that close the paper.

18   **Rigor in Qualitative Research: Problems and Possibilities**

19   The notion of rigor is often viewed as a necessary marker of quality by researchers,

20   reviewers, journal editors, and research panel members. As Tracy (2010) argued, for

21   "qualitative research to be of high quality, it *must* be rigorous" (p. 841). However, what is

22   meant by rigor can vary amongst scholars; it can mean different things to different people.

23   Such meanings may include, but are not limited to, the intellectual precision, robustness,

24   appropriateness, sufficiency, and cohesiveness of concepts, methodologies, epistemology,

25   ontology, and methods deployed in the research process and output (Burke, 2016; Saldaña,

1   2013; Tracy, 2010). With the various meanings and possibilities of rigor recognized, when it

2   comes to qualitative research within sport and exercise psychology, rigor has largely been

3   described as a marker of excellence sought through method. Methods are techniques which,

4   when properly applied, are said to provide rigor.

5   **Member Checking**

6   One extensively used method of rigor within qualitative research is member checking.

7   Member checking was popularized within the qualitative research literature by Lincoln and

8   Guba (1985). Member checks, or what is sometimes also termed 'respondent or participant

9   validation', involve the participants of a project assessing the trustworthiness of research in

10   terms of validating the credibility of qualitative data and results. In member checks validation

11   is often done by first returning the data (e.g. interview transcripts) and/or results (e.g. themes

12   and interpretations) to the research participant and then asking them to provide input on

13   whether the data is accurate and/or results accurately reflect their experiences. If the

14   participant confirms the accuracy of the data and/or results, the findings can be deemed

15   credible and the research is valid. Thus it is often suggested, either implicitly or explicitly,

16   that member checks are a means of controlling or correcting the subjective bias from the

17   researcher and/or a useful means of checking the truth of any knowledge (Birt et al., 2016;

18   Lincoln & Guba, 1995). Framed in this manner, member checking is denoted as providing a

19   check that a researcher has made contact, however subtle or approximate, with the social

20   reality independent of their interest in, or knowledge of reality, thereby enabling the

21   adjudicating between trustworthy and untrustworthy interpretations (Birt et al., 2016; Lincoln

22   & Guba, 1985).

23   Within sport and exercise psychology member checking is frequently used when

24   conducting qualitative research. As Culver et al. (2012) found, member checking rose from

25   being used in 21% in qualitative studies in the 1990's to 50.3% in 2000-2009. Such a

1   statistic, and the frequency in which one member checking is still being used in sport and

2   exercise psychology research, is however troubling. That is because there are major problems

3   with member checking as a form of quality control and a benchmark of rigor when it comes

4   to verifying qualitative research. Before highlighting evidence and practical problems in this

5   regard, the epistemological and then ontological problems of member checking need

6   emphasizing. An emphasis on epistemology and ontology is necessary because all methods

7   are informed, either knowingly or unknowingly, by an epistemology (i.e. what is the

8   relationship between the inquirer and the known? What types of knowledge might be

9   legitimately known?) and ontology (i.e. what is the nature of reality?) (Eakin, 2016; Giardina,

10 2017; McGannon & Schweinbenz, 2011; Sparkes & Smith, 2014). Put differently, research

11 methods cannot be divorced from their philosophical undercarriage. Thus, echoing Braun and

12 Clarke (2013) on member checks, Birt et al. (2016) confirm that "member checking should

13 not be considered merely as a simple technical step in any study" (p. 1810). Member

14 checking is an intellectual process which, they note, presents distinct epistemological and

15 ontological challenges. Such challenges are especially pertinent to producing rigorous

16 qualitative research when rigor is considered not only in terms of method but also as the

17 intellectual precision, robustness, appropriateness, and cohesiveness of the epistemology and

18 ontology utilized (Morse, 2016).

19   Within sport and exercise psychology, Lincoln and Guba (1985) are often cited to

20 support the use of member checking as a useful, if not necessary, method of quality control in

21 qualitative research. Indeed, scholars employing member checking have proposed that this

22 method was the most crucial technique for achieving credibility (Culver et al., 2012).

23 Although Lincoln and Guba accepted a world of multiple and mind-dependent realities (i.e.

24 ontological relativism), they also discussed member checking as informed by epistemological

25 foundationalism. Epistemological foundationalism refers to the assumption that method, like

1   member checking, itself is neutral and can thereby control for bias and be the repository of

2   procedural objectivity to sort out the more or most trustworthy from the less trustworthy.

3   However, a major problem with epistemological foundationalism is that methods are not

4   neutral, objective, or unbiased but rather are dependent on people (Culver et al., 2012; Smith

5   & Deemer, 2000). In the case of member checking, it *is* the researcher and participant who

6   are the member checkers. Moreover, like all people, researchers and participants alike are

7   unable to step outside of their own experiences and history or rise above and separate

8   themselves from the study of the social world (Denzin, 2017).

9   Thus, as various scholars (e.g., Braun & Clarke, 2013; Denzin, 2017; Smith &

10   Deemer, 2000) remind us, there is no possibility of producing theory-free knowledge when

11   using methods like member checking. The researcher and participant, no matter how hard

12   they try, will always influence the method and any knowledge claim that follows from using

13   it will be infused with their subjectivities (McGannon & Smith, 2015; Smith & Deemer,

14   2000). As Braun and Clarke (2013) noted when talking about member checks, researchers

15   cannot simply represent experience. Understanding and representing peoples' experiences

16   requires "interpretive activity; this is always informed by our own assumptions, values and

17   commitments" (p. 285). Given that point, member checking cannot deliver objective

18   knowledge. Nor can it provide an independent foundation to adjudicate valid research from

19   less valid research. As such, any claim that the rigor of research has been enhanced through

20   member checking cannot be made good and demonstrated. It is simply a claim – and a

21   problematic claim - because it does not have a *necessary* epistemic foundation to support it.

22   In light of such problems, and demonstrating a scholarly openness to re-consider

23   presuppositions and change, Guba and Lincoln (1989) and Lincoln and Guba (2000) later

24   abandoned a foundational epistemology (see also Guba & Lincoln, 2005; Lincoln, 1995;

25   2010). Of course, such reworking of these ideas raises the question as to why sport and

1   exercise psychology researchers still use and cite the 1985 work by Lincoln and Guba, which

2   these authors themselves acknowledged was deeply problematic. But a more productive and

3   useful question to ask is how might researchers now proceed epistemologically and

4   ontologically with member checking when it has been problematized? One common response

5   within sport and exercise psychology, either implicitly or explicitly, is to connect with both

6   epistemological constructionism and ontological realism. The former accepts that there

7   cannot be theory-free knowledge because a person's understanding of reality is only known

8   through their experiences (i.e., knowledge is socially constructed and thus fallible). The latter

9   claims that there is a reality independent of us that, however subtle or approximate, can be

10   known. The combination of epistemological constructionism and ontological realism informs

11   what has variously been referred to within sport and exercise psychology as neo-realism,

12   subtle realism, post-positivism, or quasi-foundationalism (Smith & Sparkes, 2016a).

13   Despite the appeal of both epistemological constructionism and ontological realism,

14   there is a major problem with a dual commitment to that epistemology and ontology which

15   has important implications for member checking. The problem starts with a commitment to

16   an epistemology and ontology that is incompatible and, in turn, untenable in terms of holding

17   both together simultaneously. In other words, combining epistemological constructionism

18   and ontological realism is neither possible nor sustainable - the two don't fit together. That is

19   because, on the one hand, committing to the belief that knowledge is socially constructed

20   means that theory-free knowledge is *unachievable*. On the other hand, believing that there is

21   a social reality independent of us that can be discovered - however ideal, approximate or

22   subtle - means that theory-free knowledge *can be achieved*. Thus, the realist ontology held by

23   the researcher contradicts the constructionist epistemological they hold - they cannot have it

24   both ways.

25   Given the incompatibility of epistemological constructionism and ontological realism,

1 researchers must move in one of two directions. The first direction is to drop ontological

2 realism and along with that, what must now be accepted is epistemological constructionism

3 and also ontological relativism (i.e. multiple and mind-dependent realities)[1]. If researchers

4 wish to hold onto ontological realism then the second direction is to drop epistemological

5 constructionism and confirm the existence of foundations and of a reality outside of ourselves

6 that can be known independently/objectively through the appropriate use of techniques. And,

7 as Smith and Deemer (2000), and Smith and Hodkinson (2009) emphasize, this assumption

8 (the reality) has to be cashed in - demonstrated - to do its work of adjudication by sorting out

9 the trustworthy interpretations from untrustworthy ones. The move to retain ontological

10 realism has however a major problem. As Smith and Hodkinson (2009) argued, one can

11 assume all one wants about an independent social reality, but the

12   problem is that there is no way to "get at" that reality as it really is. And, if one cannot

13   capture that social reality as it really is, then that reality cannot be called on to do the

14   adjudicate-the-different-claims-to-knowledge work asked of it. This is the whole

15   problematic posed by the idea that no matter how hard we try, we cannot achieve

16   theory-free observation or knowledge. (p. 34)

17   Accordingly, researchers can talk all they want about an independent social reality,

18 accurately depicting people's reality, or producing credible or trustworthy results that

19 correspond to the reality. However, unless they can somehow demonstrate through a method

20 like member checking how they can overturn the long standing and widely argued point (see

21 Smith & Deemer, 2000) that theory-free knowledge cannot be achieved, then accessing an

22 independent social reality, depicting people's reality accurately with certitude, or producing

23 credible or trustworthy results that correspond to the reality is untenable and a chimera.

24 Ultimately, as Smith and Hodkinson (2009) argued, researchers are unable to establish how

25 through method an external social reality can be objectively accessed and known as it really

1   is such that it can do the adjudication work required of it.

2   Of course, a researcher might still dispute the arguments above and persist in claiming

3   that member checking is useful to ensure rigor in qualitative research. However, there are at

4   least three reasons why that method is problematic for ensuring rigorous research. As noted

5   already, the first of these reasons is that researchers have been unable to show how to make

6   contact with the external referent point – the reality – to which they *must* appeal in order to

7   give member checking a standing beyond the socially constructed judgments researchers and

8   participants make (Smith & Hodkinson, 2009). That is, if a researcher claims that methods

9   like member checking can help sort out the trustworthy from the untrustworthy

10   interpretations, it is a necessity for them to demonstrate how that method can make, and has

11   made, contact with the reality independent of them. Yet, contacting that reality cannot be

12   done because a researcher is unable to override their human finitude to achieve theory-free

13   knowledge. Thus, without being able to do the necessary work of making contact, however

14   subtle or approximate, with the independent social reality a researcher cannot objectively sort

15   out the trustworthy from the untrustworthy interpretations through member checking and,

16   subsequently, that method remains ineffective for enhancing rigor.

17   Secondly, despite *claims* about the value of member checking, in a recent review of

18   published literature by Thomas (2017) it was concluded that there is "no evidence that

19   routine member checks enhance the credibility or trustworthiness of qualitative research" (p.

20   37). Thirdly, any claim that member checking can verify or add rigor falls further apart

21   because of the numerous insurmountable *practical problems* researchers face when using this

22   method as a form of verification and quality control.

23   One practical problem researchers may encounter is the possibility that the participant

24   and researcher might provide interpretations of the findings that contradict each other.

25   However, member checking provides no means to decide between contradictory claims to

1   knowledge based on experience (Sparkes & Smith, 2014). Member checking is also

2   problematic as a verification method because a researcher is unable to know with certainty

3   that each participant has faithfully engaged with member checking. For instance, when faced

4   with a large data set and findings a participant might briefly skim over what was offered. To

5   save time, and perhaps to even appease the researcher without him or her knowing, the

6   feedback from the participant may end up like this: 'Yes, I agree. Everything is 100%

7   correct'. At this point, it should equally be noted that in sport and exercise psychology it is

8   nigh on impossible to find a paper that discloses any disagreements made by a participant

9   during the process of member checking. It is as if all our many studies using that method,

10   totaling hundreds if not thousands of participants, produce 100% member agreement. Some

11   might argue this agreement supports the success of member checking as a method for sorting

12   out trustworthy from untrustworthy interpretations. However, given member checking cannot

13   ensure rigor for reasons highlighted above this then begs the question as to why we never

14   hear about disagreements.

15   Another practical problem with member checking relates to power relations within

16   research. For example, when asked to member check findings a participant might not

17   comprehend the results. Yet, in order to present themselves as an 'equal' to the researcher

18   they might choose to agree with the findings. Alternatively, as Estroff (1995) cautioned, a

19   participant may defer to the researcher as the 'expert', accepting all they say even if they

20   have different viewpoints about the data or findings. Given such potential problems a

21   researcher might put in place strategies to minimize power differentials during the research.

22   Conversely, later they might delicately ask the participant if they are simply agreeing or

23   deferring to them when conducting member checks. However, ultimately power relations

24   never can be truly eradicated and thus the researcher can never know with certainty if the

25   participant has simply agreed with them or deferred to their 'expertise'.

1   Moreover, there is the practical problem related to time. Although researchers

2   unfortunately rarely report on how long after data collection member checking occurred,

3   given the length of time to transcribe/record and analyze it is likely that member checks occur

4   some time after data has been collected. This length of time might be much longer when a

5   researcher collects longitudinal data using different methods (e.g., multiple mobile

6   interviews, visual methods, observations, diaries, and digital methods). Data and

7   interpretations might also be more complex and layered than when gathered from

8   interviewing people just once for a short amount of time (Smith & Sparkes, 2016c). In such

9   cases asking the participant to consider the accuracy of statements or the interpretations

10 offered may pose a problem for member checks. For instance, the person may no longer find

11 that their experiences 'ring true' or align with previous experiences. Recall bias or memory

12 distortion is not however the issue here. That is because memories are partly socially

13 constructed, people's perceptions change and contradict, and our discourses constitute and

14 become experience rather than transparently reflecting experiences[2]. The issue is that

15 member checking is influenced by time which, in turn, can limit the effectiveness of that

16 method when one seeks to use it to demonstrate accuracy or get at the truth and accuracy of

17 experience.

18   A further reason why member checking is ineffective as a verification method is that

19 people's political leanings and personal interests may, consciously or unconsciously,

20 influence member checking. For instance, a participant may consent to member checks

21 because they have a political and personal investment in the outcomes of research. When

22 member checks are conducted the participant may, unbeknownst to the researcher, reject or

23 censor the findings if these cast them in a poor light. Equally, without the researcher aware,

24 participants may reject a finding if it questions or conflicts with personal interests. For

25 instance, a person who has helped create a physical activity policy on tackling obesity might

1   disagree with a researcher's critique of it because it conflicts with their own personal interests

2   in ensuring, as part of their job and future employment options, that the policy is taken-up by

3   government. When one is aware of such possibilities a researcher might again put strategies

4   in place to try to help constrain the political and personal investments that impact on the

5   accuracy of member checking. However, because it is impossible to achieve theory-free

6   knowledge and know for certain that an external reality has been found to do the necessary

7   work of adjudicating if political or personal interests have been truly constrained, a

8   researcher is unable to know with absolute certainty if interests have influenced member

9   checking. Once again, member checks cannot then be cashed in on, or relied upon, to support

10   any claim that the method has enhanced research quality and rigor.

11   In light of all the various problems highlighted, and with no way to overcome these

12   nor any evidence to support that member checks work as a form of validating truth claims, it

13   would appear that member checking is an ineffective method for the purposes of verification.

14   Thus, as Morse (2016) recently noted, as a technique for achieving validity or reliability

15   "member checking is not recommended" (p. 1216). Unless researchers can demonstrate

16   otherwise, it is perhaps time that sport and exercise psychology researchers give up on the

17   illusion that member checking can help verify research and act as a benchmark of quality

18   control and rigor. Where might then this leave a researcher in terms of enhancing rigor? One

19   possibility is to reframe member checking as member reflections (Braun & Clarke, 2013;

20   Tracy, 2010).

21   *Member reflections* is not about verifying results, finding correspondence with the

22   truth, or getting at the independent reality. Rather, one aim of member reflections is to

23   generate additional data and insight. For instance, together a researcher and participant might

24   engage in member reflections to explore any gaps in the results or similarities they share

25   concerning interpretations of the findings (Schinke, Smith & McGannon, 2013). Moreover,

1   instead of framing member checks as a method to sort out between contradictory or different

2   claims to knowledge, researchers might more productively reframe it as a *practical*

3   *opportunity* to acknowledge and/or explore *with* participants the existence of contradictions

4   and differences in knowing. As part of this co-participatory process and dialogue, participants

5   and researchers might both consider such questions as: What might be done when we - the

6   researcher and participant - disagree over the findings? Should the interpretations of the

7   participant be privileged over the researchers' (or visa versa)? Or can the differences be

8   somehow incorporated in the final report? There is no universally agreed, final, or singularly

9   right answer to such questions. Instead, different responses may be given as each is applied

10   contextually, to actual practice and different projects as situations demands (Schinke et al.,

11   2013).

12   In addition to reframing the aim of member checking as an opportunity to help work

13   with participants and facilitate the inclusion of complementary or contradictory results so that

14   a meticulous, robust, and intellectually enriched understanding of the research might be

15   further developed, member checks may be useful for ethical reasons within the research

16   process. We stress 'may' because this method can engender ethical problems. For instance,

17   when researchers decide to share findings with participants, disappointment, hurt feelings,

18   and embarrassment may follow for them both (Sparkes & Smith, 2014). The participants

19   could be unhappy with the analysis, feel that they are being depicted insensitively, or

20   perceive that the researcher has unfairly used their power to expose vulnerabilities. In these

21   circumstances, researchers can believe and experience that their ethical commitment to do no

22   harm has been violated. With such caveats in mind, member checking might be of use as part

23   of adopting a culturally responsive relational reflexive ethics position (McGannon & Smith,

24   2015; Palmer, 2016). For example, as part of adopting that ethical position, promoting

25   dignity, mutual respect and connectedness between the researcher and participant may be

1 enhanced through the sharing of findings and experiences. When couched within the notion

2 and practice of a culturally responsive relational reflexive ethics position, member checking

3 may moreover be a valuable and useful tool when dealing with the possibility of breaching

4 confidentiality via deductive disclosure (i.e. when traits and rich descriptions of people in

5 research reports unintentionally reveal who they are) (see Sparkes & Smith, 2014).

6 **Inter-rater Reliability**

7   According to Culver et al. (2012), in sport and exercise psychology 82.2% of

8 qualitative studies clearly reported reliability testing. The most extensively used reliability

9 technique within the field is *inter-rater reliability*. Sometimes termed 'investigator

10 triangulation', inter-rater reliability is a method that aims to ensure results are reliable in the

11 sense of being reproducible and consistent by employing intercoder reliability and intercoder

12 agreement (Campbell, Quincy, Osserman, & Pedersen, 2013). The former requires two or

13 more capable researchers operating in isolation from each to independently code data without

14 negotiation. The latter requires that two or more researchers come together to compare codes

15 and then reconcile through discussion whatever coding discrepancies they may have for the

16 same unit of text. When a high level of agreement/consensus is demonstrated at the end of

17 this process, the coding is deemed reliable. Hence, inter-rater reliability is about two or more

18 researchers independently coding data and coming to an agreement over the codes to check

19 that coding is replicable (Lincoln & Guba, 1985). The use of inter-rater reliability is typically

20 written up in the methods section as follows: "To ensure reliability and avoid bias, three

21 trained researchers analyzed the data independently. Following a discussion over

22 disagreements, there was 87% consensus on the codes (or themes)".

23   Despite the appeal and wide use of inter-rater reliability as described above, this

24 method is *ineffective* for helping to ensure reliable qualitative research. There are various

25 reasons as to why inter-rater reliability as traditionally used does not work as a form of rigor

1   in qualitative research. One reason concerns the problem involving unitization (i.e., being

2   able to identify appropriate blocks of text for a particular code or codes). Unitizing the text,

3   according to Campbell et al. (2013), is "a problem insofar as different coders may unitize the

4   same text differently. Why? Because they may disagree on which segments of text contain a

5   particular meaning" (p. 302). For instance, as Campbell et al. (2013) note, although two

6   coders might each identify a string of text for the same code with each of the strings

7   overlapping, they might "still vary in length because one coder includes text providing

8   background information that helps establish the context for the code in question but the other

9   coder does not" (p. 302). As such, identifying the appropriate unit of analysis can be difficult

10   which "makes it hard to assess intercoder reliability and agreement" (p. 302).

11   A further problem can be traced back to the issue that was raised earlier concerning

12   member checking, which is that human beings - who are the coders - cannot, no matter how

13   hard we try, produce theory-free knowledge (Guba & Lincoln, 2005; Smith & Deemer,

14   2000). Thus, the theory, hypothesis, framework, or background knowledge held by the

15   researcher inescapably influences coding and is inextricably linked with the research process.

16   Consider the following example (see also Communication Studies 298, 2000; Madill, Jordan

17   & Shirley, 2000). Two researchers are chosen to code data from two different universities.

18   One is a cognitive exercise psychologist who, informed by self-determination theory, thinks

19   that people have an innate self with certain natural needs. In contrast, the other researcher is a

20   discursive exercise psychologist who, informed by social constructionism, believes that

21   selves are socially constructed through discourses and particular ways in which language is

22   used during interaction with one's self and others. Now imagine the two researchers

23   independently code the same data in relation to 'the self' (as conceptualized by the

24   underlying theoretical perspective to which each researcher subscribes). Partly because they

25   are influenced by very different and incompatible theoretical ideas, it is very unlikely that the

1   researchers would code similarly or agree after discussions over the meaning of the codes.

2   Add a third person to the mix, who adheres to social identity theory or feminist post-

3   structuralism, and more disagreements and different 'results' in terms of coding would

4   probably arise. Conversely, when researchers who hold similar theoretical interests come

5   together their shared background knowledge and theoretical lens influences the coding,

6   leading perhaps to many agreements and fewer disagreements. Accordingly, because we can

7   never achieve theory-free knowledge, inter-rater reliability will always be influenced by

8   people's theoretical proclivities, thereby making the method (including results) related and

9   tied to people's subjectivities and histories within academia.

10   Likewise in terms of the relationality of researchers to knowledge and the research

11 process, it is important to raise the question 'who did the coding?' and 'who

12 discussed/compared codes' to establish inter-rater reliability. A close reading of published

13 sport and exercise psychology research will often reveal that the coders are PhD

14 student(s)/research assistant(s) and a supervisor/grant lead. This order of authorship is often

15 understandable given the investments each has in the research and certain power hierarchies

16 in research mentoring and institutions. However, there is nothing 'independent' or 'objective'

17 about coming together to discuss codes and calculating a certain percentage of agreement to

18 indicate rigor. Power differentials and gender dynamics between coders, plus the age,

19 nationality, past training, and so on of each, can strongly influence inter-coder agreement. For

20 example, disagreements between coders might occur during initial discussions over the

21 codes. But, these disagreements might be quickly 'resolved' due to the power differences that

22 operate, implicitly or explicitly, between the coders. As Campbell et al. (2013) recognized,

23 when discussing codes a student/assistant might defer to their supervisor/grant lead due to

24 intimidation or a history of them removing 'dissenters' from the group. There equally could

25 be an implicit threshold of disagreement where the student/assistant feels that she or he

1   should only dissent or disagree a few times and/or not in particularly assertive or forceful

2   ways. Or, following discussing coding disagreements, a student/assistant might defer to the

3   supervisor/grant leader because of a deep respect they hold for them and their knowledge of

4   the subject matter.

5   Whatever the case might be for these power differentials and associated

6   practices/behaviours, the point is again that coding is done by humans who are not only

7   intimately a part of any understanding we have of what counts as knowledge, but also

8   relational beings (Gergen, 1999). The inevitable result of this relationality is that inter-rater

9   reliability will always be influenced, no matter how hard we try to erase of control from

10 them, by the background of the researchers plus the power, age, and gendered relations that

11 operate between them. Thus, inter-rater reliability cannot be viewed, nor used, as an unbiased

12 method or produce independent final results, leaving anyone that seeks to use it to ensure

13 their qualitative research is reliable with major problems that cannot entirely be overcome

14 because theory-free knowledge is impossible.

15   Another problem with inter-rater reliability is that it always possible that coders might

16 agree occasionally by chance. Also problematic is that there is no agreed upon threshold in

17 the literature for what constitutes a numerically satisfactory level of agreement among coders

18 to achieve reliability and more or less rigor. Is it 78%, 87%, or 90% agreement? An

19 examination of papers in sport and exercise psychology will reveal that what passes for an

20 acceptable level of intercoder reliability varies considerably according to the standards of

21 different researchers as well as the method of calculation (Culver et al., 2012). How then

22 does one truly know what is acceptable for qualitative research to be deemed reliable? Is a

23 study that has 90% intercoder agreement 'better' than one that has an 87% or 78%

24 agreement? Or is it that simply reporting a 'high' figure is a marker of acceptability? Will

25 that simply do? Our point is that without an objectively arrived at threshold for what

1 constitutes a numerically satisfactory level of agreement such questions cannot be answered

2 with any certainty. Thus, researchers, reviewers and journals editors have no foundation to

3 independently assess reliability claims. With no universally agreed threshold severe doubts

4 are again cast on inter-rater reliability.

5   As noted, between 2000 and 2009 Culver et al. (2012) found that in three sport and

6 exercise psychology journals 82.2% of qualitative studies used a reliability test. A close look

7 at the qualitative literature in the field over recent years will reveal that inter-rater reliability

8 is still often used. That 82.2% statistic and continued use of inter-rater reliability is troubling

9 given the many problems of the method. Moreover, the numerous problems associated with

10 inter-rater reliability have led researchers to conclude that it is a myth (Morse, 1997), a

11 misconception (Cook, 2011), inappropriate for interpretive qualitative research (Levitt et al.,

12 2016; Madill et al. 2000), not worth pursing (Braun & Clarke, 2013), and a flimsily

13 retrofitted procedure in qualitative clothes to be avoided (Eakin, 2016). Accordingly, because

14 this technique as traditionally conceived and widely used in sport and exercise psychology

15 cannot effectively test if qualitative research is reliable, it should be dropped for reliability

16 and rigor purposes.

17   If inter-rater reliability as traditionally used is discarded as an indicator of reliability

18 and rigor, where then does this leave sport and exercise psychology researchers? Let us offer

19 two possibilities. First, for researchers who still view reliability a concern when doing

20 qualitative research, additional and different ways of doing inter-rater reliability may be

21 adopted. One option might include adopting the guidelines described by MacPhail, Khoza,

22 Abler and Ranganathan (2016), which seek to establish intercoder reliability in qualitative

23 research. These guidelines involve deductively developing a coding frame and set of firm

24 coding rules (e.g. about when a chunk of text starts and ends and the degree of specificity to

25 be adopted when coding) prior to a team independently coding of data. The finalized code

1   frame and rules are then used to guide the subsequent coding process. After the team come

2   together to compare codes a statistical calculation (i.e. Cohen's kappa) is utilized to measure

3   reliability among the team of coders. Such guidelines align with the assumptions of post-

4   positivism, quasi-foundationalism, and neo or critical–realism. Although using such

5   guidelines are not without challenges, have only been trialed with semi-structured interview

6   data, may constrain creativity, can limit the identification of unanticipated yet insightful

7   knowledge, and risks producing superficial qualitative research (Morse, 1997, 2016), for

8   those who view reliability as a purview of qualitative research then new developments like

9   these must be considered. The consideration of such developments is especially required in

10   light of the numerous inescapable problems outlined that go with how inter-rater reliability

11   has traditionally been done within sport and exercise psychology.

12   Another possibility, and one that aligns with interpretive forms of qualitative research

13   that commit to epistemological constructionism and ontological relativism, is to reject

14   reliability as an appropriate criterion for judging the rigor of qualitative research. Numerous

15   researchers (e.g., Braun & Clarke, 2013; Cook, 2013; Cosh, LeCouteur, Crabb, & Kettler,

16   2013; McGannon & Spence, 2010; Pitney & Parker, 2009; Sparkes & Smith, 2014; Wolcott,

17   1995) have taken this option for very good reasons. The problems with inter-rater reliability

18   already highlighted are important reasons as to why reliability is rejected as a criteria for

19   evaluating the rigor of qualitative research. Another reason is that applying reliability criteria

20   to qualitative research is incompatible with the belief that theory free knowledge is

21   unachievable and that realities are subjective, multiple, changing, and mind-dependent. It

22   should however be made clear that for those that subscribe to ontological relativism and

23   epistemological constructionism our inability to produce theory free knowledge and get at the

24   social reality independent of us is not the problem; it is simply a recognition that we are finite

25   human beings (Smith & Deemer, 2000).

1   Furthermore, a lack of concern about reliability, and importantly not apologizing for

2   this lack of concern (Wolcott, 1995), is justified since reliability doesn't make sense when

3   collecting qualitative data. As Pitney and Parker (2009) acknowledge, reliability assessments

4   do not fit with the assumptions of the qualitative research enterprise in terms of collecting

5   data. For them, because qualitative researchers do not conduct the same interview twice,

6   "they do not need to worry about whether data can be reproduced" (p. 62). For instance,

7   seeking reliability becomes nonsensical because a qualitative researcher seeking rich and

8   personally meaningful information from people in interviews does not ask the same

9   questions, in precisely the same order, with the same non-verbal expressions or emotional

10   tone, in repeated social contexts and situations, with no change in their knowledge based on

11   previous interviews, and so on. In short, as Sparkes and Smith (2014) put it, we cannot step

12   into the same stream twice.

13   Such arguments related to reliability also apply to other forms of qualitative data

14   collection methods. Wolcott (1995) states that reliability remains beyond the pale for research

15   based on observation in the social world.

16   In order to achieve reliability in that technical sense, a researcher has to manipulate

17   conditions so that replicability can be assessed. Ordinarily, fieldworkers do not try to

18   make things happen at all, but whatever the circumstances, we cannot *make* them

19   happen twice. When something does happen more than once, we do not for a minute

20   insist that this repetition is exact. (Wolcott, 1995, p. 167)

21   Another reason why numerous qualitative researchers consider reliability as less than

22   relevant to their concerns, and feel no reason to apologize for it, relates to interpretation.

23   Superficial and thin interpretations raise the chances of agreement among researchers because

24   of the 'level' of interpretation offered. However, good qualitative research seeks to offer

25   complex, layered, and rich interpretive insights of people's lives. Seeking to keep coding

1   reliable in the conventional sense, or aiming always for agreement over findings, can often

2   come at the expense of that goal (Morse, 2016). As Kvale (1996) put it, seeking reliability

3   can "lead to a tyranny by the lowest common denominator: That an interpretation is only

4   reliable when it can be followed by everyone, a criterion that could lead to a trivialization of

5   the interpretations" (p. 181).

6   None of the above points are intended to suggest that reliability should be abandoned

7   in *quantitative* work. Reliability makes sense for this work given the assumptions, aims, and,

8   for instance, the importance in determining a psychometrically sound research instrument.

9   However, whilst reliability is needed in quantitative research, it can be considered

10 inappropriate for qualitative inquiry due to the various reasons outlined. It should also be

11 made clear that in opting to view reliability as no longer a concern in an unapologetic

12 manner, rigor is still important for doing high quality qualitative research but with a different

13 meaning as to what constitutes rigor and how it is achieved. Instead of thinking in terms of

14 inter-rater reliability as a means to achieve rigor and quality, rigor can be enhanced through

15 other ways. One way is via 'critical friends', which is a process of critical dialogue between

16 people, with researchers giving voice to their interpretations in relation to other people who

17 listen and offer critical feedback. The role of the critical friends is "not to 'agree' or achieve

18 consensus but rather to encourage reflexivity by challenging each others' construction of

19 knowledge" (Cowan & Taylor, 2016, p. 508). The role is to provide a theoretical sounding

20 board to encourage reflection upon, and exploration of, multiple and alternative explanations

21 and interpretations as these emerged in relation to the data and writing. As Wolcott (1994)

22 put it:

23   The crucial element in soliciting feedback seems to be to engage in dialogue about

24   interpretive possibilities. As with writing, engaging in a dialogue requires that you

25   first give voice to your thought processes. In the process of giving voice to your

1   thoughts you give access to them as well. There is some subtle reciprocity involved

2   here; you are never totally free to ignore the suggestions of invited critics….Every

3   invited reviewer is…a potential source of insight into the adequacy of your

4   descriptive account, the incisiveness of your analysis, the depth of your interpretation.

5   Every opinion offered is also a reminder that for every additional viewer there is an

6   additional view. (p. 42)

7   Thus, in contrast to inter-rater reliability conversations, the notion of critical friends

8   acknowledges that while there can be agreement, such agreement does not mean that the truth

9   has been found or that the research is stable or striving toward reproducibility, and achieved

10   rigor as a result. The use of critical friends also recognizes that not all those involved in the

11   process of acting as a critical friend need to define the meanings of a particular data set in the

12   same way as they can be positioned, and indeed embraced, differently in relation to their

13   theoretical interests, research experience, power resources, and so forth. Viewed in this way,

14   the different perspectives offered by critical friends in contrast to inter-rater reliability are

15   positioned as a resource for challenging and developing the interpretations made by any one

16   researcher as they construct, not find or discover through consensus, a coherent and

17   theoretically sound argument to construct, support and defend the case they are making in

18   relation to the data generated in a particular study. As such, despite possible agreements and

19   disagreements, a case can be seen as defendable and the interpretation offered can be

20   accepted as plausible. Importantly, dialogue with critical friends acknowledges that other

21   and/or additional plausible interpretations of the data can exist that are also defendable but

22   are not being utilized in a particular study or at that time.

23   **Universal Criteria**

24   The final aspect of rigor we will discuss is the notion of universal criteria, which is

25   often drawn upon within sport and exercise psychology as an indicator of research quality

1   and rigorous work. Rather than simply relying on citing Lincoln and Guba (1985), in recent

2   years the paper by Tracy (2010) has been extensively used in sport and exercise psychology

3   to make decisions about rigor and make claims about how the quality of qualitative research

4   was enhanced. As Burke (2016) noted when outlining qualitative research in sport and

5   exercise, "Tracy is now on the verge of becoming the new 'benchmark' for judging all

6   qualitative research within this sub discipline" (p. 333). However, as she also notes, there are

7   problems with Tracy's position on criteria along with how this criteria is often applied by

8   researchers in sport and exercise psychology.

9   While it needs acknowledging that Tracy (2010) speaks of criteria that "leaves space

10   for dialogue, imagination, growth and improvisation" (p. 837), she often makes it very clear

11   that that she advocates "eight *universal* hallmarks for high quality qualitative methods across

12   paradigms" (p. 837; emphasis in original). It is beyond our scope to detail all of the universal

13   criteria Tracy names. Suffice to say these are (1) worthy topic, (2) rich rigor, (3) sincerity, (4)

14   credibility, (5) resonance, (6) significant contribution, (7) ethics, and (8) meaningful

15   coherence. By advocating these criteria as universal markers of quality for qualitative

16   research Tracy connects with a criteriological approach. This refers to the belief that criteria

17   for judging qualitative research needs to be, and can be, predetermined, permanent and

18   applied to any form of inquiry regardless of its intents and purposes (Burke, 2016; Schinke et

19   al., 2013; Sparkes & Smith, 2009, 2014).

20   Taking a criteriological approach can be *strategically* useful to convince particular

21   audiences on certain occasions (e.g. when being interviewed for a university

22   lectureship/assistant professor by a panel exclusively made up of post-positivists) about the

23   quality of one's research. Yet, the idea that criteria can be universally applied to all forms of

24   qualitative research is problematic. For example, given a world of multiple, created, mind-

25   dependent realities, and the impossibility of theory-free knowledge, criteria is not 'out there'

1   awaiting discovery but socially constructed. The upshot of this is that the usefulness of

2   criteria can change and the number of criteria used in each project be modified for certain

3   purposes. The idea of universal criteria as 'stable' markers of quality thus starts falling apart

4   to sort out trustworthy interpretations from untrustworthy ones (see Lincoln, 2010; Smith &

5   Deemer, 2000; Sparkes & Smith, 2009; 2014).

6   Applying criteria in a universal manner is also inherently problematic because it calls

7   on a researcher to judge any piece of qualitative research, regardless of its intents and

8   purposes, in preordained and set ways. Under such conditions, universal criteria operates in

9   an exclusionary and punitive manner to produce a closed system of judgment that establishes

10   and maintains a narrow band of what constitutes good research (Sparkes & Smith, 2009).

11   Consequently, novel or different forms of research that could produce new knowledge and

12   make a difference in society can, by definition, be excluded and/or demeaned as not worthy

13   of attention from the outset. Much then could be lost in terms of 'additional knowledge' or

14   producing 'impactful research'. Further, when a preordained and fixed quality appraisal

15   'checklist' is used, research risks becoming stagnant, insipid, and reduced to a technical

16   exercise (Burke, 2016). There is also the risk that with the power of universal criteria to

17   police what counts as quality research, set markers of quality become a 'strategic game' to be

18   played by researchers to enhance publication chances. Despite the problems, some

19   researchers might strategically use the criteria (e.g. member checking or inter-rater reliability)

20   used in past published work within a certain journal they are targeting, and write that they

21   used 'Tracy's criteria', to improve their chance of publishing.

22   Researchers might of course disagree that universal criteria is problematic (Gordon &

23   Patterson, 2013). They might wish to continue committing to universal criteria that underpins

24   a criteriological approach and Tracy's (2010) work. If they do continue to utilize the notion

25   of universal criteria, they must though follow through with their commitment by adopting *all*

1   of the criteria that Tracy (2010) highlighted. All must be chosen since, when positioned as

2   universal criteria, the entire eight are of equal importance as markers of quality. To make a

3   judgment about which of these criteria should be left out, and which should be selected,

4   would undermine universality and a criteriological approach. Yet, within sport and exercise

5   psychology, researchers very rarely, if ever, use or demonstrate all eight criteria. What

6   appears in publications is that researchers say they applied a select number criteria from the

7   eight Tracy proposed as universal. They do not then follow through on their commitment to

8   universal criteria and a criteriological approach. Given that problem, for researchers who

9   wish to adopt universal criteria and cite Tracy in support of such use, future work should use

10   all eight criteria. They also must take in account the numerous means, practices, and methods

11   through which to achieve each of the eight criteria (e.g., spending enough time collecting

12   data, thick description, self-reflexivity about subjective biases, naturalistic generalizations,

13   and relational ethics). Further, researchers must make clear not only the approach they take

14   (i.e. criteriological), but additionally the epistemology and ontology that underpin their work.

15   This clarification will help reviewers and readers to judge if the research is epistemologically

16   and ontologically cohesive from start to finish. Including the approach taken, along with the

17   epistemology and ontology that underpins the research, is vital to include so that reviewers

18   and readers are better placed to make fair, appropriate, and informed judgments about the

19   quality of the research.

20   Finally, it should be noted that researchers in sport and exercise psychology often

21   write in the methods section that they have applied or used 'Tracy's (2010) criteria' to

22   enhance the rigor of their work. For example, researchers often write: 'To enhance the

23   trustworthiness or quality of the research Tracy's (2010) criteria was used'. Yet, Tracy did

24   not create nor does she own the criteria presented (Burke, 2016). She synthesized the criteria

25   highlighted in her paper from others' work. Improper use of language and citations aside

1   from those in sport and exercise psychology, recognizing that Tracy neither created nor owns

2   the eight criteria she synthesized opens up the possibility for researchers to still use,

3   depending on the starting points, intentions and purposes of this research being judged,

4   various markers of quality she highlighted without accepting her claims for universality. That

5   possibility is supported when one moves away from subscribing to a criteriological approach

6   to conceptualizing rigor through a relativist approach (Sparkes & Smith, 2009).

7   A relativist approach, or what is sometimes referred to as non-foundational, views

8   criteria as a socially constructed list of characteristics (Burke, 2016; Smith & Deemer, 2000;

9   Sparkes & Smith, 2009; Schinke et al., 2013). It means that when judging the quality of

10   qualitative work researchers use criteria from lists that are not fixed, rigid, or predetermined

11   before the study, but rather are open-ended; they can add to or subtract characteristics from

12   the lists. Lists are necessarily open-ended because the criteria used can change depending

13   upon the starting points, context and purposes of the specific piece of research being judged.

14   That is, as various scholars argue (e.g. Levitt et al., 2016; Smith & Demmer, 2000; Sparkes &

15   Smith, 2009) researchers might apply different criteria as they go about the practical task of

16   judging different studies. For example, when engaging with a certain piece of work a

17   researcher or reviewer might draw on the following list of criteria, some of which are

18   highlighted by Tracy (2010): member reflections, critical friends, the worthiness of the topic,

19   the significant contribution of the research, naturalistic generalizations, and what Levitt et al.

20   (2016) described as fidelity to the subject matter (i.e. the process by which researchers

21   develop and maintain allegiance to the phenomenon under study as it is conceived within

22   their tradition of inquiry) and utility (i.e. the effectiveness of the research design and

23   methods, and their synergistic relationship, in achieving study goals). Or, for different

24   research, such as an autoethnography or creative non-fiction, they might select criteria like

25   evocation, sincerity, aesthetic merit, expression of a reality, the meaningful contribution of

1   the work, incitement to action, and coherence (see Smith, McGannon, & Williams, 2015).

2   Accordingly, those who adopt a relativist approach do not believe that 'anything goes'

3   as judgments always need to be made about research. However, a relativist is unwilling to

4   mandate what one *must* do across all contexts and on all occasions prior to any piece of

5   research being conducted. Of course, just as a researcher who commits to universal criteria

6   needs to do, researchers who commit to a relativist approach should inform readers that

7   relativism underpins their work and document their epistemology and ontology. It is equally

8   vital that the execution of the study – from the data collection methods, analysis as couched

9   within a particular methodology, ethics, and write-up of results, aligns with said criterion,

10   epistemology, and ontology (Sparkes & Smith, 2009). Recent examples of researchers in

11   sport and exercise research using a relativist approach can be found in Papathomas and

12   Lavallee (2014), Hill and Hemmings (2015), Smith, Bundon and Best (2016), Coyle,

13   Gorczynski, and Gibson (2017), and Coppola, Dimler, Letendre, and McHugh (2017).

14   **Conclusions**

15   Qualitative research, once on the fringes, now plays a central part in advancing sport

16   and exercise psychology knowledge and producing impactful research (Kay, 2016). Having

17   provided a strong rationale for the need for researchers to engage in contemporary

18   methodological thinking, the present paper adds to the qualitative literature by offering a

19   detailed review of three widely used ways to demonstrate rigor within sport and exercise

20   psychology. It was argued qualitative work in the field often rests on problematic methods

21   and outdated ideas when it comes to developing rigorous qualitative research. It is vital then

22   that we avoid perpetuating the problems with how rigor has been commonly sought and

23   evaluated in the past. If then our field is to produce high quality research, it is necessary that

24   scholars, including journal editors and reviewers, change how rigor is developed and

25   qualitative work is judged. It is also important that university students at all levels are taught

1   by experienced qualitative researchers and trained in epistemology, ontology, methodology

2   and up-to-date methods (Knight, 2016; McGannon & Schweinbenz, 2011; Terkildsen &

3   Petersen, 2015).

4   Grounded in the arguments detailed and the contemporary literature, plus inspired by

5   Dunnette's (1966) critique of fads, fashion and folderol in psychology research, the following

6   summaries and recommendations for doing qualitative research in sport and exercise are

7   offered:

8   1. Member checking does not ensure that the results of qualitative research are valid or

9   trustworthy. Because theory free knowledge cannot be achieved, the method is unable to

10   access an independent social reality in order to demonstrate that the results correspond to

11   the reality and the truth has been objectively found. Member checking has no evidence

12   based to support it as a verification method. There are also many practical problems that

13   cannot be overcome, which in turn, reinforces the point that the method is unable to

14   verify or demonstrate the trustworthiness of results. Member checking is therefore an

15   ineffective marker to judge the rigor or quality of qualitative research. Given this,

16   researchers may move to member reflections whereby findings are shared with

17   participants, but with a different logic of justification, intention and outcome sought than

18   as in member checking. For example, in member reflections objectively accessing the

19   truth or getting at the reality independent of us via methods is not viewed as a problem of

20   qualitative research; it is simply part of our human finitude that must be accepted as part

21   of the research. Member reflections might be useful to produce rigorous qualitative

22   research but not then in the sense of verifying research by getting at an independent truth.

23   Reflections offered by participants are instead reframed as a way to help create a

24   meticulous, robust, and intellectually enriched understanding through generating

25   additional insights and dialogue. In certain circumstances member reflections may also be

1   used to promote ethical practice.

2   2. Inter-rater reliability as traditionally used (Lincoln & Guba, 1985) in research via the

3   practice of intercoder reliability and intercoder agreement is ineffective for ensuring that

4   results are reliable. Like with member checks, researchers should therefore give up using

5   that method as a way to ensure rigor. This recommendation is made because theory-free

6   knowledge is not possible in the process of engaging in intercoder reliability and

7   intercoder agreement. Also there are various problems with inter-rater reliability, such as

8   unitization and there being no numerically agreed level of what counts as a 'good

9   agreement' between coders to sort out the more rigorous from the less rigorous research.

10   If researchers believe reliability is still a concern for their work then it is recommended

11   that new inter-rater reliability guidelines be tested and adopted (e.g., MacPhail et al.,

12   2015). If researchers conclude that reliability is not for good reasons a relevant concern

13   for evaluating qualitative research, they need to look elsewhere for markers of rigor to

14   ensure the research is of high quality. As part of a list of characterizing traits for quality

15   and rigor, this might include adopting critical friends, which is viewed as an opportunity

16   for dialogue and the reflexive acknowledgement of multiple truths, perspectives and

17   results in the research process.

18   3. If a researcher subscribes to the notion of universal criteria and a criteriological approach

19   as a way of ensuring rigor, and follows Tracy (2010), they must demonstrate the use all

20   the universal criteria as well as the various markers or methods to achieve each marker of

21   quality that she highlighted. If one accepts the problems of adopting universal criteria and

22   a criteriological approach then a relativist approach, which advocates using criteria in a

23   list-like like manner, is a viable option. No matter what approach is used researchers must

24   be clear which one is adopted and the implications for the research process that follow

25   (i.e., from data collection methods, methodology, analysis and results presentation). In so

1   doing, researchers must also make clear the epistemology and ontology that underpins

2   their work as well as the criteria used, whether that is universal or criteria/list-like.

3   As an invitation to developing qualitative research, it is hoped that this paper enables

4   researchers - including editors and reviewers - to understand the various problems with

5   certain methods and move to other possibilities to enhance the quality of qualitative research

6   within sport and exercise psychology. Of course, in one paper we could never cover the

7   numerous debates that are occurring on qualitative research and how we can develop our

8   understandings further within and across all of these debates and discussions. For example,

9   interested readers may refer to important points recently been raised about how qualitative

10   research can be generalizable not in a statistical sense but in other ways (Sparkes & Smith,

11   2014), doing a thematic analysis (Braun, Clarke, & Weate, 2016), problematic assumptions in

12   mixed methods research (McGannon & Schweinbenz, 2011; Gibson, 2016; Sparkes, 2015),

13   the cherry picking of grounded theory techniques along with a failure to demonstrate the

14   commonalities and variants of grounded theory in work (Holt, 2016; Weed, 2017), post-

15   qualitative research (Fullagar, 2017; Giardina, 2017), and the value of exceptions within

16   qualitative data (Phoenix & Orr, 2017). We hope that qualitative researchers in the future will

17   not only reflexively and critically engage with such debates occurring, but also contribute to

18   these in order to expand upon the numerous dialogues on qualitative research within the field.

19

20

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[1] A common misunderstanding attached to believing in epistemological constructionism and ontological relativism is that a researcher denies that there is a physical world out there independent of us. This is not the case; a *physical* world is accepted (Smith & Hodkinson, 2009). But, while it is believed that there are physical beings out there moving around in time and space and uttering what people call words, it is argued that the

interpretations/descriptions we offer of these movements and utterances are not out there in

the sense of being independent of our interests and purposes.

[2] If a researcher does believe that recall bias or member distortion is a problem when

conducting interviews then to write this as a limitation in a paper that uses interviews reflects

a poor decision on their behalf. From the start, they should not have chosen interviews but

rather, for example, naturalistic data (i.e. data that is generated without the influence of the

researcher) (Smith & Sparkes, 2016c). The 'problem' and 'limitations' then lies with their

methodological decision making.